

Implementation of Occupational Health and Safety Management System – Case Study

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Abstract: - In this paper are described the methodology of implementation of occupational health and safety management system in accordance with OHSAS 18001:2007. In this respect are identified and assessed risk factors specific to the educational process so that organizational risks to be managed more easily and people to realize the importance of their own activities. In the work process, human protection objective is to eliminate and / or control of the risks of injury and disease specific activity's ending with concrete measures. It is therefore necessary to design and implement programs of action consisting of all measures of safety and health at work in order to eliminate and / or reduce risks as they are established and properly implemented only after a risk assessment process.

Key-Words: -OHSAS 18001:2007, risks assessment, occupational health, safety management system, work safety

1 Introduction

The organizations are becoming more and more aware of the need for implementing a health and safety management system. Trained and experienced consultants of advance provide specialized assistance and guidance for the implementation of occupational health and safety management system in any organization [1], [2].

There are numerous resources available to help enterprises carry out risk assessment. The choice of method will depend on the specific conditions in the workplace, for example, the number of employees, the type of process work, work equipment used, the specific characteristics of the workplace and specific risks.

Risk assessment, the process of evaluating the risks to safety and health arising from hazards at work, forms an integral part of the Occupational Health and Safety Management Systems (OHSAS), whereby all hazards are identified and evaluated taking into consideration existing control measures.

A risk assessment should not be done in isolation by the employer or the employer's representative. They should involve employees or their representatives. Workers consultation is an integral

part of risk assessment. Workers should be informed of the conclusions of the assessment and preventive measures to be taken.

During the risk assessment should always take into account the possible presence at work of employees of other companies (e.g., in charge of cleaning, private security guards, maintenance workers in the area) and other outsiders (for example, customers, visitors). They should be considered as people at risk, but should consider whether their presence in the workplace may generate new risks. Assessing the level of security is a systematic process of all aspects of workplace undertaken to determine the sources that may cause bodily harm, constituting the basis for substantiation of preventive measures and control risks.

Whoever performs risk assessment, even if it is an external service, the employer is responsible, ultimately, for assessment.

The objective is to help an organization to understand the risks which can be minimized or removed to assure its employees and other interested parties that they are practicing a hazardless process in meeting the product requirements of their customers.

2 Workplace Health Strategy

Workplace Health Promotion (WHP) covers all activities of employers, their employees and society to improve the health and wellbeing at work (Fig. 1).

WHP is more than simply meeting legal requirements of safety and health; WHP includes activities offered by employers to help staff to improve their general health and welfare. In this process, it is essential to involve employees and taking into account their needs and their opinions on the organization of activities and of the job.



Fig. 1 Workplace Health Promotion (WHP).

A successful organization is based on healthy employees who work in an exciting environment. By that makes employees feel better and healthier, WHP aims:

- Reduce absence from work;
- Stimulate motivation, increase productivity;
- Facilitating the recruitment process;
- Reduce the fluctuation of workers;
- Promoting a positive image.

2.1 Safety and health at workplace

Governments, authorities of regulation and their agencies aim to improve *safety and health at work* (SHW) to reduce the costs of accidents and occupational diseases supported by the society, enhancing national competitiveness and efficiency.

SHW can help increase productivity by:

- Reducing the number of people taking early retirement or who cannot work due to injury or work-related diseases;
- Reducing healthcare costs and social costs of accidents and diseases;

- Increased work capacity of people by improving their health;
- Improving productivity by stimulating the most effective methods and techniques work.

It is found, by intuition and observation, that both workers and firms have higher productivity as the health is better. In a study of German labor market has shown that low health reduce to 6% chances of a person to be employed full time and doubles the likelihood that it leave the labor market.

There are a number of research and case studies indicating that SHW companies can boost productivity in different ways, by:

- Increasing resource productivity through fewer unnecessary expenses, less business interruption, improve processes and so on;
- Making better quality products;
- Inciting businesses to find ways to work more productive because of the need to end the old practice;
- Promoting replacement older techniques and equipment and less productive.

2.2 The integration of SHW into education sector

This model results from eco-holistic model of schools is dedicated to promoting health. It shows the key external influences on the integration of SHW into education and internal factors influencing promoting integration in schools and other educational institutions (Fig.2).

The model is based on an analysis of a six-step process to integrate safety and health into education sector.

Safety and health at work (SHW) in education sector is required to be managed (Fig.3).

This thing can be done in several ways, but the main steps are the same for all models:

- Planning risk assessment by consultation with employees;
- Identification of risks;
- Identifying persons likely to be affected, how risk can also arise where it might produce;
- The risk and decide how to act;
- Taking measures to eliminate or reduce the risk;
- Monitoring and analysis activities.
- Relevant external services health and safety at work.

Risks to health and safety at work in the education sector could affect not only workers but also students and visitors. This factsheet is aimed at all those involved in the management of health and

safety at work, especially people in charge in education, teaching staff and other types of teachers,

representatives of security and health and relevant external services from health and safety domain.

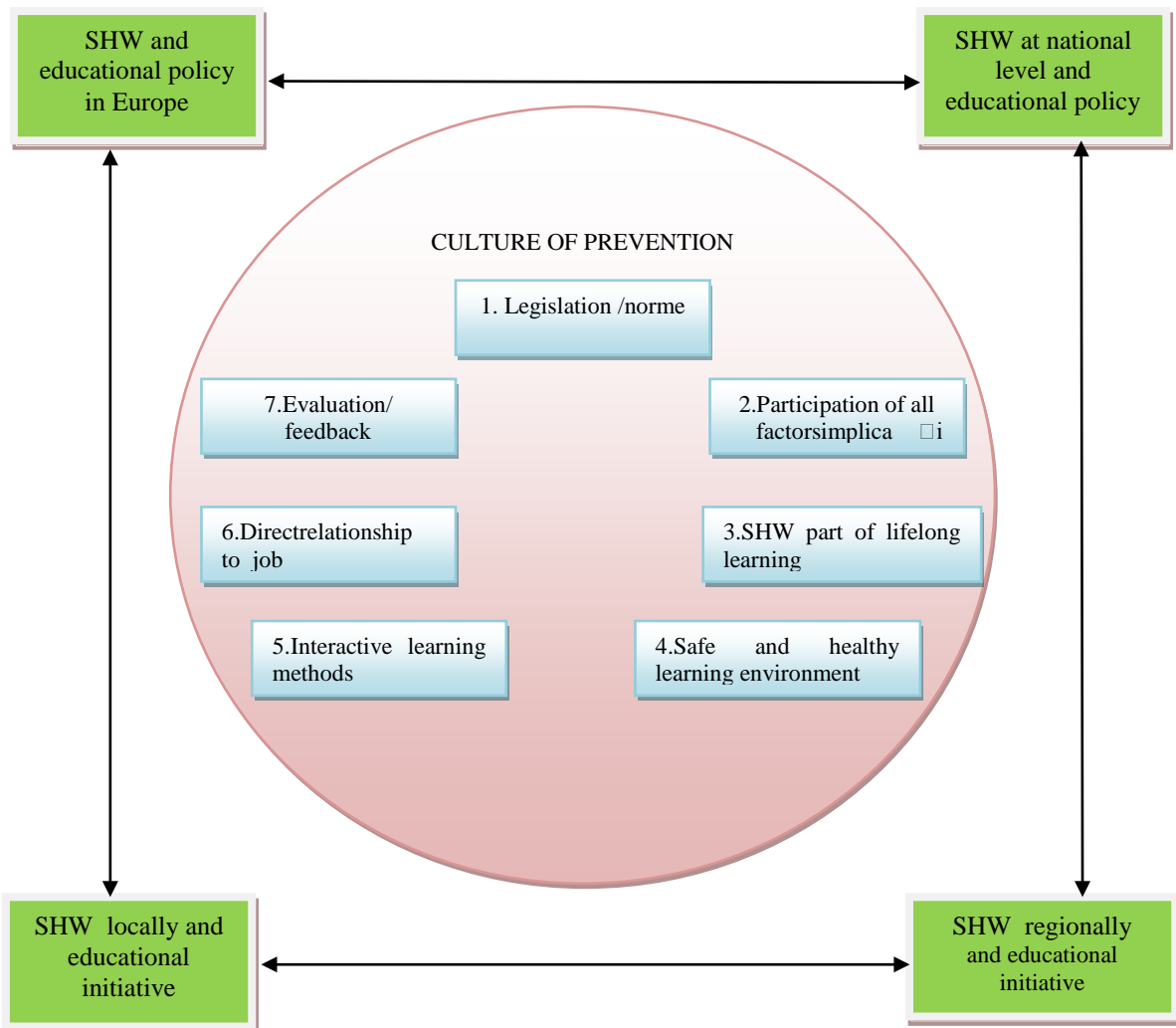


Fig. 2 The integration of SHW into education sector.

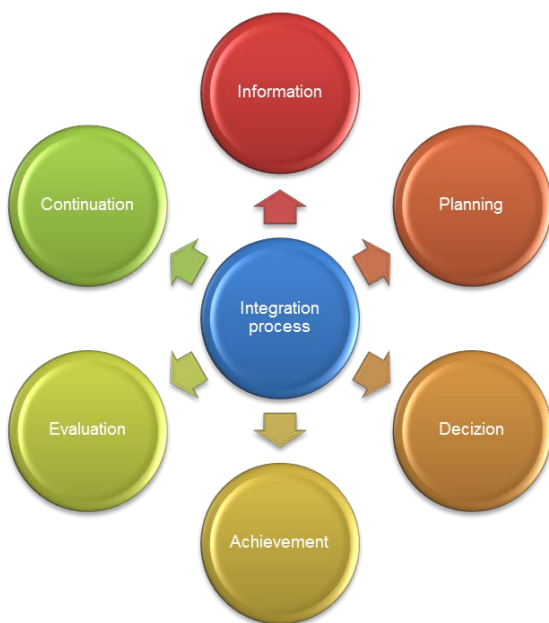


Fig. 3 SHW integration process.

3 Case Study

The methodology can be carried out in a succession of steps:

- planning assessment in consultation with employees;
- identification of risks;
- identify people who may be harmed, how and where;
- assessing the risk and decide how to act;
- taking measures to eliminate or reduce the risk;
- monitoring and analysis of activities.

There are several variations on this matrix that can be found in the literature [4], [5].

According to ISO 180001, the scale of risk assessment (risk matrix) presents a combination of severity of consequences and probability of occurrence (table 1). The following risk matrix is used in risk assessment process for analyzed case study [6].

Table 1. Risk matrix

		PROBABILITY					
		1	2	3	4	5	6
		EXTREMELY RARE	IMPROBABLE	RARELY	OCCASIONAL	PROBABLE	FREQUENT
SEVERITY CONSEQUENCE		$P > 10^{-1}/\text{year}$	$P > 10^{-1}/\text{year}$ $P < 5^{-1}/\text{year}$	$P > 5^{-1}/\text{year}$ $P < 2^{-1}/\text{year}$	$P > 2^{-1}/\text{year}$ $P < 1^{-1}/\text{year}$	$P > 1^{-1}/\text{year}$ $P < 1^{-1}/\text{month}$	$P > 1^{-1}/\text{month}$
7	HAZARD	(7,1)	(7,2)	(7,3)	(7,4)	(7,5)	(7,6)
6	CATASTROPHIC	(6,1)	(6,2)	(6,3)	(6,4)	(6,5)	(6,6)
5	CRITICAL	(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)
4	HIGH	(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)
3	MEDIUM	(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)
2	LOW	(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)
1	NEGLIGIBLE	(1,1)	(1,2)	(1,3)	(1,4)	(1,5)	(1,6)

This worksheet describes common hazards and risks in an educational institution and makes some suggestions on their prevention (Fig.4). But given the scope of the sector and the size of the worksheet, all hazards cannot be contained. Activities such as

school trips and recreational activities (e.g. sports) are not discussed in this worksheet, but maybe should be included in the risk assessment.

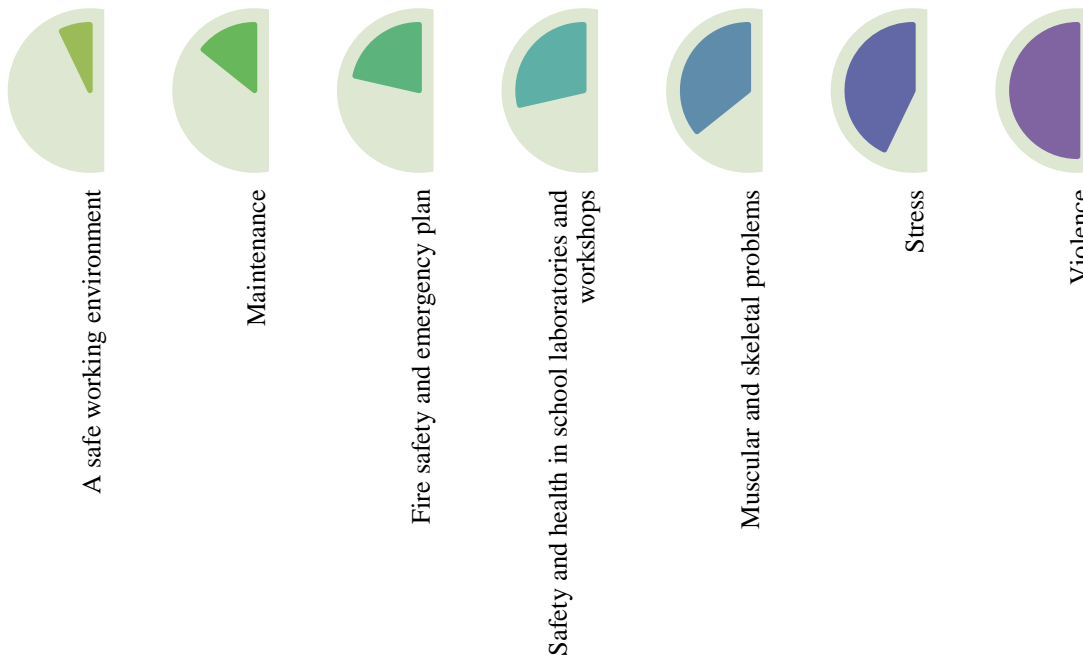


Fig.4 Hazards and risks in education process.

There are identified the following categories of risk factors:

- Risk factors of educational process;
- Risk factors of work environment;
- Risk factors of own performer;
- Risk factors of work task;

The evaluation results are suggestive illustrated. The percentage of identified and assessed risk factors to the work system elements is illustrated in fig. 5.

4 Conclusions

The implementation of OHSAS 18001:2007 standard is not the solution to all problems of security and health at work of an organization, but offers a practical way to achieve a healthier work and more secure, and continuously improve performance through a comprehensive management.

The calculated risk level is 2.73 which demonstrate that it is an acceptable process and a high level of security. For the higher risks, it was developed a “list of measures proposed”.

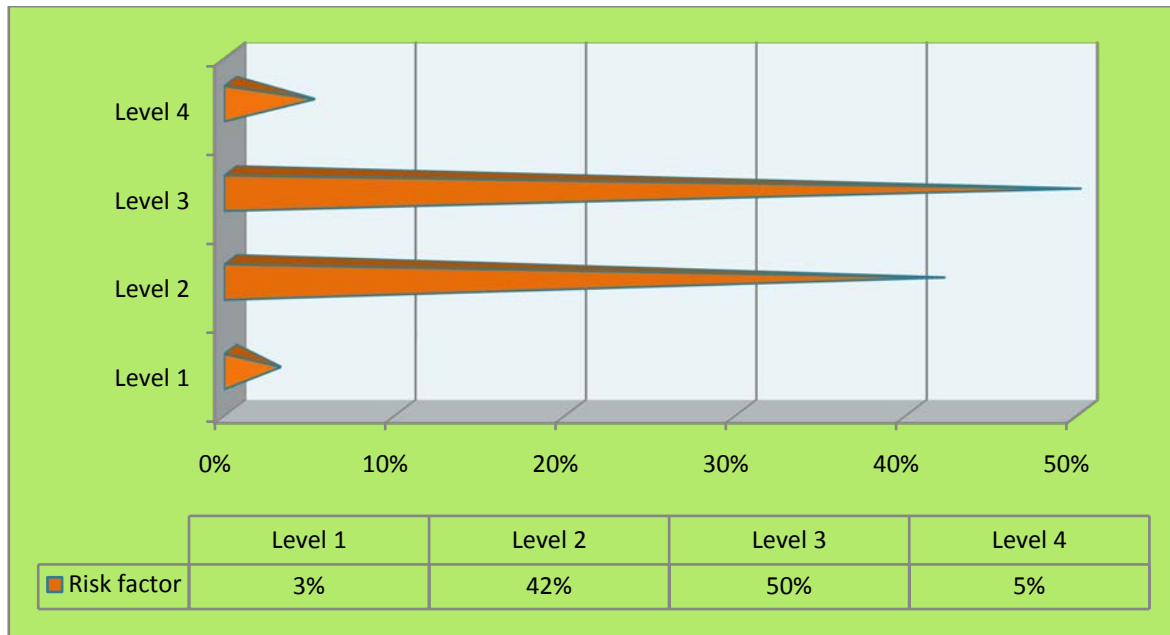


Fig.5 The assessment of identified risk factors.

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