

**Training teachers to deliver
risk education – Examples
of mainstreaming OSH into
teacher training programmes**

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Foreword

Developing risk knowledge, attitudes and skills in young people before they enter work for the first time continues to be a priority for improving workplace safety culture, as well as for their own safety and wellbeing.

Teachers not only need the basic knowledge and ability to embed risk education into their classroom teaching, they also need instruction and training about health and safety in the school environment. And to develop a safety culture in schools, teachers need to be able to play an active role, and to be able to encourage their pupils to participate too. It is for both their own safety and that of their pupil, in addition to their pupils' education, that they need the knowledge and skills to make occupational safety and health part of their daily working life.

Previous EU-OSHA reports on mainstreaming occupational safety and health into education identified the need for teachers to receive some training to deliver risk education and this report presents a variety of cases about how both in-service teachers and future teachers can be trained. They show practical ways to achieve this, despite the demands on already packed training programmes for future teachers, and the demands and time restraints faced by schools and their teachers.

While this is a challenging area, it is also one which is developing, so I hope that this report and the cases in it will provide support and inspiration to those seeking to develop and implement activities in this area.



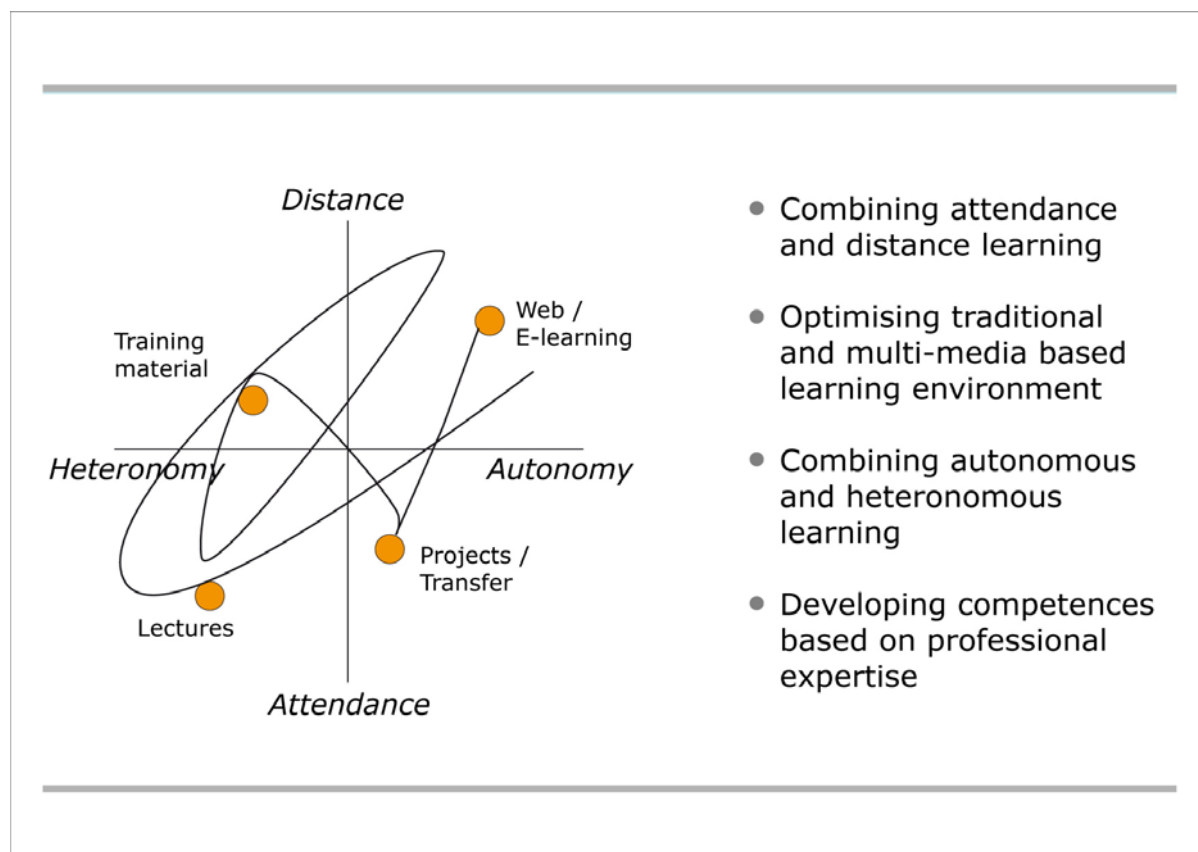
Director
European Agency for Safety and Health at Work (EU-OSHA)

Executive Summary

This report presents a range of different examples which involve training in-service and future teachers in either occupational safety and health (OSH) or in delivering risk education. While the aim was to explore training for teachers, some other alternatives are included, for example, the use of self-explanatory classroom materials for risk education, raising awareness of teachers through involving them in OSH art competitions for pupils, and training trainers for the workplace. The success factors seen in these cases on training teachers to provide risk education, as would be expected, concur with the general success factors seen in cases and current practice to promote risk education in schools (see box).

General success factors for promoting risk education in schools include:

- a whole-school approach combining safety management in schools with the delivery of risk education, where staff and pupils/students can make a positive contribution to their own safety and that of their colleagues;
- the need for motivated teachers, leadership and commitment from the head teacher and some dedicated core personnel;
- the involvement of pupils, parents, teachers, school managers, representatives from the social partners and local authorities;
- the need for appropriate and inspiring teaching materials, free of charge if possible;
- the need for support to schools on OSH management from OSH authorities;
- co-operation between OSH and educational professionals – at all levels – and other partners;
- the importance of a coherent strategy agreed by OSH and education authorities;
- the most comprehensive and successful cases are usually underpinned by legislative requirements for OSH in the education curriculum, pupil involvement in school OSH etc.



INQA Lernwelt: elements of a blended-learning approach

- Combining attendance and distance learning
- Optimising traditional and multi-media based learning environment
- Combining autonomous and heteronomous learning
- Developing competences based on professional expertise

Legal context, curriculum requirements and commitment

Unsurprisingly, the more formally OSH is embedded in the school curriculum in general, especially where requirements are set in national legislation and strategy and/or prominence given to subjects that include well-being at work, such as health education, the more attention is likely to be given to including OSH/risk education in training for new teachers and the more support is given by education ministries. In some examples, schools' duties regarding occupational safety and health have been used as the lever for activities.

Partnership

It is clear that partnership between OSH authorities and education authorities is essential to achieve success. But some cases also showed the involvement of different partners, including private industry and youth organisations as partners. Where the goal is to promote teachers receiving health education, with work well-being embedded into this, then it is clearly helpful to work with health education and accident prevention stakeholders. A case on safety in physical education case showed the extra value of working with sports organisations. It could be worth bringing a number of stakeholders together to explore common ground and see where risk-related training on different topics could be brought together to save time on the teacher training curriculum.

Most cases concern in-service teachers, which reflects the challenge of embedding risk education into new teacher training. Links need to be established with the colleges and universities where new teachers are trained, to explore more closely with them the practical opportunities for embedding risk education into teacher training in a sustainable way.

Training teachers to provide risk education linked to teachers' and school occupational safety and wellbeing

Many of the cases show the logic of combining training regarding teachers' own OSH with training to provide risk education, for example, by embedding risk education in general OSH training given to teachers in schools. This supports the objective of finding synergies, rather than loading schools with lots of extra tasks, and it is also a legal requirement for teachers to receive training regarding their own health and safety at work. It also fits the so-called 'whole-school' approach, <http://osha.europa.eu/en/publications/reports/313/view>, where risk education takes place within the context of promoting a safe and healthy school environment for pupils and staff. The main impetus for some of the cases is pupil safety and wellbeing in schools, although they relate to staff safety and wellbeing too. The importance of head teachers having the necessary know-how and the commitment can also be seen in the cases.

Training for all, champions, cascade training and support networks

While it is clearly desirable for all teachers to receive specific training on delivering risk education, several cases present the option of getting a minimum number of teachers trained external, who can then pass on their knowledge to other teachers and, depending on their role, support their school on risk education and/or OSH compliance. It is important to remember that if teachers are to train and pass on their knowledge to other teachers they should be provided with specific training and the training resources to support them do this. Some cases included networking of such teachers and the schools themselves.

Linking to the curriculum

The cases suggest that special attention should be given to linking all activities to the school curriculum, including making it explicit to (future) teachers during the training how the risk education relates to delivering the curriculum. Trainee teachers need to be trained to deliver any safety aspects in their chosen subject from a risk education perspective (i.e. so pupils develop skills on hazard identification and risk prevention). Such subjects include physical education, health education, science, arts and technology.

Effective training in the least time-consuming and least disruptive way

The cases suggest that the biggest challenge is that of limited time and resources to provide either in-service teachers or trainee teachers with training to provide risk education. It is therefore essential to look for the least time-consuming and least disruptive methods to provide teachers with a minimal training on OSH and risk education. The cases showed various ways that this problem could be approached. These included e-learning, moderated online courses, blended learning and a workshop which was only three hours long. Blended learning would seem to be a practical approach, as it allows the combination of theoretical learning with active learning, using practical exercises.

In some cases work well-being was embedded into training for health education teachers. Another kind of approach is an example on social safety in schools where the programme is adapted to the needs of the school and someone can come into the school to work with it.

With the pressures on getting teachers trained it remains very important that curriculum materials for teachers to deliver risk education are as self-explanatory as possible. One case showed how teachers' skills, knowledge and awareness can be developed by involving them in the preparation and running of the annual art competitions that they organise in schools.

Career development

It is important training is seen to contribute to career development, and several cases recognised this by making the training certified. Teachers wanting to move up the school management could be motivated to acquire some recognised OSH management knowledge and skills.

Training the trainers

Those providing the risk education need training as trainers and resources to provide the training. Expertise for training was provided in a variety of ways in the cases. One case concerns training teachers to qualify as tele-tutors.

Pilot projects

Another effective way of working appears to be through the development of pilot projects that can be tested with teachers and schools. This is not just about developing effective resources and methods to train teachers, but also about developing approaches which will be practical for schools and acceptable to both schools and teacher training bodies, given the demands on both. One pilot project was used to develop a course to train teachers but also to test the classroom resources for pupils at the same time.

Developing a strategy

Projects need to be made sustainable by being part of an overall, coherent strategy. The cases suggest that such a strategy could include the items listed below.

- Training as part of a 'whole-school' approach which combines risk education and promoting improved OSH management in schools, including making OSH part of the daily work of all teachers, in a school safety culture that promotes their participation and actively engages them.
- The training of all future teachers to include basic information about OSH in schools and how to embed risk education into their daily teaching.
- All teachers to receive OSH instruction as part of their induction on arrival at a school – including risk education.
- Head teachers to receive additional training to obtain special knowledge on managing OSH and embedding risk education in school daily life.
- Other teachers to receive additional training, depending on their teaching specialization, to obtain special knowledge on OSH, risk education. The approach of appointing certain staff as 'champions' with a role to disseminate information and motivate others can be considered.
- Setting targets for the minimum number of teachers to have received special training.

- Networking schools and OSH/risk education ‘champions’:
- to help keep other staff up-to-date – as schools often struggle on this;
- to share and exchange experiences.
- The cooperation and participation of a wide range of stakeholders.
- Identifying synergies and ways to teach teachers with the least disruption.
- Providing schools with specific support, information and tools to create a healthy and safe learning and working environment, so that health and safety issues are considered to be of central importance to both teachers and pupils.

Setting learning objectives

Based on the cases, the learning objectives for training of all teachers working in general teaching in primary and secondary schools could be focused around:

- acquiring the knowledge and skills to embed risk education into their daily teaching work;
- acquiring basic attitudes and knowledge in relation to their own occupational safety and health – i.e. OSH in schools; and
- acquiring the knowledge and skills to be able to make a positive contribution to their own and others health and safety in schools.

Providing relevant and appropriate training resources

In previous EU-OSHA reports on mainstreaming OSH into education it was also noted that relevant teaching resources need to be developed and provided to schools and training colleges to support a strategy of mainstreaming risk education into education. The same holds with training for teachers. The cases suggest that various resources and approaches for training teachers should be considered as part of a strategy to train teachers.

Training resources:

- Booklets for trainee teachers;
- booklets for teachers new to the workplace;
- resource packs for lecturers;
- resources for training teachers to provide cascade training;
- resources for teachers to provide cascade instruction and training to other teachers; and in addition,
- self-explanatory materials for use with pupils in the classroom.

Training methods and approaches:

- Self-study options, especially e-learning and/or interactive CD-ROMs;
- blended learning – a combination of distance online training and contact training, e.g. in workshops;
- active learning methods where teachers use their own knowledge – especially important as this will be the teaching approach for pupils in the classroom;
- as with other areas of vocational training, include a link to teachers’ own OSH in the courses for trainee teachers;
- clearly linking the teacher training to the delivery of the curriculum.

Other training issues include:

- Discussing training needs of teachers when classroom resources are piloted;

- looking at the possibilities of generic training, e.g. relevant to health education, road safety education, physical education, risk education, etc;
- exploring how to get the basic information and skills across to teachers in the minimum amount of time;
- linking the training to career development, through accreditation, provision of certificates, recognition of OSH management skills acquired etc;
- providing additional support for schools in doing risk assessments and managing occupational safety and health; and
- including the evaluation of projects, training programmes and methods

Conclusion

If getting risk education properly embedded in the school curriculum is challenging, then it is even more difficult to get it into the programmes for future teachers. However, the cases present various approaches and methods that could be considered or elaborated upon. They show that success is dependant upon taking a pragmatic approach, which is sensitive to the needs and circumstances of schools and courses for future teachers. They also show the value of training which supports a 'whole-school' approach combining the provision of risk education with the management of OSH to provide a safe and health work and learning environment. Developing the relevant partnerships and gaining commitment of all key stakeholders will be crucial as will be continuing to share practices and experiences.

1. Introduction

This report and the project on which it is based are part of the European Agency for Safety and Health at Work's (EU-OSHA) on-going work on mainstreaming or integrating occupational safety and health (OSH) / risk education into education.

OSH and education

Protecting and promoting the health and safety of tomorrow's workforce is highly dependent on 'mainstreaming', or the integration, of occupational safety and health (OSH) into the education of children and young adults. The European Union Strategy for safety and health at work (2007–2012) highlights the mainstreaming of occupational health and safety into education as a key priority area. An important aim of mainstreaming OSH into education is the development of a 'risk prevention culture' within society at large: both within and outside the workplace (EU-OSHA, 2004a; 2004b). One of the keys to effectively developing a 'risk prevention culture' is educating children and young people about risk identification and prevention as well as about broader issues in relation to health and safety.



S. UIk/ BAR SoSu, Denmark

It is believed that the earlier children are taught about the concept of safety and health, the sooner they will develop risk awareness, and, in turn, the better children and young adults will be able to shape and influence their own safety and health environment in their future working and private lives. In short, increased awareness of risks, both inside and outside the workplace, is fundamental to the development of a genuine 'risk prevention culture' in society at large (EU-OSHA, 2004b).

A report by EU-OSHA (2004b) entitled *Mainstreaming Occupational Safety and Health into Education* provides an overview of the principles that underpin the mainstreaming of OSH into education, and highlights several good practice case studies from across Europe that exemplify these principles. These case studies were found to relate to three different, albeit complementary, approaches to mainstreaming OSH into education: 'holistic', 'curriculum', and 'workplace' approaches.

Cases based on a holistic approach were underpinned by a comprehensive view on health and safety issues. Specifically, these initiatives were observed to examine and address issues relating to physical health as well as mental and social well-being. Initiatives supported by a holistic approach

primarily focus on the whole school system with the aim of improving the working conditions and learning environment in schools.

Initiatives categorised as having a curriculum approach integrated health and safety issues into the school curricula as an integral component. Generally, health and safety issues were found to be embedded, addressed and discussed across a number of subjects (e.g., languages and literature) and through all levels of education: kindergarten or nursery, primary, secondary, vocational schools and universities.

Initiatives underpinned by the workplace approach, in contrast to the previous approaches, focus primarily on facilitating the successful transition of students from school to working life. Initiatives adopting this approach attempt to provide students with: (a) an introduction to the workplace; (b) guidance on professional life; and (c) an outline of the risks that may be faced in the workplace and how to manage and cope effectively with these risks.

The teacher's role

The future development of a coherent strategy for mainstreaming occupational health and safety into education requires the active participation of teachers in key health and safety issues, and risk identification and prevention. This means educating teachers, across all levels of education, in risk education and risk management principles; and, moreover, training them how to teach these principles to pupils. To date there is limited knowledge on how teacher training to delivery risk education is being conducted across Europe, and what key components and factors are common in these training approaches. However, previous EU-OSHA reports have highlighted the importance of providing teachers with training to give them the confidence to deliver OSH education, concluding that:

It is essential that primary and secondary school teachers receive training on how to deliver risk/OSH education.

Ideally this training should become part of the curriculum for training future teachers at all levels (primary, general secondary, vocational).

Primary and general secondary (non-vocational) teachers are least likely to receive any training in OSH/risk education.

This report presents a number of examples of good practices in this area and examines the types of approaches taking place.

Objectives and methodology

EU-OSHA commissioned a two-year project to address this gap in knowledge and, more specifically, to identify and examine good practice case studies on teacher training to provide risk education from across Europe. The project was conducted in two stages. In the first phase, a series of good practice case studies in teacher training in OSH and risk prevention were identified from across Europe. In the second phase, the key components across the case studies and approaches (holistic, curriculum, and workplace) were analysed and discussed.

The project had three objectives:

- to collect and analyse examples of training teachers to provide risk/OSH education;
- to focus on examples of OSH/risk education in the training schedules of future primary and general secondary teachers (both implemented and those in the planning stage) (first priority for cases); and
- to consider other cases if there is a lack of available examples in the schedules (such as training for: in-service teachers, future vocational teachers, delivering health education, combined with instructing teachers about their own OSH).

Target Audience:

The target audience for this report is primarily those responsible for developing and implementing policy in the fields of education and occupational safety and health (whether at local, regional or national level), as well as practitioners in both fields. Some of the cases will also be interesting to individual schools wishing to better prepare their teachers to deliver risk education.

Selection of good practice case studies (Phase 1):

The report presents 25 good practice examples of mainstreaming OSH into teacher training from across Europe and internationally (17 full cases and 8 snapshots). The case studies were categorised into three main approaches: 'holistic', 'curriculum' and 'workplace' approaches.

The report provides examples of:

- training of trainee teachers to deliver risk education;
- training of qualified teachers to deliver risk education; and
- training of all types of teachers (nursery, primary, secondary and at post-secondary level).

This report presents a range of different examples which involve the training of teachers on either OSH or in delivering risk education. Only a limited number of cases were found of person to person training of teachers. Therefore the report also contains some other alternatives, such as examples of online training, self-contained guides for teachers on providing risk education, other activities to promote and facilitate risk education which in part help to develop teachers' skills in this area and training trainers for the workplace.

Reviewing good practice case studies (Phase 2):

A review was conducted of the cases. The goal was to outline the key factors, conclusions and informed recommendations across all case studies, as well as identifying unique factors within each approach (holistic, curriculum and workplace) and across all teacher training initiatives. The cases were analysed order to identify, in relation to training teachers to provide risk education:

- practices and approaches used;
- factors relating to the type of approaches or methods used with trainee teachers and teachers presently in service;
- key success factors;
- challenges and barriers;
- gaps in knowledge, prevention or practice where more attention is required;
- recurrent forms or innovative aspects;
- examples from the cases to illustrate the points made;
- overall conclusions and recommendations.

2. Short Description of the Cases

Cases with a Holistic Approach

- ***H1. Promoting accident prevention and awareness on health and safety at schools, Greece***

A partnership was established in the region of Achaia (Greece) between private companies, as well as public and local authorities, for promoting accident prevention and awareness on safety and health at schools. This network, the **Frontida, Agogi, Organosi, Symmetohi (FAOS)**, trains teachers on safety and health issues, encourages schools to develop inspection schemes for possible risks at schools and motivates parents' associations to obtain their active involvement. The approach includes training teachers to train other teachers about OSH and risk education.

- ***H2. Summer Course for Primary School Teachers, Ireland***

The Health and Safety Authority (HSA) developed a pilot 20-hour in-service course for primary school teachers. They realised that developing skills in teachers to assess and prevent risks in schools would also help them deliver risk education. Chartered health and safety practitioners delivered the course over five consecutive days with participating teachers receiving three days off in-lieu during the term. The aim is to raise awareness of safety and health matters among primary school teachers and principals. There is an equal emphasis on the teacher acquiring knowledge as a worker in a work environment and on ways of positively affecting students' safety and health. The pilot course looks at a range of safety and health issues relevant to schools. The course is highly interactive, drawing on the knowledge and the experience of the participants to develop awareness and methods of teaching. Out of this the HSA has developed an online summer course for primary teachers about risk assessment and prevention in schools which also covers risk education.

- ***H3. Children's Art Competition as a way of educating children about safe behaviour at school, Poland***

This case describes how teachers are involved in the planning and implementation of a health and safety art competition. The competition aims to raise awareness of OSH among teachers and head teachers as well as pupils. The activity includes preparatory meetings with head teachers and teachers in those schools who will participate, customised to the school. In this way teachers' skills and motivation to provide risk education are also developed.

- ***H4. Mainstreaming safety for physical education lessons among teachers, Germany***

In 1999 the Ministry for School and Education of North-Rhine Westphalia decided to integrate lessons in martial arts and climbing into the school curriculum. Both of these can be considered as high-risk sports for students and teachers, who are often not sufficiently trained. The Statutory Accident Insurance for Public Services of North-Rhine-Westphalia (UK NRW) and partners from school authorities responded to this challenge by publishing teaching aids, organising training courses and including information in an internet-based self-study platform (Sichere Schule). The training workshops are of a practical nature and provide the qualification to teach in this area. The teacher training aids provide good practice information about safety during sports lessons and educational aspects. The internet platform covers safety and safe behaviour in school buildings and during classes.

▪ ***H5. Co-operation in risk prevention at school, Sweden***

Källby Gård, a comprehensive school in Sweden, developed a plan to promote children's safety in both the physical and the psychosocial environment. Every close call and accident which occurs is recorded, and a safety representatives' committee which includes pupils and staff is responsible for taking suitable measures. Parents are also involved in this work.

Teachers learn on the job about risk prevention in the school and about delivering risk education to pupils. OSH issues are constantly on the agenda for all staff meetings and conferences. The new teachers at school join these discussions and are thus introduced to the school's safe culture. The pupils also have the opportunity to talk with teachers when environmental issues are on the agenda, in the meetings of the collaborative councils. In addition, first aid and fire protection courses for example, have been held for all of the staff.

Cases with a Curriculum Approach

▪ ***C1. Accident prevention and safety in secondary and primary schools, Greece***

The Office for Health Education - Division for Secondary Education in West Thessaloniki, Central Macedonia (Greece), organised a series of seminars. The seminars, directed at teachers and pupils in the region, were on accident prevention in schools, road safety, drug abuse, fire protection and first aid. They also focused on safety management in schools, and teachers and pupils were involved in detecting the main problems.

▪ ***C2. Co-operation and health education for teachers and pupils, Cyprus***

The Health and Citizenship Education Committee of Cyprus was set up to bring together representatives from the ministries covering education and health. It supports health education in schools, trains in-service teachers and promotes health education programmes. The wide spectrum of activities covers, among other issues, safety and health at schools, drug abuse, smoking, self-esteem and stress management.

▪ ***C3. Road safety education and teacher training in Scotland, UK***

Road Safety Scotland commissioned research to review the provision of road safety instruction in all courses at the country's seven teacher-training colleges (TTCs). Stage One of the research involved consultation with Road Safety Units which had TTCs in their area. This looked at their input to road safety instruction in the colleges, and links with the TTCs. In some areas, the local council administers the unit while in others the unit is the responsibility of the police.

Stage Two involved interviews with the Health Education co-ordinators in each TTC to establish the extent and nature of road safety education at the colleges. It also determined the support and resources needed to ensure this kind of training at the TTCs, in line with national strategy. Two focus groups were also held with trainee primary teachers. The report made a number of recommendations about how to make the content and delivery of road safety education more consistent in TTCs. After the research, Road Safety Scotland produced resource packs for lecturers and safety booklets for student teachers.

▪ ***C4. A set of CIOP-PIB's educational materials for teachers, Poland***

A set of the CIOP-PIB educational materials for teachers was developed in the area of occupational safety and health (OSH), specifically for trainers who deal with OSH education in schools. The set contains a lot of different materials - guidelines, courses, scripts, tips, colouring books, educational games, puzzles, multimedia educational materials and Power-Point presentations. Some of the

materials can be found on the CIOP-PIB's website. The materials are designed for self-learning by the teachers.

▪ ***C5. Teacher training in health education, Finland***

In Finland, health education is a mandatory subject in basic, general upper secondary schools and vocational institutions (government proposal 142/2000). Teachers must now have certain competencies to teach health education so one requirement arising from this was that in-service training be provided for teachers. The example features training for in-service teachers of upper secondary school-leavers, aged 18-19, who select health education as one of the topics for their matriculation examination. The approach chosen was distance learning combined with contact learning. There was a recommendation that at least two teachers per school take the course. The health education school curriculum incorporates topics such as general health education, social skills and work/life balance, and safety and health at work and OSH-related issues have been covered in the matriculation tests.

▪ ***C6. Ambassador network for teachers in social and health care training programmes, Denmark***

According to a ministerial order for vocational education and training, education must contribute to the student's understanding of a good work environment. The teachers responsible for vocational education and training do not necessarily have any particular skills in teaching about the work environment. Thus BAR SoSu (Branch environmental council for social and health care) in 2004-2006 initiated an 'ambassador' network to strengthen the teaching in environmental work within the social and health care training programmes.

The aim of the network is to provide a better understanding and more focus on teaching about the work environment, to strengthen the skills of the teachers already teaching this topic and to help exchange information between schools. The school's chosen ambassador is a 'special-knowledge person' who has contact to the other ambassadors of the network and the other teachers and the leaders of the individual school. The ambassador provides the school with information, materials, ideas and knowledge from the network, and provides the network with evaluation, practical experiences and results.

▪ ***C7. Implementation of the Ordinance on Hazardous Substances in schools in North Rhine-Westphalia (Germany)***

The Directive on Safety at Schools of North Rhine-Westphalia (RISU-NRW) introduced the position of a commissioner for dangerous substances at schools, who has the responsibilities of the head of school with regards to management of dangerous substances. In order to help teachers to accept the new regulations, and to enable the nominated commissioners to comply with their duties, the Statutory Accident Insurance for the Public Services of North Rhine-Westphalia (UK NRW) and its partners have researched, written and promoted guidelines for safety management and risk assessment on dangerous substances at schools.

Cases with a Workplace Approach

▪ ***W1. Training teachers to develop and deliver health and safety education - ("Western Pilot Project"), Ireland***

This pilot programme was targeted at secondary schools in western counties in Ireland. It gave in-service training to secondary school teachers. Its key aim was to help them to provide better assistance to students who were entering work by providing them with knowledge and skills in safety and health. The programme ran between autumn 2005 and spring 2006 in 15 schools. An experiential approach was used; teachers received training, tested materials and developed classroom strategies.

The evaluation was very favourable although the issue was raised as to whether three days would be available for schools to participate in the programme on a sustainable basis. It was the starting point for other initiatives, including an e-learning course.

▪ **W2. EU-OSHA training programme for authorised trainers, USA**

The EU-OSHA Training Institute (OTI) provides training for trainers at its education centres located all over the country. The week-long courses are designed for trainers within the construction sector and for general industry. They give a general view of the most hazardous and referenced standards. The programme's website contains guidelines, topical materials, and updated information. Authorised trainers are required to attend an update course every four years to renew their status.

▪ **W3. Teaching OSH, Czech Republic**

Institut Výchovy Bezpečnosti Práce is an educational OSH institution accredited by the Ministry of Labour and Social Affairs and by the Ministry of Education. It offers a wide scope of educational initiatives at a national level, e.g. training courses and post-secondary education. In addition to courses for training as OSH managers specialists or labour inspectors, there is the course 'OSH lecturer' which covers methodology, knowledge of modern, active methods of teaching. The institute also organises OSH courses for schools and post-secondary education.

▪ **W4. INQA Lernwelt: Multi-media based teaching and self-studying of tele-tutors and apprentices in OSH, Germany, Austria, France**

In order to strengthen OSH awareness, INQA and the project partners looked for a way to publicise effectively safety and health issues over the long term. They developed the "Lernwelt", a blended learning network that aims at disseminating work and product safety guidelines among teachers and trainers, students and apprentices. As it was designed to be used for blended learning, qualifying teachers to be tele-tutors (or TC TeleCoach[®]) in occupational safety and health was central to its success.

▪ **W5. Work Safe! Working Together for Safety - A State Team Approach to Preventing Occupational Injuries in Young People, USA**

The National Institute of Safety and Health (NIOSH) initiated the *Work Safe!* Programme, as it was recognised that there was a need to develop a curriculum to educate young people to be more safety conscious. The State of Connecticut is involved in the programme. Training is provided in free three-hour workshops approximately four times a year for those teachers who are interested in learning how to use the curriculum in their classrooms. Although the use of the Work Safe curriculum is not mandatory, its use within the classroom is encouraged. The project has been extended and training is also provided to both members of the workforce development boards and youth job training programme operators on how to use the curriculum.

3. Case Studies

3.1. A Holistic Approach to OSH in Schools

3.1.1. Main Cases

- ***H1. Promoting accident prevention and awareness of health and safety at school, Greece***

FAOS Project

Key points

- Training in-service teachers to train other in-service teachers about OSH/ risk education.
- Raising awareness on issues of safety and health and developing appropriate attitudes and behaviours among pupils.
- Improving the safety of school buildings and safety management in schools.
- Partnership involving public and private sector. Involvement of parents.
- Primary and secondary schools.

“FAOS - Building awareness for a lifetime”

“When permanent partnerships are built for a common cause, goals can be more easily achieved and maintained”

(Klio Varou, Vice-President, FAOS Project)

Introduction

According to the 1999 annual report by the Greek Ministry of Health, 25% of the accidents listed occurred at school and involved children aged between five and 14 years. Moreover, educational institutions are places where an opportunity exists to provide children with a life-long awareness of safety issues. However, teachers are inadequately trained and facilities are limited.

Aims and objectives

- Promotion of safety and health concepts among teachers and pupils in the Prefecture of Achaia.
- Prevention of accidents in and out of school.

Background

The TITAN Cement CoS.A. marked the European Week for Occupational Health and Safety in October 2000 by proposing a special partnership between private companies and the public sector. This was to support a greater knowledge of the best practices for accident prevention at school. The meeting was held in Patras (Achaia) and was attended by government ministers, representatives of local authorities, parents' associations, trade union organisations and the press.

Scope

Public and private organisations dealing with safety and health were quick to co-operate and a team of volunteers did the groundwork. This led to the establishment, in 2002, of the non-profit voluntary association named FAOS (**F**rontida, **A**gogi, **O**rganosi, **S**ymmetohi). This translates as Care,

Education, Organisation and Participation. Incidentally, 'faos' means 'light' in the Homeric Greek. The association's partners are:

- The Environmental Education Department of the Directorates of Primary and Secondary Education of the Prefecture of Achaia;
- The Health Promotion Department of the Directorates of Primary and Secondary Education of the Prefecture of Achaia;
- The Preventive Centre of Occupational Risks of Western Greece;
- The Industrial Association of Peloponnese and Western Greece; and
- The TITAN Cement Company S.A.

The partnership identified five goals:

- to develop the partnership with representatives from both public and local authorities and companies in the Prefecture of Achaia;
- to develop an experienced task force among teachers to act as trainers within schools;
- to encourage some schools to co-operate, on a voluntary basis, in an inspection scheme for possible dangerous defects or potential causes of accidents;
- to motivate parents' associations and the wider community to raise awareness of accident prevention; and
- to ensure that the partnership is sustained and its expertise transferred and reproduced in other communities and regions.

The target groups were the pupils, the students and the teachers involved in primary and secondary education in Achaia.

A key activity was the development a long-term safety-training programme for teachers in order to create a pool of trainers for other teachers. The response was very positive and successful.

The main subjects of the programme were:

- introduction to safety principles;
- facing risks as an individual and as a team;
- safety in schools, risk assessment and risk management, introducing safety measures and monitoring their effects;
- development and implementation of safety programmes in schools; and
- first aid.
-

The methods used included seminars for teachers and pupils; safety audits and assessment of school buildings; interactive workshops for teachers and students; introduction of special safety and health educational programmes; and circulation of various publications on safety and health issues. Accidents and potential accidents inside schools were recorded, with school directors and safety teachers completing questionnaires. Co-operation between schools, specific government authorities, non-governmental organisations and local communities was encouraged. Sponsors were sought among the local business community, and unions, with specific individuals also being asked.

Outcome

FAOS is already active in over half of Achaia's high schools, running a variety of programmes and activities, which include:

- the first aid training, with educational material, of 184 teachers in co-operation with the Medical Department of the University of Patras;
- the implementation of the project "One Health Professional per School" in 49 schools, in co-operation with students of the Medical Department of the University of Patras;
- the introduction of a health and safety programme in 111 schools in Achaia Prefecture;

- a total of 150 teachers and 140 physical education instructors being trained in health and safety at schools; and
- the dissemination of educational material on health and safety issues, especially designed in the context of the FAOS project.

Problems faced

The private and the public sectors operate very differently, which has presented challenges regarding effective co-operation on FAOS. The first step to be achieved was to overcome the barriers and stereotypes amongst the partners. The local community was also slow to respond.

Partnership building is something new, not only for companies, but also for public and local authorities and organisations. The lack of experience from active participants on how to build and manage partnerships has also been a significant challenge faced in the FAOS project.

Another difficulty was estimating FAOS's effectiveness. The reason for this was that there was initially no official monitoring system for accidents at schools. This means that current and future data will not be fully comparable.

Success factors

What was learned by the FAOS experiment was that partnership building is a difficult but feasible issue if carefully managed.

FAOS has been built on volunteer work. Thus, motivation on one hand and broader acknowledgement of the volunteers on the other hand, played a significant part in the success and sustainability of FAOS association.

Transferability

The project can be easily reproduced in other communities and regions. In this respect, following the success of the programme in Achaia, a new FAOS-type partnership was set up in Thessaloniki, Central Macedonia, Greece, in July 2005.

Further information

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H2. Summer course for primary school teachers, Ireland

▪ *Health and Safety Authority (HSA)*

Key points

- 20-hour summer course for in-service primary school teachers.
- Combines training about OSH in their own work environment, to promote their involvement in the management of OSH in their school with training to deliver risk education to pupils.
- Active learning approach, use of case studies and participants' experience
- Delivered by the national OSH authority through regional education centres.
- Shorter evening course on OSH management mainly attended by head teachers and deputy heads.

Introduction

The Health and Safety Authority (HSA) designed a 20-hour summer course for primary school teachers, which is delivered over five consecutive days as per the specifications of the Department of Education and Science. It is hoped that the course will help to develop awareness of health and safety matters among primary school teachers and principals. An equal emphasis has been placed also on the teacher acquiring knowledge as an employee in a work environment and on ways of improving students' health and safety. The training programme discusses a range of health and safety issues relevant to schools.

On each day of the course the participants apply general principles to the specifics of schools and consider lesson plans to teach the basic principles to primary level pupils. The first two courses were organised in July 2007. Four more pilot courses were offered in summer 2008.

Aims and objectives

On completion of this course, it is hoped that participants will:

- positively influence their students' ideas about health and safety, nurturing them as future responsible adults;
- make a positive contribution to the planning of their school's approach to health and safety management;
- have an understanding of the context of health and safety from a work and student perspective.

Background

HSA is the national statutory body in Ireland with responsibility for securing safety, health and welfare at work. As future workers, children and young people are strategic target groups for the safety message, the authority is exploring opportunities whereby the principles of health and safety can be disseminated through the formal education system.

The HSA's education strategy has five strands:

- managing safety in schools - creating a safe teaching and learning environment;
- putting health and safety awareness at the centre of all levels of education;
- providing teacher support and classroom resources;
- teacher training; and
- joint initiatives and programmes.

In terms of its education strategy, the HSA's objectives are

1. To raise awareness in teachers of safety and health at work issues in order to ensure that they support their school's approach to managing safety for workers and pupils; and
2. To help teachers to develop lessons which would help pupils understand and respect the need for good practice in safety and health at work.

In Ireland, the National Centre for Curriculum and Assessment (NCCA) conducted a survey (commissioned by the Health and Safety Authority) to find out where health and safety education might be introduced and/or reinforced in the primary and secondary school curriculums. Following this, the authority identified a number of existing educational programmes and curriculum areas that are particularly suitable for developing health and safety awareness in pupils.

Social, Personal and Health Education (SPHE) is one area where considerable opportunities exist for this kind of teaching. SPHE is part of the curriculum for all students in primary school and in the Junior Cycle (the first three years of second-level education for students aged 12-15). SPHE can help to lay the foundation for positive attitudes, values and decision-making in relation to health and safety. The NCCA are at an advanced stage in developing a SPHE curriculum for the Senior Cycle (students aged 15-17/18 years). The Health and Safety Authority has helped in the development of the course content.

At the moment the authority's education unit is developing a series of courses aimed at increasing awareness of health, welfare and safety matters among teachers. These courses are being organised in conjunction with a number of education centres around the country. One of these is a 20-hour summer course for primary school teachers.

Scope

The course is delivered to primary school teachers in Ireland over five consecutive days outside the school term, lasting four hours per day. Participants can get three days off in-lieu during the term. The course is delivered by chartered health and safety practitioners and is highly interactive, drawing on the knowledge and the experience of the participants to develop awareness and methods of teaching. Attendance is voluntary and expenses are not paid. There are typically 18-22 participants in each group. Two courses were presented in summer 2007, with four in summer 2008. The experience of these pilots has allowed the authority to improve its training strategy including the method of delivery.

The overall theme of the course is the understanding of health and safety in the primary school environment from both teacher and student perspective and developing ways of positively influencing the students' perspective of key health and safety issues.

Teachers are also given a greater understanding of risk management and the formal structures associated with it, such as a safety statement, accident reporting, consultation and training. The course is highly interactive, with group discussion, presentation of findings, case studies and DVDs used as necessary. Course tutors are expected to draw on their own experience of occupational health and safety management to further re-enforce the key messages.

Teaching methods

The main focus of the course is on hazards, risks and their control in the primary school environment. Six of the most likely hazards in the primary school environment were selected for discussion: fire, chemicals, manual handling, bullying, slips, trips, falls, and electricity. The tutor introduces each hazard with an appropriate amount of time spent on its description, its associated risks and possible control measures. The tutor presents this information in his/her own style but ensures that the key objectives are addressed.

There is also a group task related to each hazard: the main group is subdivided into smaller equal groups of four to eight, depending on the full group size. Each group focuses on early (four to seven years), middle (seven to 10 years) or late (10 to 12 years) primary school students and base their findings accordingly. Each sub group considers the relevant hazard in its own schools and agrees on three examples of risks. The group's main objective is to formulate ideas that could then be used in the classroom to stimulate student interest. Where possible, these ideas should be divided into the SPHE (primary level) strands of *Myself*, *Myself And Others* and *Myself And The Wider World*.

Within these strands, children begin to explore what it means to be healthy and well; for themselves, in their relationships with others and in the context of the wider world. In other words, health and well-being are seen as not being solely one's personal responsibility but as something that is affected by our relationships with family, friends and the wider community.

Support materials

HSA has produced course material containing notes for participating teachers and guidelines for tutors.

Venues

The courses are delivered through regional education centres (teacher in-service training centres). The first two pilot courses were conducted in July 2007. The two centres involved were Dublin West Education Centre and Drumcondra Education Centre. Four other education centres hosted the course during July 2008. This health and safety course competes with many other pedagogy and curriculum based courses for teachers including those available online. For this reason, take-up of the course remains low.

Other related courses

HSA has piloted another in-service training course for teachers. 'Health and Safety for Schools' is a 10-hour evening course for primary and post-primary teachers with some responsibility for, or interest in, occupational health and safety as it applies to schools. The programme consists of five two-hour weekly sessions.

Its modules are:

- safety legislation;
- safety roles and responsibilities;
- school training requirements;
- critical incidents;
- emergency planning;
- accident reporting and investigation;
- safety management systems;
- protective and preventative measures;
- hazard identification; and
- risk assessment.

This course is designed to meet the needs of teachers with a broad interest in health and safety as well as those teachers with duties in this area. Many of the participants are principals or deputy principals. Most of the remainder have additional posts of responsibility in which health and safety play a part. The course relates to introducing teachers to, or augmenting their knowledge and skills relating to the management of health and safety in their schools. The aim of this course is not to assist teachers in the teaching of safety matters to students; at least, not directly.

The 10-hour evening course was piloted with eight groups during the 2007/2008 school year. Extremely favourable evaluations by participants were received. The authority plans to adapt the content of this course in the development of an e-learning-based course. In this way it is hoped to maintain the best features of the pilot training (summer and evening) as well as ensuring its wider availability to teachers, its long-term sustainability and the use of best practice e-learning.

The main difference between the 10-hour evening course and the 20-hour summer course is that the 20-hour course allows broader consideration of each hazard, a greater amount of group work, wider active learning techniques and enhanced consideration of teaching health and safety to students.

HSA also offers a student training (awareness) module (*Choose Safety*) which has been piloted in 100 schools. This is for senior second level students who engage in some work experience during the year and who will soon be part of the work force. There is very little training of the teachers who choose to teach this. However, the material (tutor manual) for this course is highly teacher-friendly and largely self-explanatory. The second phase of this pilot will make the programme available to 200 schools in the 08/09 school year.

Outcomes

Participants' evaluation forms indicate that the teachers liked these courses. The summer course has been developed as an online summer course, the take-up of which has been good.

Problems faced

There were some problems with getting teachers to sign up for this course. In Ireland primary school teachers can take a week-long course in summer and get three days off in lieu during the term. The Department of Education and Science has a long list of courses from which teachers can choose. These include courses in, for example, local history, drama, arts and music, which attract more participants than the health and safety course.

Another problem was that many other courses had an e-learning option. E-learning courses are very popular among younger teachers. For this reason HSA is developing a series of e-learning course materials aimed at various types of learners. And the summer courses for teachers have subsequently been carried out by this method. This pilot, which involved traditional methods of instruction, has allowed the authority to develop clear content, learning outcomes and goals for its courses that have been tried and tested.

Success factors

The course is highly interactive, using the knowledge and experience of the participants to develop their awareness of safety issues and methods of teaching. It includes a lot of group tasks and activities and encourages active learning.

HSA publications support other learning materials and enable teachers to learn more about the topics covered in the programme.

The tutor manual is well written, clear and specific to the school environment.

Transferability

This training course can be implemented easily by other health and safety authorities and within other countries. It can be introduced also into different cultural, social and economic environments. The general approach and the majority of elements are fully transferable. However, as policies and laws differ between countries, modifications may be needed. The scope of adaptation relates to the area closely connected with national background such as national legislation.

Further information

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<http://www.hsa.ie/eng/Education/>

http://www.hsa.ie/eng/Education/Safety_and_Health_Training_for_Teachers/

H3. Children's art competitions to promote safe behaviour at school – teachers' involvement, Poland

▪ *Central Institute for Labour Protection - National Research Institute (CIOP-PIB)*

Key points

- not a training programme, but developing teachers' skills and motivating them by involvement in an art competition;
- encouraging the schools to organise art competitions on safety themes;
- involving teachers in the competition planning process;
- suggestions for the primary school teachers concerning the competition's details (rules, specifying the subject);
- preparation and transfer of competition materials for teachers.

Introduction

The Central Institute for Labour Protection – National Research Institute's (CIOP-PIB) activities include OSH awareness-raising and knowledge development. As part of this the institute organises art competitions, both for professionals and for primary school children. The art competitions are an effective tool for teachers to introduce, educate and promote safe behaviour among children. As a result of this, the safety knowledge in schools is increased.

Aims and objectives

An artistic form of presenting risk education should help motivate pupils to learn about safety rules. It encourages them to observe what is going on around them, in order to incorporate this into the art activity.

The main aims of the art competition for primary school children are:

- promoting the idea of safety and safe attitudes to make children aware of hazards in their environment, including school, playground, possible future workplace;
- educating teachers on occupational safety and health in the work environment;
- making school managers aware of the importance of their support for the teachers in organising the competitions.

Background

The accident rate for Polish schools is nearly twice as high as for overall Polish employment. In 2003-2004, over 140,000 children had an accident at school. There were almost 90 deaths, with more than 1,200 seriously hurt. Nearly 60% of the accidents occurred in primary schools, mostly in gyms, corridors, stairs and playgrounds, during lessons of physical education or at break times. Therefore, CIOP-PIB aims to develop a comprehensive approach to safety in primary schools. Teachers' education in this area is crucial to achieving this.

An art competition forms a part of the approach: since 1997 CIOP-PIB has periodically organised a poster competition devoted to occupational safety and health protection in the work environment - both for professional artists and children. The participants of the children's competition are usually split into two groups: grades one to three, (ages seven to 10) and grades four to six (ages 10 to 13).

Scope

This case focuses on how teachers are involved in the children's competition. In order to organise a successful art competition for children as a form of safety education, it is crucial to get the active

support of teachers from the school and especially the school's management. The support of educational associations and parents' organisations has also been important, because it increases the programme's impact. These organisations include the Mazovian Centre for Public Health and the Polish Association of Parents.

The crucial element of organising every competition is to prepare the background for the teachers. The preparatory work consists of meetings and presentations of the proposed topic, and detailing the reasons why it was chosen for promotion in a particular school. This approach also requires the acceptance by the school's management that the chosen topic for the annual competition corresponds with the goals of the school. The topic is usually compatible with the current priorities and activities of CIOP-PIB. Due to the co-ordination process there have not been any disagreements to date. Topics have included noise, healthy backs, learning and playing safely, hazardous attitudes at home and school.

Arrangements for the competition usually start in April or September and last two months. After introductory meetings with school principals and involved staff in every school, it is important to organise several preparatory meetings for teachers prior to conducting the competitions, giving them a chance to discuss the topic.

Preparatory meetings for teachers are always tailored to their particular school and there is no set method. They can be face-to-face meetings with a teacher, or group of teachers at the school, or meetings with a teacher at the institute's premises. Nor is there any special method of knowledge transfer to teachers. A range of materials, including statistical data, information on children's typical behaviour, previous competition materials and artistic work, are all drawn upon to arouse teachers' interest and encourage them to participate. Organisers are usually able to identify among participating schools interested teachers who want to take part.

A teacher nominated by the principal in each school is responsible for co-ordinating all the activity until the school's competition posters (designed on A2-A4 paper size in any media - drawing, painting, collage) are sent to the organiser.

Then a jury comprising representatives from CIOP-PIB and schools, and some artists, judge the posters received. At the end of every competition there is an exhibition of the winning posters, and if possible, they are published in a catalogue.

CIOP-PIB has also produced self-explanatory risk education resources, including handbooks and guidebooks, educational packages and training materials using multimedia. These resources have also been a support to teachers involved in running the art competition within their schools/classes.

One goal of the programme is to raise the awareness of children, teachers and school principals. This can be measured by conducting a survey.

Example: Nationwide art competition

In spring 2007 the institute initiated and organised a national art competition for primary school children entitled: Lighten the Load - Lighter and Safer. The theme echoed a campaign organised by the European Agency for Safety and Health at Work, Lighten the Load, which related to musculoskeletal disorders (MSDs).

Over 19,000 children from nearly 200 schools took part. Entries were divided into two parts according to the artistic level of the pupils: grades one to three and grades four to six. Posters were designed in any media (drawing, painting, collage). Younger children were given A3 paper size, and the older ones A2 size. The children concentrated on the negative consequences of back pain (MSDs) and how awareness of OSH can be raised.

The results were announced at an official ceremony in the Mazovian Voivodship Office in Warsaw, when the winners were rewarded in the presence of representatives of CIOP-PIB, the press and television.

The second competition was organised in Warsaw in September and October 2007, and accompanied the Occupational Safety Poster Competition, Lighten the load, designed for professionals. More than 470 children from Warsaw and Giżyce, near Sochaczew, took part. There were six main prize-winners and nine honourable mentions. The awards ceremony took place at the CIOP-PIB head office in Warsaw.

Outcome

Many schools have taken part more than once. This increases their commitment to and awareness of, health and safety issues. Around 35,000 children have taken part in the competitions to date. There has been a systematic increase of the numbers of participating teachers.

Problems faced

In the case of children's art competitions, communication is crucial. Other important issues are:

- finding time within the school year to give the programme sufficient priority;
- financing the programme (including prizes and travel expenses); and
- attractive incentives for children.

Success factors

- involving teachers in the planning process - working with the teachers before hand has been crucial to success.
- provision of guidance and suggestions for the primary school teachers concerning the competition's details (rules, specifying the subject).
- making this a regular event, thereby introducing more teachers to OSH and risk education over time.

Transferability

With adaptation to local circumstances, the activity could be successfully implemented in other countries.

Further information

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H4. Safety training for physical education teachers, Germany

Unfallkasse NRW (UK NRW, Statutory Accident Insurance for the Public Services of North-Rhine Westphalia). In co-operation with: Bezirksregierungen (District Authorities) and the Ministerium für Schule und Weiterbildung NRW (Ministry for School and Education), Deutscher Judo Bund (German Judo Federation), Deutscher Alpenverein (German Alpine Club), Deutsche Sporthochschule Köln (German Sport University Cologne).

Key points

- Teacher safety training for sports lessons (examples are martial arts and climbing) helps to prevent accidents.

- Teacher training aids (for grades 1-8) provide good practice information on safety in sports lessons and educational aspects.
- Training workshops.
- Internet self-study platform is used to disseminate good practice information concerning safety and safe behaviour in school buildings and during classes. Platform is integrated into an existing 'safe school' online web-based resource.
- Partnership, with statutory accident insurance organisation working with sports educators and sports federations.
- Promoted by the introduction of new, high risk sports into schools and administrative rules on safety promotion in physical education.
- The training forms part of the official annual teacher training programme.
- The training aids are recognised and used by sports federations to train sports club trainers.

Introduction

In Germany school education is under the control of the Federal States. Sixteen ministries of the Federal States and their subordinated authorities are responsible for school curricula and for teachers' education and vocational training. The important partners for teachers' training in safety issues are the Statutory Accident Insurance Companies for the Public Services (UKs), which are organised regionally, and responsible for civil servants and teachers. The UKs offer a broad range of vocational training and safety guidelines as they have the legal duty for accident prevention activities (§23 SGB VII- the legal basis for accident prevention activities and safety training activities of the statutory accident insurances.)

Background

Physical education is among the most dangerous of activities in the school curriculum. These are the lessons in which most accidents at school happen. In order to prevent accidents in physical education and to give aid and guidance to the pupils, teachers have to be trained thoroughly in various kinds of sports.

In 1999 teachers were confronted with a new challenge: The Ministry for School and Education of North-Rhine Westphalia decided to integrate lessons in martial arts and climbing into the school curriculum. Martial arts became obligatory for physical education even though it can be considered as a high-risk sport activity where pupils can get hurt easily and severely. Climbing is optional but in practice it is very popular in addition to classic gymnastics lessons.

Aims and objectives

The new school curriculum raised the need for vocational training measures for teachers of physical education, as only a few of them were specialised in one of these sports. Neither martial arts nor climbing are compulsory lectures at university for student teachers in physical education. Therefore teachers needed training in three areas:

- the new sports;
- how to teach them; and
- advice in safety issues.

Safety issues are part of the newly developed training programme and its materials. A good knowledge of general fighting and climbing techniques was considered to be the precondition for safety in school lessons. The special focus of material and workshops is to teach co-operation, togetherness and safety techniques as an integrated part of physical education.

Scope

The Statutory Accident Insurance for the Public Services (UK NRW) was the first organisation to tackle the problem. It is the responsible body for the accident insurance for teachers and pupils and in this function it has been the partner of the Ministry of Education and Culture and district authorities (Bezirksregierungen) as part of the subordinated authorities responsible for the safety training of teachers.

The approach was based on three factors:

- developing teaching aids for climbing and martial arts that cover safety issues as well as pedagogic guidance;
- offering lessons for teacher training; and
- implementing an internet platform for further general safety instructions.

a) Teaching aids for teachers

Together with experienced specialists from the German Sports University Cologne, the German Judo Federation and the German Alpine Club teaching aids were developed. They cover safety issues as well as exercises for the physical education lessons.

The teaching aid for martial arts consists of a general introduction, which gives advice on safety issues in martial arts lessons and how to teach them, and seven consecutive modules that start from basic lessons for body experience and body control and lead step by step towards first fighting techniques:

- fighting 'together': contact, co-operation, confidence;
- balance and body tension;
- basic experiences in duel: learning to attack and to defend;
- pitting strength, experiencing forces: pushing, pulling, holding, dodging;
- controlling falls;
- fighting on the ground; and
- fighting upright.

Each module contains different exercises suitable for pupils of different ages. Additionally, the introductory chapter defines essential safety rules that should always be followed to minimise the risk of being harmed. These rules should be introduced in the modules so the pupils can learn safe behaviour in play:

- Sports wear should be suitable for martial arts; jewellery and any piercing should be removed, and long hair should be pulled back.
- Stop signals should be agreed with the pupils; and respect for these when fighting is compulsory for everybody.
- Teaching fair and sportive fighting. Taboos include: biting, scratching, beating, kicking, choking, pulling someone's hair and insulting others.
- Showing discipline, e.g. keeping a safe distance from pupils who are watching the fight, showing respect to each other, e.g. bowing before and after the fight.
- Exercises and techniques should be adapted to the age, experience, cognitive skills and physical dexterity of pupils.
- The teacher should point out situations of particular risk in every exercise and show how they can be avoided.

The teaching aid promotes also social competence, a sense of responsibility and safety and health awareness among the pupils. Team play, experiencing the excitement of sports and pushing limits without forgetting about safety are essentials of the educational background of the publication.

The teaching aid for climbing lessons is structured in a similar way: In the introductory chapters the pedagogic use and chances of climbing lessons and the concept for vocational training for teachers

are presented. Subsequently safety and climbing techniques are presented and hints are given about how they can be taught in school lessons. Soft skills, team play and responsibility are also in focus.

The most important chapter of the teaching aid is dedicated to belaying techniques. Individuals should be aware that climbing accidents can lead to fatal accidents, especially when climbing on higher walls. The main focus is the triangle of safe climbing: knot, karabiner, and safety person. The wrong use of equipment may cause material overstress so that the rope may rip or the karabiner may break. It can also lead to severe injuries by burns or crushed fingers. The use of 25 questions will highlight common errors and demonstrate good practice, for example:

- How to tie climbing harnesses?
- How to fix the top rope?
- How to tie the munter hitch (knot)?
- How to use figure eight and karabiner?
- Where to place the safety person / spotter?

Furthermore, advice is given concerning climbing techniques, such as shimmying, descending, dynamic manoeuvres (dyno), laybacks, and smearing. Examples illustrate how these climbing techniques can be taught in an ordinary school's gym by the help of wall bars, pommel horses, boxes, benches and climbing poles, but also at climbing walls and at natural rock faces. Also exercises are shown for physical work out and cardio training.

b) Training workshops for teachers

According to the administrative rule on safety promotion in physical education at school (Erlass Sicherheitsförderung im Schulsport, Ministerium für Schule und Weiterbildung, Ed. 2002) all teachers of physical education must qualify and prove their expertise before giving lessons in martial arts or climbing. This is especially with regard to climbing lessons. The rule explicitly defines techniques and knowledge in which teachers have to have expertise. All teachers who are not qualified can become so in teacher training workshops, organised by the Statutory Accident Insurance NRW in co-operation with the district authorities. The martial arts workshop consists of three days of training, and the climbing seminar of two workshops of three days each. The workshops are held four to six times per year.

It is essential to know that both work shops are designed for, and held as, practical training. The teaching units are based on the above mentioned teaching aids. In this way the content is presented in a close and practical way to the teachers, which facilitates the later use of the aids in sports lessons.

c) Using the Internet as a self-study platform

For further information and as a platform for self-study, the team of UK NRW opted for the already existing "Safe School" (www.sichere-schule.de) on the internet. This virtual school was developed originally for general safety issues in school buildings and has been enlarged with safety instructions for school lessons, physical education among them.

The virtual sports facilities were enhanced with the safety instructions and teaching aids for martial arts so that every teacher can download information as PDF file. Hyperlinks lead to specific information and safety instructions, for example sports equipment or even fighting pupils. More than 10,000 hits per month are registered in the physical education section at the Safe School homepage. Material is also available at www.schulsport-nrw.de

It is important to note that climbing aids are not available online in a complete version because the UK NRW team decided that no teacher should give climbing lessons without practical experience in climbing and safety techniques (belaying with karabiner and rope, tying knots, e.g. the munter hitch).

Outcome

Since 2003, the UK NRW has taught, on average, 80 teachers in martial arts courses and around 120 in climbing courses every year. The feedback from teachers and students is very positive and climbing lessons especially have become very popular. Many teachers also broadening their knowledge in advanced training offered by members of Alpine Club and Judo Federation. The hit rate (10,000 hits per month) and downloads of material at Safe School also show the continuing interest of teachers and school representatives in the topic.

The most important outcome of the measures is that accident rates in physical education have not increased over the last years, despite the fact that martial arts and climbing have become part of sports lessons in school. It can be considered as success that no severe accident has happened so far, especially for climbing lessons where the smallest mistake can be fatal.

Problems faced

The development of new material for safety aspects in schools has to take into account a lot of different demands: safety issues, educational aspects and specific sports techniques. These aspects needed to be communicated between those involved in the school, administration and experts. The involvement of experts and practitioners could solve the problem.

It was of major importance to find experienced trainers in climbing and martial arts for the seminars. This could also be done in co-operation with the district authorities.

Success factors

Teaching aids have been developed with the help and support of specialists from the German Sport University, Alpine Club and Judo Federation on the one hand, and practitioners from schools on the other. In this way it could be ensured that the new material meets high technical, as well as high educational standards.

The teaching aids are more than just guidelines for accident prevention; they also increase the competency of pupils and teachers by promoting safe behaviour, responsible team play and general health awareness.

As the district authorities offer the lessons in the official annual teacher training programme, teachers can participate in courses as vocational training and do not have to take special leave. Hence it is easier to motivate teachers to participate.

As the materials to the Safe School are uploaded on a website, teachers from all over Germany can easily use the teaching aids for martial arts. Furthermore, Safe School provides a lot of good practice information on safety in gymnasias and in sports lessons in general.

Transferability

The training aids for climbing lessons are not only used in teacher training but also in training offered by the German Alpine Club. The guidelines for martial arts in schools is also recognised and used by the German Judo Federation in teaching trainers at sports clubs.

For any further transferability of the programme among teachers in Germany, it should be mentioned again that the responsibility for school education and teacher training is under the control of the Federal States of Germany. Furthermore, vocational training and safety training for teachers is not compulsory in any of the Federal States of Germany and depend on the personal engagement of the teacher and the school principal.

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<http://www.sichere-schule.de/kaempfen/kis/kis.htm>

http://www.schulsport-nrw.de/info/03_fortbildung/kaempfen.html

<http://www.sichere-schule.de/sport/10/01.htm>

http://www.schulsport-nrw.de/info/03_fortbildung/Klettern/kletternindex.html

Ministerium für Schule und Weiterbildung Nordrhein-Westfalen (Ed., 2002): Erlass Sicherheitsförderung im Schulsport. Düsseldorf 2002. Available at: http://www.schulsport-nrw.de/info/05_sicherheitsundgesundheitsfoerderung/sifoe_erlass_01.html

UK Nordrhein-Westfalen (Ed.): Kämpfen im Sportunterricht. Bausteine und Materialien für die Lehrerfortbildung. Düsseldorf. Available at: <http://www.sichere-schule.de/kaempfen/kis/pdf/kis.pdf>

UK Nordrhein-Westfalen (Ed.): Klettern in der Schule. Bausteine und Materialien für die Lehrerfortbildung. Düsseldorf.

H5. Co-operation in risk prevention at school, Sweden

▪ *Källby Gård*

Key points

- A comprehensive school for children from 6 to 12 years of age.
- The school has developed a holistic approach to risk education for pupils and maintaining a safe learning environment.
- Staff and pupils are all directly involved in maintaining a safe learning environment. Every class identifies hazards in its classroom.
- In-service teachers learn on the job about delivering risk education and preventing risks in the school.
- OSH is on the agenda of all staff meetings.
- Staff and pupils participate in the school safety committee.
- Specific courses for all staff include first aid and fire protection.

Introduction

Källby Gård has been doing sustainable work on involving staff and pupils in accident prevention since 1994, with the aims of decreasing accidents and injuries. The students are provided with a special form, red and blue pins, and a map to help find the environmental risks.

The risk areas on which they focus are:

1. ventilation;
2. lights;
3. heat/cold;
4. school design;
5. details of work environment;
6. play-ground;
7. atmosphere/social relationships; and
8. other issues, including fire protection, and allergies.

Every class identifies the risks in each of these eight areas in their own environment and proposes improvements. The defects are listed and the safety committee, consisting of both pupils and staff, looks at them in order to find hazards and risks. The safety committee then makes a workplace tour to determine what needs to be done.

Part of the programme includes developing teachers' skills to deliver risk education and contribute to staff and pupil safety at the school.

Aims and objectives

The school is the pupils' work environment. Thus it is hoped that:

- The pupils will be able to influence their work environment. They should know how to identify risks and also have good suggestions for counteracting them.
- Student-elected pupil safety representatives will contribute to increasing the safety within the school and promoting their own security.
- The principal, the pupil safety representatives and the school nurse will continue to function as key persons in promoting safe behaviour.
- As the registration of injuries is an important aid in preventing injuries, that once a month, the school nurse continues to report to the principal on these.

Teachers' skills and knowledge to enable them to participate effectively in the process are developed on the job.

Background

Källby Gård is situated in the municipality of Götene, which is beneficial to the school, as the municipality gives priority to three strategic principles: environment, participation, and safety.

Källby Gård consists of a kindergarten for children aged from one to five years, a comprehensive school for children from six to 12 years of age, a leisure centre including a club for after-school activities, and a library. Since 1997, Källby Gård has a local governmental board of which the majority are parents. The school has 220 children and employs 40 adults. The staff aim to create a good educational environment, focusing on a holistic view on children's learning and environment.

Pupils and teachers at Källby Gård register all near misses and injuries. Their accident statistics show patterns of accidents and types of damage, which are then used in the work on accident prevention. There are also actions against bullying and violence, and working towards an environment of friendship and companionship.

The registration of injuries and incidents is used to:

- get an indication of those environments that are dangerous for children;
- correct these environments once they are identified as part of the registration process; and
- encourage the children to be proactive in identifying risks.

Further, there is a special sub-committee that works to combat bullying and violence. Rules, for example, have been developed on the use of cycle helmets. In addition, parents are involved in creating a safe traffic environment around the school.

Scope

Regarding the development of the necessary teaching skills and their awareness of the importance of safety, this is achieved through:

- on-the-job learning
- directly involving all staff in the process of detecting and managing risks in the school and making part of their day-to-day activities
- specific courses in certain areas.

Teachers learn on the job about risk prevention in the school and about delivering risk education to pupils. OSH issues are constantly on the agenda for all staff meetings and conferences. Because these questions are frequently discussed, staff becomes familiar with the idea of how the environment can be improved. The new teachers at school join these discussions and are thus introduced to the school's safety culture. The pupils also have the opportunity to talk with teachers when environmental issues are on the agenda, in the meetings of the collaborative councils. In addition, first aid and fire protection courses, for example, have been held for all of the staff. The commitment and leadership of the head teacher is also important in building staff confidence and skills.

Outcome

Källby Gård, in 2003, was the first school in the world to be awarded the title of Safe and Secure School, according to the criteria set by the World Health Organisation (WHO). However, Källby Gård already had a long history of improving the school environment and the systematic prevention of hazards. Its work, which has been sustainable since 1996, is continuing.

Success factors

The school stands up for its values and principles and is a long-term model for work with risk. Regarding the development of teaching skills the success factors include:

- combining risk education with school safety;
- facilitating engagement and participation by all staff, pupils and parents within the work environment;
- developing teaching skills by actively involving all teachers in preventing risks in schools;
- compulsory training in some areas for all teachers;
- commitment and leadership of the head teacher;
- backing of the municipality to create safe schools.

Transferability

The safe school idea presented by Källby Gård is transferable, although it would be challenging without having the municipality's interest and support as owner of the school. However, the most important issues are the basic school values, attitudes, participation of pupils, parents and staff, knowledge and competence, structures, daily work, enthusiasm and good leadership. The aspect of involving all teachers in school safety is transferable.

Further information

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<http://www.gotene.se/barnkunskap/skolor/kallbygard.103.html>

Källby Gård - A Safe School. A small manual for you who wants to start working in the pupils' work environment

http://www.gotene.se/download/18_2edd891311d671f43228000292326/hafte_eng_working_environment_gotene_kommun.pdf (Swedish)

The work environment at Källby Gård school

http://www.dguv.de/bgag/deveranstaltungen/tundi/2007_dokumente/cardell.pdf (English)

Källby Gård - A Safe School. - http://www.phs.ki.se/csp/pdf/safeschools/kallby_gard.pdf (English)
Källby Gård - A Safe School. -
http://www.gotene.se/download/18.2edd891311d671f43228000286902/Haftet_Kallby+Gard_feb_2007_gotene_kommun.pdf (Swedish)

3.1.2. Snapshots I

HS1. Centre for School and Safety – web resources on ‘social safety’, the Netherlands

Lead organisation

Centrum School en Veiligheid

Aim

To encourage schools to develop their own social safety policy about bullying, sexual harassment, knives and even guns in schoolbags.

Key elements

To support schools in designing this specific policy, the Dutch Ministry of Education, Culture and Science, set up a Centre for School and Safety at the APS (Dutch National Centre for School Improvement) in November 2004.

The Centre for School and Safety provides a range of services and resources.

It provides training in the form of workshops for schools and their teachers. The programme can be organised to fit the needs of specific schools. There is also a programme where it will come and work within a school and with its staff for a week (Research Route).

Its website is filled with tools and good practices, information and links to experts on safety. It also tells the website visitor about school safety in the larger context, from control of weapons to student mediation. It provides information about other training, conferences, etc. on social safety in schools.

The website gives access also to other specialist safety projects of the Dutch National Centre of School Improvement, for example, the ‘PPSI’-project which stands for Project for the Prevention of Sexual Intimidation in an educational context, Gay- and -School and ‘Pestweb’ which includes information on school bullying.

Further information

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HS2. Educational activities of a pharmaceutical company, Poland

Lead organisation

GlaxoSmithKline Pharmaceuticals SA

Aim

As part of the corporate social responsibility approach of pharmaceutical company GlaxoSmithKline, it aims to promote risk awareness and a healthy life style through educational activities with schools and the local community.

Key elements

- The organisation of free workshops for school teachers and other promotional/educational activities to raise awareness of teachers in the area of safety.
- Part of a wider approach to raising awareness of risks and healthy lifestyles which includes competitions among children and young people, educational visits, attention to safety training of students on placements in the company.

Further information

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HS3. OSH and ergonomics in the training curricula for teachers in primary and secondary schools, Slovenia

Lead Organisations

University of Ljubljana, Faculty of Education
University of Maribor, Faculty of Education

Aim

- To integrate OSH into the training curricula for future teachers.
- To train future teachers about children's working environment through ergonomics.

Key Elements

OSH issues are integrated into parts of the curricula for future teachers in primary and secondary schools at two teacher training colleges. There is also a special subject: "Children's working environment through ergonomics".

The learning objectives of the programme, in order to gain knowledge and skills in relation to schools, pupils and ergonomics, include:

- to acquire knowledge of human physiology, biomechanics and psychology;
- to understand the consequences of a sedentary lifestyle;
- to understand the effect of sport on the human body, in terms of both psychological and physical;
- to acquire knowledge and skills in sports safety;
- to be aware of the importance of the quality of children's and adults' lives;
- to obtain ergonomic knowledge of the physical school environment and its effect on pupils such as noise and lighting;
- to obtain an understanding of making ergonomic assessments and the methods/tools involved;
- to become competent to perform a basic ergonomic analysis in education;
- to become competent to plan and prepare measures to prevent risks and ensure a safe and healthy school learning environment.

The programme includes hands-on practice of planning workplaces ergonomically.

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3.2. The Curriculum Cases

C1. Accident prevention and safety in secondary and primary schools, Greece

▪ *Division for Secondary Education - West Thessaloniki*

Key points

- Incorporation of safety topics into health education;
- combining initiatives to improve school safety with training for teachers;
- involving pupils in detecting school safety problems;
- joint seminars and activities for pupils and teachers;
- involvement of relevant safety, health education and youth organisations;
- networking schools on safety management;
- health education as a permanent component of school education.

Introduction

According to the annual reports of the European Home and Leisure Accidents Surveillance System (EHLASS), about 30% of children's accidents in Greece occur at school. The school environment is

frequently the source of many safety and health hazards, often due to inadequate design and construction which does not meet the safety requirements for pupils and teachers.

It was understood, from the first European Conference on Health Education in Dublin in 1990, that it would be difficult to succeed with school health education programmes without first training teachers. The teacher is crucial in conveying positive attitudes about health and safety to pupils, and imbuing them with a sense of caring.

A way was sought to tackle both these issues together.

Aims and objectives

- To make teachers aware of matters about health, hygiene and safety in the school environment. This effort was supported with the use of adequate material to facilitate the dissemination of this information to the pupils and the promotion of active learning methods among them;
- to enable teachers to access services and bodies that can help them on health, hygiene and safety at school;
- to help individuals and organisations to begin to develop safety programmes in schools.

Background

The Office for Health Education in Primary and Secondary Education is under the control of the Ministry of Education and is concerned primarily with hygiene and safety at school. Since 1993, when health education was introduced to the curriculum of the schools, the office's main concern has been to support health education programmes. The Ministry of Education in its yearly circular always lists the topic as a top priority.

The co-ordinator for health education initiated a seminar, organised by the Division of Secondary Education during 2003-2004. It was attended by 100 principals and teachers from primary schools of the Thessaloniki Prefecture. The title of the seminar was Prevention and Safety at School (March 2004). Following this, a one-day seminar for 40 teachers was held. Its title was The Role of Prevention for Safety and Health at Schools (June 2004). From these two initiatives it became evident that there was a need for further training of teachers to raise their awareness of these matters.

Scope

“Co-operation among teachers, pupils, public authorities and local groups on health matters at schools helps to safeguard pupils' health.”

(Christina Christidou, Division for Secondary Education, West Thessaloniki)

In November 2004 the ministry's Division for Secondary Education in Thessaloniki organised a six-day seminar (a total of thirty hours) in collaboration with the Office of Environmental Education for 50 teachers from different backgrounds. In parallel to this, the Division for Primary and Nursery Schools organised a seminar for their teachers on similar matters. These events were the main vehicle for developing topics such as safety at work, environment and the school playground, road safety and conduct, fire protection and first aid.

In collaboration with two prevention centres run by the Greek Organisation against Drugs (OKANA) training themes were developed about the risks of drug dependence, and with the Department of Youth Protection of the Public Prosecutors' Office for Youth in Thessaloniki themes were developed concerning the implications infringement or transgression of the law. A manual containing all the seminar resources was published and shared among the participants. Since the ultimate aim was the protection of the pupils' well being, that same year (2004) and within the framework of the initiatives undertaken by the National Youth Foundation (EIN) on matters of health education, a network of nine schools of Thessaloniki was created.

This network conducted a programme entitled Safety and Accident Prevention in the School Environment during the school year 2004-2005. Taking part were 225 pupils and 18 teachers. A questionnaire was distributed, asking pupils how safe they considered their school environment. The

accidents at each school were registered. In addition, information was given for first aid and safety measures in the workshops of technical high schools. The results and the initiatives undertaken by the schools were exhibited through a poster, a leaflet and a newsletter. The main source of information was the book *More Safety at Schools* (I. Papadopoulos, Medical School, University of Athens).

During the following school years teachers' health and safety training continued on various topics, such as first aid (in collaboration with the Red Cross), civil protection (in collaboration with the Periphery of Central Macedonia and the Prefecture of Thessaloniki), fire protection (in collaboration with the Fire Brigade) and protection against drug abuse (in collaboration with Prevention Centres of the Greek Organisation against Drugs). In addition, health education programmes in schools were enhanced by pupils' visits to relevant bodies and institutions and supported by lectures from specialists in classes. In the school year 2006-2007 another network of ten schools presented a programme entitled: *Risk Management - How Do I Protect Myself?*

This programme, involving 220 pupils and 14 teachers, was conducted in the framework of the policy of the National Youth Foundation (EIN), which encouraged initiatives on health education. The use was made of educational material such as:

- A. a safety pack, distributed by the Commission of the European Communities in 1992;
- B. a book entitled *Safely I Circulate* published by the Centre for Research and Accident Prevention, the Greek Society of Social Paediatrics and Health Promotion and the National University of Athens; and
- C. a book entitled *Road Conduct and Accidents* published by the Division of Health Education of the Ministry of Education.

An emphasis on active learning was given with the formation of teacher - pupil groups. This encouraged the pupils to produce a poster, short plays, exhibitions and a presentation of the results of their work to the local community.

Outcome

Teachers, who wished to be involved in matters of hygiene and safety learned more about these issues due to the training. These teachers were informed about the services, bodies and organisations from which they could get further support in their classwork. They were also trained in contemporary teaching methods which could be used in their day-to-day lessons. This knowledge, ability and positive attitude was passed on by the teachers to the pupils through new programmes and through a new, permanent school network. These initiatives can act as an impetus to promote further co-operation between pupils, teachers, parents and the local community in dealing with these issues.

The programme has continued over subsequent years, with continued support from schools. The efforts have been expanded from the nursery school up to high school in collaboration with the Primary and Secondary Education Divisions of the Ministry of Education.

An additional outcome has been that in 2005 a non-profit civic society named FAOS (**F**rontida, **A**gogi, **O**rganosi, **S**ymmetohi or Care, Education, Organisation and Participation, and means 'light' in Homeric Greek) was formed along the lines of the same society in the city of Patras (see case study H1). The society consists of teachers, parents' organisations and individuals who all are interested in safety matters concerning school buildings. In January 2005, potential hazards at 16 primary and secondary schools were registered by a group of specialists from the University of Athens. The appropriate authorities were informed about the specific hazards found so that they could attract sponsors to pay for safety work.

Problems faced

- The main problem was financing the training of the teachers, the programme and the production of educational material.

- Another difficulty was that the training of the teachers and the carrying out of the programme was performed after working hours and with only a limited number of interested teachers and pupils, since participation was not mandatory.

Success factors

Combining education with improvements in school safety;

- the participation of many organisations of the wider community and their good will and co-operation;
- using seminars with teachers to develop safety topics;
- networking of schools on safety management and involving pupils in detecting safety problems.

Transferability

The formation of a non-profit civic society covering the Prefecture of Thessaloniki has been based on the example of a similar society launched in the Prefecture of Achaia (FAOS project). Furthermore, this type of local network is in the process of being imitated in other regions of the country, for example in Magnesia (a city of Volos).

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C2. Cooperation on health education for teachers and pupils, Cyprus

▪ *The Health and Citizenship Education Committee of Cyprus*

Key points

- The creation of the Health and Citizenship Education Committee.
- The committee brings together departments of the Ministry of Education and Culture, the Ministry of Health and other bodies.
- Its main tasks are: to support health-related activities and associated programmes in schools and to organise training on health-related topics for in-service teachers.
- Two-day workshops for nominated teachers.
- The activities are linked to the European Network of Health Promoting Schools
- External, mobile classrooms used to provide classes to children where specialist skills are needed.

Introduction

The Ministry of Education and Culture in Cyprus (MOEC) supports health education and citizenship activities in schools. For this purpose the MOEC created a "Health and Citizenship Education Committee" consisting of representatives from different departments of the Ministry of Education and Culture, representatives of the Ministry of Health, and the Cyprus Anti-drug Council.

Aims and objectives

The main objectives of the Health and Citizenship Education Committee are:

- to disseminate information about prevention programmes in the school system;
- to create health education training courses for teachers;
- to reinforce and enrich health promotion programmes in the schools' curricula;
- to support and supervise the implementation of school prevention programmes;
- to monitor the implementation of national strategies in schools such as the National Anti-drug Policy and the National Crime Prevention Policy.

Background

The reasons for the creation of the Health and Citizenship Education Committee by the MOEC are described below.

- The different departments of the Ministry of Education and Culture (Primary, Secondary, Technical Education, Pedagogical Institute and Educational Psychology) were initiating and implementing different health education programmes and activities in schools on several topics (such as smoking, emotional health, road safety, drug prevention). Nevertheless, there was no adequate communication between the different departments regarding the implementation of health education. The Health and Citizenship Education Committee has been set up as a horizontal co-ordinating body, which facilitates the communication between the departments. Each department still has a say on the decisions taken by its representative at the committee.
- The creation of the committee was a requirement of the national anti-drug strategy to support health education and drug prevention programmes. The committee is also responsible for ensuring the implementation of the national strategy for crime prevention policy in the school environment.
- Health education in schools focuses on the development of life-skills (such as assertiveness), which are important and necessary for several health-related topics such as safety, drug prevention, smoking, and promoting interpersonal relationships. The committee helps to co-ordinate all this.
- Another important activity of the committee is its policy of Zones of Educational Priority (ZEPs) aiming at offering equal opportunities in education for children of low socio-economic backgrounds and educational levels.

Scope

“Changing real conditions and attitudes towards health problems at schools is more significant than the simple provision of information” (Soula Ioannou, Health Education Advisor)

The main activities of the Committee are:

1. To support health education activities in schools

The main goal of the committee is to create opportunities and actions to encourage, support and guide schools to bring about health promotion changes themselves. Therefore, the committee supports health education activities, such as the creation of an application form by which schools can apply for financial support for their health education activities. It also provides information relating to good health education practices, which helps the applicants to seek financial support to design a sound health education programme.

2. To train in-service teachers on health education and promote health education programmes in schools

In order to support its activities to promote health education, the committee organises health education training for in-service teachers and educational psychologists who work within public schools in Cyprus. Examples of training supported by the committee are given below.

- Training on different anti-drug health education packages such as, Step On My Feet, The Garden With 11 Cats”, and Communication With Adolescents. These packages are conducted on a weekly basis at selected schools and classes, upon request from the school itself or from information provided by the police.
- The training of schools’ advisors and inspectors on health-related topics, such as their role in supporting health and safety in schools. The advisors are subsequently expected to encourage teachers to include these topics in the schools’ programme.
- Encouraging schools to incorporate training on health matters as part of their annual action plan. All school teachers attend a training session, relating to the particular problems and needs of their school, after which they are expected to put their training into practice and/or implement a specific health package.

The main annual, health-related courses for school teachers are organised in the following ways.

The committee, with the co-operation of the health ministry in the framework of the European Network of Health Promoting Schools (ENHPS), organises two-day workshops for one teacher per school, nominated to participate in the network. The ENHPS is a strategic programme for the European Regions. The Council of Europe, the European Commission and the WHO Regional Office for Europe support it.

The Ministry of Education and Culture, with the collaboration of the Ministry of Health, support these schools by various means such as seminars, books and other information, in order to help them develop and implement an action plan for health-related topics. Some of the main themes of the action plan chosen by schools were safety - either at school or at home, smoking, promoting self-esteem, stress management and friendship.

During the school year 2006-2007 the network involved 141 schools while in 2007-2008, this number increased to 174 schools (primary, secondary, technical).

While teachers are trained to provide health education, not all the burden of providing health education is placed on the teachers especially where special skills are needed. For example, another programme related to health at schools is called MENTOR. The courses take place in specially designed mobile classrooms, which are equipped to provide a stimulating learning environment. Highly trained teachers/educators use a wide range of positive techniques and strategies designed to enable children to make sound decisions on matters of health. For example, the development of an anti-drug culture is most important. The educational material used has been designed to fit the understanding of each age group. MENTOR is implemented in all four districts of Cyprus.

Outcome

The impact of the Health and Citizenship Education Committee on health education at schools can be summarised as follows:

Support for health education activities in schools

Applications from schools for financial support have gradually increased. In the school year 2006-07 the ministry financially supported 32 health-related activities and in the school year 2007-08, 123 activities. The schools are encouraged to investigate what their own needs are and to undertake appropriate initiatives based on their capabilities. The quality of these activities has been improving due to the information given by the committee, moving away from focusing on health risks as an individual’s problem to be solved through disseminating information. The documents sent to schools enabled the applicants to obtain financial support to carry out activities that stimulate students to critically explore and improve health-related conditions, practices and choices at different levels: family, school and community.

Training for in-service teachers and promotes health education programmes in schools

Training of in-service teachers has gradually increased, providing them with knowledge and skills on health-related issues. The committee has trained 1,445 educators and educational psychologists

since 2006. The main health education programmes are expanding annually. New programmes have been continuously added. These are Shape Up Europe (Children and adults taking action together towards a healthy and balanced growing up) and Traditional Story Telling (anti-drug education through traditional stories).

Problems faced

The Health and Citizenship Education Committee had, at its beginning, limited staff. Its work procedures took some time to reach their full potential. This caused some delay in the implementation of a few activities.

Success factors

The committee provides a flexible framework for the development of health promotion activities at schools. The flexibility of the framework has several positive outcomes:

- A cross-department and cross-ministry approach was facilitated through the formation of a committee.
- The committee provides a flexible framework for the development of health promotion activities at schools.
- It supports the activities initiated by schools.
- Training is provided for teachers, school advisors and inspectors.
- The training provided to teachers is tailored to the particular needs of the school and takes into account the special needs of the school and the types of pupils.
- Educators are trained in teaching an 'action-oriented' approach to health.

Transferability

The experience gained through the processes in promoting the health-related programmes of the committee will be useful in the event that other educators will take up similar tasks in other schools either in Cyprus or abroad.

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C3. Road safety education and teacher training in Scotland, UK

▪ *Road Safety Scotland*

Key points

- A review of the provision of road safety education to all courses in Scottish teacher-training colleges;
- consultations with Road Safety Units, Health Education co-ordinators in teacher-training colleges and focus groups with primary teacher trainees;
- putting forward recommendations to provide a more consistent and better delivery of road safety education in schools and to trainee teachers;

- recommendations that teacher training include strong links to curricular targets for health education and national road safety strategy;
- developing a training pack for supporting the delivery of road safety education on courses for trainee teachers.

Introduction

Road Safety Scotland commissioned research to review the road safety input to all courses in the seven Scottish university-based teacher-training colleges (TTCs).

Stage One of the research consisted of consultation with police/local authority Road Safety Units that had TTCs in their area about their links with the colleges and their input to road safety training there. Stage Two involved consultation with the health education co-ordinators in each TTC to canvass them about the extent and nature of road safety education within the teacher training courses and the support and resources that would be needed. In addition, Stage Two involved focus groups which were held with primary teacher trainees to determine their views on road safety education. It was found that there was no consistent approach to the delivery of road safety education and a number of recommendations were made, for example, to make the training uniform, to link it to the curricular targets for health education and the national strategy for road safety education, and regarding the involvement of the Road Safety Units and Road Safety Scotland.

Aims and objectives

- To review the level of road safety training in all courses in Scottish training colleges for future teachers by carrying out consultations with Road Safety Units, Health Education co-ordinators in teacher-training colleges and focus groups with primary teacher trainees.
- To put forward recommendations to provide a more consistent and better delivery of road safety education.
- To develop materials to support the provision of road safety education.

Background

Road Safety Scotland is funded by the Scottish Government, and its remit is to develop and co-ordinate national road safety initiatives and campaigns. Road Safety Scotland works closely with all local authority and police Road Safety Units in an attempt to ensure a co-ordinated approach to its goal.

A National Strategy for Road Safety Education has been developed to ensure that all pupils in Scottish schools receive a minimum amount of road safety education in a structured way, with links to the Scottish curriculum, making it easy for teachers to incorporate road safety into lessons. The strategy is based on research findings, developed by practising teachers, piloted in schools and then evaluated after a number of years. It covers pre-school, primary, secondary and additional support needs. The strategy delivers a structured and long-term approach to road safety education.

The recommended minimum amount of time for road safety education is two hours for every pupil each year.

Road Safety Scotland has produced a range of educational resources aimed for use with pre-school, primary and secondary pupils and pupils with additional learning needs. These resources link to National Educational Guidelines, to be taught in personal and social development courses. Teacher and pupil-friendly materials can be downloaded from the Road Safety Scotland website.

To support and strengthen the provision of road safety education in schools, Road Safety Scotland commissioned research company ODS Ltd. in 2002 to review the provision of road safety training in all the courses at the seven Scottish teacher-training colleges.

Scope

Road Safety Scotland commissioned research to review the road safety input to all courses in the seven Scottish university-based teacher-training colleges (TTCs). The universities involved provide a number of undergraduate courses, including a Bachelor of Education (B.Ed) in primary and secondary education, and postgraduate courses, including the Post-graduate Certificate in Education (PGCE) in primary and secondary education.

Stage One of the research consisted of consultation with Road Safety Units that had TTCs in their area. This part of the research explored their links with the colleges and their input to road safety training there. In some areas, the local council administers the Road Safety Unit while in others it is the responsibility of the police. Stage Two involved consultation with the Health Education co-ordinators (usually the member of TTCs' teaching staff who would have responsibility for Health Education or Personal and Social Development courses) in each TTC. The aim was to canvass them about the extent and nature of road safety education within the teacher training courses and the support and resources that would be needed. In addition, Stage Two involved two focus groups which were held with primary teacher trainees: one group with trainee teachers who had had some road safety training in their course, and the other group with those who had not. The aim of the focus groups was to determine students' views on road safety education.

The consultations with Road Safety Units and the health education co-ordinators, as well as focus groups with teacher trainees, uncovered useful information about the state of the road safety education. The study resulted in the recommendation of strategies for securing road safety training at TTCs, and an exploration of elements for a training pack on road safety for all teacher-training courses.

First of all, the report found that there was no consistent approach to the provision or content of road safety training at TTCs. There were good working relationships between some Road Safety Units and their TTC, whereas other Road Safety Units had found it difficult to establish links. These working relationships tended to rely on individual contacts, rather than any formalised arrangement.

Five out of seven TTCs were teaching or planning to teach road safety education. However, their target group was primary trainee teachers only. Where teaching took place, it was usually the Road Safety Officer (RSO) who covered road safety education in the TTCs, sometimes with the support of the lecturer.

There was no clear link made between road safety education and the road safety attainment targets in the Health Education 5-14 National Guidelines. However, it was recognised that health education was the main curricular context for road safety education. The main barrier to teaching road safety education was a lack of time.

Consultation with the health education co-ordinators resulted in some suggestions of methods for covering road safety education, such as lectures with questions and answers and a feedback session, interactive sessions inviting students to discussions and handling materials, micro teaching work and thematic workshops. Suggested resources for teaching road safety education included an interactive CD-ROM as a teaching pack, videos and a teaching pack for lecturers.

The report also put forward recommendations to provide a more consistent approach to the content and provision of road safety education in TTCs. The main recommendations were:

- familiarising all trainee teachers with the national strategy for road safety education;
- highlighting curricular links to the Health Education 5-14 National Guidelines;
- giving all trainee teachers a minimum of two hours of road safety education, including sources of information and advice on road safety education and the availability of road safety education resources;
- developing a national framework for the provision of road safety education in TTCs, by Road Safety Scotland working in partnership with police Road Safety Units and TTCs, in line with the national strategy for road safety education; and
- making the principal responsibility for providing road safety education rest with TTC staff, with the support and advice of Road Safety Scotland and local Road Safety Units.

Based on the results of the study, Road Safety Scotland produced a Road Safety Education Training Pack for health education lecturers in TTCs. Section One of the pack includes background and rationale and a list of innovative educational resources for pre-school, primary, secondary and further education levels. These resources can be downloaded for free from the Road Safety Scotland website. Section One also contains useful contacts. Sections Two and Three contain PowerPoint presentations for primary and secondary levels (including lecturers' notes) and Section Four presents workshop handouts (photocopied workshop sheets). The pack also contains a PowerPoint CD-ROM.

The pack is intended to be used as a core framework. It has been designed so that the lecturers can focus on the national Road Safety Educational Strategy but can use additional information to suit local needs. Any additions can easily be included; slides can be hidden or added as needed.

Road Safety Scotland has also produced a road safety education information booklet to be handed to all student teachers during their course to complement the training that they receive. Road Safety Scotland is not aware at which point of the course booklets have been handed out; it probably varies between TTCs. The booklets can be ordered from Road Safety Scotland and they are also available online.

Outcome

The report put forward three options for supporting TTCs in providing road safety education:

- Option One: the local RSU could have responsibility for supporting road safety education training in their TTC.
- Option Two: an individual, such as a former education adviser from BITER (British Institute of Traffic Education Research) could be selected to support road safety education to all TTCs.
- Option Three: a team of RSOs from throughout Scotland could provide support to all TTCs.

Road Safety Scotland suggests that health education lecturers, with the support of road safety officers, primarily provide the road safety education for student teachers. At the moment, Road Safety Scotland is aware that road safety education is taught in some of the TTCs, following Option One, as a day event. Some faculties look at road safety in the context of other health and well-being issues. However, Road Safety Scotland does not know whether this takes place in all colleges. Road Safety Scotland now delivers educational resources, but does not know whether health education lecturers use the resource packs or if the road safety booklets are given to student teachers.

At the moment the recommended time for road safety education is two hours for all undergraduate and postgraduate primary and secondary courses, but the recommendations may change with the Scottish curriculum change (Curriculum for Excellence), due in 2010. Road Safety Education will be included in the new curriculum. The new curriculum will in turn affect teacher training; safety education will not be an isolated subject but it can be part of any subject (e.g. French or Physics) Road Safety Scotland intends to discuss this with faculties after the report on new curriculum has been published.

Problems faced

As mentioned, there were good working relationships between some Road Safety Units and their TTC, whilst other Road Safety Units have found it difficult to establish links. Working relationships tended to rely on individual contact between Road Safety Units and the TTCs, rather than a formalised arrangement. Road Safety Units do not initiate any further contact if the member of staff responsible for working with teacher training providers left. In general, the main barrier to teaching road safety education was a lack of time and this is related to the number of staff and staff pressures and the need to compete with other subjects. It may be difficult to devote two hours for road safety education within post graduate primary courses.

Success factors

- Use of prior research into the existing situation in order to make proposals for a uniform approach and develop teaching resources for lecturers and student teachers.

- Establishing the contribution and functioning of different organisations with regard to the teacher training.
- Involving student teachers.

Transferability

Many elements are transferable to OSH in teacher training in the UK and equally elsewhere.

Similar research could be conducted to review the provision of occupational safety and health (OSH) education in teacher training programmes. An objective should then be to form a consistent approach to the content and provision of OSH in teacher training. Student teachers could also be advised about the range of OSH teaching resources already available; produced by different OSH bodies. A similar training pack on OSH could be produced (by OSH experts) for health education or other lecturers. OSH information booklets could also be produced and given to all student teachers.

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Road safety education and teacher training in Scotland

<http://www.roadsafetyscotland.org.uk/research/completed-research/road-safety-and-teacher-training/>

Road safety education in the Scottish curriculum – research findings

<http://www.scotland.gov.uk/Publications/2000/05/1818ec65-25c3-40fc-8ca8-91935d728b30>

Training resources: <http://www.road-safety.org.uk/education-and-families/>

Primary Schools Road Safety information for Student Teachers

<http://www.roadsafetyscotland.org.uk/downloads/resources/primary-schools-road-safety-information-for-student-teachers/>

Secondary Schools Road Safety information for Student Teachers

<http://www.roadsafetyscotland.org.uk/downloads/resources/secondary-schools-road-safety-information-for-student-teachers/>

C4. A Set of CIOP-PIB's educational materials for teachers, Poland

- **Central Institute for Labour Protection - National Research Institute (CIOP-PIB)**

Key points

- Development of a set of self-explanatory educational resources for teachers;
- initiated partly at the request of teachers for improved materials;
- materials covers only topics that already exists in schools' curricula.
- content developed in cooperation with various authors, some of whom were teachers representing all types of schools;
- materials evaluated and certified;

- modular approach allows a flexible approach to using the materials and tailoring them to different age levels.

Introduction

The Central Institute for Labour Protection - National Research Institute (CIOP-PIB) carries out activities to promote a safety culture with training and education. The institute manages and develops the implementation of national OSH training and education policies and procedures. CIOP-PIB provides an educational programme directed at youngsters at different levels of education, including children in pre-school and those of school age and also, to some extent, teachers and parents.

A set of educational materials on safety culture and occupational safety and health was developed, supporting teachers at all levels of the national educational system.

Aims and objectives

The main aim of the project was to expand existing educational materials, and to support OSH and ergonomics training at each level of the national educational system. This task required the selection of the most suitable programme topics and teaching methods in order to promote the safe behaviour of young people, not only at school, but also in their future work environment. The materials were to be self-explanatory for teachers.

The indirect aims included:

- preventing school accidents;
- promoting safe behaviour among children and youngsters;
- increasing the importance of OSH among social partners; and
- encouraging schools to promote a safety culture.

Background

Drawing on other countries' experiences, the project authors noticed the need to:

- start the education from the lowest level of the national educational system; and
- treat the subject in a holistic way, taking into account all the human environments, such as work or home.

One important reason for the expansion of the set of educational materials was the opinions of teachers working with the institute, who cited the lack of supportive materials and teaching aids, as a reason for not introducing safety matters at schools as well as they could. There were also concerns from employers about the lack of OSH knowledge of those starting work for the first time and concern over the high accident rate in schools (double the national average).

Scope

CIOP-PIB created an educational programme named "Safety Culture" to be used at all levels of the national education. The Centre for Education of CIOP-PIB carried out the expansion of the accompanying set of educational materials.

It was decided to avoid the need for preparatory courses by making the materials self-explanatory. Educational materials contain just some leads, which serve to encourage teachers to self-directed learning. The material content and the way it is structured, gives teachers considerable flexibility. The teachers make use of their own inventiveness and resourcefulness.

The structure and the content of the material is a result of the co-operation between the institute and a group of 25 authors, some of whom were teachers representing all types of schools. The group was created with the assistance of local education departments. Graduates of the institute's postgraduate study Safety and Human Protection in the Working Environment were also among the authors. The

project was implemented as part of long-term national strategic programme "Adaptation of Working Conditions in Poland to UE Standards".

The Safety Culture Programme supports teachers in the training process at all levels of school education (safety culture, occupational safety and health) and the educational materials are divided into parts according to the four levels of the national education system. The programme consists of different modules. This structure allows a flexible approach to using the materials, and at the same time it can be tailored to the different age levels. Each module is divided into lessons. It contains also source material and help tasks for students and teachers consisting of:

- a module card outlining its subject matter, time-frame, and educational aims. It also describes the module's topics (subjects of the day, index, operation's aims, methods and forms of work); and provides transparencies (slides) and an additional literature index;
- lesson outlines integrated with teaching materials plus additional aids;
- students' progress cards with a variety of exercises (drawings, crosswords, colourings); and
- transparencies (slides).

Primary and secondary school content

The intention of the authors was not to introduce additional obligatory content to primary and secondary school teaching programme, since the schools' curriculum is already overwhelmed. At first, before beginning any elaboration of the materials, a detailed analysis of OSH matters already included in obligatory teaching programmes was made. Since the aim of the authors was to prepare educational aids to support teachers in introducing safety issues to the student, the materials include only the content that already exists in schools' curricula.

Two main rules were taken into consideration:

- Content of programmes should not exceed existing information on safety culture in teaching programmes (additional information would overload students).
- The issues presented in the materials should build up and be treated as a continuation at each level of education to ensure proper understanding of the material.

High school content

It was impossible to prepare separate materials for each type of high school, since they have different levels of education. The authors decided to elaborate only one programme and set of educational materials for all types of high schools. Contents of these materials are very closely connected to future professions and workplaces.

It was assumed that implementation of the programme, (planned by each school individually), will let the students obtain the certificate of basic OSH training (according to the regulation of the Minister of Labour and Social Politics), issued separately from the graduation certificate.

Complementary materials

The complementary materials to the Safety Culture programme consist of teaching aids for children in pre-school age (Safe Kindergarten), primary school children (Safe School), and high school and college students in (Labour Science – Safety, Hygiene, Ergonomics).

- A. *Safe Kindergarten*: includes educational tools promoting safe behaviour. It is directed at children aged between five and six years. It consists of eight lesson scenarios with a main character named Detective Umbrella. These scenarios define objectives for particular activities and include instructions for teachers. The programme includes: providing knowledge of healthy lifestyles; teaching to evaluate the positive or negative impact on health; developing the ability of recognising children's and other peoples' capabilities resulting from gender differences, age, health and experience; teaching safe behaviour; creating hygienic habits; promoting a healthy and ecological lifestyle.

- B. *Safe School* - designed for teachers working in primary schools. It includes an artistic form of learning (colouring pictures of safety subject). The objective for children is to memorise potentially dangerous situations (for example running in school corridors, throwing school equipment, pushing other children).

The educational materials for teachers include:

- a course of activities promoting safe behaviour directed at pre-school and school children, teachers and parents;
- scripts of lessons used by teachers;
- teaching aids supporting teachers at all levels of school education (safety culture, occupational safety and health);
- educational materials such as: colouring books, educational games, puzzles; and
- friendly multimedia educational materials including CDs and e-books.

- C. *Labour Science - Safety, Hygiene, Ergonomics* - *the material is arranged in eight separate modules designed for 60 hours of lessons.*

Themes of the modules are: ergonomics, labour legal protection, biomechanics' and anthropometric factors, physiological factors, psychological and social factors, risk and harmful factors in the workplace, diagnostics and designing anthropotechnic schemes, occupational safety and health management. The multimedia educational pack is designed in two versions: for teachers and for students. Each of the modules has the following elements: source text, slides, teacher's guide and dictionary of terms.

The teacher's guide includes documents that describe the various modules and consists of exercises, tests, methodological advice, a list of slides, a bibliography and an index of new terms regarding a specific theme.

Outcome

The outcome of the initiative is a set of materials for teachers, to help them conduct safety and health courses, including:

- a course of activities promoting safe behaviour directed at children, teachers and parents;
- scripts of lessons used by teachers;
- teaching aids;
- classic educational materials (colouring books, educational games, puzzles);
- multimedia educational materials (CDs, e-books); and
- Power-Point presentations.

The quality of the materials was evaluated and certified. A trial of the set, involving 14 primary schools, 18 secondary schools and 19 high schools was conducted in 2004 to verify its practical use. General and detailed opinions concerning the usefulness of the materials as well as remarks, evaluations and proposals of other solutions (based on the schools' own experience) were collected. All the suggestions and new ideas for contents, methods and educational tools were considered during the final edition, which contributed to the set's improvement.

Problems faced

Preparation of the materials has faced problems such as:

- assessment of the knowledge level of teachers;
- lack of time for completing the project; and

- budgetary limitations of the project.

Success factors

Among the various factors that made this project successful, the high quality of materials merits special mention. Other success factors included:

- involvement of teachers in developing the resources and good communication among all the people involved in the initiative;
- a good climate for implementing the project – reflecting the good will of the school teachers and decision makers from the ministries concerned;
- materials to support the teaching of already existing curricular content relating to health and safety – not the addition of new teaching areas;
- content covered based on prior analysis of OSH matters already included in obligatory teaching programmes.

The most appreciated aspect of the project was the wide-ranging and multiphase treatment of the subject.

Transferability

Although the initiative mainly involves preparing the set of materials, the method of the project's implementation could be transferred to similar projects in other countries.

Further information

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C5. Teacher training in health education, Finland

▪ *Finnish National Board of Education*

Key points

- Health education is a mandatory curriculum subject and competence requirements for teachers of health education are defined by a national Decree;
- in-service training for upper secondary school teachers to develop these competences;
- distance learning combined with contact learning which include workshops;
- the course counts as credit points;
- recommendation that at least two teachers per school take the course;
- the health education school curriculum, and therefore the training, includes OSH-related subjects.

Introduction

The term occupational safety and health (OSH) is normally not found in teacher training programmes or in-service training in Finland. At schools, OSH is considered as part of general health education, and the general competence requirements for teachers are seen as sufficient. However, extensive in-

service training for teachers, organised when health education became a mandatory subject, is continuing, and OSH is now an integrated part of health education in the Finnish school system.

Aims and objectives

- To mainstream OSH into education;
- to facilitate the development of a prevention culture;
- to be able to measure the popularity of health education by the number of candidates choosing the examination on health education as part of their matriculation examination; and
- to ensure a structured approach for overall OSH improvement, and the organisation of in-service training until 2011.

Background

- In Finland, health education became a mandatory subject in basic, general upper secondary and vocational education and training (government proposal 142/2000) in 2000.
- The competence requirements for teachers of health education were defined by Decree 614/2001.
- In-service training for teachers was organised to occur during the five-year transition period as part of the 2001 Ministry of Education's teacher training development programme, and beyond until 2011 (government proposal 142/2000 and decree 614/2001).
- Since spring 2007, upper secondary school-leavers have been able to select health education as one of the topics of their matriculation examination.
- Some of the questions of the health education tests occur in the area of occupational safety and health.

Scope

In Finland, all teachers have a master's degree, and those teaching seven to 13 year-old children (i.e. for the first six years of school) have a master's degree in educational science. Before 2001, when the competence requirements for teachers in health education were defined, health education was taught by Physical Education (PE) teachers as a part of the physical education curriculum, with teachers of biology, social science, psychology and home economics also playing a role in teaching this subject. The competence requirements of these teachers remained, in practice, the same as before the reform, but the change of health education from a secondary subject to a mandatory subject influenced the teaching. It has only recently been possible for teachers who have studied health education at university to find teaching posts in schools where they can teach this subject. Therefore, many teachers have not studied health education, as it is required at the present time. This is also why in-service training has been organised for these individuals.

The Finnish National Board of Education funds the in-service health education training. The organisers of the training vary; in the case of health education they are mainly universities. In-service health education training started with the theme 'developing the subject' and progressed to 'developing didactics'. See Table for the number of teachers completing the in-service health education training.

Table: In-service health education training for teachers in 2002-2007 (Source: Finnish National Board of Education in Finland)

Year	In-service health education training	Number of teachers having completed the training
2002	Developing the health education subject 3-5 credit points	306

Year	In-service health education training	Number of teachers having completed the training
2003	Developing the health education subject 3-5 credit points	209
2004	Developing the health education subject 3-5 credit points	145
2005	Developing didactics of health education 5-8 credit points	200
2006	Developing didactics of health education 5-8 credit points	249
2007	Developing didactics of health education 4-8 credit points	131
Total		1 240

One of the courses under the 'didactics' theme has been in the programme since 2005, and is organised by the University of Jyväskylä. It is called Lubenter or Laudatur health education for upper secondary school teachers (the name of the course refers to the Latin grades of the matriculation examination certificate). The aim of this course is to increase the competence of upper secondary school teachers in developing the contents and methods of health education, in particular to strengthen their skills in evaluating the matriculation examination tests of this subject.

The course consists of distance learning with network elements, and contact learning divided into one one-day, and two two-day periods. During the contact learning days, there are expert lessons and workshops, co-operatively using the work experience of the teachers. The tasks dealing with evaluation are carried out as distance learning. Progress is discussed during the contact days and in the network sessions with tutors and fellow colleagues. It is recommended that at least two teachers from the same school participate in the course. The course counts as five credit points, and its completion takes almost a year.

The specific aims of the Lubenter or Laudatur in-service training programme are:

- For teachers to get acquainted with the reform of the matriculation examination regarding health education. Teachers study the different types of health education questions in the matriculation examination test and learn to evaluate the test.
- To deepen teachers' contextual knowledge of health education. The topics include medical issues, health and commercialism, ergonomics, well-being at work, and the most common research on health and diseases.

Teachers learn diverse health education teaching methods for upper secondary school (e.g. arguing, valuing, exploratory learning or discussion). They also go through all the questions and answers of each matriculation examination test.

Outcome

Teachers have positively received the Lubenter or Laudatur courses. The focus of in-service training has been on developing health education teaching at upper secondary schools and on evaluating the candidates' answers to the matriculation examination test questions on health education. The number of teachers having completed the training is notable (1240). It compares favourably with the number

of general upper secondary schools in Finland (about 380) and the number of teachers (100,000). It seems that the recommendation, that at least two teachers from the same school participate in the course, has been followed quite well.

However, health education is taught at every phase of the basic school system in Finland, during the first six years by the class teacher, and afterwards by the subject teacher. There is no public information available as to how teachers at lower and upper comprehensive schools and at vocational schools should teach health education, regardless of whether or not there are any OSH elements, or as to how teachers may participate in in-service training of this subject.

The questions on the health education matriculation examination test are publicly available. An analysis of them reveals that occupational health and safety issues have been included into the instruction and learning content in Finnish schools.

Problems faced

OSH has not been clearly defined as a subject in teacher-training programmes, and occupational health and safety issues are 'hidden' inside the curricula, and not explicitly mentioned. A good example is health education in Finland. This subject contains OSH issues, but the curriculum topics are expressed in general terms, such as general health education; promoting social skills; healthy and safe ways of living; and the balance of mind. Even when OSH is mentioned as part of a course, the meaning needs to be established. In 2007, the statistics of the Finnish National Board of Education showed an in-service training course entitled Social Sustainability and Occupational Health and Safety at Schools. While the course appeared to deal with sustainable development, or ecological sustainability, according to the course outline, social sustainability is a part of sustainable development, which includes subjects such as the prevention of bullying and student counselling and care. The course supported the connection between the viewpoints of occupational health and safety and social sustainability, and school management and administrative processes.

As occupational health and safety and risk education are not represented in the teacher training programmes in Finland, the incorporation of occupational health, safety topics, and risk education would be more realistic being developed as part of in-service learning.

Success factors

Despite the problems given above, health education has a stronger position on the school curriculum, and OSH elements are more strongly integrates into it, than in some Member States. This is reflected in the course content for training the teachers and the number of teachers who have been trained. The target of getting two teachers per school to take the course and making it an accredited course have probably also helped.

Regarding the course itself, distance learning combined with contact learning in the form of workshops is a practical approach for in-service teachers.

Health education has become one of the most popular matriculation examination subjects and the popularity of the subject provides an opportunity for occupational safety and health to use it to strengthen its position. Although occupational health and safety issues may not be in the same form as in the curricula and in the teacher-training programmes, they are still there. Four matriculation tests on the subject of health education have been held since its inclusion in the examination, with some of the test questions focusing on the area of occupational safety and health, e.g. epidemiology, ergonomics, and prevention. The candidates have been asked to identify cases of bullying, to identify health risks in the work of a rock musician, to present and review indoor air problems, to argue for the positive health effects of banning smoking in bars and restaurants, and to discuss the consequences of this action.

Transferability

This type of practice is transferable to countries with a similar administrative structure in their education sector. In other words, core learning outcomes are centrally determined but there is plenty of local autonomy in implementation and deciding how to reach these outcomes.

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C6. Ambassador network for teachers in social and healthcare training programmes, Denmark

▪ *Arbejdsmiljøsekretariatet*

Key points

- A programme in social and healthcare vocational schools to support the teaching of OSH and to coach teachers in this area.
- The role of an ‘ambassador’ for OSH/work environment training was established in each vocational school to support other teachers.
- Ambassadors organised into a network to share information and experiences.
- Instigators are the joint employer-trade union work environment council (BAR) for the social and health care sector.
-

Introduction

To promote the inclusion of work environment training in vocational courses in social and healthcare and the exchange of knowledge and experience between vocational training schools a network of ‘ambassadors’ was set up.

Aims and objectives

- To strengthen teaching about the social and healthcare work environment by enabling particular teachers to function as ambassadors with special knowledge on this subject. Close connections would be fostered between them so that they could share experiences, obtain information and create knowledge.
- To improve the dialogue between teachers and work-experience counsellors, so that the students realise the relevance of what they learn in school to what they learn while on work experience.

Scope

Denmark has employer-trade union occupational health and safety councils (or work environment councils) that are organised by sector – the BARs. The BAR for the social and healthcare sector decided that they wanted to support vocational trainers in teaching their students about occupational safety and health/ the work environment by improving teachers’ knowledge and ability to provide training on OSH/work environment.

It was not thought practical to train all staff in the schools in this area, yet they felt that all staff needed improved knowledge and needed to be kept up-to-date on relevant work environment issues and how to teach them. Teaching concerning the work environment is a developing area so the exchange of experiences is also very important. So they had the idea of having a nominated teacher in each school to promote teaching on work environment matters and facilitate the development and exchange of information and experience. These nominated teachers should be organised into a network and they should then have a formal, recognised role within their school. As well as facilitating

the development and exchange of information, this would also provide the ambassadors with mutual support concerning their role in their school.

The participating schools each appointed an 'ambassador'. In the years 2006, 2007 and 2008 the ambassadors met three times a year at different schools in order to see the actual school environments of the different ambassadors. During the meetings the ambassadors have shared experiences and developed a catalogue of ideas of 'the healthy working life' with descriptions of existing teaching materials and ideas of good practice.

Besides the meetings the network uses an electronic 'toolbox' of resources, which was developed during the project, to get inspiration and ideas for the actual teaching. This toolbox is evolving further as teaching materials continue to be developed.

Outcome

In an evaluation of the ambassador network, the participating teachers have said they see their involvement in the network as a kind of in-service training, where they get the opportunity to have some time away from the school, and develop thoughts and ideas with other teachers across geographical distances.

Furthermore, the evaluation shows that the fact that the ambassadors were asked to set a goal, actually made them strive for this goal. Thus it has strongly encouraged or incited them to be part of the network.

The BAR wants to extend the ambassador network to all of the 24 schools that use a social and health care programme in Denmark. The network is currently represented at 11 schools and working to expand to include the other schools.

Problems faced

The ambassadors experienced different barriers to teaching about the work environment at their schools. They are very dependent on the willingness of the leaders of the school, which sometimes makes it difficult to do something. Furthermore it has, in some cases, been difficult for them to transfer information and experiences to colleagues about teaching work environment because of resistance from colleagues.

The different schools do not progress equally, because of the different barriers they face. This is to be kept in mind, so that all of the ambassadors profit from the network and no one gets left behind.

Success factors

The promotion of training in the work environment has often relied on isolated, interested 'champions' in individual schools. This approach is neither sustainable nor does it promote consistency in teaching. All teachers need to be involved but it is not easy to motivate them or keep them up-to-date. The value of this case is that it goes beyond one-off cascade training, where one teacher is trained and then goes back and trains the other teachers. It provides the teachers with a defined, on-going information and motivational role, and organises them into a network which not only promotes the continual sharing and exchange of information and experience that they can take back to their school, but also provides the ambassadors with mutual support.

The context of school legislation in Denmark must also be mentioned. The teaching of health and safety is mandatory in all school grades and its importance is recognised in the curriculum, with commitment to this from the Education Ministry. Within their strategy it is recognised that risk education and occupational safety and health must be brought together.

Transferability

This type of network practice is transferable to other countries that wish to strengthen the teaching of the work environment at schools. Consideration should be given to the size of the network, as too

great a number of schools might create too loose a network, which would have greater difficulty in achieving its goals.

Further information

Arbejdsmiljøsekretariatet

Studiestræde 3, 2. sal

1455 København K

<http://www.arbejdsmiljoweb.dk/>; <http://www.bar-web.dk> and <http://www.bar-u-f.dk/>

C7. Implementation of the Ordinance on Hazardous Substances in schools in North Rhine-Westphalia, Germany

Unfallkasse NRW (Statutory Accident Insurance for the Public Services of North Rhine-Westphalia) in co-operation with: BAuA - Federal Institute for Occupational Safety and Health, B.A.D GmbH, Ministry for School and Education of North Rhine-Westphalia

Key points

.The Directive on Safety at Schools of North Rhine-Westphalia, implementing the Ordinance on Hazardous Substances, requires the designation of a teacher in each school as a 'commissioner' for dangerous substances.

- The approach combines safety management with raising safety awareness of staff and pupils in schools.
- The commissioner's role includes advising and instructing other teachers concerning the preventing risks from dangerous substances.
- Easy-to-use guidelines, backed up by training, were developed to support the commissioners. They cover risk management as well as promoting a safety culture among staff and pupils.
- Teachers were involved in the development process.

Background

The Ordinance on Hazardous Substances is the national act implementing European regulations on dangerous substances. It aims to protect workers, including teachers, and others such as school students from health and safety risks arising from hazardous substances. The handling of such substances is a daily task for many teachers and students, especially in chemistry lessons, but also in other natural sciences, technical and arts lessons. These substances are not only chemicals found in science classes but can also be wood dust, paints and adhesives.

In order to ensure safety with regard to dangerous substances, RISU-NRW requires the head of school, who has ultimate responsibility for safety in schools, to give a teacher special responsibility for them. This is usually a teacher with relevant knowledge such as a chemistry teacher. The main role of this teacher 'commissioner' is to advise other teachers about the proper handling of dangerous substances. The school head can also assign additional duties and tasks to others, e.g. for risk assessment and the management of dangerous substances in the school.

Many natural sciences teachers were concerned that the role and responsibilities of commissioner were unclear. In addition, they may have knowledge of the properties dangerous substances, but this is not sufficient. They need specific guidance and training about their role in the management of risks and involving others in this process.

Aims and objectives

- To produce information and practical guidelines that help teachers, commissioners and heads of schools ensure safety in lessons and the wider school environment;
- to define in the information the responsibilities of the different individuals involved and give advice on safety measures at school and how to organise them;
- to support commissioners through training.

Scope

A team was set up, under the overall co-ordination of the Statutory Accident Insurance for the Public Services of North Rhine-Westphalia (UK NRW) with the task to define roles and responsibilities for safety at school and to elaborate guidelines for the practical management of dangerous substances including in the classroom. Partners included the Federal Institute for OSH, BAuA, and the regional ministry for education.

The project management team considered that the position of the commissioner for dangerous substances was crucial. It is a key position in complying with safety management, as well as in establishing safety awareness at schools. It is a means of raising awareness and coaching other teachers at the school in their role in maintaining safety and also raising pupils' awareness of risks. But they need support in their role. The project partners produced two brochures aimed at heads of schools, commissioners and teachers.

The first brochure provides information about the role and responsibilities of the commissioner for dangerous substances. He/she can be nominated by the head of school but has to agree to take the position him/herself. He/she executes the delegated duties, which shall be defined in an assignment document. A pro forma document can be copied from the brochure.

The brochure provides a flow chart on how to manage hazardous substances. It gives examples on safety measures that are the responsibility of the commissioner and explains, step by step, what has to be done and to what extent. The commissioner's duties cover: risk assessment; prevention measures; disposal labelling and storage; use of personal protective equipment; record keeping support to teachers. Their supporting role to other teachers includes helping them when ordering dangerous substances, informing them about hazards and risks and ensuring that any necessary personal protective equipment is available.

The brochure aims to be as self-explanatory as possible. Tried and tested practical guidance and methods for SMEs were adapted to the school context (the EMKG concept - Easy-to-use Workplace Control Scheme for Hazardous Substances). Additional instructions, for example, for fire and explosion hazards, help commissioners and teachers to familiarise themselves quickly with the risk assessment process.

The second brochure goes more deeply into the risk assessment process, measures and the detailed information related to specific substances, in accordance with legal requirements. Again, they adapted the guidance to schools' particular needs and circumstances. For example, each substance is categorised as to whether suitable for students' experiments, for teachers' demonstrations only or for being generally prohibited for use at schools.

Before, during and after publication, the overall project management team kept in contact with teachers at schools in North Rhine-Westphalia to get feedback. They also motivated intermediaries, e.g. from prevention services, to promote and explain the position of the commissioner to teachers and explain the guidelines to the target group. All public secondary schools in North Rhine-Westphalia have been provided with copies of the guidance.

Further, the Unfallkasse NRW offers training measures and courses on the matter, where the information of the guidelines and roles and responsibilities are explained directly. There is flexibility regarding the training. Courses can be booked at facilities run by Unfallkasse NRW or as in-house seminars at school.

Outcome

Resistance to the role of the commissioner has been overcome with the introduction of the easy-to-use guidance and training, and the support that the commissioners are now able to provide to other teachers. Commissioners and teachers now contribute much more actively to the management of dangerous substances in schools and the promotion of a healthy safety culture.

Problems faced

There were problems that had to be overcome at the very beginning of the project. The teachers initially rejected the Directive on Safety at Schools of North Rhine-Westphalia (RISU-NRW) that introduced the position of the commissioner. They were concerned about being responsible for dangerous substances management without being sufficiently trained.

Success factors

The designated person, the commissioner, is able to instruct and train the other teachers as part of their role. But they need to have a clearly defined and realistic role and clear guidance and training if they are going to be effective:

- A clear strategy combines safety management and raising awareness of all in schools of risks.
- The whole task of managing dangerous substances does not fall on the commissioners. They are trained to coach and involve other staff.
- Teachers were involved in order to get the guidance right and win them over to the approach.
- By keeping in contact with the teachers, the project team could react directly to their concerns and needs.
- Successful, practical tools and guidance previously used with SMEs was adapted to the specific needs and circumstances of schools.
- Although the guidance was designed to be self-explanatory, training is also given to teachers – which can be external or in-house.

Transferability

The concept of the commissioner and the production of the ready-to-use guidance and training could be transferred to other schools. In addition, the good practice content would be helpful for any school and every teacher who comes into contact with dangerous substances, even where there is not the commissioner system in place.

The experiences from the project could be used for the development of D-GISS, an information system on dangerous substances at schools (<http://www.d-giss.de>). Additionally, the Easy-to-use Workplace Control Scheme for Hazardous Substances (EMKG) has become part of learning aids and school books. With Chemie 2000+ students learn risk assessment with regard to school experiments by the help of EMKG (see also online information of the University of Wuppertal at <http://www.chemiedidaktik.uni-wuppertal.de/chemie2000plus/index.htm>).

Further Information

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<http://www.baua.de>

Unfallkasse NRW (Ed. 2007): Umsetzung der Gefahrstoffverordnung an Schulen, Band 1. Available online at:

http://www.unfallkassenrw.de/index.php?eID=tx_mm_bccmsbase_zip&id=15006830684986c3f6cf57d

Unfallkasse NRW (Ed. 2007): Umsetzung der Gefahrstoffverordnung an Schulen, Band 2. Available online at: [http://www.unfallkasse-](http://www.unfallkasse-nrw.de/index.php?eID=tx_mm_bccmsbase_zip&id=6570082444986c3f6be907)

[nrw.de/index.php?eID=tx_mm_bccmsbase_zip&id=6570082444986c3f6be907](http://www.unfallkasse-nrw.de/index.php?eID=tx_mm_bccmsbase_zip&id=6570082444986c3f6be907)

3.2.1. Snapshots II

CS1. Safety at school - didactic materials for teachers and pupils, Czech Republic

▪ *Occupational Safety Research Institute (VÚBP)*

Aim

To support teaching at schools through the preparation of an interdisciplinary, OSH information resource that is accessible online.

Key elements

- This is a self-training resource and teachers' support resource.
- The website containing didactic materials was created which has two main parts, one for pupils and one for teachers.
- Apart from basic information concerning, for example, laws and information about news and events, the website contains promotional materials supporting teaching activities.
- A set of links allows easy choice of materials to suit particular needs.
- There is a combination of materials for pupils and teachers, and support for lessons on risk education.

Further information

Project Mediální a osvětové nástroje kultivace lidských zdrojů, BOZP - zdroj zvyšování kvality života, práce a podnikatelské kultury, (Media Awareness Project - tools to cultivate human resources, occupational health and safety), Ing. Zdenka Opletalová

<http://www.techportal.cz/4/1/medialni-a-osvetove-nastroje-kultivace-lidskych-zdroju-cid191563/>

<http://skoly.vubp.cz/?wa=WWW10I5+TP>

CS2. Safety training programme for schools, France

- ***The French Institute of Instructors in Major Hazards and Environmental Protection, School Emergency Standardised Answer in the case of Major accident (SESAM plan)***

Aim

A national network of instructors was created to provide resource staff, including teachers and specialists, in the area of major hazards education. The plan has two principal objectives: to introduce risk awareness into civic culture through education and training for students, staff and the educational community, and to help schools develop a strategy to ensure the safety of students and staff in the event of a major emergency.

Key elements

- The staff were assigned to academies or school districts in France to foster a risk awareness culture during the period of compulsory education.
- The Ministry of the Environment established the French Institute of Instructors in Major Hazards and Environmental Protection to help implement the programme and to train instructors.
- The main elements of the plan were incorporated into each school's safety plan and were made compulsory in national education.
- The plan is an effective education and training instrument for students, staff and others.
- It represents a wide scope of the implementation of risk awareness education among the school community.

Further information

SESAM plan - School Emergency Standardized Answer in the case of Major accident

14 Passage Dubail

75010 Paris - France

Tel: + (33) 1 44 72 06 25

Fax: + (33) 1 44 72 06 24

e-mail: contact@iffo-rme.fr

<http://www.iffo-rme.fr/>

CS3. International internet portals on violence prevention in schools, Europe

- ***The VISIONARY and VISIONARIES-NET programmes, supported by the European Commission***

Aim

The aim of the projects was to create international and country-specific internet portals on violence prevention in schools and to bring together persons engaged in this issue in schools. Specifically, the portal aims to help all who search for background information on school bullying, project descriptions, good practice, materials and other resources on SBV in the Internet. It also aims to support the exchange of ideas and experiences.

Key elements

- This example is not specifically on teacher training, but includes some elements related to training and provides resources.
- These are two projects funded by the Socrates/Minerva programme of the European Commission: (2000-2003) and VISIONARIES-NET (2004-2006).
- The VISIONARY project – involves five European countries (Denmark, Finland, Germany, Portugal and the United Kingdom). The VISIONARIES-NET project involves experts from Germany, France, Spain and Romania;
- The project offered three moderated online courses on school bullying and violence:
 - “Managing school violence and bullying: A whole-school approach for teachers”
 - “Coping with school violence and bullying. A course for policy makers”;
 - “Coping with school violence and bullying: A course for parents”.
- Apart from introducing the topic of school bullying and violence the VISTOP online courses promoted a whole school approach.
- The courses included self-study modules with information on current research and practice about violence reduction and prevention, video-clips illustrating issues and interventions, online forums for moderated discussions, activities, assessment of learning progress and links to useful websites.
- The website also includes suggestions for teachers, literature and materials, help and advice, communication channels and on-line sources of information, lesson plans and teaching concepts, courses and training. There are online conferences with experts and practitioners.

Further information

VISIONARY and VISIONARIES-NET: <http://www.bullying-in-school.info/>

Online training: http://www.bullying-in-school.info/en/content/links-resources/news/single-news.html?tx_ttnews%5Btt_news%5D=1753&tx_ttnews%5BbackPid%5D=13&cHash=bfa92e81eb

CS4. Health and safety training for trainers, Denmark

▪ *Arbejdsmiljøsekretariatet*

Aims

- To improve teachers’ willingness to integrate OSH in general teaching;
- to improve teachers’ knowledge on OSH for children and pupils;
- to qualify teachers to make plans to teach and evaluate teaching in OSH; and
- to give teachers the opportunity to get acquainted with OSH teaching materials.

Key elements

- There are customised courses on health and safety training for teachers at kindergarten, primary and secondary school level.
- Courses may approach the subject on a theoretical level or provide practical guidance on teaching a health and safety programme.

- Even with good teaching resources, teachers may not feel sufficiently qualified to teach OSH. At present this new programme is the only option in Denmark for supplementary training in teaching OSH.
- A newsletter on delivering health and safety training is also issued twice a year.

Further information

Arbejdsmiljøsekretariatet
Studivestruede 3, 2. Sal
DK-1455 København K - Denmark
<http://www.arbejdsmiljoweb.dk/>
<http://www.bar-web.dk>
http://www.bar-u-f.dk/Aktuelle_projekter.aspx

3.3. The Workplace Cases

W1. Training teachers to develop and deliver health and safety education - Western Pilot Project, Ireland

- **Health and Safety Authority (HSA)**

Key points

- Helping secondary teachers to give students knowledge and skills in OSH;
- training for in-service teachers on five health and safety units for students;
- developing materials for teaching as part of the module;
- a pilot three-day training and curriculum development course for teachers, which enabled HSA to develop the most appropriate material for the modules;
- experiential learning methods used;
- training certificates were issued;
- partnership between education and OSH authority; and
- a broad cross-section of schools participated in the programme.

Introduction

The key aim of in-service training in the Western Pilot Project was to support teachers at a secondary level in assisting students to make the transition from school to the workplace, by providing them with knowledge and skills in the area of health and safety. The programme was designed and piloted during a three-day training and curriculum development course, which allowed the national occupational safety and health authority, HAS, to develop the most appropriate materials for the modules. Twenty-four teachers from 15 schools delivered the pilot programme, and participated in the training delivered. Within an experiential approach, teachers received training, tested materials and developed classroom strategies for use in the final pack to be given to students.

Aims and objectives

- To support teachers at a secondary level in helping students to make the transition from school to the workplace, by providing them with health and safety knowledge and skills;
- to heighten awareness of OSH amongst secondary schools, their teachers and students.

Background

A core element of the Health and Safety Authority's (HSA) education strategy is to introduce health and safety education in the curriculum of the second level Senior Cycle (two or three years of post-compulsory education for students aged 15-17/18 years). HSA commissioned a 'curriculum probe' to be undertaken by the National Council for Curriculum and Assessment (NCCA), which investigated the extent to which health and safety was present in the curriculum. Following this, HSA intends to achieve the mainstreaming of health and safety in the curriculum at all levels of education. The Pilot Western Project, aimed at secondary schools in the western counties of Ireland, was developed in the context of significant developments at the second level senior cycle, which are being made by the NCCA.

Scope

The Western Pilot Project was initiated during the summer of 2005 as a result of discussions between the chairman of the HSA, Mr. Jim Lyons and the Western Regional Advisory Committee (WRAC) Education Sub-Committee. Mr. Lyons suggested to the sub-committee that a 10-hour module be developed and piloted in secondary schools.

Mr. Lyons and Ms. Sheila O Driscoll approached principal teachers of targeted voluntary secondary schools, vocational schools and community schools. This personal contact was critical in engaging schools, according to principals consulted as part of the evaluation. Fifteen schools in four counties, Mayo, Roscommon, Galway, and Clare, participated in this programme. The total number of participating students was 395, averaging 26 students per school.

The principals and relevant teachers from their schools attended a kick-off meeting to be informed about the programme details and to offer views on its implementation. The teachers who were to deliver the module were provided with three training sessions. Twenty-four teachers from the participating 15 schools delivered the pilot programme, and participated in the training delivered between November 2005 and March 2006.

The participating teachers were assessed in three ways as part of the evaluation process. First, a short workshop was undertaken at the end of the first training day. This workshop sought to establish the initial expectations and hopes of the teachers for the programme. The workshop established that teachers felt very positive about the programme: they felt it would be very relevant to students, particularly as many students were already working. Secondly, at the end of the programme, and on the final training day, a follow-up workshop was undertaken to find out to what extent the teachers felt that the project had met their objectives. Thirdly, a questionnaire was handed out on the final training day.

Teachers were trained to deliver the following modules:

- making abstract concepts real (hazards, risks, risk assessment, controls);
- conducting a risk assessment;
- preparation for work experience;
- manual handling and ergonomics; and
- understanding chemicals.

The course material was primarily aimed at transition year students (15/16 year olds). Students of the established Leaving Certificate, Leaving Certificate Applied and Leaving Certificate Vocational Programme also participated on the programme. These are senior cycle programmes (15-18 year olds in secondary schools).

Expected learning outcomes include:

- understanding key terminology and the concepts of health and safety;
- being aware of hazards in the workplace (school, community, home);
- knowing the main measures required to prevent accidents to oneself and to others;
- understanding the rights and responsibilities of employers and workers in the workplace;
- understanding the basic tools used to manage safety in the workplace;

- appreciating that human behaviour is a major factor in accident prevention;
- understanding the effects of accidents on the victim, and the wider circles of impact; and
- knowing where to find and get relevant information.

How to develop teaching materials was an important part of the teacher training course. An experiential approach was used whereby teachers received training, tested materials and developed classroom strategies for use in the final pack. This enabled HSA to develop the most appropriate material for the modules, which were subsequently rolled out to students.

The training was given by HSA experts and facilitated by the Shannon Curriculum Development Centre, an independent education centre with strong links to the Department of Education and which regularly gives and develops in-service training for teachers.

The programme culminated in an awards ceremony in May 2006 where participating students, teachers and schools were presented with certificates of attendance by the Minister of State at the Department of Enterprise, Trade and Employment, Mr. Tony Killeen, TD¹ and by the Chair of HSA, Mr. Lyons.

Outcome

HSA commissioned TSA Consultancy to evaluate the project. Consultations were undertaken with participating students, teachers and principals, as well as the Education Sub-Committee of Western Regional Advisory Committee. Consultations were also undertaken with HSA staff and Chairman, National Co-ordinators for the Leaving Certificate Applied, Transition Year and Leaving Certificate Vocational Programmes, Shannon Curriculum Development, who provided the training and the National Council for Curriculum and Assessment.

In general, the pilot project was very well received, and participating schools were interested in continuing the programme. Its success provides significant experience for HSA in developing further educational tools, which can be introduced into the curriculum.

Teachers' evaluation on the quality of training

Teachers felt the training was critical for them and of very high quality. The questionnaires showed 100% of teachers thought the training days to be good or very good. All also agreed or strongly agreed that the training prepared them well for teaching the course. Furthermore, all teachers reported that they would feel confident running the course again, and reported that their knowledge and awareness of health and safety as employees had increased.

In the workshop, one teacher believed that other teachers in her school could deliver the course without extra training, by referring to her for assistance. However, others felt that all teachers involved would need to be trained in order to teach the course effectively.

The teachers reported the phasing and timing of the training was good (i.e., scheduled in advance of each unit and spread out over the year), and prepared them well for teaching the course.

Eighty-eight per cent of teachers agreed or strongly agreed that students responded well to the course. In addition, 94% of teachers agreed or strongly agreed that participating students had improved their knowledge of health and safety issues.

¹ A TD (Teachta Dála) is a member of the Dáil Éireann, the lower chamber of the Oireachtas (Parliament) of Ireland.

Principals' evaluation of training provision

Principals commented that while they were supportive of training and believed it to be very important, three days training was a significant amount of time to allocate to a teacher for a non-curriculum based course. Some schools reported that it was relatively straightforward to get substitute teachers and supervision cover for the training days. Others reported difficulties in this.

However, principals were supportive of releasing teachers for training, and expressed a willingness and preparedness to manage the process.

Summary of feedback

All of those consulted believed that teacher training and support should accompany the materials of the programme. There are a number of reasons for this:

- Materials need to be followed up with support to ensure their use and application.
- It is important that teachers are supported in delivering materials to ensure that they are used correctly, and also that programme objectives are promoted.
- Experiential learning is very important for teachers – particularly in delivering practical subjects. Teachers must be able to put themselves in the position of students, especially with regard to being in the workplace.
- Online support is important but on-line support alone will not be sufficient, as there is a varying degree of IT use and familiarity with teachers.
- One school suggested that in order to avoid training during the school term, training could be delivered outside of school hours, with an incentive payment offered to teachers (in addition to expenses).

Problems faced

In particular, the issue was raised as to whether three days would be available for schools to participate on the programme on a sustainable basis. The schools and other parties consulted viewed this as being perhaps the single most important obstacle in running the programme nationally. Also other related problems were reported:

- School management issues arise with regard to managing substitution and supervision during in-service training. Three days training was regarded as a significant number of days to allocate to a teacher for a non-curriculum based course.
- Difficulties in getting substitute teachers (lack of availability), whether paid for by the Department of Education and Science or by the schools out of their own resources.
- If supervision/ substitution is being provided within the school, there is a limit to the availability of hours and days, which may be covered. Schools are currently allocated hours for supervision and substitution on the basis of 37 hours per whole-time teacher equivalent per school year. Teachers, although paid to do so, provide this supervision and substitution on a voluntary basis. The limited cover that can be provided under this system can inhibit flexibility of schools.

Lessons learned

The Western Pilot Project evolved into a number of separate projects. While HSA and the teachers recognised the benefit of the three days' training it was acknowledged that it would not be possible to duplicate that level of training during school hours on a national basis. Every time a teacher is taken out of the classroom for training or other reasons, the Department of Education has to pay other teachers to cover as substitutes. This is very expensive and schools and parents are naturally reluctant to have teachers leaving the classroom, even if the training was worthwhile.

Therefore, HSA took the learning material from the pilot project and developed a pack for schools called Choose Safety. The teachers do not get training in delivering the materials.

Another thing that HSA learned from the project was that training teachers in risk education was really important so that they know how to teach it to children. Therefore an element of the health and safety courses they run for teachers (in terms of managing safety in schools as opposed to teaching it) deals with how teachers might use their learning in the classroom.

HSA has further developed the training element in a new project, to develop e-learning courses for specific groups of learners. This will be provided free of charge for the end-user and HSA hopes to have it certified for those who complete the course. It has the endorsement of the Department of Education which will use it as part of its support and training service for teachers. The big advantage that this offers is that the courses can be done in the teachers' own time without taking them out of the classroom. The aim will be to raise awareness of key issues for each teaching group and have them reinforce their learning with their students in the classroom. Through learning management systems, learning can be monitored, reviewed and assessed.

The following groups will be targeted:

- science teachers;
- technologies teachers (e.g. woodwork, metalwork, engineering);
- teachers/principals/schools' safety officers i.e. teachers with an interest;
- third level students (engineering); and
- secondary school students (15-18 year olds) in preparation for work experience.

HSA has also further developed its training for teachers in the Social, Personal, and Health Education (SPHE) programme in schools. In this, it will work with the national coordinator for SPHE Support Service (Department of Education). Representatives from HSA will sit on a committee which will develop an anti-bullying programme for schools that aims to train all teachers how to help prevent and deal with bullying. Also, its organisational psychologist will work with SPHE teachers as part of the department's training programme on emotional health in its autumn programme.

In general, in Ireland there is still a large demand for evening courses for teachers but they are very expensive to run and the HSA was able to implement only a limited number of these. They do not believe it is the role of the HSA to provide training for one employment sector and therefore their intention is to demonstrate the demand for the training in order to encourage the Department of Education to meet that demand in time. The HSA, also hope they might be able to place the e-learning they are developing in this sector within the Department of Education's existing training structures. This blended approach would be their ideal solution.

Success factors

- HSA is an expert institute within OSH and thus was able to design a programme with appropriate and up-to-date content, and to provide expert support throughout the process.
- Teachers as well as students received a certificate of completion from HSA as a first step in recognising the importance of acknowledging training and continuous professional development.
- Teaching materials were developed as a part of in-service teacher training.
- An experiential learning approach is important to teachers when it comes to delivering practical subjects. The approach enables teachers to put themselves in the shoes of students, particularly with regard to being in the workplace.
- The Chairman of the HSA (as a former CEO of Vocational Schools) had personal contact with many of the schools that participated. As a result, the principals of these schools released their teachers during school hours to attend the training and took this time from their annual allowance of hours of training for teachers.
- There was a broad cross-section of schools participating in the programme, including voluntary secondary schools, Vocational Education Committee Schools and Community Schools.

Transferability

Consultations indicated that this type of programme is transferable across the second level sector in terms of its application and relevance to courses and programmes within schools.

Further information

educationunit@hsa.ie

<http://www.hsa.ie/eng/Education/>

http://www.hsa.ie/eng/Education/Safety_and_Health_Training_for_Teachers/

W2. OSHA training programme for authorised trainers, USA

▪ OSHA Directorate of Training and Education

Key points

- An example aimed at training trainers to provide training in workplaces, not schools;
- The example describes the training role and activities of a national OSH institute;
- a nationwide programme of courses for authorised trainers of occupational safety and health;
- two main areas (the construction sector and general industry);
- teaching aids for trainers.

Introduction

The US Department of Labour, Occupational Safety and Health Administration carry out activities in the area of training and education. The Occupational Safety and Health Administration (OSHA) Directorate of Training and Education manages and develops the implementation of OSHA's national training and education policies and procedures. The *OSHA Outreach Training Programme* is a 'training for trainers' programme and is its primary way to provide training for workers. Through the programme, individuals who complete a one-week OSHA trainer course are authorized to teach 10-hour and 30-hour courses in construction or general industry safety and health hazard recognition and prevention. It is a voluntary programme.

Aims and objectives

The aim of the *OSHA Outreach Training Programme* is to educate OSH trainers based in the USA, who are then authorised to teach OSH courses in construction or general industry safety. The provision of nationwide training for trainers constitutes a good way to promote employee health and safety, and it supports OSHA's training and education mission.

Background

The OSHA Training Institute (OTI) Education Center Programme was initiated as an extension of the OSHA Training Institute, which is the primary training provider of the Occupational Safety and Health Administration. OTI targets federal and state compliance officers and state consultation programme staff, but also provides training for private sector personnel and federal personnel from agencies other than OSHA. However, during the 1980s, the number of requests for training from the private sector and other federal agencies increased substantially. The demand eventually exceeded the capacity of the OSHA Training.

In 1992, the OSHA Training Institute Education Center Programme was created when OSHA began partnering with other training and educational institutions to conduct courses. The organisations were selected through a national competitive process and would not receive funding from OSHA; they

would be expected to support their OSHA training through their normal tuition and fee structures. Throughout the next decade, the OTI Education Centres Programme continued to grow. In 2007, the total number of OTI Education Centres increased to 26, with 45 member organisations. The *OSHA Outreach Training Programme* ‘training the trainer’ courses were introduced through the OTI Education Centres in order to increase the availability of competent training in the workplace. OTI Education Centres also play a leadership role in distance-learning courses. The variety of safety and health programmes includes, among others, Spanish-language courses and other initiatives. The Education Centres play a prominent role in OSH curriculum development and offer local training specialisation related to regional industry needs.

Scope

The *OSHA Outreach Training Programme* ‘training the trainer’ courses are available through the OTI Education Centres. To become an authorised trainer, it is mandatory to complete an OSHA trainer course. There are two main courses: one for the construction sector and one for the general industry. In addition, up-date courses are available.

- **Trainer Course in OSHA Standards for Construction Course (500)** - is designed for personnel in the private sector interested in teaching the 10-hour and 30-hour construction safety and health outreach programme to their employees and other interested groups. This course allows a trainer in the Outreach Programme to conduct both 10-hour and 30-hour construction safety and health courses, and to issue cards to participants verifying course completion.
- **Trainer Course in OSHA Standards for General Industry Course (501)** - is designed for personnel in the private sector interested in teaching the 10-hour and 30-hour general industry safety and health outreach programme to their employees and other interested groups. This course allows a trainer in the Outreach Programme to conduct both 10-hour and 30-hour general industry safety and health courses and to issue cards to participants verifying course completion.

Special emphasis is placed on those topics that are required in the 10- and 30-hour programmes as well as on those that are the most hazardous, using OSHA standards as a guide. Course participants are briefed on effective instructional approaches and the effective use of visual aids and handouts. These courses provide an overview of the most hazardous and referenced standards. The courses are one week long and are conducted by the OSHA Training Institute and the OSHA Training Institute Education Centres, which are located around the country. When people complete the course, they are authorised to train for four years. Before the end of the four-year period, they must take an update course to renew their authorisation for another four years. There are two update courses available:

- Update for Construction Industry Outreach Trainers
- Update for General Industry Outreach Trainers

Update for Construction Industry Outreach Trainers Course (502) - is designed for personnel in the private sector who have completed the Trainer Course in Occupational Safety and Health Standards for the Construction Industry and who are active trainers in the outreach programme. It provides an update on such topics as OSHA construction standards, policies, and regulations.

Update for General Industry Outreach Trainers Course (503) - is designed for private sector personnel who have completed the Trainer Course in Occupational Safety and Health Standards for General Industry and who are active trainers in the outreach programme. It provides an update on OSHA general industry standards and policies.

There are many teaching aids for trainers, accessible from the programme website:

- 10-Hour Presentations (construction, general industry);
- training references (audiovisual materials, multimedia, training materials, and others);
- safety and health references (OSHA eTools and Electronic Products, Technical Information, Regulations and Compliance, Small Business Information, Safety and Health Programmes,

Frequently Cited OSHA Standards, OSHA Worker's Page, Compliance Assistance: Hispanic Employers and Workers, OSHA Frequently Asked Questions, Sample Safety and Health Programmes, Industry-Specific Resources and others); and

- publications (e.g. OSHA Fact Sheets), information materials, specific for construction sector (e.g. Fact sheets about construction fatalities), general industry, or Spanish language information.

These materials are designed to assist trainers in conducting training for employees. The PowerPoint presentation contains, for example, instructor notes and lesson plans.

Outcome

The outcome of the initiative is a nationwide network of trained trainers, prepared to conduct safety and health courses. An active trainer list contains 16,000 people. Trainers meet both experience and educational prerequisites: five years of safety and health experience, 30 hours of prior safety and health training. They are authorised to teach 10-hour or 30-hour courses in construction or general industry. Trainers assemble their class materials from many sources, including OSHA's Outreach website. They are provided a 10-hour PowerPoint CD to use. Trainers document their training and receive OSHA course completion cards for their students. In 2007, over 520,000 students were trained in over 35,000 classes, in the past five years, the number of students trained has doubled. During the past three years over 1.3 million students have received training.

The quality of the training is evaluated and assured. Those who wish to participate as authorised trainers in the Outreach Programme must pass a written exam at the end of the course. Outreach trainers are required to attend an update course at least once every four years to maintain their trainer status. They must bring their current trainer's card for validation.

The International Association for Continuing Education and Training (IACET) has approved the OSHA Training Institute as an Authorised Provider. In obtaining this approval, the OTI has demonstrated that it complies with the ANSI/IACET Standards, which are widely recognized as standards of good practice internationally. As a result of its Authorised Provider membership status, OTI is authorised to offer IACET CEU's for its programme as it qualifies under the ANSI/IACET Standards.

Problems faced

Teaching processes often have to deal with specific problems such as the assessment of knowledge level, ensuring a high quality of informational materials, organisational infrastructure and communication with all the partners involved. In the case of the nationwide initiative, organisation and communication is crucial to success, together with social aspects, language used, differentiation of target audience and geographical coverage.

Success factors

Among the various factors that made this project successful, the high level of management could be mentioned. It influenced the success in involvement of the partners nationwide. Systematic approach, ensuring good quality and promotion of training also supported the initiative. The training system, with updating procedures ensures the good quality of trainers' teaching.

Good communication among all the people involved in the initiative, access to the current on-line information and a large set of educational materials are also very important.

Transferability

Although the initiative mainly concerns a nationwide action, training is conducted also in other languages, and beyond the USA borders. It confirms its flexibility and transferability.

In the context of transferability, a general approach to educational materials could be emphasised. A set of materials, accessible from the website, is a good support for teachers. They can use presentations with teachers' notes, and a great variety of informational materials, designed or adapted for didactic needs.

While the example does not cover training of school teachers, elements of it could be adapted to training school teachers about OSH and the school environment.

Further information

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<http://www.osha.gov/dte/index.html>

http://www.osha.gov/dte/outreach/construction_generalindustry/index.html

W3. Teaching OSH, Czech Republic

▪ *Occupational Safety Education Institute, Brno*

Key points

- The example describes the training role and activities of a national OSH institute, which are mostly aimed at workplace OSH.
- There is a wide scope of educational initiatives, e.g. training courses, post-secondary education and seminars offered by the educational OSH institution.
- The programmes cover post-secondary (adult) education in health and safety at work and also focus on improving the efficiency of inspectors for safety at work by using principles of people management, OSH for schools.
- Active learning methods are used on all courses.
- Selected training (OSH lecturer) prepares individuals for teaching and managing OSH. The training includes training to use active learning methods.
- Some courses are organised for schools and post-secondary education.

Introduction

The Occupational Safety Education Institute carries out OSH educational activities as a state funded organisation. The institute is an important training provider for adults in the Czech Republic. The professional programme supports health and safety policies in the area of education and in shaping safety culture in society. It prepares OSH specialists for their work, related to management, supervision and training people in the area of OSH.

Aims and objectives

The management and organisation of educational activities contribute to shaping a safety culture in society. A high quality system of education supports the state policy of improving working conditions.

The institute's objectives cover a wide range of core OSH education, consultancy, information and promotion. Its programme is designed to prepare highly qualified personnel for their work as specialists, supervisors, managers and OSH lecturers. Further transfer of safety knowledge and skills through training represents a good way to promote health and safety issues in the work environment.

Background

The institute was founded in 1974 in response to educational needs. The role of the institution covered activities related to state labour inspection and other, teaching needs. The educational programme has been continuously developed for many years, and a wide range of activities are now

carried out. The institute is evaluated and accredited by the Ministry of Labour and Social Affairs and by the Ministry of Education. In 2005 the institute fulfilled new legal requirements for certification of personnel according to the new rules.

Scope

The institute offers a wide range of training courses. They are prepared and organised by professional staff, representing a certified level of OSH knowledge and teaching skills. In addition to courses for OSH auditors and managers, OSH and fire safety specialists, labour inspectors, and OSH construction site coordinators is the course:

- OSH lecturer (covers methodology, knowledge of modern, active methods of teaching);

There are many other courses, some standard, some tailored for the particular needs of a group. The institute also organises OSH courses for schools and post-secondary education.

The courses are carried out on the basis of described and accepted methodology. Training focuses on the theoretical and practical aspects of occupational safety and health. The participants pay for the courses. A systematic, experienced approach to education ensures the institute's high-quality service.

Students participating in the courses and fulfilling prescribed requirements are certified. Lists of certified specialists are accessible on-line for various regions of the Czech Republic. The institute's website includes information about the courses and about contacting those who have become OSH certified specialists or consultants.

Outcome

The outcome is an educational system not only aimed at preparing future OSH professionals to undertake duties in the area of OSH management and supervision, but also to act as teachers. A wide scope of didactic activities covers a variety of courses, meetings, and conferences. The institute has subsequently been involved in an international project on training of OSH lecturers.

Problems faced

The problems are those specific to the education sector, such as keeping courses up-to-date.

Success factors

In this example it is recognised that it is not enough to have knowledge of OSH to be able to effectively pass this on to other. Those undertaking this task need teaching skills too. A highly qualified training team and modern teaching methods seem to be crucial in general to the success of the institute's courses.

Transferability

The inclusion of a specific course to become an OSH lecturer, covering teaching methods etc., among a range of courses offered by an OSH training institute could be adopted by others. As mentioned above, the institute has subsequently been involved in an international project on training of OSH lecturers.

Further information

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W4. INQA Lernwelt (World of Learning): Multi-media based teaching and self-studying of tele-tutors and apprentices in OSH, Germany, Austria, France

INQA (Initiative Neue Qualität der Arbeit - Initiative New Quality of Work), Germany, in co-operation with: Berufskolleg Ennepetal, Demag Cranes and Components GmbH, Phoenix Contact GmbH & Co. KG, AUVA (Allgemeine Unfallversicherung, Austria), INRS (Institut National de Recherche et de Sécurité pour la prévention des accidents du travail et des maladies professionnelles, France)

Key points

- A blended learning and teaching network contributes to mainstreaming occupational safety and health issues into vocational training.
- Both teachers and students profit from exchange of information, training measures and newly developed content.
- Teachers qualify to be tele-tutors (or TC TeleCoach®).
- The concept has also been used for pupils in schools.

Introduction

INQA Lernwelt (INQA learning and teaching platform) was designed to improve media competence and methodological background as well as to develop a platform for mainstreaming safety and health issues in education, vocational training and teacher training. It was designed to be used for blended learning so qualifying teachers to be tele-tutors (or TC TeleCoach®) in occupational safety and health was central to its success.

Background

In order to strengthen risk awareness, BAuA and its project partners wanted to develop a teaching approach based on experiencing problems and providing solutions (active learning). The methods and framework had to be flexible, easily updated and suitable for different learning situations and changing contents; modules should fit in apprenticeships, vocational training and life-long learning programmes and be able to integrate new developments quickly.

Aims and objectives

The aim of the project was to establish an online platform for learning and teaching (INQA Lernwelt) safety and health issues in the fields of mechanical, metal and electrical engineering. It was hoped the project would:

- help to integrate safety and health in vocational training and at work in a practical and interactive way;
- give advice and help for planning and attaining vocational training in safety and health as well as for self-study;
- serve as a communication platform between teachers, trainers, students and other interested parties dealing with safety and health; and
- be used by tele-tutors (on-line coaches) from vocational schools, teacher training facilities and companies.

Scope

a) Development

Educational background

The internet as a medium in teaching and education has been proven to be most effective if it can be used in the context of blended learning. This comprises phases of self-studying or distance learning with the help of online tutorials and manuals, alternating with personal tutorials and seminars (attendance learning).

The INQA Lernwelt website and its contents had to be designed with blended learning in mind, so that it can be used for self study and for attendance learning.

- Students should be motivated to learn following their individual needs. Tests at the end of the modules can help to control the progress.
- The focus was on 'active learning' and 'experiential learning'.
- Teachers should act as tele-tutors, giving guidance and advice before and during the learning process by adapting and developing contents, controlling the learning progress of the students and offering additional seminars.

INQA Lernwelt also had to be compatible with other learning and teaching platforms (Lernwelten) and be able to provide various communication tools, such as chat, messenger, and journal to stimulate contact and interaction between the users.

Framework set up

One crucial point of the project was to qualify teachers to be tele-tutors (or TC TeleCoach[®]) in occupational safety and health. TC Tele Coaches are central to the success of blended learning. They act as teachers and contacts for the students and future teachers. They are also multipliers of the INQA Lernwelt concept by qualifying further tele-tutors and by developing contents themselves.

The media framework had already been developed in the DiaMedia Lernwelt project. This was a BIBB model programme for developing dialogical media for the use in vocational training. In a second project, Start up PMC (Planning, Management, Controlling), a multi-media curriculum was developed and later tested and evaluated for its e-learning usability (see also: BAuA 2005).

To begin with 12 teachers and training instructors were qualified as TC Tele Coaches[®]. The programme lasted 200 hours during which they learned about safety and health. They were able to adapt the modules of INQA Lernwelt for their own purposes and to integrate them into education and training. And they were also shown how to compile online learning modules for the website.

Teacher training

From the very beginning, the qualification of teaching personnel at schools and for vocational training in companies was one aim of the Lernwelt concept. They were named TTE Tele Teachers with expertise in safety and health at work as well as in blended learning, and they taught apprentices and students.

Modules on media competence and educational competence in blended learning were developed in order to qualify the TTE Tele Teachers. The qualification process consisted of 60 hours of self-learning guided by the TC Tele Coaches and a final two-day workshop. Co-operating in this scheme was the Berufskolleg Ennepetal, a school for vocational and general education. Up to now, 160 teachers have gained the qualification as TTE Tele Teachers.

Content development

The content which has been developed is varied and can be used entirely or in smaller modules. Some modules of the Lernwelt project are especially made for students and apprentices; others aim to train and qualify teachers.

The modules are based on information and guidelines already available, for example, from BAuA and the Statutory Accident Insurance of the Precision and Electrical Engineering Industry (BGFE). Emphasis was given to material about safe machine construction, quality management in machine

construction and product development, safe plant and equipment, and risk assessment guidance related to these issues. Materials were tested and evaluated during a previous project Start Up.

Following evaluation, guidelines and information were adapted and restructured to form new modules, which were aimed at apprentices and students, for example:

- Safety and health in plant construction (mechanical engineering): Apprentices should be shown how to construct mechanical plant systematically and safely.
- Electrical safety in maintenance works and start-up procedures of mechatronical systems: This module was also designed to be close to the reality of apprentices work.
- The introduction into using the internet for self-study purposes.
- Introduction into project management: How to structure tasks, milestones and responsibilities.

These contents are also aimed at school teachers and trainers from companies who can not only use and adapt them in training and education but can also tailor them to their own priorities and to develop further modules.

b) Transferability

To illustrate the practical use of INQA Lernwelt, in one company apprentices used it to construct a 3.2 tonne rotation crane following the instructions on safe construction taking into account hazard identification and risk assessment processes.

With regard to teacher training, Berufskolleg Ennepetal, the school for vocational training and general education, uses the platform for the training of teachers specialised in blended learning. In this way, they will be qualified as knowledge managers, moderators, advisers and coaches for young workers.

The concept has also been used to bring safety and health into the general education of pupils. Verkehrssicherheit in Grundschulen (Traffic/cycle safety at primary schools) was launched for third and fourth grade pupils under the auspices of INQA. Teachers need appropriate media to teach the youngsters. When starting this project, a lot of information and experience about training teachers gathered from the Lernwelt design was used.

Outcome

By 2008 160 teachers were qualified as TTE Tele Teachers from Berufskolleg Ennepetal. They are taught in occupational safety as well as in blended learning. In this way the project has proven able to contribute to teacher training and help students training in occupational safety and health.

The Lernwelt project itself continues to be successfully used in various companies. For example, in 2007 its use in Demag Cranes and Components was awarded with the Wissenspreis of the Marketing Club Südwestfalen ("Südwestfälischer Wissenspreis") for innovative knowledge management and good practice in bringing safety and health to the forefront of young workers' training.

The project management has tried find new 'multipliers' and presented the Lernwelt design to chambers of commerce and industry (IHK), which are the responsible bodies for vocational qualifications in Germany: Young workers have to take examinations at IHK at the end of their apprenticeship. This seems to be a promising approach as the experiences in companies and of the chamber of commerce in South-Westphalia (IHK Südwestfalen) are good recommendations for further transfer.

Problems faced

The project team underestimated the work and resources it took to adapt general good practice guidelines into teaching material for teachers and students.

Success factors

The blended learning and active learning approach has been proven to be flexible for adaptation and further developments. Ensuring the teachers are trained as OSH tele-tutors has been crucial to its success.

Transferability

The Lernwelt design has proved that it is suitable for multi-purpose use and that it addresses various target groups. Trainers and workers in vocational training, as well as teachers and students in general education, can use it. It offers flexibility in order to adapt contents to new scientific findings and includes media competence in its blended learning approach. The methods of training the tele-tutors are also transferable.

Further information

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Web information

INQA Lernwelt: <http://www.inqa-lernwelt.de>
Demag Cranes and Components: <http://www.inqa.de/Inqa/Navigation/Gute-Praxis/datenbank-gute-praxis.did=213834.html>
Phoenix: <http://www.inqa.de/Inqa/Navigation/Gute-Praxis/datenbank-gute-praxis.did=213630.html>
AUVA Lernwelt: <http://auva-lernwelt.net/>

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W5. Work Safe! Working Together for Safety - A State Team Approach to Preventing Occupational Injuries in Young People, USA

▪ *National Institute for Occupational Safety and Health (NIOSH)*

Key points

- A curriculum that focused on increasing the ability of young people to be more safety-conscious within the work environment.
- Free train-the-trainer workshops, for example, for health teachers.
- Vocational education conferences.
- The State team conducts regional training in which both members of the workforce development boards and youth job training programme operators learn how to use the curriculum.
- The focus is on young people, but also on educating parents, employers, health care providers, educators, and government officials on workplace safety.

Introduction

While educators are acknowledged as essential partners in any comprehensive approach to teach young people about occupational safety, few of them have received adequate training about occupational injuries and their prevention. It is important therefore to educate teachers, guidance counsellors, and other school staff in these areas. Additionally, it is just as important to ensure that they know the best ways to ensure that students are provided with young worker safety curricula and other materials, as well as ensuring that schools are making the best use of systems already in place (such as the work permit process) to protect young people. A programme to create a curriculum for use in schools is also used to provide training for the teachers.

Aims and objectives

As part of wider initiatives to develop and promote of a variety of strategies and projects that can be used to prevent injuries to young workers:

- to create a curriculum that focused on encouraging young people to be more safety conscious; and
- to train trainers, such as health teachers, at schools and run vocational education conferences.

Background

The Labour Occupational Health Program (LOHP) at the University of California at Berkeley developed the *Work Safe!* programme. The initiative arose as it was recognised that there was a need to create a curriculum that focused on encouraging young people to be more safety conscious. Furthermore, most health teachers had not been trained in occupational safety, and were unaware of the risks their students faced on the job. It was essential to address this lack of training.

The young worker safety curriculum teaches teenagers to recognise their right to a safe work environment and to become safer workers. The following issues are covered in three curricula; two that were developed with NIOSH funding, and a third that was modelled after these two.

- Teenagers are taught how to work safely.
- They are made aware that State and Federal laws protect them in the workplace.
- They are shown how to identify hazards and negotiate with employers over unsafe conditions and to whom they can turn if these negotiations are unsuccessful.

Currently, in Connecticut the curriculum is available to teachers and other adults who work with youth, but it is not a mandatory activity of the State Department of Education. However, it is highly recommended, especially to those teachers with students enrolled in Career and Technical Education courses offered at the states' comprehensive public high schools as well as those teachers who teach students in the states' 17 technical high schools. Further, the *WorkSafe!* curriculum is highly recommended for those students engaged in career and technical education, as well as those in the technical high schools, who participate in paid work experience programmes as part of their high school curriculum.

Scope

Through *Work Safe!* the State of Connecticut is able to train trainers at schools and run vocational education conferences.

The Connecticut State Department of Education offers interested teachers training on how to deliver the curriculum through participation in free three-hour train-the-trainer workshops. The courses are run approximately four times a year and the Department provides the training at its annual School-to-Career Summer Institute. The teachers attending workshops receive a free DVD of the curriculum. Once the training is complete teachers are left to integrate the information into their classrooms, as they deem fit.

Other activities related to this project include:

- Workforce Development Boards: The Connecticut State team is working with the state's workforce development boards to put into place a requirement that the youth job training programs funded by the boards use *Work Safe!* to teach their young participants about workplace safety. The State team conducts regional training in which both members of the workforce development boards and youth job training programme operators learn how to use the curriculum.
- Young Worker Safety Team members regularly provide presentations on young worker safety issues - including an overview of *Work Safe!* - at conferences, meetings, and schools. Audiences for these presentations include career and technical education professionals, school counselors, workforce board staff, youth employment programs, School To Career and work-based learning coordinators, health educators, and teens. Young worker safety workshops have become a regular feature at several annual conferences.

Outcome

The programme is used in a large number of schools in Connecticut and this is increasing. This means that the number of trained teachers is increasing.

Connecticut is one of three states in the USA involved as part of a small pilot project with NIOSH (The National Institute of Safety and Health) to identify and design examples of how the curriculum can be integrated into the high school curriculum at the local level. The purpose of the NIOSH project in Connecticut is to identify and design model curricula with several schools within three different career and technical education programme areas that will then be replicable. These areas are agri-science/aqua-science; technology education; and co-operative work education (which is a high school programme designed to introduce students to diverse occupations). The programme continues as [Youth@Work](#).

Problems faced

The use of the curriculum is not mandatory in schools, and so schools can choose to use it or not. And so there is only voluntary attendance of the course by teachers.

Success factors

- Provision of free training.
- Short training, of only three hours helps increase participation.
- Supporting DVD and adaptable use of the curriculum by teachers.

Transferability

The programme can be transferred to other countries. The curriculum is available on a DVD and can be adapted, if needed.

Further information

<http://www.cdc.gov/niosh/docs/2005-134/2005-134d.html>
<http://www.cdc.gov/niosh/talkingsafety/states/CT/default.html>

3.3.1. Snapshots III

WS1. “Information on education, occupation and the labour market” in the Danish teacher training programme’, Denmark

- *Undervisnings Ministeriet*

Aim

To train new teachers in the educational and vocational guidance of pupils, including counselling.

Key elements

- Voluntary option.
- Student teachers are trained:

- to give information to students, throughout the first to ninth grades (7 to 16 year olds), about the elements of education, occupation and the labour market that will form a basis for the individual student's planning;
- to teach the students different work concepts such as working in the public or the private sector or of being a salary earner or self-employed;
- to improve their knowledge of the educational environment, especially in terms of occupations, that is applicable for children and students;
- to teach them techniques that are useful when applying for jobs and
- to provide them with knowledge of life conditions and life styles.

Further information

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4. Results of the analysis

An analysis of the case studies was conducted, with the overall aim to identify the key success factors, challenges and barriers, practical methods and areas of innovation. Measures being taken in mainstream occupational health and safety into teacher trainings were found to be varied across disciplines, circumstances, educational setting, and national context. The main findings of the analysis are presented below. In addition, appendix 1 contains a summary table of the key achievements of the cases and appendix 2 contains a table summarising the analysis.



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Success factors: What works

Several key success factors were common to many of the cases studies, irrespective of which approach was used. These include:

- Training programme was accompanied by resource pack with teaching materials/aids;
- involvement and commitment of various different stakeholders in development and implementation;
- delivering training through an e-learning or blended learning platform; and
- use of a partnership approach to develop and implement the training programme.

Certain success factors were observed across some, but not all, of the teacher training approaches. Some success factors from individual projects were:

- Use of summer courses – avoids need for replacement teachers during term time;
- educating teachers on issues relevant to their own work environment and in overall importance of OSH;
- training in the context of wider support and commitment by the school to manage OSH;
- use of interactive and self-reflecting teaching techniques and experiential learning;
- distance learning to help overcome the ‘time-off’ problem;
- certificated/ accredited training;
- OSH authorities developing courses in close cooperation with teachers, schools, and education authorities; and obtaining the commitment of all these key stakeholders;
- including OSH training within more general compulsory training areas: for example, including hazards and risk identification in both health and physical education;
- train-the-trainer workshops and establishing ambassadors for OSH in schools/ OSH education;

- OSH authorities (or even companies) providing OSH training for risk management in schools that incorporates an element on the provision of risk education;
- supporting schools to improve their own risk management and safety culture; and actively involving teachers in this process; and
- providing schools and teachers with networking opportunities in regard to risk management and risk education.

Challenges and barriers to OSH teacher training initiatives

Several key challenges and barriers were observed in the cases studies, irrespective of which approach was used. These include:

- Developing a long-term commitment, communication and participation of key stakeholders;
- competing demands on teachers' time and limited financial resources;
- addressing the diverse topics in health and safety;
- there is, in general, a lack of OSH training by schools for their employees; and, in turn, a lack of documentation of the training received; and
- lack of feedback and evaluation of the implementation and of training methods.

Practical methods and application

Several practical methods were commonly used across many of the case studies, irrespective of which approach was used. This includes using:

- E-learning or blended learning platform.
- training programme using experiential and self-reflective teaching techniques;
- recruiting the commitment, motivation and support by all key stakeholders; and
- training programmes with an accompanying online resource toolkit and teaching aids.

Some practical methods were used across some, but not all, of the teacher training approaches, such as:

- Training programmes initiated by government or national OSH authority (Workplace);
- wide range of OSH topics and general issues are addressed (Workplace);
- training programme delivered by OSH expert, national OSH authority or higher education (such as university: Workplace); and
- integrating training for teachers into compulsory workplace health and safety training (Holistic).

Innovative aspects

Several innovative practices were observed across many of the cases studies, irrespective of which approach was used. These include:

- Using a blended learning approach: both face-to-face and e-learning components; and
- online resources, toolkits and forums for teachers to access and use.

Some aspects of innovation were observed across some, but not all, of the teacher training approaches, such as:

- Train-the-trainer workshops (Workplace);
- integrating training for teachers into compulsory workplace health and safety training (Holistic); and
- training programme linked to professional accreditation (Workplace).

Gaps or areas that need special attention

Following the review of the good practice case studies, there were several areas that were identified as requiring special attention:

- Lack of financial support and resources;
- facilitating and developing good working relationship and communication between partners;
- individual responsibilities in the participation of the programme;
- different backgrounds of the participants;
- the importance of feedback and evaluation of the implementation;
- the use of alternative means of delivery, e.g. internet, multimedia, etc;
- the awareness in schools that a variety of staff need OSH training - including, teachers, head teachers, deputy head teachers, school counsellors, and so on, including non-teaching staff.

5. Discussion and conclusions

The success factors seen in these cases on training teachers to provide risk education, as would be expected, concur with the general success factors seen in cases and current practice to promote risk education in schools. These success factors include:

- a whole-school approach combining safety management in schools with the delivery of risk education, where staff and pupils/students can make a positive contribution to their own safety and that of their colleagues;
- the need for motivated teachers, leadership and commitment from the head teacher and some dedicated core personnel;
- the involvement of pupils, parents, teachers, school managers, representatives from the social partners and local authorities;
- the need for appropriate and inspiring teaching materials, ideally free of charge;
- the need for support to schools on OSH management from OSH authorities;
- co-operation between OSH and educational professionals – at all levels – and other partners
- the importance of a coherent strategy agreed by OSH and education authorities;
- the most comprehensive and successful cases are usually underpinned by legislative requirements for OSH in the education curriculum, pupil involvement in school OSH etc.



S. UIK/ BAR SoSu, Denmark

Legal context, curriculum requirements and commitment

Unsurprisingly, the more formally OSH is embedded in the school curriculum in general, especially where requirements are set in national legislation and strategy (e.g. as is the case for Danish snapshots CS4 and WS1) and/or prominence given to subjects that include well-being at work, such as health education (e.g. Finland (case C5) and Cyprus (case C2)), the more attention is likely to be given to including OSH/risk education in training for new teachers. Similar contextual circumstances can be seen for the cases which involved training teachers as ambassadors or commissioners on OSH topics or risk education (e.g. in Denmark – case C6 and Germany – case C7 on hazardous substances).

The activities taking place in Ireland (H2, W1) and Denmark (C6, CS4, WS1) are underpinned by strong commitment from the education ministry, as are cases C1 from Greece and C2 in Cyprus. In other examples, schools' duties regarding occupational safety and health have been used as the lever for activities. The Swedish school example (H5) is underpinned by duties in Sweden to formally include pupils in school safety. The Irish Health and Safety Authority has linked its projects (H2, W1) strongly to schools' duties to manage occupational safety and health and to training teachers about their own occupational safety and health and to carry out risk assessments. French snapshot CS2 uses the requirement for schools to have a major hazards plan to promote risk awareness. Both Greek examples link to requirements for safe school buildings (H1 and C1).

Partnership

Continuous engagement and active dialogue between both social partners and all key stakeholders are vitally important for developing and promoting training activities for teachers and resource materials that can be used in the classroom. However, the cases showed that this is not always an easy task as stakeholders will have competing agendas and may have different working styles.

It is clear that partnership between OSH authorities or institutions and education authorities is essential to achieve success. But some cases also showed the involvement of others, including private industry and youth organisations, as partners. The FAOS case (H1) combining risk education and school building safety from Greece is a partnership driven by a company. GlaxoSmithKline in Poland (snapshot HS2) is an example of a company which has built risk education into its activities with the local community. Where the goal is to promote teachers receiving health education, with work well-being embedded into this, then it is clearly helpful to work with health education and accident prevention stakeholders. The German physical education case (H4) showed the extra value of working with sports organisations not only to get the training right but also to link it to generally requirements for sports trainer outside of schools.

It could be worth bringing a number of stakeholders together to explore common ground and see where risk-related training on different topics could be brought together to save time on the teacher training curriculum. For example, road safety, risk education and health education. The case from Cyprus (C2) shows the scope for working within the context of the European Network of Health Promoting Schools. None of the cases mention links with the teaching trade unions, although they may be especially interested in having teachers' own OSH being covered in training courses for new teachers.

Only a limited number of examples were found that were aimed at trainee teachers (Slovenia – HS3, Denmark WS1, Scottish road safety case – C3) and they involved voluntary options. Most cases concern in-service teachers, which reflects the challenge of embedding risk education into new teacher training. Links need to be established with the colleges and universities where new teachers are trained, to explore more closely with them the practical opportunities for embedding risk education into teacher training in a sustainable way. As was concluded in the EU-OSHA report on OSH in the school curriculum, it is particularly important to make use of opportunities such as when teacher training course curricula are being reviewed. Some of the challenges and opportunities for embedding OSH into university courses were covered in the EU-OSHA report on mainstreaming OSH into university education.

Training teachers to provide risk education linked to teachers' and school occupational safety and wellbeing

Many of the cases show the logic in combining training regarding teachers' own OSH with training to provide risk education, for example, by embedding risk education in general OSH training given to teachers in schools. For example, this approach was used in both Irish cases (H2, W1). This supports the objective of finding synergies, rather than loading schools with lots of extra tasks, and it is also a legal requirement for teachers to receive training regarding their own health and safety at work. This also fits the so-called 'whole-school' approach, where risk education takes place within the context of promoting a safe and healthy school environment for pupils and staff.

It is recognised that workplaces which show strong leadership and commitment to safety and health and where there is effective participation and dialogue with workers (and here pupils as well) generally have better safety records. The Swedish case (H5) is an example of how staff and pupil

involvement can take place in managing school safety, and it is no surprise that this is driven by the strong leadership and commitment of the head teacher. The Irish case about training for secondary-level teachers (W1) includes head teachers in the training, to train them about their OSH responsibilities and also to gain their commitment. Case C7 from Germany, on hazardous substances in schools, included a brochure aimed at head teachers.

The main impetus for some of the cases is pupil safety and wellbeing in schools, as in the Slovenian snapshot on ergonomics in the school learning environment (HS3), the Dutch snapshot on social safety (HS1), the German case on high risk sports (H4), the German case on commissioners for hazardous substances (C7), as well as the Swedish primary school case (H5). However, these cases do relate to staff safety and wellbeing too.

While it is necessary to continue to train teachers, it is also essential to ensure that a variety of other stakeholders are trained, including school principals, as mentioned, members of educational boards and parents, so they have an understanding and can play their part.

Training for all, ‘champions’, cascade training and support networks

In the discussions that took place in the pilot case from West Ireland (W1), teachers participating were divided about whether all teachers needed the specific training to deliver the curriculum, or whether one trained teacher could then train other colleagues. While it is clearly desirable for all teachers to receive specific training on delivering risk education, several cases present the option of getting a minimum number of teachers trained externally, who can then pass on their knowledge to other teachers and, depending on their role, support their school on risk education and/or OSH compliance. The Finnish case (C5) includes the recommendation that two teachers per school receive training on health education. Cases from Denmark (C6) and Germany (C7) involve ‘ambassadors’ or ‘commissioners’. These teachers have specific roles, which may include instructing and passing on knowledge to other teachers, motivating and keeping the school up-to-date. German case W4, INQA ‘Work world’, concerns training teachers to qualify as tele-tutors, who can then train others to be tele-tutors.

It is important to remember that if teachers are to train and pass on their knowledge to other teachers they should be provided with specific training and the training resources to support them do this. To further support those staff who are given special roles in OSH/risk education they can be networked, as in the Danish ambassadors case (C6). Schools themselves can support each other by being networked on OSH, as seen in the Greek case C1. In the Danish snapshot CS4 a newsletter helps to keep trained teachers up-to-date on delivering OSH education. INQA ‘Work world’ (W4) includes an online communication platform.

Linking to the curriculum

The cases suggest that special attention should be given to linking all activities regarding training in risk education to the school curriculum, including making it explicit to (future) teachers during training how the topic relates to delivering the curriculum. This was mentioned as being important in the road safety case (C3). Existing curricula for trainee teachers could be examined to ensure that teachers are trained to deliver any safety aspects from a risk education perspective (i.e. so pupils develop skills on hazard identification and risk prevention). Such subjects include physical education, health education, science, arts and technology.

Effective training in the least time-consuming and least disruptive way

The cases suggest that the biggest challenge is that of limited time and resources to provide either in-service teachers or future teachers with training to provide risk education. It is therefore critical to look for the least time-consuming and least disruptive methods to provide teachers with a minimal training on OSH and risk education. Even where training is provided free-of-charge by authorised OSH experts it can be difficult for schools to give teachers the time off to attend and for teachers to be motivated to attend. The cases showed various ways that this problem could be approached.

Case W5 from the USA shows the use of a workshop which was only three hours long to train teachers to deliver a curriculum, 'Work Safe', in schools and which was part of a broader summer training initiative for teachers.

The use of e-learning methods can improve on transferability, reach a large audience and reduce costs as well as having time-saving potential. E-learning and self-study were used in various cases. In Ireland the summer courses for primary teachers (H2) are now provided online. The other Irish example (W1) has developed the pilot training for secondary-level teachers into e-learning and the Czech snapshot CS1 includes e-learning. The online course on preventing violence in schools, European project (CS3), is another example of a moderated online course and self-study. The Czech snapshot CS1 also concerns online self-study resources. Cases W2, the US training programme for authorised trainers, and W3, from the Czech Republic, also include the use of distance learning. The German case on training for physical education teachers (H4) uses an internet self-study platform to disseminate good practice information.

Other cases used blended learning – online learning combined with some supplementary workshops. Examples include: the hazardous substances case (Germany- C7) which includes an internet self-study platform; the multimedia INQA 'World of learning' case (W4) which involves an innovative blended learning network; and in Finland the health education case (C5) which involves distance learning combined with contact learning. Blended learning would seem to be a practical approach for this kind of training, especially as it allows the combination of theoretical learning with active learning, using practical exercises. The use of active learning is recommended for OSH training and it is also the method that teachers should be using in the classroom, so the face-to-face training in the cases generally uses active, experiential training methods (e.g. see cases W1, W2, W4, H2). If only online training methods are used, they should be designed to be interactive and allow self-reflections.

Regarding online courses it is necessary to promote them constantly to make sure that individuals know about them and are motivated to complete them. Cooperation with other stakeholders can help with this. In Ireland (W1) the Health and Safety Authority has now put its courses on a public platform for free e-learning courses. It is also important to offer introductory modules on the optimal use of e-learning.

As mentioned above, a practical approach can be to identify synergies. The Finnish case (C5) embedded work wellbeing into training for health education teachers. Another kind of approach is the example of the Dutch snapshot on social safety in schools (HS1) which concerns a programme adaptable to the needs of specific schools, and where someone from the programme will come into the school to work with it.

With the pressures on getting teachers trained it remains very important that curriculum materials for teachers to deliver risk education are as self-explanatory as possible, as seen in the case from Poland (C4) and the Czech snapshot (CS1). Involving teachers in the development of materials and teachers notes will help to achieve this. The other Polish example (H3) shows how teachers' skills, knowledge and awareness can be developed by involving them in the preparation and running of the annual art competitions that they organise in schools. This approach also helps to engage teachers in the activity by giving them some ownership of it.

Career development

It is important that any training is seen by teachers to be a clear part of their career development. To motivate teachers to take courses several cases recognised the training by making it certified. Examples include the German high risk sports case (H4), the Finnish health education case (C5) and the case of training for secondary-level teachers in West Ireland (W1). Teachers wanting to move up the school management could be motivated to acquire some recognised OSH management knowledge and skills.

Training the trainers

Those providing the risk education need training as trainers and resources to provide the training. This has already been mentioned in respect of teachers who are asked to provide cascade training. Various cases use specialists, e.g. from OSH authorities, to deliver training. The Scottish road safety case (C3) showed that how the training was delivered in teacher training colleges and by whom

varied widely. Various types of training for OSH tutors was seen in the cases: case W2 from the USA concerns training the trainer to provide workplace training; the Czech case W3 includes a course for training to be an OSH lecturer and case W4, INQA 'Work world', concerns training teachers to qualify as tele-tutors.

Pilot projects

Another effective way of working appears to be through the development of pilot projects which can be tested with teachers and schools, e.g. as seen in the Irish case W1. This is not just about developing effective resources and methods to train teachers, but also about developing approaches which will be practical for schools and acceptable to both schools and teacher training bodies, given the demands on both. In fact, the Irish pilot project was used to develop teacher training and to test resources for use by teachers in the classroom at the same time.

Developing a strategy

One of the problems highlighted in the Scottish road safety case (C3) was the problem of reliance on individual contact. Another problem is if training sessions are just one-off and not part of regular, organised events. As is perhaps obvious, projects need to be made sustainable by being part of an overall, coherent strategy. The cases suggest that such a strategy could include the items listed below.

- Training as part of a 'whole-school' approach which combines risk education and promoting improved OSH management in schools.
- Making OSH part of the daily work of all teachers, in a school safety culture that promotes their participation and actively engages them.
- The training of all future teachers to include basic information about OSH in schools and how to embed risk education into their daily teaching.
- All teachers to receive OSH instruction as part of their induction on arrival at a school – including risk education.
- Head teachers to receive additional training to obtain special knowledge on managing OSH and embedding risk education in school daily life.
- Other teachers to receive additional training, depending on their teaching specialisation, to obtain special knowledge on OSH, risk education. The approach of appointing certain staff as 'champions' with a role to disseminate information and motivate others can be considered.
- Setting targets for the minimum number of teachers to have received special training.
- Networking schools and OSH/risk education 'champions':
 - to help keep other staff up-to-date – as schools often struggle with this;
 - to share and exchange experiences.
- The cooperation and participation of a wide range of stakeholders, including:
 - education authorities, curriculum bodies, institutes providing the training for future teachers;
 - other organisations whose topic can relate to risk education (health educators, accident prevention and road safety bodies, sports bodies etc.);
 - teachers' professional bodies and trade unions.
- Identifying synergies and ways to teach teachers with the least disruption.
- Providing schools with support and specific information and tools to create a healthy and safe learning and working environment, so that health and safety issues are considered to be of central importance to both teachers and pupils.

Setting learning objectives

In order to discuss any training strategy with others, such as education authorities or training colleges for teachers, it will be important to be clear about the learning objectives that should be embedded into that training. Based on the cases, the learning objectives for the training of all teachers working in general teaching in primary and secondary schools could be focused around:

- acquiring the knowledge and skills to embed risk education into their daily teaching work;
- acquiring basic attitudes and knowledge in relation to their own occupational safety and health – i.e. OSH in schools; and
- acquiring the knowledge and skills to be able to make a positive contribution to their own and others health and safety in schools.

Providing relevant and appropriate training resources

In previous EU-OSHA reports on mainstreaming OSH into education it was also noted that relevant teaching resources need to be developed and provided to schools and training colleges to support a strategy of mainstreaming risk education into education. The same holds true for training for teachers. The cases suggest various resources and approaches for training teachers that should be considered as part of a strategy to train teachers. These are summarised below.

Training resources:

- Booklets for trainee teachers (e.g. see Scottish road safety case C3);
- booklets for teachers new to the workplace;
- resource packs for lecturers;
- resources for training teachers to provide cascade training;
- resources for teachers to provide cascade instruction and training to other teachers and, in addition;
- self-explanatory materials for use with pupils in the classroom.

Training methods and approaches:

- Self-study options, especially e-learning and/or interactive CD-ROMs;
- blended learning – a combination of distance online training and contact training, e.g. in workshops;
- active learning methods where teachers use their own knowledge – especially important as this will be the teaching approach for pupils in the classroom;
- as with other areas of vocational training, include a link to teachers' own OSH in the courses for trainee teachers; and
- clearly linking teachers' training to the delivery of the curriculum.

Other training issues include:

- Discussing training needs of teachers when classroom resources are piloted;
- looking at the possibilities of generic training, e.g. relevant to health education, road safety education, physical education, risk education, etc;
- exploring how to get the basic information and skills across to teachers in the minimum amount of time;
- linking the training to career development, through accreditation, provision of certificates, recognition of OSH management skills acquired etc;
- providing additional support for schools in doing risk assessments and managing occupational safety and health; and

- including the evaluation of projects, training programmes and methods.

Conclusion

If getting risk education properly embedded in the school curriculum is challenging, then it is even more difficult to get it into the programmes for future teachers. This creates a vicious circle, where teachers do not choose to teach it on a voluntary basis as they do not feel competent to do so. The challenge is to find practical, sustainable ways to ensure that all teachers can gain basic knowledge and skills regarding their own health and safety and how to impart this to their students in the form of risk education as part of their daily work as teachers.

Despite the difficulties, the cases present various approaches and methods that could be considered or elaborated upon. They show that success is dependant upon taking a pragmatic approach, which is sensitive to the needs and circumstances of schools and courses for future teachers. They also show the value of training which supports a 'whole-school' approach combining the provision of risk education with the management of OSH to provide a safe and healthy work and learning environment.

With adaptation to local context, it is thought that all the programmes and projects could be implemented in other countries and educational sectors. Developing the relevant partnerships and gaining commitment of all key stakeholders will be crucial to developing successful activities, and the continued sharing of approaches and experiences will also be very important.

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7. Appendixes

7.1. Appendix 1 - Overview of the Main Achievements of the Cases

Holistic Approach

Case	Country	Title	Lead organisation	Main achievement
H1	Greece	Promoting accident prevention and awareness of health and safety at school	FAOS Project	A partnership approach including private industry. Combines improvements in school safety with risk education for pupils and teachers.
H2	Ireland	Summer Course for Primary School Teachers	Health and Safety Authority (HSA)	The course is highly interactive, drawing on the knowledge and the experience of the participants to develop awareness and methods of teaching. It includes group tasks and activities and encourages active learning.
H3	Poland	Children's art competition to promote safe behaviour at school – teachers' involvement	Central Institute for Labour Protection – National Research Institute (CIOP-PIB)	Teachers are involved in the planning and implementation of a health and safety art competition. This includes preparatory meetings with head teachers and teachers in participating schools, customised to the school. Around 35,000 children participate.
H4	Germany	Safety training for physical education teachers	UK NRW (Statutory Accident Insurance organisation) with: District Authorities, the Ministry for School and Education, German Judo Federation, German Alpine Club, German Sport University Cologne	The teaching aids were developed with the help and support of specialists from the German Sport University, Alpine Club and Judo Federation and practitioners from the schools.
H5	Sweden	Co-operation in risk prevention at school	Källby Gård school	On-the-job learning for teachers, courses on specific issues, all staff and pupils involved in preventing risks in the school environment. Health and safety on the agenda of all staff meetings.

Case	Country	Title	Lead organisation	Main achievement
HS1	The Netherlands	Centre for School and Safety – resources on 'social safety'	Centrum School en Veiligheid	Workshops and web resources for schools and teachers, visits to schools, customised according to school's needs.
HS2	Poland	Educational activities of a pharmaceutical company	GlaxoSmithKline	Free workshops for teachers among activities to raise teachers' awareness of safety.
HS3	Slovenia	OSH and ergonomics in the training curricula for teachers in primary and secondary schools	University of Ljubljana, University of Maribor	OSH issues integrated into curricula of future primary and secondary teachers. There is also the specialist subject 'Children's working environment through ergonomics'.

Curriculum Approach

Case	Country	Title	Lead organisation	Main achievement
C1	Greece	Accident prevention and safety in secondary and primary schools	Division for Secondary Education - West Thessaloniki	It includes training of the teachers and support for schools. OSH seminars for teachers provided as part of health education activities. Formation of a schools' OSH network. Youth organisations involved.
C2	Cyprus	Cooperation on health education for teachers and pupils	The Health and Citizenship Education Committee of Cyprus	Educators gain an action-orientated knowledge about health.
C3	Scotland	Road Safety Education and Teacher Training in Scotland	Road Safety Scotland	Extensive research into current practices regarding road safety teacher training used to inform the development of educational materials for teacher training colleges and make recommendations.
C4	Poland	A Set of CIOP-PIB's educational materials for teachers	Central Institute for Labour Protection - National Research Institute (CIOP-PIB)	Through the project a large set of high quality educational materials was produced. The aim was to make them self-explanatory to avoid the need for additional training of teachers.

Case	Country	Title	Lead organisation	Main achievement
C5	Finland	Teacher training in health education	Finnish National Board of Education	OSH integrated into health education and also training for health education teachers. Distance learning combined with workshops. Recommended that 2 teachers per school trained. Health education is very popular among students.
C6	Denmark	Ambassador network for teachers in social and health care training programmes, Denmark	Arbejdsmiljøsekretariatet	Nomination of a key person for OSH education in each school, who receive training to train other teachers in their school and form a network for the exchange of experiences and practices.
C7	Germany	Implementation of the Ordinance on Hazardous Substances in schools in North Rhine-Westphalia (Germany)	UK NRW (Statutory Accident Insurance organisation) in co-operation with the Federal Institute for OSH, B.A.D GmbH, and a regional Ministry for School and Education	One teacher appointed as hazardous substances commissioner and is trained for their role. This includes instructing other teachers. Strategy combines school safety with awareness-raising of teachers and risk education of pupils.
CS1	Czech Republic	Safety at school - didactic materials for teachers and pupils	Occupational Safety Research Institute (VÚBP)	Self-training resource and teachers' support resource.
CS2	France	Safety training programme for schools	French Institute of Instructors in Major Hazards and Environmental Protection	Major hazards plans used to foster risk awareness culture in compulsory education. Includes training for students and staff.
CS3	Europe	International internet portals on violence prevention in schools	VISIONARY and VISIONARIES-NET programmes	While not specifically on teacher training, it includes resources and some online training courses.
CS4	Denmark	Health and safety training for trainers	Arbejdsmiljøsekretariatet	Customised, supplementary courses on health and safety education for teachers of all levels.

Workplace Approach

Case	Country	Title	Lead organisation	Main achievement
W1	Ireland	Training teachers to develop and deliver health and safety education - Western Pilot Project	Health and Safety Authority (HSA)	As well as refining the student teaching materials, and training teachers, the course enabled discussion on how training could take place in the future.
W2	USA	OSHA Training Programme for Authorised Trainers	EU-OSHA Directorate of Training and Education	In 2007, over 520,000 participants were trained in over 35,000 classes.
W3	Czech Republic	Teaching OSH	Occupational Safety Education Institute, Brno	OSH courses offered include one to become an OSH lecturer which covers OSH principles and teaching methods.
W4	Germany, Austria, France	INQA Lernwelt: Multi-media based teaching and self-studying of tele-tutors and apprentices in OSH	INQA, Germany In co-operation with partners from industry, from France and Austria.	The programme is blended learning and active learning approach. It includes training of tele-tutors in OSH and online tutoring.
W5	USA	Work Safe! Working Together for Safety - A State Team Approach to Preventing Occupational Injuries in Young People	National Institute for Occupational Safety and Health (NIOSH)	The project includes free 3-hour trainings for teachers to deliver an OSH curriculum. Training is also given to members of the workforce development boards and youth job training programme operators.
WS1	Denmark	Information on education, occupation and the labour market” in the Danish teacher training programme	Undervisnings Ministeriet	Voluntary course for new teachers of 7-16 year-olds.

7.2. Appendix 2 - Overview of the Analysis the Cases

Success factor	Workplace	Curriculum	Holistic	All
Continuous support of OSH experts and national/ regional authorities	√	√		
Training tailored to needs of trainee	√			
Training programme accompanied by resource pack with teaching materials/aids	√	√	√	√
Training programme using interactive and experiential learning techniques	√		√	
Appropriate training infrastructure (step-by-step, structured and long-term approach) and resources	√	√		
Long-term commitment and active participation of trainees	√		√	
Training programme addressing a number of OSH topics and issues	√			
Training programme underpinned by legal framework	√			
Involvement and commitment of various different stakeholders in development and implementation	√	√	√	√
Delivering training through a e-learning platform	√	√	√	√
Use of a partnership approach	√	√	√	√
Covering OSH, risk education in other curriculum topics e.g. health education.		√		

Challenges	Workplace	Curriculum	Holistic	All
Developing a long-term commitment, communication and participation of key stakeholders	√	√	√	√
Lack of evaluation of projects and training methods			√	
Resources and course length - difficult for teachers to be away from class rooms, and cost of providing substitute teachers	√	√	√	√
Finding a practical way to embed into the already full curriculum of new teacher training	√	√	√	√

Innovative aspect	Workplace	Curriculum	Holistic	All
'Train-the-trainer' workshops	√			
Using a blended learning approach: both face-to-face and e-learning components	√	√	√	√
Combining school OSH with risk education			√	

Innovative aspect	Workplace	Curriculum	Holistic	All
Training for head teachers	√		√	
Limited number per school trained as ‘champions’		√	√	
Networks and other post-training support		√	√	
Online resources and toolkits for teachers to access and use	√	√	√	√
Training programme linked to professional accreditation	√			
Involvement of companies			√	

Practical methods	Workplace	Curriculum	Holistic	All
Training programme initiated by government or national OSH authority	√			
Wide range of OSH topics and general issues are addressed	√			
Training programme delivered by OSH expert, national OSH authority or higher education institution	√			
Blended learning platform	√	√	√	√
Training programme using experiential and self-reflective teaching techniques	√	√	√	√
Integrating training for teachers into compulsory workplace health and safety training			√	
Online resource toolkit and teaching aids		√		
Developing teachers’ knowledge by involvement in organising national schools’ OSH competition for pupils			√	
Self-explanatory classroom teaching materials		√		