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Modern instruments for occupational safety promotion

Nowoczesne instrumenty wspierania bezpieczeństwa pracy

Abstract

In today's world, the knowledge of employees of the enterprise or company is its strategic resource, so the process of knowledge management and maintaining their relevance is becoming increasingly important. The quarantine restrictions imposed by the Covid-19 pandemic necessitated the transfer of vocational and safety training to an online format in search of methods that would bring it as close as possible to the offline format.

Key words: *interactive learning, e-instruction, online learning*

Streszczenie

W dzisiejszym świecie wiedza pracowników przedsiębiorstwa czy firmy jest jego strategicznym zasobem, dlatego proces zarządzania wiedzą i utrzymywania jej aktualności nabiera coraz większego znaczenia. Ograniczenia kwarantannowe nałożone przez pandemię Covid-19 wymusiły przeniesienie szkoleń zawodowych i BHP do formatu online w poszukiwaniu metod, które zbliżyłyby je jak najbardziej do warunków formatu offline.

Słowa kluczowe: *interaktywne nauczanie, e-instrukcje, nauka online*

Introduction

In today's world, an extremely important and relevant issue in enterprises of all forms of ownership is the creation of safe working conditions, which, not least, depends on the quality of professional knowledge and competencies, as well as knowledge of occupational safety, fire, environmental and industrial safety. Such knowledge should be assessed at the time of recruitment as well as during employment. Each organization must outline a list of competencies that its employee should have, based on certain values and business strategies.

Modern enterprises create centers for assessing such competencies using modern methods and techniques of comprehensive staff assessment, which are focused on assessing the professional qualities of employees, their psychological characteristics, compliance with job requirements, as well as identifying potential opportunities for professionals.

The procedure of such selection of candidates has certain advantages for them, namely: transparency of the selection process, ability to manage stress, understanding of the main criteria of success and efficiency in the company, the practice of this type of competition, understanding of their strengths and development potential. The preferences of companies that use this type of professional selection are: reducing staff turnover, providing themselves with talented staff with high development potential, understanding their strengths and directions of development, and so on.

Problem status

Knowledge in the modern world is the same resource as finance or material resources. Knowledge can be explicit, i.e. that contained in the documents of the organization in the form of instructions, regulations, regulations, drawings, reports, schedules, audio, and video recordings, databases, software, and more. There is also hidden, practical knowledge (mostly not recorded in paper or electronic form), which includes personal knowledge directly related to individual practical experience. They are usually the key to making creative and managerial decisions. If they are not supported and increased, they lose their relevance and, consequently, value.

To maintain a high level of relevant explicit and implicit knowledge of employees, it is important to periodic training using modern effective knowledge management tools, including brainstorming, flight analysis, world cafe, peer meeting, the union of practitioners, open space, and more.

In the context of the COVID-19 pandemic, business entities are forced to address key occupational safety issues through the latest transformations, namely: the transfer of employees to remote work; continuous online training and on-the-job training; developing a strategy to preserve the viability of economic entities in a pandemic.

In 2021, the Labor Code of Ukraine was supplemented with new rules: on remote acquaintance with documents, remote briefings on labor protection, the introduction of full individual liability for destruction and damage to equipment and facilities provided for use by remote workers [1]. Innovations were also introduced by the Law of Ukraine “On labor protection” from 04.02.2021 [2]. Following the updated rules, in case of hiring an employee for remote work, the employer must: acquaint him with the rules of internal labor regulations and the collective agreement; provide recommendations for working with equipment and tools that he provides to the employee to perform a certain amount of work [3].

When concluding an employment contract for telework, employers are obliged to systematically instruct (train) employees on occupational safety and

fire safety. Such briefings (training) can be conducted remotely, using modern information and communication technologies and video communication. Confirmation of the briefing (training) is the fact of the exchange of relevant electronic documents between the employer and the employee. To acquaint employees with orders, notices, other documents of the employer regarding their rights and responsibilities, the use of electronic means specified in the employment contract is allowed. The creation of an electronic document ends with the imposition of an electronic signature. The employment contract with the consent of the parties may provide for additional conditions for occupational safety [3].

It should be noted that this form of training fully meets the requirements of the Standard Regulations on the procedure for training and testing of knowledge on occupational safety, paragraph 3.5 which states that training on occupational safety can be conducted using distance learning, as well as using technical means of training.

In the case of remote work, the employer is responsible for the safety and proper technical condition of the equipment and means of production transferred to the employee for remote work. At the same time, the remote worker independently determines the workplace and is therefore responsible for ensuring safe and harmless working conditions at this workplace. It is known that the Labor Code also contains a provision that allows to recover from a home or remote worker the amount of damage caused by the lack, destruction, or damage to equipment and facilities provided for use by the employee to perform work remotely (or at home).

Research results

It is known that in the field of occupational safety, much attention is paid to employee training, conducting introductory, initial, unscheduled briefings on occupational safety [4]. Not only the quality of work, but also the safety of the employee, his life, and health depend on high-quality, accessible instruction. Therefore, it is clear that the more accessible the training material, the better it will be mastered. The pandemic has led to the transition to online learning not only in educational institutions of various levels and profiles but also in enterprises and organizations. To do this, it is necessary to take into account all the disadvantages and advantages of online training over offline format and based on the results of the analysis to search for effective communication of important information to employees and ensure its quality assimilation. The process of transferring to this format of training and conducting briefings on compliance with safety rules by employees has begun.

It is investigated that to modernize teaching methods it is effective to conduct briefings on health and safety, as well as the rules of safe operation of equipment in the format of presentations and videos. In European countries, as well as in many modern enterprises of Ukraine use modern practice – video instructions.

Offline learning has certain advantages, including live communication, the atmosphere of the production team (not home sofa), types of active participation in learning, which are possible only indirect communication.

Therefore, to bring online learning closer to the offline format, it is necessary to: work with small groups (10-15 employees), which will provide the possibility of real-time feedback; conduct training with cameras on, the constant response of the audience to simple questions, the ability to ask questions; provide unimpeded access to the recording of classes.

It is known that a person remembers no more than 10% of the information heard, visual information is stored by 50%, and an interactive form – up to 90%. Therefore, traditional forms of coaching are beginning to lose to the latest technology. Digital technologies can be used not only to create video instructions on labor protection but also to study the detailed rules of operation of equipment or machinery, using interactive multimedia programs.

The main purpose of training on occupational safety is to promote safe working conditions, familiarize employees with their rights and responsibilities in occupational safety, accident prevention, occupational injuries, and occupational diseases, as well as inform them about changes in labor protection legislation adopted by the new regulations – legal acts on labor protection, as well as on the rules of using means of individual and collective protection and providing home care to victims of accidents.

The instructions on occupational safety operating at the enterprise are developed based on the current regulations on labor protection, sample instructions, technological documentation of the enterprise taking into account specific production conditions, and safety requirements set out in the operating and repair documentation of equipment manufacturers of enterprise [5].

The main task of enterprises, in quarantine, is to create accessible and clear information resources for conducting online briefings. The video instruction, as well as the usual instruction on labor protection, should contain the name and a serial number of its registration. The title briefly indicates for which profession or type of work it is intended. Observance of norms of registration of the video instruction which are specified in Regulations on development of instructions on labor protection [5] has to be an obligatory condition.

A study of the activities of one of the enterprises of the sawmill and logging industry of Lviv region shows that the video instructions created for them are relevant and necessary. Thus, 25 instructions on occupational safety and 57 instructions for various works have been approved at this facility, most of which are already presented in the format of videos and presentations.

The sequence of presentation of multimedia materials is divided into mandatory sections: “General provisions”, “Safety requirements before work”, “Safety requirements during work”, “Safety requirements after work”, “Safety requirements in emergencies”. If necessary, the instruction may contain other sections to place materials that supplement the content of the instructions, illustrate or specify specific requirements.

For example, the video instructions present the method of safe work on the equipment, safety rules in the workplace, as well as safety signs (Fig. 1). The issues covered are important: home care, fire safety rules, and the use of primary fire extinguishers.



Figure 1. Safety signs in the online instructions

Source: Own research

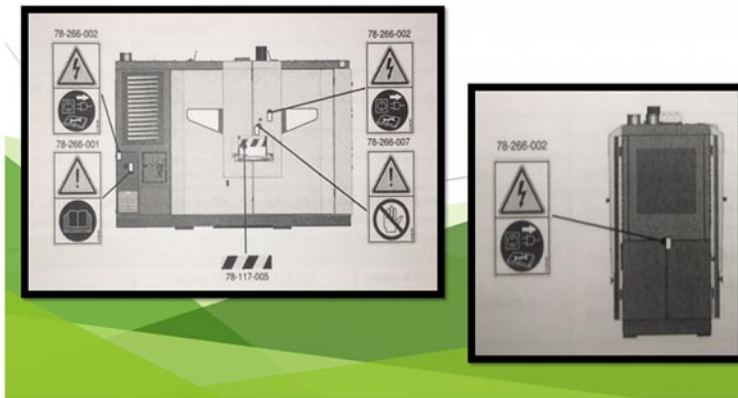


Figure 2. Algorithm for working with equipment in the online instructions

Source: Own research.

Conclusions

In today's world, knowledge management processes are becoming increasingly important, which are a strategically important resource of enterprises and companies, and determine the economic attractiveness and prospects for development. Therefore, knowledge management should be focused on people

and knowledge culture and security culture, to stimulate and educate the acquisition and use of acquired knowledge. Learning processes and methods should be those that help to find, create, store and transfer knowledge, and the technologies involved should help to store and make them available [6]. In addition, ways and methods of training should eliminate the feeling of the diversity of employees, help them work together, even in distance work.

Therefore, when at the present stage it is not possible to conduct mandatory briefings in the traditional offline format, their conduct in the format of online presentations and video resources is relevant and appropriate. It has been studied that this method will allow employees to better remember the material and better master the information on the rules of operation of the equipment, improve employees' knowledge of safe work, and so on.

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