


# Preparation of teachers for education in OHS: basis for the development of teachers training program for OSH learning

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**Příprava učitelů na vzdělávání v BOZP - Základní východiska pro vývoj tréninkového programu pro učitele ke vzdělávání žáků v BOZP**

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## Abstract

učitelé   kompetence   učení   odborná příprava   vzdělávání   BOZP   bezpečnost a  
ochrana zdraví při práci

## Abstract

OSH in the context of secondary school teachers' training and introduces principles and general objectives in effective training for teachers on OSH learning. The article also presents a list of competences needed for teachers to teach OSH successfully.

**Key words:** teachers, competences, learning, training, education, OSH

## Abstrakt

Článek se zaměřuje na téma integrace BOZP do školního vzdělávání. Zabývá se odbornou přípravou středoškolských učitelů v BOZP a seznamuje se zásadami a obecnými cíli jejich efektivní přípravy na výuku. Článek rovněž obsahuje přehled kompetencí učitele, potřebných k úspěšnému vzdělávání žáků v BOZP.

**Klíčová slova:** učitelé, kompetence, učení, příprava, vzdělávání, BOZP

**Introduction: ERASMUS+ project MIND SAFETY - SAFETY MATTERS!**



MIND SAFETY - SAFETY MATTERS! (hereinafter MS-SM) project aims to improve and innovate methods and teaching competences and abilities of teachers in order to teach safety and health issues in the classroom. MS-SM project, elaborated within ERASMUS+ project, is being developed for many reasons, the most important is that around 430 workers in Europe under the age of 25 are killed at work each year. European young workers suffer around 714 000 accidents at work every year [11]. In the EU, approximately 14 % of all students drop out of school before completing their entire school path and arrive at work without any knowledge about occupational hazards or how to recognize and prevent them. This lack of knowledge together with the lack of experience and training has been identified as

an important contributing factor to the occurrence of occupational accidents among young workers. This is a cross-social problem to many EU countries and has been a priority in the EU occupational health and safety policies. In many EU countries, health and safety issues are already included in educational programs and curricula, but in other countries the process is more difficult due to curriculum restraints, time limitations and teaching priorities.

Seven partners from five countries have combined their efforts for this new project:

- Autoridade para as Condições do Trabalho, Portugal (the leader)
- Universidade de Aveiro, Portugal
- AFTEBI - Associação para a Formação Tecnológica e Profissional da Beira Interior, Portugal
- INCDPM, Romania
- Výzkumný ústav bezpečnosti práce, v.v.i. , Czech Republic
- Technische Universiteit Delft, Netherlands
- Univesitat de Girona, Spain.

MS-SM project aims to establish an interface between teacher education, professional training and learning contexts in occupation safety and health (OSH). By supporting teachers' education, the project will help them to expand their skills and to provide them the right tools to deal with OSH issues at school. The project involves them in the creation of knowledge and in the sharing of best practices, which will simultaneously improve the quality of the teaching and learning process and potentially increase young people's knowledge how to protect their health and quality of life. This project is being carried out transnationally to build a strategic partnership combining OSH and education of experts, to involve countries with different experiences and realities and to extend the potential dissemination of best practices. The goal of the project is to establish partnerships that encourage the international transfer of existing knowledge and material as well as to take advantage of these synergies in order to generate an OSH educational reference for teachers. It is composed by organizations with different and complementary characteristics, competences and geographical coverage, all sharing the common goals of fostering the decrease of young/future workers work accidents numbers by promoting OSH education and improve the awareness for the hazards at work.

Planned outputs of the project:

- OSH Teacher Education Reference Guide
- Practical Guide for Teachers
- Booklet for students and other educational contents.

The following chapters deal with the basic assumptions that have been identified by the project partners as a cornerstone for development of teachers training program for OSH learning.

## **OSH in the context of teachers' education/training**

In all partner countries, teacher training experiences related to OSH were already performed. However not all of them were formalized or certified by the responsible bodies in national certification and accreditation systems. In general, data found in the consulted sources of project partners indicate that the available continuing OSH training or OSH learning activities for students covers a very small number of teachers and that this theme appears often very diluted in the continuing training plans and incipient or non-existent in the curricula of initial teacher training. In some countries, these issues are often present in educational systems, with direct or related concepts in disciplinary programs. Experience and skills of teachers in relation to these matters are not yet formalized. Issues, such as risk management and accident prevention, are rarely solved in the perspective of the analysis and evaluation of working conditions.

In some cases teachers' training means an extra time that is additional to normal working hours. Teachers often complain that the courses or training activities have predominantly theoretical character, information and knowledge provided are difficult to transfer to the real work environment. In the field of continuing vocational training, traditional dichotomy between "learning" and "doing" tends to be counteracted by a strong proximity of training situations in relation to work situations. The classic education addressed to individual training for the "job" is ineffective when it needs many organizational changes. New ways of thinking and organizing work processes make appeal to new types of competences in the dimensions of knowledge, skills and behaviours, such as teamwork, thinking of the organization as a whole etc.

According Care [4], the most appropriate response to the rapid technological and social changes is to develop a reflection of lifelong learning for the workers, through professional situations in the context of encouraging an active self-training.

The development of professional skills requires guided theory-practice methodologies in problem solving situations and in reflection on professional practice. At this point it is important to clarify these two concepts that are often confused. Knowledge is necessary but not necessarily prior to skills, evolving in a dynamic that is both individual and collective, which is based on a process that can be combined in many different ways.

## **Principles for effective training teachers on OSH learning**

As suggested by some authors [5, 6], teaching includes a technical dimension, but also contains an "intellectual, cultural and contextual activity that requires competent decisions on how to address the matters to teach, how to apply teaching skills, how to develop human relationships and how to generate and use knowledge. So the teachers training should focus not only on what teachers should know and be able to do, but also in how teachers, as agents of change, think and how they are able to transform society."

It is important to consider the learning process when planning teachers' training for the teaching of OSH and fundamentally promote research skills, reflection and sharing practices or collaboration, including the ethical, cultural and political dimensions, so that training can fill a space of transformation [7].

The definition of guidelines for teacher education/training in OSH matters depends not only on identifying the content or daily practice of teaching activity, it is also necessary to consider that training for teachers is a formalization process of experiences reflecting both personal and professional ones, materialized in "re"construction of knowledge and skills and once applied to the school context, it potentiates the change of implementation and innovation, not only in teaching practice reflecting the learning of students but it also acts as agent of change.

In the context of teachers' continuing training, previous personal experiences and knowledge regarding to safety and health at work are - within their organization (the school) and in their professional context - an important training resources.

So, it is natural that as students' learning needs, school context and its characteristics is subject of special attention. We suggest a set of assumptions with which this training program will be based on:

- Competences
- Student learning needs
- Reflective teaching practice
- Research (more reliable available sources)
- Collaboration and Feed-back
- Evidence and data for improving its impact and dimensions
- Support and integration into the culture and operations of the educative system and main actors of the educational community
- Individual and collective responsibility on different levels of the education system.

### **General objectives for the training program for teachers on OSH learning**

The training program proposal considers the conclusions of EU-OSHA reported experiences [12], so the discussions around training strategies with other stakeholders, in particular with educational authorities and teacher training institutions, are considered. It was preceded by a clear definition of learning objectives that should guide the training and it focuses on the following purposes:

- To facilitate the reconstruction and development of basic and behavioural knowledge, skills, and values regarding safety at work awareness in the school context;
- To promote OSH integration in educational practice.

General objectives of the training:

- Promote safety and health awareness
- Improve learning in OSH issues in a collaborative way
- Increase a positive and inclusive safety culture at school
- Stimulate practices' change.

### **What competences should teachers have to teach OSH?**

The first output of the project - OSH Teacher Education Reference Guide - just as the whole MS - SM project is based on the idea of competences.

According to this, the MS - SM project has its own concept regarding inclusive education perspective of learning OSH which should also be contemplated in teachers training activities and it should support classroom resources.

It's also important to recognize that the design and development of the tools, aids and specific adaptations to answer these demands must always be done considering the particular teaching scenarios in which workshop training will take place, specifically in what concerns students' needs, teachers' previous experience and other stockholders' influence. In the case of the students with sensory and/or cognitive impairments, special attention must be given to the services and the community, namely in the interactions with physicians, social workers, therapists and, most important, their families.

Competences to master knowledge, skills and attitudes/values defined by Roldão [8] play an important role in education and curricula. When we think about the role of school for social and productive integration of citizens in a profession or career, skills play a very important role in education and curricula. Here the meaning of competence is reflected in the transfer of knowledge, know-how and knowledge, how to deal with complex situations of their daily lives according to different contexts. This should also apply to work settings where exposure to occupational hazards requires that current and future workers must learn to transfer their knowledge and skills and to use them to protect themselves and prevent accidents and occupational diseases. The school and its interlocutors should be prepared to meet this demand and drive the learning process in terms of skills acquisition, which also involves their assessment.

Generally, in the consortium countries, the skills to access and to exercise the teaching profession for different levels of education are set centrally, and are defined in specific regulations, in the respective professionals' profiles of primary and/or secondary school teachers and early childhood educators. A European report published in 2010 on these issues [9], says that there is a very wide range of general skills related to teaching content, teaching skills and competencies related to the integration of theory and practice. The same report identifies a set of skills as central issue in teacher training:

- Knowledge of the subject to be taught;
- Knowledge of pedagogy;
- Integration of theory and practice;
- Cooperation and collaboration;
- Self-assessment;
- Mobility;
- Dynamics creativity and leadership;
- Lifelong learning.

In this topic we chose to list generic and situational skills that can be developed from previous OSH knowledge and arising from teachers' experience of their own working conditions, in the teaching practice in the school context and other work contexts, as a way to facilitate learning by the students and to mobilize and rebuild new knowledge and skills from the consideration of the cases discussed in the formative experience.

At this point, it is important to contextualize the contribution of teachers' skills for the learning of OSH in the school context.

### **Knowledge Domains:**

- Occupational Health and Safety concepts contextualized with the curricular subject, like: workplace, hazard and risk concepts;
- Occupational hazards and risks;
- Occupational risks, preventive and corrective measures (integrated, organizational, collective and individual);
- The consequences of occupational accidents and diseases at: social, cultural, economical and personal level;
- General principles of occupational risks prevention;

- Risk assessment;
- Best practice in safety procedures;
- Health and Safety at Work national legislation: legal basis for employers/employees.

#### **Skills Domains:**

- Clarify definitions of workplace, hazard and risk;
- Promote Health and Safety at Work learning in curricular units both in an integrated vision
- Occupational Safety and Health knowledge with different pedagogical strategies, adjusted to the specific characteristic of students;
- Illustrate the general principles of occupational risk prevention;
- Explain the role that individual and organizational factors play in the risk prevention;
- Promote critical and creative thinking to discuss Health and Safety at work issues;
- Integrate digital technologies and other learning resources in a safer, inclusive and adapted way, considering specific characteristics of students.

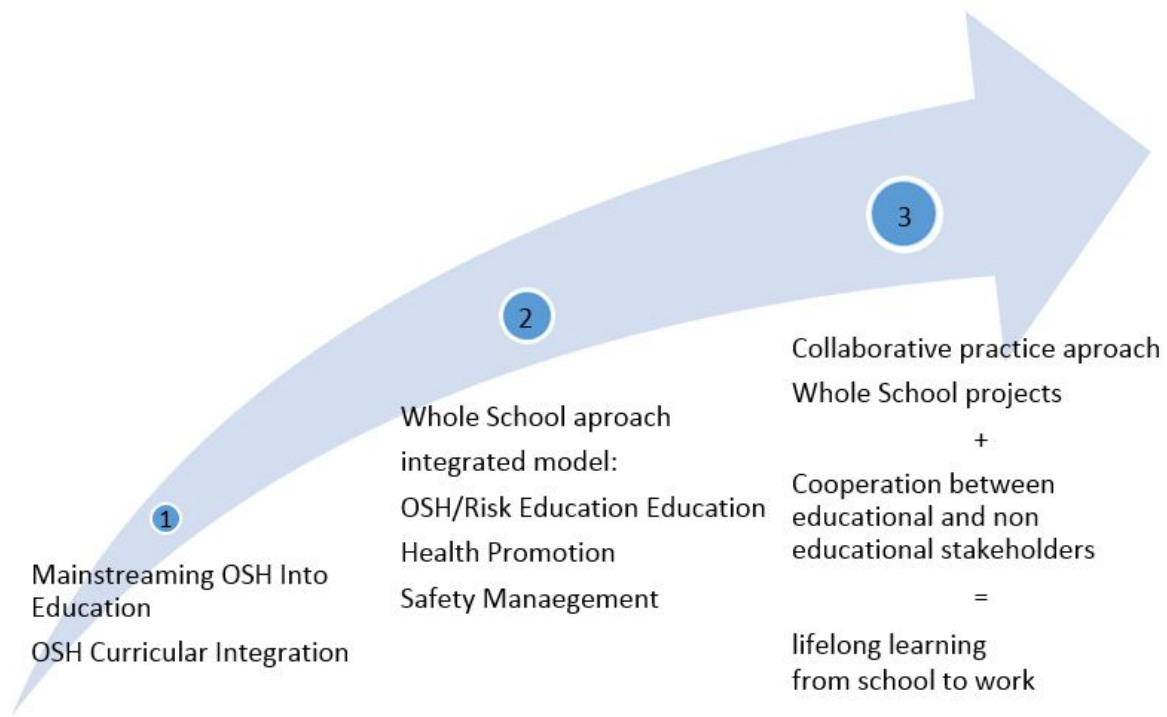
#### **Attitude/Values Domains:**

- Mutual respect and cooperation;
- Initiative and proactivity in the communication and identification of hazardous conditions;
- Self-awareness and responsibility towards hazards situations;
- Disposition for critical thinking about Health and Safety at work issues;
- Active and collaborative participation in the solution of OSH problems at work.

### **Summary**

The proposition of a collaborative model for the introduction of OSH into the system means going beyond the traditional school role. The model was defined according to the paradigm of “culture prevention”, to the concept of the maintenance of health throughout life as a part of a lifelong learning based program.

Considering OSH mainstreaming (1) and integrated models (2) (see the corresponding parts in the figure below) with OSH integration into the educational system combined with the European Lifelong Guidance Network [3] assumptions, the Output 1 of the MS-SM project - Guide for the teachers training on OSH learning - will be focused on students’ learning needs and on project-based collaborative practices (3) (see also the figure below) which will facilitate the development of a culture of prevention. This new model was adapted from the EU-OSHA previous models and its implementation and efficiency relies upon the capacity to promote dialogue and synergies between the different educational and non educational actors/players.



**Figure: Mainstreaming and integrated models towards a collaborative practices model**

## Conclusion

In this article we opened the topic of training teachers on OSH learning and we will deal with other issues related to training programs for OSH learning in next issue of the magazine JOSRA.

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