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Occupational Safety and Health Education Teaching Guide

Guidelines for Teacher Education and Training on OSH Learning

Intellectual Output 1

Occupational Safety and Health Education Teaching Guide

Guidelines for Teacher Education and Training on OSH Learning

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OSH Education Teaching Guide – Guidelines for Teacher Education and Training on OSH Learning

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Acronyms/ Abbreviations

ACT	Autoridade para as Condições do Trabalho
AFTEBI	Associação para a Formação Tecnológica e Profissional da Beira Interior
CPD	Continuing Professional Development
EASINE	European Agency for Special Needs and Inclusive Education
ENETOSH	European Network Education and Training in Occupational Safety and Health
EU	European Union
EU-OSHA	European Agency for Safety and Health at Work
ILO	International Labour Organization
INCDPM	Institutul Naţional de Cercetare – Dezvoltare Pentru Protectia Muncii "Alexandru Darabont"
ISCED	International Standard Classification of Education
ITE	Initial Teacher Education
MOOC	Massive Open Online Course
MS-SM	Mind Safety-Safety Matters!
OE	Open Education
OER	Open Educational Resources
OSH	Occupational Safety and Health
OSH ESF	OSH European Strategic Framework
TUDelft	Technische Universiteit Delft
UA	Universidade de Aveiro
UdG	Universitat de Girona
UNESCO	United Nations Education, Scientific and Cultural Organization
VÚBP	Výzkumný Ústav Bezpečnosti Práce Praha – Occupational Safety Research Institute
WHO	World Health Organization

Introduction

This publication is based on the General Principles of Prevention and aims to contribute to the promotion of a safety culture on workplaces, resulting from the need to reinforce OSH Education through collaboration and shared experiences, providing support for the teachers, and raising students' awareness about Safety and Health issues.

The contents presented in this document express the teamwork developed by a consortium of seven partners from 5 European countries (Czech Republic, Netherlands, Portugal, Romania and Spain) and is an output of the project "Mind Safety – Safety Matters!"

The project "Mind Safety-Safety Matters!" – funded by the Erasmus+ Programme – it is geared to in-service teachers and students ages 14 to 18 (lower/upper secondary levels). This option is supported by the fact that these students belong to an age-group which is concluding their learning cycles in general or vocational education, and are eventually about to enter the labour market.

In order to achieve a certain level of harmonization and to be able to compare each country's educational system, the *International Standard Classification of Education* (ISCED) was used – approved by the UNESCO General Council in 2011, and applied since 2014 [1](Annex 1). Thus, it became possible to take into consideration the differences between the educational systems of each consortium partner.

The OSH realities in the consortium countries are very different despite the common European regulations, directives, conventions and recommendations. The education experiences towards Safety and Health issues in the workplace are very dispersed, and not always integrated in formal educational careers.

The literature review emphasizes the need to support educational professionals by providing educational resources which can be used to address OSH activities in the classroom with their students, or by training resources which enables teachers to actively participate in their own process of learning about OSH.

The European Agency for Safety and Health at Work (EU-OSHA) (2013) in the *OSH and Education: a*

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[1] ISCED is the reference classification for organizing education programmes and is related to qualifications by education levels and fields. The ISCED 2011 classification was adopted by the UNESCO General Conference at its 36th session in November 2011, and has been applied since 2014.

whole-school approach report presents experiences of European countries, pointing out success factors such as active learning methods that enable teachers to use their own experience and knowledge, while favouring this kind of approach with their students in the classroom. As an integral part of the support strategy, the stated report also presents access possibilities to additional educational resources, such as brochures and teaching guides, pedagogical resources and other information materials about OSH.

However, international literature review pointed some directions to the project "Mind Safety – Safety Matters!" design. Those directions are based on the following assumptions:

▪ Teacher training in this context refers not only to undertaking routine tasks, but also to all the activities aimed at preparing education professionals for their job as educators and as reflective practitioners (Schön, 1991; Alarcão, 2003; Herdeiro & Silva, 2008; Barros, 2012).

▪ Supporting teachers as facilitators of learning processes means identifying essential elements of effective training in terms of the quality of training, contents, mode and adequacy of teacher education and training, as a way to develop new competences, exploring previous experiences, knowledge and existing materials.

This *Teaching Guide* will take in account these elements in the design of the training programme and in the educational interventions that have been recognized to be useful and effective.

Just as it is important to provide teachers with adequate education and training in OSH, it is no less important to promote opportunities to access Open Educational Resources (OER)[2], to adapt and to develop new OSH educational material to be used in the classroom by teachers and students. These aspects will be developed in depth in Outputs 2 and 3 of "Mind Safety – Safety Matters!", namely with the "OSH! What a Bright Idea!", a practical Guide for teachers and an interactive and inclusive booklet for students (with audio version).

Purpose and structure

This document was drawn up as a reference guide for the education and training of teachers of diverse subjects, and aims to be a flexible instrument designed to support the development and

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[2] According to UNESCO (2002) definition, Open Educational resources (OER) are "Open Teaching, learning or researching material from the public domain or available under intellectual property license that allow their use, adaptation and free distribution." "OER" is a general concept, related to practice and organizations aimed at eliminating of access-to-education barriers. The OER Resources are part of the open education which was greatly enhanced due to ICT utilization. For further information, please consult the UNESCO website related to this subject: http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/openeducational-resources.

implementation of continuing teacher training in OSH issues.

This document includes an introduction of the main issues concerning OSH and aims to provide a set of pedagogical and methodological orientations about learning processes and contexts, regarding content integration, learning outcomes, assessment and inclusive pedagogical practices. It is also intended to exemplify different ways to address OSH issues, within educational projects and teaching practices, concerning the reflective practice and the lifelong learning acquirements.

This standard is based on two theoretical assumptions:

- The applicable EU and international reference orientation, regarding law and normative framework, on the domain of OSH and Education.

- Theoretical and scientific foundations applied to continuing teacher training and contributions to curricular approaches in OSH topics.

The "OSH Education Teaching Guide" is organized in two distinct parts.
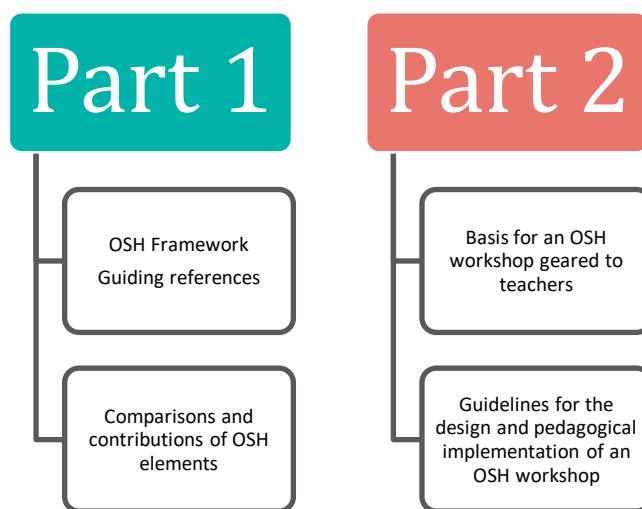
Figure 1 - "OSH Educational Teaching Guide" structure

The first part takes a look at key background and legal references about OSH into Education Systems highlighting existing references and national practices.

Presents the general background based on the international main references about world working conditions and legal framework, justifying reasons behind the need for a prevention culture and OSH promotion within the educational universe. It also highlights some notes about European and National policies and law related to the integration of OSH into Education Systems (in the partner's countries). Furthermore, the promotion of a prevention culture is proposed based on the "whole-

school approach," introducing reflective and collaborative practices and an inclusive perspective of OSH, taking in account a lifelong learning paradigm and critical thinking approach.

Following the project baseline, the first part also provides some guidelines about teacher education and training objectives, and skills related to OSH teaching and learning.

The second part briefly provides base elements to design and implement a training workshop, and explains the training activity structure, the OSH topics, and the 6 general and flexible modules that show how competences and objectives might be integrated into educational systems.

In the global scheme, the structure of the training workshop for OSH learning was especially geared to teachers, educators and trainers. It includes:

- learning objectives,

- examples of activities,

- suggestions of other educational resources,

- assessment criteria,

- strategies to address OSH topics in different curricular areas,

- references for further research and reading.

A common feature in the training modules is the value of the range of teaching skills that teachers already have, as well as the reinforcement of reflective and inclusive practices and the acquisition of lifelong learning skills.

1. The Relevance of Occupational Safety and Health Awareness in Education

1.1. General Background

In the last 30 years, there have been major global transformations in work processes, resulting in the reduction of the workforce in the industry sector, while services have become one of most significant sectors of the economy. According to Bischoff (2008), these transformations have an influence on OSH, more specifically in the new ways and methods of working. These new conditions encompass the emergence of new hazards and risks, many of which are still unknown or there are still no certainties about the danger, as technological advancements and innovations comprise one of the main reasons for these changes. Additionally, new ways to identify, assess and control risks arise, particularly through artificial intelligence technologies.

Work plays an important role in the way individuals structure their lives. The exposure to hazards in the workplace is reflected in the general well-being, health and quality of life of each person.

According to the principles of the United Nations, WHO (World Health Organization) and ILO (International Labour Organization), every citizen in the world has a right to healthy and safe work and to a work environment that enables him or her to live a socially and economically productive life.[3]

Despite the unquestionable suffering and losses caused all around the world by workplace accidents and occupational diseases, the Safety and Health awareness tends to be poor. The ILO has been raising awareness about these subjects since its foundation and, during the 2003 conference *Global Strategy on Occupational Safety and Health*, expressed the need to revert the accident and occupational diseases figures, also recommending to all their national and international partners to develop a preventive approach and a safety culture, fostering integrated actions.

The improvement of work conditions and the reduction of occupational incidents and accidents should be a shared and social responsibility.

In the most developed countries OSH training has become a common element which expresses the protection aimed at the most vulnerable workers, such as apprentices and young workers, specifically to help them face the hazards which they will be exposed to during the activity they are

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[3] Conclusions concerning ILO standards related to activities in the area of occupational Safety and Health – A global strategy (ILO, 2004).

practicing.

Especially on their first jobs, young workers need to be more prepared to face adverse working conditions which may contribute to the lack of Safety and Health. The sooner they are familiar with OSH principles and measures, the more likely they will develop competences related to risk prevention.

In the countries of the "Mind Safety-Safety Matters!" project consortium two different realities go hand in hand. While all member states of the European Union have corresponding laws that implement EU Social Directives, a few of them have some social problems and malpractices, especially lack of prevention culture, child labour and marked gender inequalities and undeclared work.

1.2.   Scientific foundation and guiding frameworks

The UNESCO report Education for the 21st Century Committee (DELORS, 1996, refers an education grounded upon 21st-century pillars: learning to know, to do, to live together and learning to be, presented guidance towards a contextualized education that prepares the student to live in society, amplifying the essential elements of apprenticeship, and applying these contents into day-to-day knowledge. It also reports that education should, therefore, constantly adapt itself to those very societal changes, without neglecting experiences, basic knowledge and the result of human experience (UNESCO, 1996). More recently, the European Union's Recommendation on Key Competences for Lifelong Learning (2008), on the establishment of the European Qualifications Framework for Lifelong Learning (reviewed in 2016-2017), focuses the need to modernize education and training systems, the interrelationship of education, training and employment and the close ties between formal, non-formal and informal learning, also leading to the validation of learning outcomes acquired through experience.

This came to reinforce the purpose of promoting adequate training and support for competences development accessible to people in the EU so that they are prepared for quality jobs and may fulfil their potential as active citizens."[4]

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[4] European Union's Recommendation on Key Competences for Lifelong Learning available at http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006H0962&from=EN .

Comparisons and contributions of OSH elements

The recommendations and educational goals for this century emphasize the growing complexity of being a teacher. Nowadays, schools and teachers are being confronted with multiple tasks, more work and more regulation of their work, aspects that interfere in the teaching activity, calling into question the role of the school and teachers regarding present and future challenges in times of paradoxes, uncertainty and rapid changes (Hargreaves & Lo, 2000).

One of these challenges is being able to play a teaching role far ahead of traditional knowledge transmission models, being innovative, improving their teaching practices and professional development. This means engaging with and performing the school's social function, by incorporating subjects considered socially relevant, such as citizenship education, which includes risk education, health education, road safety, consumer education and sustainable development, among others.

It is assumed that the school exerts enormous influence on the development of the intellectual and social performance of their students, and thus citizenship-focused education is one of the school's main social functions. Being aware of that implies recognizing the extent and complexity of such a task in the education of critical, participative and conscious citizens.

In conformity with the European common educational framework and national policies, the curricula mirror the priority given to the imposed limitations. In the "Mind Safety – Safety Matters!" consortium, the disciplinary programmes and standards offer a wide range of subjects and quite diverse educational contexts, allowing to explore general and specific OSH contents from an educational standpoint.

Although the preparation for the working environment is not the only or the biggest goal attributed to education, its importance in life is unquestionable, the preparation towards citizenship should necessarily consider preparing all students for an active life in an inclusive perspective, taking into account the protection of their health and integrity in all aspects of their lives.

Directive 89/391/CE, regarding the Occupational Risk prevention text, clearly expresses the need to include these subjects in educational curricula. Additionally, there is a group of references and standards in international literature, produced by entities such as ILO, WHO or EU-OSHA, who have been suggesting for several years that the topic of Safety and Health in the workplace cannot be restricted to the workplace and that it must be incorporated into the daily life of children and young people, starting in school and family environments. This means that for an effective reduction of

work-related accidents and occupational diseases, it is simply not enough to address the subject within the labour context. It becomes essential to insert it in the educational system in such a way that it becomes incorporated in a previously organized set of activities and competences, and ensure that these topics are not explored in a purely theoretical way, allowing broader and more significant hands-on approaches, through the adoption of practices, attitudes and values supported and fostered by schools.

With the transposition of Directive 89/391/CE into member-states' domestic laws, the legislation of most Member States reflects those obligations and, in some countries and regions, Occupational Safety and Health in the Education Systems has already been formally integrated, especially in vocational education and training schools and institutes, grammar schools, secondary vocational schools and higher vocational schools.

However, in some cases, the current legislation relating to the system of elementary and secondary levels, especially when talking about elementary/primary and general secondary schools, does not deal with issues covered in OSH topics.

Box 1

Example

Both Portugal and Spain have included OSH education in their National OSH Strategies following the last two European OSH Strategies[5]. However, in the Portuguese Educational System, there is still no general education in OSH. The integration of OSH topics is expressed in transdisciplinary areas in vocational courses, and specialized in one specific subject in Secondary Vocational Courses.

In Spain, Law no. 31/1995 outlines the strategic framework for OSH; however, there are no specific regulations for the OSH educational content integration in a formal and structured way at school level.

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[5] The OSH European Strategic Framework 2014-2020, like the two previous European Strategies, has determined the strategic objectives and respective measures to promote worker Safety and Health, based on the identification of major challenges and problems that still persist.

> **Box 2**
>
> **Example**
>
> Recognizing the relevance of OSH topics, other countries have already done this. This is the case in countries represented in the consortium, such as the Czech Republic, which did not have the necessary legal requirements that would mandate the integration of OSH into curriculums.
>
> Czech Republic began integrating OSH into education by including these subjects, by taking advantage of regulation concerning promotion of workplace conditions in schools for student workers and student protection in the course of educational activities. Currently, this country legal framework has already integrated OSH in national curricula, from elementary level (general basics of occupational Safety and Health) in the lifelong learning perspective.

It is also important to mention that the educational integration of OSH issues also pursues previously assumed commitments, as it is prescribed in article 14 of the 155th convention hosted by ILO in 1981 about Worker Health and Safety, where it is clearly mentioned that the Member States should adopt measures to include Safety and Health in the workplace into formal education.

The response to the European legal initiative didn't match the expected results of the European Commission compared to reported data of each EU member, and currently, the integration of OSH into education is less frequent than other areas and subjects; additionally, the prevention culture in what concerns OSH and the necessary changes are very slowly inserted into society.

The introduction of OSH into Education needs to be based on a comprehensive and integrated perspective considering its contributions to achieve the goals of reducing workplace accidents and occupational diseases.

The discussions about the most adequate curricula in the 21st century stress that it will be necessary to consider the numerous evidences which have revealed that frequently teacher support (in terms of education and training) has not been enough and/or adequate to guarantee the development of an essential set of competences to allow them to deliver OSH topics in an efficient way in different contexts (classroom, educational projects, organizational management) (Survey Report TALIS 2013 *in* OECD, 2014).

Besides an initial consistent and updated education, it is necessary to provide teachers with relevant professional development opportunities that allow them to add some value concerning OSH

learning.

Several EU countries' experiences suggest an interesting and useful link between training in OSH domains and lifelong training that considers the experience of the teachers in their working context and the promotion of Safety and Health in the workplace within the school.

Box 3

Example

On the other hand, regardless of the legal framework, there are examples of countries which followed a whole-school approach.

For instance, a few years ago, a transverse approach of Safety and Health through a project entitled "Using IT at School and at Home," integrated in the Health Promotion Schools' European Network (EU-OSHA, 2011), was adopted in the Netherlands.

Also in Romania, the Safety Management and Risk Assessment tools for Schools initiative (with students and staff training involved) was carried out as a result of a partnership between a technical local university and a secondary school (EU-OSHA, 2013).

Portugal, Spain and the Czech Republic experienced the implementation of national, regional or school projects driven by the creation of a positive attitude towards OSH (safety culture and health promotion).

In these circumstances, an increasing number of preventive approaches and strategies have already been planned and executed for the sake of promoting Safety and Health, following collaborative practices involving schools, teachers, staff and students or other members of the academic community, by creating partnerships, promoting dialogue, sharing practices and responsibilities and finding innovative ways to face the challenge of dealing with a complex social problem involving the broader community.

To this end, the European Agency for Safety and Health at Work prepared an OSH integration approach in the educational system starting from the practical experience and their OSH reports.

Figure 2 represents the integrated perspective of a Safe and Healthy school approach based on several reports and testimonies. This educational approach relies on the transversal character of several curricular and non-curricular domains containing the topics of Safety and Health, bringing

together OSH, Risk Education and Health Promotion concepts with safety school management, which was inspired in a pre-existing integrated approach from the World Health Organization (WHO).

According to EU-OSHA (2013), school activities can contribute toward encouraging and improving individual OSH competences.
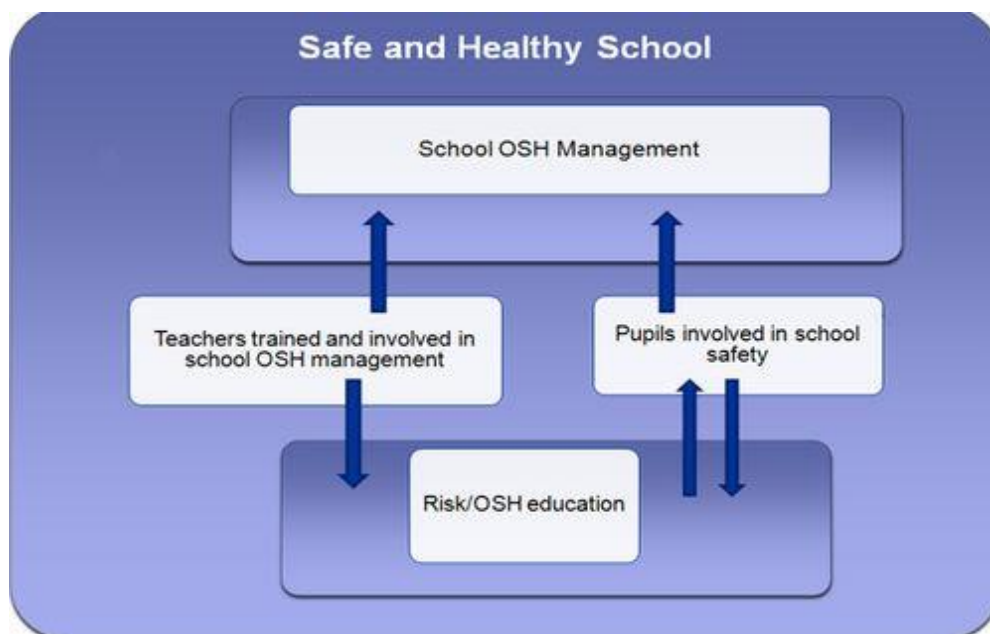
Figure 2 - Whole-school approach to OSH (EU-OSHA, 2013)

This challenge calls for a dialogue aimed at a collaborative culture between the education sector, competent bodies on OSH and other stakeholders.

The communication from the Commission to the European Parliament, the Economic and Social Council and the Council of the Regions regarding the implementation of QE 2014-20, in the education field, states a clear reaffirmation of the importance of increasing awareness of Safety and Health at work beginning at school. The same communication also advises Member States to follow the recommendations on curricular approaches to OSH at the same level as the mental health and well-being and by reference to the successful and documented pilot projects conducted in several Member States.

In this regard, and since this institutional dialogue between the OSH field and the Education sector has not yet produced the desired effects in many European countries, it's important to strengthen the dissemination and joint reflection between speakers from the fields of education and other stakeholders concerning the impacts of the experiences and best practices already identified for

gradual OSH integration in education, understanding OSH education as a way of promoting a culture of prevention among children and young people so they can live and work safely in the future.

The OSH ESF (OSH European Strategic Framework) also identifies prior intervention domains which contain effective measures for the most vulnerable audiences such as young people and the elderly, migrants and workers with disabilities or the disabled. On the other hand, teaching and learning in inclusive settings is a priority supported by the European Agency for Special Needs and Inclusive Education (EASNIE). In this perspective, the dimensions of education for OSH in the context of school values and citizenship confers an important role in preparing the active life of young people, considering the difference as a resource and a value for education and challenge educators, teachers' makers and employers to cooperate and take responsibility for the facilitation process and access to employment and learning throughout life to all who wish to join the active life.

Under this scenario, inclusive approaches must also be considered in OSH strategies in most European countries, in which students with special needs are attending regular schools (EASNIE, 2014).

As stated in the UNESCO Salamanca Statement (1994), the international community must implement practical and strategic inclusive-driven changes aiming to adopt a new framework for action, whose main guiding principle is that ordinary schools should accommodate all children, regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This "Education for all" commitment recognizes the need for and urgency of providing education for all children, young people and adults 'within the regular education system.' (UNESCO, 1994).

This new scenario is mainly characterized by 'inclusion' practices that replace the 'integration' and 'segregation' ones: in an inclusion set, students with special needs attend regular schools, benefiting from being in a general education classroom, both academically and socially. This concept of inclusion is based on the idea that students with disabilities should not be segregated or integrated in educational homes or residential/rehabilitation centres, but included in mainstream schools and classrooms with their typically developing/non-disabled peers. In these inclusive schools, typically developing students are in classes alongside students that need specific adaptations, such as individual education plans and assistive technologies that can help them augment, bypass or compensate their impairments (Lewis 1993). Indeed, digital-based solutions can help remove the difference between integration and inclusion and create accessible, barrier-free and inclusive learning scenarios (EASNIE, 2013).

In this context, it is of utmost importance to train teachers, enabling them to better understand the

relevance of developing and using adapted didactic material and specific assistive technologies (Ribeiro et al. 2009; 2011; EASNIE, 2015). Teachers must be trained to deeply understand the challenge of accommodating different learner profiles and the role that digital-based solutions can have in this process, for both disabled students and regular ones: most of these solutions can benefit students with severe or mild sensory and/or cognitive impairments, but also students with temporary conditions and students that are only tired or unmotivated (Bergman & Johnson, 1995; UNESCO, 2013; UNESCO, 2014).

In this framework, the "Mind Safety – Safety Matters!" project proposes to further improve knowledge on an inclusive perspective of learning OSH, also considering teachers' needs in what regards training activities and classroom support resources, specifically adapted to students with special needs.

It is 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 each workshop training will take place, specifically in what concerns students' needs, teachers' previous experience and other stakeholders' 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 what concerns the interactions with physicians, social workers, therapists and, most importantly, their families.

Keeping the whole-school perspective for the introduction of OSH into education, it is necessary to consider other dimensions and the life contexts of all individuals that call for learning. The implementation of a comprehensive integrated approach of OSH into education must contribute toward helping the students, teachers, and school staff develop general and specific skills on OSH.

1.3. Making of OSH part of the educational system – proposal for an inclusive and collaborative approach

The proposition for a collaborative and inclusive approach for OSH integration into the educational system means going beyond the traditional school role. The approach presented here (Figure 3) is based on the paradigm of inclusive and collaborative approach of prevention culture and safety culture, understood as the maintenance of health throughout life, and as a part of a skills-for-life and

lifelong-based learning programme.[6]

Considering previous EU-OSHA mainstreaming and integrated approaches to OSH integration into the educational system combined with the European Lifelong Guidance Network (2014) assumptions, the "OSH Education Teaching Guide" focuses on teacher competences development, attending students' learning-specific needs, and collaborative practices which will promote the development of a culture of prevention.
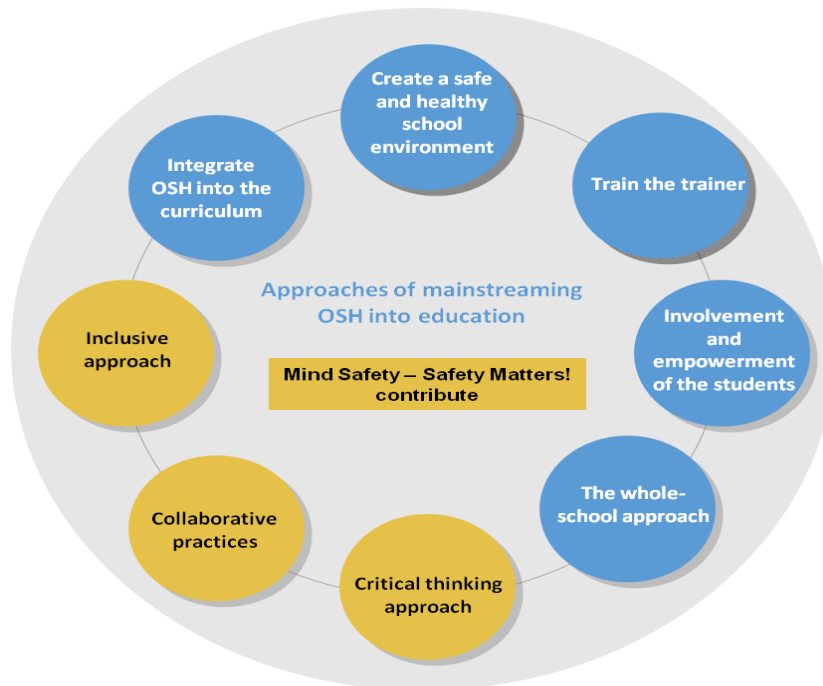
Figure 3 - Approaches of mainstreaming OSH into education – Mind Safety- Safety Matters! contribution
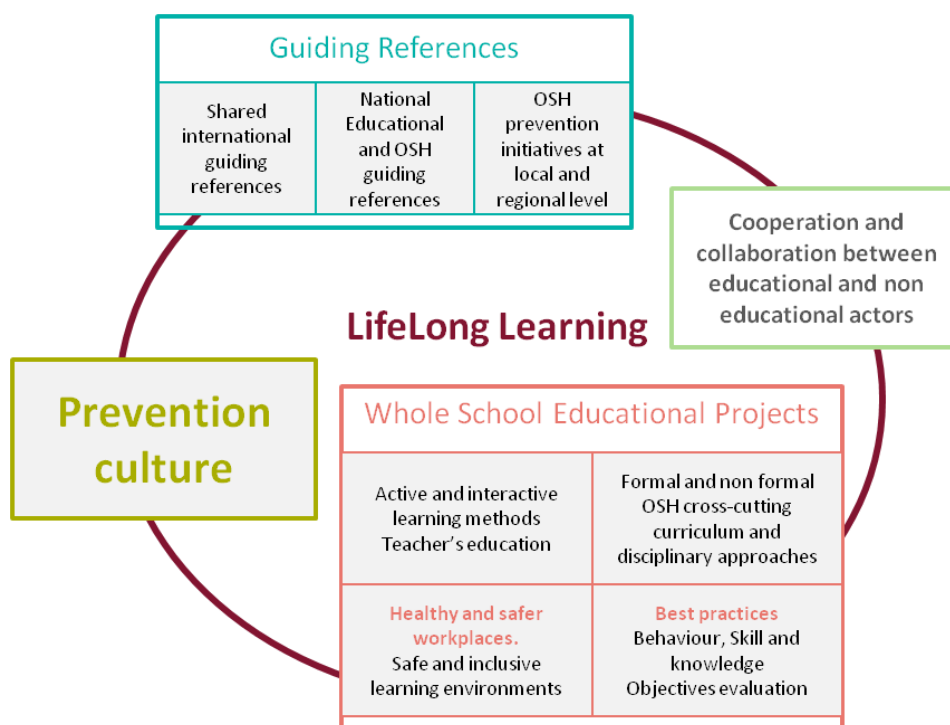
Figure 4 - Whole-School approach intervention areas

This proposal aims to be broader and more flexible than a closed perspective. It was adapted from previous EU-OSHA initiatives, and its implementation and efficiency rely first of all, on the ability to promote dialogue and synergies between the different educational and non-educational players. All the players involved must be encouraged to favour collaborative practices and respond to diversity by using and designing inclusive solutions for different contexts and needs aimed at promoting diversified competences through varied educational strategies.

1.4. OSH in the context of teacher education/training

Generally speaking, teacher education and training experiences related to OSH are already performed in all partner countries of the "Mind Safety – Safety Matters!" project. However, not all of them are formalized or certified by the responsible bodies in national certification and accreditation systems, at least with the purpose and in the perspective and dimensions contained in this referential.

The data existing in the consulted sources indicate that the available courses, continuing training for delivering OSH or conducting OSH learning activities for their students, covers a very small number of

teachers, with a topic that often appears very diluted in the continuing training plans and more incipient or non-existent in the curricula of initial teacher training.

Although some countries have these issues often present in the respective curricula in a direct way with Safety and Health concepts in some subject programmes, such as chemistry, visual arts and technology, some other countries don't have OSH issues in formal education or teacher training. Issues such as risk management and accident prevention are rarely treated by taking in perspective work contexts that could promote reflective practice of the teachers, and new competences development.

According to Carré et al. (2011), the most appropriate response to the rapid technological and social changes lies in the potential of the self-directed learning paradigm and the role of agency, implying the development of lifelong learning in/and through professional situations in the context a self-learning organization characterized by open training modes, encouraging active self-training.

All these challenges may contribute toward increasing opportunities for education throughout life in all its dimensions, places or forms. In the continuing vocational training area, the traditional dichotomy between the place of "learning" and the place of "doing" tends to be counteracted by a strong proximity of training situations in relation to work situations. Classic education addressed to individual training for the "job" is ineffective when the need to produce organizational changes is at stake (Canário, 1999).

New ways of thinking and organizing work processes demand new types of competences in the dimensions of knowledge, skills, attitudes and values, such as teamwork, thinking to scale the organization as a whole, and act strategically by anticipating reasoning (Canário, 1999).

The notion of competences here is understood as a set of knowledge, skills and attitudes, being defined as "knowledge in action" (Ministério da Educação, 2001; Zabala & Arnau, 2007; Vieira & Tenreiro-Vieira, 2005; Assunção & Goulart, 2016). Merging the American with the French school framework, to the previous definition of competences one must add the idea that competence nowadays also means the "people's ability to learn and adapt, knowing how to mobilize their resources to act in a professional context" (Assunção & Goulart, 2016, pp. 188-189).

The dynamic character of the concept of competences also relates to the various tasks of a certain job, stressing the permanent process of developing professional competences in changing working context (Zarifian, 1999 as cited in Sá & Paixão, 2013). In accordance with Le Boterf, competences are a source of social value to the individual and an economic value to the organization (as cited in Fleury

& Fleury, 2001).

At this point, it is important to clarify the notion of knowledge. Following Assunção and Goulart's (2016) definition, knowledge is an element of skill which constitutes "the set of information," being associated with the "experience, the intuition and the values" (p. 188).

1.5. Principles for effective teacher education and training in OSH learning

As suggested by some authors (Cochran-Smith, 2004, as cited by Flores, 2014), teaching includes a technical dimension, but also contains an "intellectual, cultural and contextual activity that requires competent decisions on how to address the subjects to be taught, how to apply teaching skills, how to develop human relationships and how to generate and use knowledge. (..) So teacher training should focus not only on what teachers should know and be able to do, but also on 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 teacher training for the teaching of OSH and essentially promote research skills, reflection and sharing practices or collaboration, including the ethical, cultural and political dimensions, so that training can be a space of transformation (Korthagen, Loughran & Russell, 2006).

The development of guidelines for teacher education/training in OSH matters, as in others, depends not only on identifying content or daily practice on teaching activity. It is also necessary to consider that teacher education is a process for formalizing experiences. Those experiences reflect both personal and professional ones, materialized in 're'' construction of knowledge and skills and, once applied to the school context, have the potential to change implementation and innovation, not only in the teaching practice, reflecting the learning of their students, but also as agents of change belonging to a learning organization.

In the context of continuing teacher training, previous personal experiences and knowledge regarding Safety and Health at work in their professional context, i.e., school, are an important training resource.

So, it is natural that as students' learning needs, school context and its characteristics are the subject of special attention.

This training programme is based on a set of assumptions:

- Competences
- Students' learning needs
- Reflective and collaborative teaching practices
- Critical thinking
- Research in reliable available sources
- Evidence-based and data-driven teaching to improve the impact
- Supported and fully integrated into the culture and operations of the educative system and main players of the educational community
- Individual and collective responsibility at different levels of the education system

1.6. General objectives of the OSH education and training programme for teachers

The present training programme proposal considers the conclusions of EU-OSHA reported experiences (2011) and discussion around training strategies with other stakeholders, in particular with educational authorities and teacher training institutions. It was preceded by a clear outline of learning objectives that should guide the training and focuses on the following purposes:

▶ To facilitate the reconstruction and development of knowledge, skills, attitudes and values regarding workplace safety awareness within the school context;

▶ To promote OSH integration in their teaching practice.

General objectives of the training programme:

- Promote Safety and Health awareness
- Improve learning in OSH issues in a collaborative way
- Increase a positive and inclusive safety culture at school
- Stimulate change in teaching practices by promoting collaborative practices regarding an inclusive OSH approach.

1.7.   What skills should teachers have in order to teach OSH?

Mastering knowledge, skills and attitudes and values outlined by Roldão (2009) plays an important role in education and its curricula.

Teacher professional profile includes core competences inherent to teaching, such as pedagogical, communication, relationship, leadership; it is assumed they already have such competences. They already know how to teach and have developed teaching competences.

What the "Mind Safety - Safety Matters!" project attempts to do is capitalize on all that knowledge when teaching, for example, on the hazards related to some activities and environments, how injuries and diseases happen, or what we can do to prevent risks and control hazards to avoid repeating those accidents and occupational diseases.

When we think about the role of school for social and productive life of citizens in a profession or career, competences play a very important role in education and its curricula. It is competences translated into qualifications for a function that future workers learn to mobilize their know-how, knowledge, skills, attitudes and values for a professional activity. Here, the meaning of competences is reflected in the transfer of knowledge, know-how and the ability to deal with complex situations of their daily lives according to different contexts, including knowledge, skills, attitudes and values (European Commission, 2013).

This should also apply to work settings where exposure to occupational hazard conditions requires that current and future workers 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 acquiring competences, which also involves their assessment.

Generally, in the consortium countries, the competences to access and to exercise the teaching profession, for different levels of education are set centrally, and are outlined in specific regulations in the respective professional profiles of primary and/or secondary school teachers and early childhood educators. A European report published in 2010 on these issues states that there is a very wide range of general skills related to teaching content, teaching competences (Perrenoud, 2000) and to the integration of theory and practice (Piesenen & Viläjrvi, 2010, as cited by Flores, 2014). "The same report identifies a set of skills as central in teacher training: i) knowledge of the subject to be taught; ii) knowledge of pedagogy; iii) integration of theory and practice; iv) cooperation and

collaboration; v) self-assessment; vi) mobility; vii) dynamics creativity and leadership; viii) lifelong learning."

The thematic Working Group "Teacher Professional Development" asked member states to define the role of teacher educators through competence-based criteria, and then translated it into the *Supporting Teacher Educators for better learning outcomes* report from European Commission's (2013).

In the communication, teacher educator competences are classified as follows:

- First-order competences - concern the knowledge base about schooling and teaching that teacher educators convey to student teachers – as related to subjects or disciplines;

- Second-order competences - concern the knowledge base about how teachers learn and how they become skilful teachers. They focus on teachers as adult learners, the related pedagogy, and organizational knowledge about the workplaces of students and teachers (European Commission, (2013, p. 15) Empowering Teachers to Promote Inclusive Education.

- Key competence areas, which include 'knowledge development, research and critical thinking competences;' 'system competences (i.e., managing the complexity of teacher education activities, roles and relationships);' 'transverse competences;' 'leadership competences (inspiring teachers and colleagues; coping with ambiguity and uncertainty);' and 'competences in collaborating, communicating and making connections with other areas' (ibid.).

In this topic, there is a list of generic and situational competences that can be developed from previous OSH knowledge and arising from teachers' experience of their own working conditions, in the teaching practice within 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' competences for learning to learn and teach OSH within the school context. (Annex 2. -3-dimensional skills table- related to OSH teaching and learning).

Knowledge Domain:

- Occupational Health and Safety concepts contextualized with the curricular subject, such as: 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 risk prevention;

- Risk assessment;

- Best practice in safety procedures;

- Domestic Workplace Health and Safety legislation: legal basis for employers/employees.

Skills Domain:

- Clarify definitions of workplace, hazard and risk;

- Promote Workplace Health and Safety learning in curricular units in an integrated vision

- Develop different pedagogical strategies, adjusted to the specific characteristic of students in the OSH domain;

- Illustrate the general principles of occupational risk prevention;

- Explain the role individual and organizational factors play in risk prevention;

- Promote critical and creative thinking to discuss Workplace Health and Safety issues;

- Integrate digital technologies and other learning resources in a safer, inclusive and adapted way, considering specific student characteristics.

Attitude/Values Domain:

- Mutual respect and cooperation;

- Initiative and proactivity in the identification and communication of hazardous

conditions;

- Self-awareness and responsibility towards hazard situations;
- Willingness to critically think about Workplace Health and Safety issues;
- Active and collaborative participation in the development of solutions in occupational health and safety problems.

1.8.   Training Modules and OSH Topics

Risks are always present in every area of our lives. Family, school teachers, the educational community and society as a whole have a role to play in promoting a culture of Workplace Safety and Health. From the standpoint of accident prevention, change behaviour is a complex and lengthy process.

Where should we begin?

After the publication of the *Global Strategy on Occupational Safety and Health by the ILO* (2004), priorities were identified by the European Commission regarding the areas of research and intervention to be followed by European and National Strategies on OSH.

In order to stimulate research of OSH concepts and develop further knowledge about different risks in different work contexts, we suggest the following OSH topics regarding what teachers need to know so as to teach OSH contents and what their students need to know:

- Basic OSH concepts: Work; safety, occupational health; prevention; hazard and risk;
- Safety and Health legal and technical references;
- General Prevention Principles;
- What students need to know about OSH (General and specific concepts, such as safety signs, collective and personal protection equipment, chemical, physical, biological hazards, work processes and ergonomic conditions, among others).

Module List   27

The programme structure is organized according to the competences that teachers should acquire and develop as the content blocks of each module. The module list has taken into account training pedagogical, organizational, practice and ethics dimensions. These dimensions are present in the modules and in the subjects that will be worked throughout the training sessions, as follows:

Module 1. Occupational Safety and Health basics

Module 2. Occupational Accidents and Diseases

Module 3. Workplace Hazards

Module 4. Safety Management and responsibilities

Module 5. Safety and Health in the school context

Module 6. Teacher Intervention Project

2. Teacher Training Programme for OSH Learning

2.1 Teachers: Training Programme for OSH Learning - design and implementation

It is common for the integration of new theme-based and respective areas in teachers' education and training programmes to be centralized and regulated by central bodies.

Even in teachers' education/training programmes outlined locally or by the schools and teachers' education and training institutions, sometimes it is not given the importance to the problems related to teachers' job conditions.

Education policies, though, need to be more flexible and suited to teachers' education and training programmes, and to consider the diversity of school contexts and dimensions, such as social, economic, administrative, pedagogical and managerial.

Teachers training for OSH learning may use a variety of approaches such as Health Education, which includes three core dimensions to achieve their goal: health promotion schools, risk education and safe learning environment (as previously depicted here, in fig.4).

The main purpose of the training programme is to promote the development of new competences among teachers of any scientific area, empowering them to design and deliver OSH contents while promoting a safe working and learning environment.

What type of training?

Regardless of the type of training modes, in-service training[7] must be carefully planned and designed to be suitable to target attendants' reality. For instance, the identification of educators/trainers to attend/foster, the duration and schedule and the number of attendants. It is important to consider the following questions:

I.   Why is the Teacher Training for the OSH Learning programme important?

II.   How can it promote the acquisition of new competences?

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[7] In-service training takes place after a teacher completes their pre-service education and starts teaching.

III.   What are the expected outcomes?

IV.   How can impact be measured?

Planning and designing in-service training

The decision to propose an example of a training programme following a workshop mode is justified, first of all, for being a flexible and adaptable model, suited to the diversity of the educational contexts in every country in the consortium. Secondly, a workshop can enable teachers to come in contact with different realities and work contexts that will, in the short term, lead to a transformation.

Moreover, this example considers the students' and teachers' own experiences and knowledge in collaborative learning processes.

Assumptions for the workshop proposal for OSH learning:

▶ Within the context of Education and Citizenship, the school has educative and socializing functions, being a health promoter and a vehicle for implementing a positive safety culture. Safer and healthier schools have higher levels of performance and are more productive lifelong.

▶ The global learning of OSH is improved where members of the community are actively involved in Safety and Health and contribute toward detecting and solving problems (Alves, 2014).

▶ Teachers are reflective practitioners, being active participants in producing knowledge. The focus and quality of teacher reflection must be clearly prioritized in order to improve teacher practices and positively impact their professional development. Collaborative practices that favour the promotion of critical thinking and the use of ICT are approaches and strategies suited to contemporary educational/training challenges (Wegerif & Dawes, 2004; Zeichner, 2008; Vieira, Tenreiro-Vieira & Martins, 2011; Moolenaar, 2012).

The workshop training combines "inside and outside school" training, observation, analysis and peer discussion about other teachers' practice and work context in a collaborative way that allows:

▪ Sharing experiences;

- Sharing problems;

- Sharing resources;

- Searching for solutions;

- Testing and experimentation;

- Reflective practices;

- Fostering critical thinking.

Taking into account the purpose of the training programme, the suggested duration for this workshop runs from a minimum of 20 to a maximum 50 consecutive hours, according to a mixed system or blended-learning in which the number of hours can be distributed in: a) Regular class group sessions; b) Independent work (tutorial, distance learning).

Blended learning combines traditional face-to-face classes with online sessions, allowing active and collaborative learning experiences (Graham, 2013; Jong et al., 2014).

The combination of the professional development benefits with learning outcomes resulting from the regular sessions and from the independent work must be reflected in the materials production and in the final reflection report of each attendee.

Time management for the activity proposals and content delivered in each module should be agreed upon with attendees, according to their starting level, learning styles and the assessment criteria.

2.2   An Inclusive Approach

Different dimensions must be addressed in order to allow the validation of the training, considering the current educational scenario, characterized by a wide variety of student profiles and needs (UNESCO, 1994; EASNIE, 2014). As stated in a recent report of the European Agency for Special Needs and Inclusive Education, efforts must be made to empower teachers for inclusive practice (EASNIE, 2015).
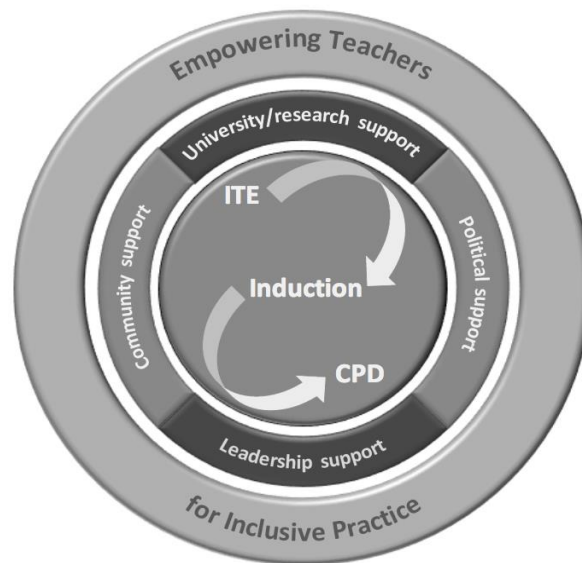
Figure 5 - "Empowering teachers to promote inclusive education: Conceptual Framework and Methodology" European Agency for Special Needs and Inclusive Education, 2015, p. 7.

These efforts towards developing the empowerment of teachers for Inclusive Practice can only be successful with proper initial teacher education (ITE), which include not only organizational and content issues, but also school practice and evidence-based pedagogy and, most importantly, the recruitment of teachers with skills that can act as triggers for developing a prevention culture, namely in what concerns the connection to local communities.

Continuing professional development (CPD) is also vital, as it also involves local leaders and external experts, and the professionalization of teacher educators (in higher education institutions, local authorities/municipalities and schools). To support this continuous empowerment, one must recognize the importance of universities/research groups, community, leaders and policies (EASNIE, 2015).

When putting these approaches into practice, and particularly regarding the approach presented in this document, a different set of strategies can be used to expand teacher awareness to the challenges of inclusive education: diagnose and evaluate the different learning profiles; identify specific health conditions that can prevent students from comfortably accessing and using resources and materials; identify students with specific sensory impairments (namely visual ones); select and adapt aids and assistive technology-based solutions following international accessibility guidelines; build life- and context-based activities enabling all students, despite their specific conditions, to benefit from the training courses; validate these activities in combination with students' contexts (school level, community level and family level).

2.3 Critical thinking and collaborative approach and relevant educational/training strategies

The purposes of jointly improving teachers' critical thinking skills and willingness by promoting reflection and collaborative practices during the training sessions are considered the programme's main training strategies.

Critical thinking can be defined as "reasonable reflective thinking focused on deciding what to believe or do," emphasizing "reflection, reasonableness (roughly interpreted as rationality), and decision-making (about belief and action)" (Ennis, 1991, p.6). In contemporary societies, the development of critical thinking skills becomes an educational imperative, and it is argued that this type of thinking has to be "explicit, systematic and promoted within the context of different subjects at all levels of education" (Vieira, Tenreiro-Vieira & Martins, 2011, p. 44).

A learning environment capable of encouraging the development of critical thinking considers a set of characteristics that concern both teachers and students, such as: 1) stimulating students' interest; 2) creating meaningful discussion; 3) exposure to the thoughts and views of others; and 4) fostering a supportive and trusting atmosphere (Meyers, 1986, as cited by Forrester, 2008).

Reflective practice, understood as a conscious process that improves a critical type of thinking (Cirocco, 2007), is a key element not only for self-evaluation allowing educators to continuously look for ways to strengthen their educational efforts, but also to enable professional development. According to Lee (2005), the main goal of reflective teacher education 'is to develop teachers' reasoning about why they employ certain instructional strategies and how they can improve their teaching so as to have a positive effect on students" (p. 699). Ultimately, reflective thinking here is understood as a skill, a meaning-making cyclic process to improve practice through a systematic, precise and disciplined way of thinking (Lee, 2005). In this context, we believe that providing constructive feedback, including *feedback among peers* (Silva, 2011), in order to improve the discussion and reflection practice, is of utmost importance. Additionally, reflection as a social practice to be developed within professional communities (of teachers) is considered a valuable and effective strategy for fostering this type of thinking and acting (Zeichner, 2008; Silva, 2011).

Reflective thinking positively affects collaborative practices of teachers due to the adjustment of their actions pursuing optimal results, while being capable of learning from their collaborative experience and improving on it (James & Jule, 2005; Hindin et al, 2007; Canha & Alarcão, 2008). According to Stewart, collaboration is a process that engages people from different contexts and

professional experiences that work jointly, ensuring mutual benefits (1997, as cited in Santos, 2013).

Finally, it must be underlined that the role of technology is not only related to an inclusive approach of OSH topics, but it also acts as a facilitator and developer of teachers' collaborative practices (Sullivan, 1994; Pifarré & Staarman, 2011; Moolenaar, 2012; Ottenbreit-Leftwich et al., 2012).

Web 2.0 technologies, in particular the use of wikis, are of great educational relevance offering potential for collaborative learning through, for instance, the creation of a shared digital artefact able to monitor the different phases of collaborative project-based learning (i.e., designing, planning and documenting) (Pifarré & Staarman, 2011). Moreover, recent research on social network theory shows that networks of teachers have positive impacts which are reflected in teacher relationships for teaching, learning and educational change (Moolenaar, 2012).

It should also be mentioned that the use of web 2.2 technologies offers the possibility of creating dialogic spaces where people can think and act together, developing critical thinking skills by using and improving explicit reasoning and knowledge construction in on-line collaborative activities (Wegerif & Dawes, 2004; Pifarré and Staarman, 2011).

2.4   Resources

The school/training facilities, ICT equipment and other resources are meant to be used throughout the workshop, like textbooks, visuals, technology (mainly web 2.0-based technology, such as online tools for creating, editing, collaborating and sharing), outputs from the work with students in the class, or any other supplementary materials either authentic or specifically designed for educational reasons (in physical or digital support), adapted to students' needs and interests, to competences to be developed and to the interaction between practical and theoretical elements.

Also recommended is the use of diversified documentation resources, such as teacher journals, class observation records, storytelling, audio/video records, etc.,

2.5 Evaluation and assessment

2.5.1 Learning assessment

Assessment is an interactive process between learners and the evaluator used to evaluate, measure, and document learning progress, and competences acquisition.

In any training, the main thing is to make sure the learning processes could bring added value for learners and, because of that, it is important to monitor and measure the success of a programme or course in achieving the intended learning outcomes.

In the learning assessment, the criteria and methodologies are related to the specific characteristics of the training session as well as the training programme. In a simple formulation, assessment provides information on how the learning process was successful, related to the training objectives and goals.

Assessment Criteria

The assessment will embrace active participation in the proposed activities, which can include the creation of a learning log, or peer cooperation and collaboration, and also an individual final learning reflection report.

The individual final learning reflection report must illustrate OSH approaches on the planned activities in each teacher practice or in interdisciplinary collaborative projects with the correct application of concepts, ideas, principles, knowledge and skills learned in the training context.

Teachers will have to elaborate on experiences developed with the students in the classroom, in a final self-reflection about the training programme and lessons learned.

The discussion strategies/debates are of utmost importance for the evaluation. These are the suggested assessment topics; however, they should be adapted depending on each specific context.

Attendance and Active participation in the discussion and proposed activities	Peer cooperation and collaboration
Documents and other materials, production and application	Critical reflexion

Figure 6 - Suggested assessment topics

The assessment criteria and respective weightings are meant to be set by the person responsible for the training programme, according to its objectives and following domestic educational standards. It should be communicated to the attendees at the beginning of the sessions.

It is also recommended that during the training, the teachers' educator reserve some time for the follow-up, to answer questions/doubts and/or to provide orientations to participating teachers.

2.5.2   Training assessment and follow-up

The course assessment can use some tools, such as questionnaires, that must consider both formal and structural aspects of the course, namely:

- relevance and content quality;

- justifications of any changes to the initial setup, resources and/or human support;

- course organization: trainer quality, balance between theoretical and practical contents

- learning impacts: learning expectations and professional development impacts.

It is recommended that, after the end of the training/workshop, the school/training institution or the trainer/teacher collect information about the programme operation and the learning lessons retained during the training programme. This information should appear in the final report and it should be shared with the training attendees so that they can reflect about their learning paths and outcomes. At the same time, this information will contribute toward promoting the integration of theoretical and practical contents in future actions/sessions.

2.6   Non-formal training opportunities – some examples

Teachers use different ways to foster their professional development, through a variety of contexts, techniques and dynamics, such as:

a.   Multidisciplinary teams (disciplinary departments, class councils, year or cycle-cross teams);

b.   Case discussion and training needs;

c.   Observation of students' work and performance;

d.   Groups/study circles;

e.   Self-learning - Conferences, internal and external workshops;

f.   Structured/ Guided reading;

g.   Practices/study visits;

h.   Online learning (MOOC, collaborative platforms) and mixed (combining distance learning, online and classroom training, for example, in workshops);

i.   Learning communities / communities of practice;

j.   Informal Meetings;

k.   Peer observation;

l.   Research work;

m. Security teams and OSH management.

OSH Open Educational Resources (OER), examples for learning and teaching:

OER were already mentioned as important resources and bridges between formal and non-formal

learning.

International organizations such as ILO, EU-OSHA, ENETOSH, NAPO consortium or Fundacentro and their websites are just a few examples where teachers can find OSH educational resources meant to facilitate OSH learning and available for trainers, teachers, and educators. These resources are on specific topics such as school safety management, and they can include, for instance, articles, factsheets, videos, brochures and info graphics.

More useful information and other pedagogical tools related to OSH can be found in the suggested sources at the end of each module and at the end of the "Teaching Guide."

2.7   Pre-requisites and training participation conditions

This workshop is geared to regular in-service teachers who teach students ages 14 to 18. However, other teachers, despite their scientific area or teaching level, can also participate in order to achieve professional development, or, if they are interested in acquiring or enhancing their knowledge and skills about OSH, or innovate their practices.

No previous OSH education is required.

2.8   Teacher Educators/ Trainer Profile

For an effective implementation of the present Workshop, it is essential that teacher educators/trainers be well acquainted with safety school reality and teachers' professional context. Besides the core competences that a professional teacher educator/trainer should possess, in every organization, educational practice, deontological/ethical and personal dimensions, it is also very important to have the necessary competences in general OSH subjects. But above all, they must be able to adapt the sessions, methods, and strategies to address different group needs and different ways of learning.

2.9 Workshop structure towards a Teacher Training Programme for learning OSH

"It's not what you know, it's how you learn'' [8]

The training programme structure as described below is a sample scheme of how to organize the different key elements of the training activities. It focuses on allowing participants to discuss, share their diverse practices and reflect on them. Even if in different contexts from the "Mind Safety-Safety Matters!" project, the idea was mainly to provide some key ideas and activities to reconstruct competences that can always be helpful and useful to educators and teachers, to teach and learn OSH as outlined before.

In the training programme sample presented here, there is a learning competence (learning to learn) which is directly linked to this type of training – *workshop* -, because competences are not intended to be a definitive statement of knowledge, attitudes and values required by teachers. In this model, every educator has the opportunity to (and must) discuss, test and share experiences.

The main idea behind this option was also to stimulate questioning and problem solving that can be supported by a set of previously composed information, which will facilitate autonomous learning, and significant interactions. Taking step by step, from the exposed problem to the reflexion of what was learned and how can it be used as resource to rebuild teachers' skills and, finally, to improve the desirable relation between theory and practice.

Facing the diversity of subjects related to OSH body of knowledge, the choice of the most relevant topics is crucial. The designation of each module refers to selected themes that form the background of learning activities and are focused on teachers' actual or likely experiences, and, of course, centred on what students need to learn about OSH. This means that the training topics are combined with the topics and educational contents of "OSH – What a bright idea!"

The training programme is meant to be workshop-like and it is organized in a matrix oriented by guiding questions following a modular list of generic topics.

In each module of the workshop, some guiding questions are asked, related to learning objectives, descriptors, more specific topics, terms and finally suggested activities to be held up to facilitate interactions and reflect on what was experienced.

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[8] Griffin, P. (2013). Old school or new school? Teach future skills and traditional subjects together. *The Conversation* Retrieved from http://theconversation.com/old-school-or-new-school-teach-future-skills-and-traditional-subjects-together-18179.

As mentioned above, the time spent in each module must be adapted to the workshop goals, and total duration respecting the group's heterogeneity and the balance between theory and practice.

Figure 7 - Workshop basic elements

The **Guiding Questions** are the main scenario. These questions will conduct the discussion and the teacher's reflection around the general topic. This component represents the module's challenge. The possible answers, or the resolution of a problem, must be found and discussed, through a set of previously composed information, to motivate and facilitate the learning process.

The purpose of the **Key Ideas** is to organize the information and illustrate the line of logical reasoning that links the questions asked and seemingly unrelated facts or concepts.

The **Descriptors** indicate the achievement of the learning outcomes that can be observed and described, meaning what is expected of the training participants at each level of performance for a particular criterion.

Topics and content – this component integrates the concepts, issues and topics to be presented and discussed.

The **Suggested Strategies and Activities** presented are examples of strategies and activities to be addressed, in order to accomplish the learning objectives and steps to facilitate competences development. The practical application of these activities is not compulsory since they are meant to

be orientations, allowing trainers to make their own training session plan.

We can never overemphasize the flexible character of this workshop, which can always be adapted, updated and/or improved.

A matrix that presents the range of knowledge, skills and attitudes and values which are part of the key OSH competences, was integrated in the "Teaching Guide" (Annex II).

MODULE **1**

OCCUPATIONAL SAFETY AND HEALTH BASICS

Objectives: To provide a space for self-introduction as well as encourage participants to reflect on their motives and their expectations
Outline the importance of Safety Education and Awareness of Workplace Hazards at school
Clarify common understanding on OSH basic concepts

GUIDING QUESTIONS

Why should everyone be concerned about occupational safety and health?

What legal rights do workers have to be able to work safely?

KEY IDEAS

In the global world, the fast technological advances are having a major impact on many aspects of our lives, including our workplace conditions.

Work has fully recognized benefits and advantages for the individual and for society. Nevertheless, it can also be the cause of worker injuries, sickness or even on-the-job fatalities.

Workers need to know how professional risks can affect their lives.

Work in a safe and healthy way is a human right that should be learned as early as possible.

As new workers, young people are likely to be inexperienced and unfamiliar with many tasks required of them, so they need to develop health and safety competences.

TOPICS/CONCEPTS

Globalization and Changing labour markets

Facts on young workers within the national context

Emerging occupational risks in different types of activities

Specific Health and Safety Learning Expectations

Safety Education and Awareness of Workplace

DESCRIPTORS

- Understand the purpose of the workshop, and objectives of the module;
- Define work and workplace;
- Define and identify common workplace hazards;
- List different hazardous situations and conditions regarding occupational activities;
- Have the perception of emerging risks in workplaces, due to technological and societal changes;
- Discuss basic duties and rights at work;
- Compare different OSH perspectives and evolution over time;
- Identify the relation between OSH awareness and young ages, to improve workplace safety and health.

Hazards at school
Basic work rights
Work
Workplace
Hazard
Prevention
Safety

SUGGESTED STRATEGIES AND ACTIVITIES

- Introduction (Break-the-ice group activity).
- OSH Questionnaire (In order to find out the variety of participants' learning styles and previous knowledge).
- Open dialogue - Sharing experiences and previous knowledge.
- "What legal rights do workers have for a safe job?"- Analysis of information (news, pictures/video, other related documentation about legal rights of young workers – discussion and recording of conclusions).
- Storytelling- Narratives of one's own experiences.
- Teacher/learning Journal record sharing.

Suggested sources to this module:

http://www.hsa.ie/eng/Education/Teacher_Support_and_Classroom_Resources/Choose_Safety_Programme_-_Senior_Cycle/

MIND SAFETY *safety matters!*

MODULE **2** **WORK ACCIDENTS AND OCCUPATIONAL DISEASES**	**Objective:** Recognize that Work accidents and Occupational diseases are predictable and can be prevented Increase self-awareness and accountability regarding hazard situations

GUIDING QUESTIONS

How do work accidents and occupational diseases happen and how can we prevent them?

KEY IDEAS

The high costs, suffering, and losses caused by deaths and work-related accident victims are unacceptable. From the standpoint of accident prevention, risk recognition and knowing how to act while exposed to bad work conditions and practices, it's a lifelong learning process that should begin since childhood and through adolescence.

Work-related accidents have an immediate visibility, as opposed to occupational diseases, which can take up to 30 years to be identified and medically recognized. Communicating dangerous conditions and situations and reporting unsafe practices incidents are a critical process for avoiding injuries and the development of professional activity-related diseases.

TOPICS/CONTENTS

Occupation/ Activity

Workplace Hazard

Occupational Risk

Occupational Health

Work Hazards Exposure

Accidents

Occupational Diseases

Causes and costs of work accidents and occupational diseases

Safety Education and Awareness of Workplace Safety Issues

Specific OSH Learning Expectations

Reporting hazardous events/incidents/accidents

DESCRIPTORS

- Discuss work accidents and occupational diseases statistics in a critical way, taking into account the different causes and consequences;
- Illustrate the consequences of work accidents and occupational diseases;
- Be able to deliver the required OSH students' learning expectations;
- Reflect on the OSH impact on students;
- Know how to act when an accident/fatal injury happens;
- Find recognized professional diseases, related to teaching activity.

SUGGESTED STRATEGIES AND ACTIVITIES

- Guided lecture about/research into work accidents.
- Exploring video/texts regarding safety education, EU-OSHA Fact Sheet.
- Team/peer work: case study of a work accident/ Testimonies of actual cases of occupational diseases.
- Presentation of a flip chart that lists the key points of unsafe practices, incidents, accidental/fatal injuries, what to do and how to report them to responsible bodies.

Some suggested sources for this module:
http://training.itcilo.it/actrav_cdrom2/en/osh/intro/inmain.htm

MIND SAFETY
safety matters!

MODULE 3 WORKPLACE HAZARDS	**Objective:** Conclude that preventive measures are the most effective way to eliminate or reduce hazards

GUIDING QUESTIONS

How can we reduce workplace hazards to minimize professional risk exposure?

KEY IDEAS

When thinking about hazards in the workplace or activity-related risks, several people imagine dangerous occupations such as mining or construction, and few think about the dangers that are present in occupations such as office work or service-sector jobs. Nevertheless, a hazard in such workplaces can also result in serious damage for health.

There are different categories of hazards according to their nature and effects. However, it is important to know that hazards interact among each other in the workplace environment and only become risks according to human exposure during the exercise of a specific professional activity. That is why each work context needs to be known and regarded as a system in order to choose the best and most effective ways to control a hazard.

TOPICS/CONTENTS

Difference between hazard and risk

Types of hazards:

E.g.: Fire and explosion, electrical, falling, machines, vehicles, lifting/carrying/moving weights

Health Hazards: Biological, Physical (noise, vibrations, mechanics, lighting, temperature, radiation)

DESCRIPTORS

- Understand the relation between existing types of hazards and the effects on the human body
- Describe the workplace context teaching activity conditions in School;
- Recognize/Know the meaning of hazard warning and safety signs;
- Participate in a critical way by expressing one's opinion about what can be done and who should do it.
- Propose different ways of reducing hazards in specific workplaces;
- Correctly apply safety procedures to control specific workplace hazards.

Chemical (dust, fumes, sprays)

Ergonomics-related hazards

Psychosocial hazards (stress, violence, etc.)

Hazard warning and safety signs

SUGGESTED STRATEGIES AND ACTIVITIES

- Workplace interview (Participants are invited to share their own experiences).
- To elaborate on and discuss workplace hazards.
- Guest Speaker Activity.
- Group Risk Mapping
- Class discussion and proposals of different ways of reducing workplace hazards at school.

Some suggested sources for this module:

https://www.acs.org/content/dam/acsorg/about/governance/committees/chemicalsafety/publications/chemical-safety-manual-teachers.pdf

https://www.bced.gov.bc.ca/irp/resdocs/scisafe/moescisaf.pdf

https://www.teachervision.com/fire-safety

http://www.livesafeworksmart.net/english/special_needs/

http://training.itcilo.it/actrav_cdrom2/en/osh/intro/inmain.htm

MIND
SAFETY
safety matters!

MODULE 4 SAFETY MANAGEMENT	**Objective:** Relate the impact of preventive measures concerning workplace safety and improving wellness

GUIDING QUESTIONS

What are the employer's responsibilities?

What can we think of that might prevent an accident from happening again?

Who is responsible for OSH at School?

KEY IDEAS

Employers must keep the workplace safe for workers. The best way to control a hazard is to eliminate it completely. Although this cannot always be possible, therefore it is critical to assess the risks and to be aware of better ways to reduce the likelihood of an accident or occupational disease occurring.

If you cannot completely remove or control a hazard in the workplace or keep it away from workers, good safety policies and managerial measures can reduce their exposure to risks, such as training workers on how to safely do their jobs despite the hazards, or organize time schedules and breaks to avoid and reduce tiredness.

Personal protective equipment is the least effective way to control hazards; however, workers should use it whenever the employer provides it to them or when other measures aren't effective.

TOPICS/CONTENS

Duties and responsibilities:

Employer, Management

Prevention principles-

Hierarchy of controls:

Assessment

Substitution

Engineering

DESCRIPTORS

- Describe the Prevention Principles according to the hierarchy of controls;
- Elaborate and compare each control benefit;
- Collaboratively prepare a Risk Assessment tool example;
- Be aware of legal duties on the use of protective equipment and its required measures;
- Identify emergencies at work;
- Find collaborative solutions to reduce and control identified hazards.

Labour practices/administrative controls Collective and personal protection equipment Reduction/elimination of workplace hazards	**SUGGESTED STRATEGIES AND ACTIVITIES** Ask teachers to collect images/ short videos of actual workplaces /made by students concerning the topic Watching and exploring short videos/ images taken by teachers - Case studies in actual workplace contexts. Teamwork: "Spot the hazard" – prepare a short draft of how to approach the identification of hazards with students. Test different control measures, through a role-play activity: Pros and Cons. Teacher/learning Journal conclusions record (sharing experiences).

Some suggested sources for this module:

 www.hse.gov.uk/services/.../**school**-leaders.htm ;

http://www.bristol.ac.uk/safety/media/gn/safety-organisation-gn.pdf ;

http://www.2.southwark.gov.uk/info/200142/school_management/1228/health_and_safety_in_schools;

http://smesafety.ie/wp-content/uploads/2014/03/General-Principles-of-Prevention.pdf;

https://oshwiki.eu/wiki/Hierarchy_of_prevention_and_control_measures

http://education.qld.gov.au/health/docs/healthsafety/managing-health-safety-fact-sheet.pdf

MODULE 5

HEALTH AND SAFETY IN THE CURRICULA CONTEXT

Objective: Positioning OSH in the Education System (legal frameworks, policy and strategy);
Identify facilitators and barriers to promote the development of OSH competences in existing educational practices;
Plan OSH class activities to promote OSH awareness among students;
Identify the role of teachers as OSH learning facilitators from an inclusive perspective;
Identify strategies to involve the broader community in OSH learning.

GUIDING QUESTIONS

What do students need to know about OSH?

What should the teacher's role be as an OSH Learning facilitator?

How could an inclusive approach in OSH be built?

KEY IDEAS

Young workers are particularly exposed to risks and occupational injuries. Many young people believe that, when you get injured at work, it is "bad luck" or "it is your fault," when reality might be quite different. Often, they are unaware of the dangers and hazards posed by some tasks or equipment.

Labour laws that protect young people are, in some cases, different from those that apply to adults, like other specific laws to specific groups of workers with special needs (pregnant, older workers, persons with disabilities, etc.).

These and other OSH issues can be interconnected with other competences and contexts according to different subject programmes, and introduced in the teaching practice, suited to students' needs.

TOPICS/CONTENTS

Safety issues in the curricular context:

Approaches/Best practices of OSH curricular integration

Pedagogical adjustment of OHS concepts to the curricula

Pedagogical resources of OSH teaching for young students

Inclusive approaches for OSH teaching

DESCRIPTORS

- Share own prior knowledge, experiences and ideas regarding competences to facilitate OSH learning

- Relate competences objectives and concepts of occupational health and safety to their disciplinary area programmes;

- Discuss ways to encourage students not to overlook their responsibilities in protecting themselves and keeping the workplace safe;

- Outline priorities to integrate previous/rebuild OSH knowledge's in the teaching practice;

- Choose different approaches to OSH in the teacher's own subject, according to specific student needs;

- Reflect on different pedagogical methods/strategies, adjusting

ICT challenges and opportunities in OHS teaching

Strategies to foster broader community engagement

specific student characteristics and OSH learning goals.

SUGGESTED STRATEGIES AND ACTIVITIES

- Use the findings of the group discussion to prepare a lesson plan geared to different learning needs and subject goals, by addressing Health and Safety awareness.
- Explore related audio, video images/pictures.
- Injury/Fatal Accident procedure – Case Study.
- Prepare a Checklist – "Does Our School have…" – (about safety and health school management).
- Produce a digital game where students have to break several obstacles/come up with solutions to questions, to reduce risks, protect workers with personal devices, and prevent accidents.
- Storytelling and discussion about other people's professional experiences invited to participate in OSH activities at school (parents, fire-fighter, nurse, OSH experts, police officer)
- Students' works/class work results concerning a Safety week initiative, presentation of exhibits

Some suggested sources for this module:

https://osha.europa.eu/en/tools-and-publications/publications/reports/occupational-safety-and-health-and-education-a-whole-school-approach;

http://www.hse.gov.uk/services/education/index.htm:

https://osha.europa.eu/pt/tools-and-publications/publications/reports/teachers-training-risk-education_TE3111358ENN

http://www.hse.gov.uk/risk/classroom-checklist.pdf

http://www.education.vic.gov.au/Documents/school/teachers/teachingresources/careers/work/swlessonplan1.doc

MIND SAFETY
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MODULE 6
TEACHER INTERVENTION PROJECT

Objectives: Devise a plan for a project related to OSH awareness at school, identifying strategies to promote OSH learning;
Clarify the importance of OSH skills in the professional/learning context;
Develop teacher competences to work collaboratively from OSH topics and projects;
Develop teachers' critical thinking skills from OSH topics and projects;
Reflect about teachers' OSH awareness and its impact on students at school.

GUIDING QUESTIONS

How can we WORK TOGETHER to create a Health and Safety culture at school?

What are the most important things you learned about OSH?

How will you use what you have learned?

KEY IDEAS

The school is a workplace with many hazards and activity risks. Occupational Health and Safety, Risk Education and Health Promotion follow common goals and use similar approaches and strategies to stimulate collaborative problem solving that concerns all members of the educational community and should be everyone's responsibility.

Students need to be aware of the importance of OSH in their present and future lives, as teachers are the key element for increasing and improving student-focused learning contexts, by motivating them to build their knowledge, develop creative thinking and solve problems in different areas of their active lives.

CONTENTS

Taking action on unsafe working conditions and Daily practice change
"WORK TOGETHER INTERVENTION PROJECT"

DESCRIPTORS

- Demonstrate motivation to introduce practice changes and experience sharing about OSH Awareness in the classroom;
- Improve the quality of learning by developing and rebuilding new competences;
- Assume the role of a facilitator of collaboration with other players, bringing OSH to school daily activities;
- Use inclusive approaches/resources of learning OSH.

LEARNING/TRAINING ACTIVITIES

- Project Planning/Preparation.
- Information research and reflexion.

- Action- Research Development.
- Presentation (On-site).
- Discussion (On-site).

(AUTONOMOUS WORK)

Some suggested sources for this module:

http://www.ontariodirectors.ca/health_and_safety.html

https://www.cdc.gov/niosh/talkingsafety/states/nj/entireNJ.pdf

Final conclusions and comments

"OSH Education Teaching Guide" constitutes a contribution toward promoting a safety culture in workplaces and schools, while addressing the need to reinforce OSH education and teacher training through collaboration practices and shared experiences. This document provides a support for teachers, presenting educational approaches and strategies to learn and teach about OSH issues. The distinctive character of this "Teaching Guide" also arises from the particular interest in developing teacher competences following the critical thinking approach while meeting students' learning-specific needs, prioritizing an inclusive educational perspective which will promote the development of a culture of prevention.

The workshop represents a teacher training example that could be used and/or adapted in order to benefit interlocutors in each country. This workshop was designed to be a flexible training proposal, since the certification and accreditation systems, when they exist, are configured in very different ways. The flexible character of the workshop also took into consideration that the different international references, though valid and rich, sometimes are not formally recognized or adopted by the competent authorities. Depending on their specific validation modes, each EU country could benefit from this document.

Taken as a whole, this document arises from an international consortium committed to the idea that the need to modernise OSH education and training systems must be connected to the improvement of work conditions and the reduction of occupational incidents and accidents, particularly among young workers.

We strongly believe that the educational field, combined with the OSH policy area, should be a shared and social responsibility determined to reduce young worker accidents, further OSH awareness and improve a safety and health culture.

Glossary

Acceptable risk	Risk for which the likelihood of an incident or exposure occurring and the severity of harm or damage that may result are as low as reasonably practicable in the setting being considered.
Accessibility	Ensure that all products, devices, services or environments are available for people who experience disabilities.
Accident	Is an incident that results in injury, health impairment or death.
Accreditation	Process for approval by an accrediting authority of a learning programme.
Accredited short course	Learning programme comprising one or more components (e.g. skill units, modules or subjects), which has been accredited by an accrediting authority.
Accrediting authority	European/National organization that is either authorized under legislation or has been given responsibility for accrediting learning programmes.
Activity	The state or quality of being active; a specific deed, action, function, or sphere of action.
Assessment	Process to determine a student's achievement of expected learning outcomes, which may include a range of written or oral methods and practice or demonstration.
Attitude	Manner, disposition, feeling, position, etc., with regard to a person or thing; tendency or orientation, especially of the mind. The affective-cognitive evaluation of the reality that determines attitudes and behaviour patterns (Fleury & Fleury, 2001; Assunção & Goulart, 2016).
Awareness	Knowledge that something exists, or understanding of a situation or subject at the present time based on information or experience.
Biological hazard	Any biological organism, including viruses, fungi and bacteria that can affect health.
Chemical hazard	Any chemical substance that can affect health, such as cancer, mutagenic or genotoxic effects, asthma, or intoxication.
Cognitive skills	Skills that are used in the process of acquiring and applying knowledge

and include reasoning, perception and intuition.

Communication skills   Skills that enable a person to convey information so that it is received and understood.

Competences   Proven ability to use knowledge, capabilities and personal, social and/or methodological abilities, in work or study situations and in professional and personal development.

Comprehensive knowledge and/ or skills   Skills that cover a complete area or field of work or learning.

Course   See learning programme or accredited short course.

Coursework   Method of teaching and learning that leads to the acquisition of skills and knowledge that does not include a major research component.

Creative skills   Skills that may lead to innovative, imaginative and artistic outputs.

Decent work   Work that: is productive and delivers a fair income; provides safety in the workplace and social protection for workers and their families; offers good prospects for personal development and social integration; grants freedom for people to express their concerns, organize and participate in decisions that affect their lives; and ensures equal opportunity and treatment for all women and men

Disability   Evolving concept that results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others.

Discipline   Defined branch of study or learning.

Diversity   Commitment to recognizing and appreciating the variety of characteristics that make individuals unique in an atmosphere that embraces and celebrates individual and collective achievement.

Emerging risks   Previously unknown risks caused by social/technical change or scientific discovery, or an existing issue that is now considered a risk due to changed public perceptions.

Employees   Workers who hold a paid employment job. This means that employees have an employment contract which entitles them to a basic remuneration, typically in the form of wages and salaries.

Employer	Any natural or legal person who has an employment relationship with the worker and has responsibility for the undertaking and/or establishment.
Erasmus +	The European Union's programme to support education, training, youth and sport in Europe.
Ergonomics	Scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance.
Formal learning	Learning that takes place through a structured programme leading to the full or partial achievement of an officially accredited qualification.
General principles of risk prevention/hierarchy of control measures	Principles that the employer shall take to implement the necessary measures for the safety and health protection of workers including prevention of occupational risks and provision of information and training, as well as provision of the necessary organization and means.
Hazard	Any activity, situation or substance that can cause harm, either physically or mentally.
Hazardous work	Any type of work which, given its nature or the circumstances in which it is carried out, is likely to jeopardize the worker's health or safety.
Impairment	The state of being diminished, weakened, or damaged, especially mentally or physically.
Incident	A work-related event in which injury, health impairment (regardless of severity) or death occurred or could have occurred. (An incident resulting in injury or death is an accident at work. if no injury occurred, neither disease nor fatality is termed a near-accident).
Inclusive education	School that accommodates and promotes approaches which include all children irrespective of their physical, intellectual, social, emotional, linguistic or other conditions.
Informal learning	Learning gained through work, social, family, hobby or leisure activities or experiences. Unlike formal or non-formal learning, informal learning is not organized or externally structured in terms of objectives, time or learning support.
Knowledge	Knowledge is an element of skill which constitutes "the set of information," being is associated with the "experience, the intuition and the values" (Assunção & Goulart, 2016, p. 188).

Learner	See student.
Learning	Process by which a person assimilates information, ideas, actions and values and thus acquires knowledge, skills and/or the application of the knowledge and skills.
Learning programme	Course, curriculum, training package, units of study or structured workplace learning that leads to the award of a qualification.
Learning outcomes	Expression of the set of knowledge, skills and the application of the knowledge and skills a person has acquired and is able to demonstrate as a result of learning.
Lifelong learning	Any learning activities that are undertaken throughout life to acquire knowledge, skills and the application of knowledge and skills within personal, civic, social and or employment-related contexts.
Non-formal learning	Refers to learning that takes place through a structured learning programme but does not lead to an officially accredited qualification.
Occupational disease	Any chronic condition that occurs as a result of work or occupational activity.
Occupational Safety and Health	Conditions and factors that affect, or may affect, the health and safety of employees and other workers (including temporary and contracted staff), visitors or any other person in the workplace.
Open Education	Institutional practices and programme initiatives that broaden access to the learning and training traditionally offered through formal education systems.
Open Educational Resources	Open Teaching, learning or researching material from the public domain or available under intellectual property licence that allow their use, adaptation and free distribution.
Prevention	All the steps or measures taken or planned at all stages of work in undertaking to prevent or reduce occupational risks.
Pupil	See student
Psychosocial risk factors	Risks associated with the way individuals interact with the demands of their job and their work environment.
Research	Systematic experimental and theoretical work, application and/or development that results in an increase in the dimensions of

knowledge.

Risk	Combination of the likelihood of occurrence of a dangerous event or exposure and the seriousness of injuries or health conditions that may be caused by the event or exposure.
Risk Assessment	Is the process of evaluation of the risks arising from a hazard, taking into account the adequacy of any existing controls and deciding whether or not the risks are acceptable.
Risk Evaluation	The determination of a quantitative or qualitative value for the risk. Quantitative risk evaluation requires calculations of the two components of the risk: the likelihood that the risk will occur, and the severity of the potential consequences. This approach is seldom applied in practice.
Skills	Include cognitive skills, technical skills, communication skills, creative skills, interpersonal skills and generic skills.
Student	Person enrolled in a formal learning programme at an educational institution and /or in a workplace setting.
Technical skills	Operational skills necessary to perform certain work and learning activities.
Worker	Any employed by an employer, including trainees and apprentices but excluding domestic servants.
Work Accident	Accident in the course of work, including work-related accidents and off company's premises that leads to physical or mental occupational injury.
Workplace	Any physical location in which work-related activities are performed.

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Annex

Annex 1 International Standard Classification of Education - 2011

Resume Table - ISCED coding of levels (First Digit)

ISCED - Programmes (ISCED-P)		ISCED - Attainment (ISCED-A)	
0	Early Childhood Education	**0**	Less than primary education
1	Primary Education	**1**	Primary Education
2	Lower Secondary Education	**2**	Lower Secondary
3	Upper Secondary Education	**3**	Upper Secondary Education
4	Post-secondary non-tertiary education	**4**	Post-secondary non-tertiary education
5	Short-cycle tertiary education	**5**	Short-cycle tertiary education
6	Bachelor's or equivalent level	**6**	Bachelor's or equivalent level
7	Master or equivalent level	**7**	Master or equivalent level
8	Doctoral or equivalent level	**8**	Doctoral or equivalent level
9	Not elsewhere classified	**9**	Not elsewhere classified

Annex II – OSH related Skills dimensions table (sample)

K- Knowledge; S- Skills; V- Values

K1	Occupational Safety and Health concepts contextualized with the curricular subject, such as: workplace, hazard and risk concepts;	S1	Clarify definitions of workplace, hazard and risk;	V1	Mutual respect and cooperation;
K2	Occupational hazards and risks;	S2	Promote Workplace Safety and Health learning in curricular units both in an integrated vision	V2	Initiative and proactivity in communicating and identifying hazardous conditions;
K3	Occupational risks, preventive and corrective measures (integrated, organizational, collective and individual);	S3	*Develop different pedagogical strategies, adjusting the specific characteristic of students and OSH learning goals.*	V3	Self-awareness and responsibility towards hazard situations;
K4	The consequences of occupational accidents and diseases at: social, cultural, economical and personal level;	S4	Illustrate the general principles of occupational risk prevention;	V4	Willingness to think critically about Workplace Safety and Health issues;
K5	General principles of occupational risk prevention;	S5	Explain the role individual and organizational factors play in risk prevention;	V5	*Active and collaborative participation in the development of solutions for Workplace Safety and Health problems.*
K6	Risk assessment;	S6	Promote critical and creative thinking to discuss Workplace Safety and Health issues;		
K7	Best practice in safety procedures;	S7	Integrate digital technologies and other learning resources in a safer, inclusive and adapted way, considering specific student characteristics.		
K8	Domestic Workplace Health and Safety legislation: legal basis for employers/employees.				
K9	*Workplace Safety and Health stakeholders*				

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safety matters!