European Week for Safety and Health at Work

2006

A Safe Start for Young Workers in Practice

European Agency for Safety and Health at Work

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Introduction

INTRODUCTION

Young workers have a higher accident rate than older workers for a number of reasons including their lack of training, experience and awareness of OSH; their immaturity, both physically and mentally; and the types of jobs and employment situations in which they are placed. According to European statistics, the incidence rate of non-fatal accidents at work is at least 50% higher among those aged 18-24 years than in any other age category. Many work-related ill health problems are cumulative in nature. They may not show at a high rate in young workers but it is equally important to pay attention to cumulative health risks as well as accident risks, to reduce the possibility of young workers developing a work-related health problem later in life.

Factors putting young workers at risk include:

- Lack of awareness of OSH risks;
- Inexperience and unfamiliarity with the job they are doing, and their surroundings;
- Lack of skill/training in the job they are doing;
- Physical or mental immaturity;
- Being given jobs that are beyond their capabilities;
- Lack of health and safety information and training;
- Lack of supervision;
- Lack of awareness of employers' duties, and their own rights and responsibilities;
- Paying insufficient attention to health and safety, and high risk-taking behaviour among some young people;
- Lack of confidence to raise OSH issues.

European legislation enacted in the Member States requires employers to pay special attention to young workers under-18 by assessing risks, prohibiting their exposure to certain hazards and paying special attention to their abilities, and their training and supervision. Employers must also assess risks and bring in prevention measures for young workers over-18, taking into account that they may be vulnerable because of their lack of awareness and lack of experience.

In addition to ensuring that work is safe, healthy and suitable for young workers, there is a need for 'awareness raising' and education from an early stage right through to vocational and university education - risk education and the prevention culture are key factors in maintaining and improving the quality of work.

Sharing good practice

An important role of the European Agency for Safety and Health at Work is to make information available to support and promote the prevention of risks to young workers, helping employers and others with legal duties comply with national legislation based on the directives, and helping schools and colleges to include risk awareness education within their activities. The Agency achieves this by publishing its own material and by making available existing good practice from across Europe. The Good Practice Awards competition is a method to promote and encourage practical solutions in workplaces and to share this good practice.

This publication contains real examples of how enterprises and organisations from across the European Union have taken actions to prevent risks to young workers and to educate students

about health and safety at work. The cases should inspire owners, managers, workers and those involved in education about what could be achieved in their workplaces or educational institutions. They are not intended to be definitive or to provide detailed technical guidance. Not all elements of all cases were successful and these short summaries present the best features to demonstrate what can work in practice and how to achieve it.

Some organisations developed their own solutions using in-house expertise. Others found it useful and cost effective to use consultants with expert knowledge and practical experience in preventing risks. The majority of the workplace examples included the involvement of employees and their representatives to identify problems and to develop solutions; this is crucial to success, as workers have first-hand experience of the work situation.

Every workplace is different! Therefore work practices and solutions to problems must be matched to the particular situation by carrying out an assessment of the risks at the workplace concerned. However, concepts can be transferred across sectors, organisation size and type, and Member States. Likewise, although educational systems vary, many of the student activities are transferable.

The practical examples

The practical examples presented here were all entries in the 7th annual Good Practice competition run by the European Agency for Safety and Health at Work The aim of this competition is to support the dissemination of good practice information and to promote the application of 'practical solutions' in workplaces in the twenty-seven Member States.

Thirty five entries from 20 Member States were received, covering a wide variety of sizes of organisations, employment sectors and educational situations process. Examples ranged from schemes where apprentices taught apprentices to collaborations between businesses/schools and theatre to get the message across, including competitions where vocational students proposed solutions to risks.

What the judges were looking for

In selecting the examples, the judging panel were looking for solutions that:

- Tackled risks at source through good management, particularly the effective use of risk assessment and implementation of its findings;
- Showed good consultation between management and the workforce, including young people where appropriate, or between education establishments and commercial enterprises;
- Showed successful implementation, achieved real improvements, and were sustainable over time;
- Went beyond simple compliance with all relevant legislative requirements and;
- Could be transferred to other workplaces or situations.

Risk assessment and prevention principles

Before good practice information is applied, an assessment of the risks present in the workplace should be carried out and reference made to relevant national legislation A risk assessment is a careful examination of what could cause harm to people, so that you can decide whether you have taken enough precautions or need to do more to prevent harm.

The aim is to make sure that nobody gets hurt or becomes ill. If a risk assessment is not carried out before implementing good practice information, there is a danger not only that risks may not be controlled but also that there may be a waste of resources.

The general principles of prevention

- Avoiding risks;
- Evaluating the risks which cannot be avoided;
- Combating the risks at source;
- Adapting the work to the individual, especially the design of workplaces, the choice of work equipment, and the choice of working and production methods;
- Adapting to technical progress;
- Replacing the dangerous by the non-dangerous or the less dangerous;
- Developing a coherent overall prevention policy which covers technology, work organisation, working conditions, social relationships and the influence of factors related to the working environment;
- Giving collective protective measures priority over personal preventive measures; and
- Giving appropriate instructions to the workers.

Further information

The Agency's website http://osha.europa.eu contains much more information in all European Community languages on the prevention of risks to young people. Good practice on young workers can be found at: http://osha.europa.eu/priority_groups/young_people. All Agency publications can be downloaded free of charge from the website.

Acknowledgements

The Agency would like to thank its network of Focal Points in Member States (competent authorities, or bodies nominated by them, responsible for occupational health and safety) for assessing and nominating good practice examples for the Agency award scheme. The competition would not have been possible without their assistance. The Agency also thanks the experts who made up the judging panel for their input: Patricia Pedelabat, Daniela Kubickova, Jos Bormans, Juliane Bir and Roger Bibbings. The panel included representatives from the European Commission, government, employer and employee organisations and an independent expert

Various Agency staff contributed to making the project a success, including Teresa Cardás, Joanna Kosk-Bienko, Lorenzo Munar, Zinta Podniece, Peter Rimmer and Estibaliz Vidart. Last but not least, many thanks to the organisations who are featured in this publication for their initiative!

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European Agency for Safety and Health at Work
March 2007

Practical solutions

1 "¡A SALVO!" CAMPAIGN - RAISING AWARENESS IN PRIMARY EDUCATION ABOUT PREVENTING SCHOOL RISKS

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Issue

A campaign to make children between 6 and 12 years of age aware of the importance of safety and of acting in a safe and healthy manner in any area of everyday life.

Problem

In developed countries, accidents are the main cause of death among children between the ages of 1 and 4 years, while among older children and adolescents they cause between a half and two thirds of the deaths. For each death there are hundreds of accidental injuries, some of which result in permanent disability. In Spain, as in the rest of Europe, the leading causes of death among children under the age of 14, after perinatal mortality, are due to external causes including trauma and poisoning. The most frequent occupational risks during school age that children and adolescents are exposed to, depending on the surroundings in which they find themselves, are among others:

RISKS OF ACCIDENTS AND ILLNESSES	
Falls from the same level	At ground level
Falls from a different level	From a height
	Into depths
Stepping over objects	
Crashes and impacts against still objects	
Bruises and cuts from objects and tools	Sharp and cutting objects
Projection of fragments and particles	
Thermal contacts (burns)	
Electrical contacts (burns and electrocution)	Flaws in electrical installations
	Insulators deficiency
Exposure to toxic substances	Ingestion (digestive tract)
Contact with caustic substances	Contact (skin, eyes, mucus)
	Inhalation (airways)
Asphyxiation or choking	Mechanical suffocation (external obstruction of the respiratory tracts)
	Drowning (obstruction from immersion of head under water)
Being run over and impact from vehicles	Traffic accidents: cars, bicycles, and motorcycles.
	Accidents as pedestrians
Living creatures and organisms	Attacks - injuries
	Infections – transmission of zoonoses
	Domestic animals
Fires (burns, pulmonary injuries)	

One of the measures that would help to reduce these figures is an increased awareness and attention to safety in children.

Solution

The "¡A salvo!" (which translates as Safe!) campaign directed at primary education students aged from 6 to 12 years in all schools in Castilla y León was developed. Its objective is to create a new preventive culture by acting from the first stages of education to promote awareness that safety is socially desirable and must be defended by all, and by promoting an attitude change that contributes to the development of health and safety habits for all and benefits everyone.

The campaign was structured in three phases:

1. Development of a diverse range of teaching materials in a trolley suitcase

One of these suitcases is given to each of the schools in the community. It is intended to contribute to the education of the participants, through different games, teaching them to identify risks and to take the necessary measures in order to avoid accidents in different areas, while helping them to become oriented and familiarised with safety and prevention measures.

In the "¡A salvo!" Trolley, the teacher and the student will find:

- 'SALVA', the mascot, who is a pleasant work glove and also a hand-sized puppet which a child can play with and so start to become familiarised with the materials;
- Various games and materials that are divided into five prevention areas: 112 and emergency plans; identification and prevention of risks; personal protective equipment; First Aid; and Signs. These games can be used in the classroom, both at group level and individually. The games include: signs game, situations and scenes poster, activity cards, the little theatre, comics, and two board games, Prevenpinta and Trivisalva.

Description of the games:

- Signs game: two complete packs of signs, sign forms and pictograms to work their meaning;
- Situations and scenes poster: the different environments and different risks that can be found in a school are shown in a classroom, the kitchen, the gym, the lunchroom, the recess patio, an area being reformed and the school street for students to assess an analyse;
- Twenty-five activity cards: present contents through drawings in a form that is practical and close to children's reality, so that, with the simplicity of the activity, they help students to reinforce learning of different concepts;
- Little theatre: this activity consists of the representation or staging of a series of everyday life situations where the five prevention areas covered in the trolley are represented. Besides the prevention subjects, others, such as organising a group, communication, body language and creativity are developed.
- Comics: a special reissue for Castilla y León of Erga comic, a publication made by the Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT) (National Institute for Safety and Hygiene at Work;
- Prevenpinta: the object of this game is to identify, through fast and simple drawings, the greatest number of words related to the five areas of the "¡A salvo!" campaign;
- Trivisalva: this is another classroom game, with questions related to prevention of risks which allows each team to move forward as it answers questions correctly;

- A guide directed at teachers that includes a detailed description of the materials and guidelines on how to use them in the classroom.

All the materials can be used in the three primary education cycles, as they contain activities appropriate for each age-group: (6 and 7 year-olds; 8 and 9 year-olds; 10 to 12 year-olds.

2. Creation of a web portal

http://www.prevencioncastillayleon.com/escueladeprevencion.
The website seeks to bring involvement and awareness about prevention to all in the primary education community - teachers, students and parents – and each has their own space in this portal. The student can find different games to entertain while teaching about safe behaviour and rules. Parents and teachers can download and update much of the material included in the trolley suitcase (teacher's guide, activity cards, etc.), to support activities at school or at home.

The portal contains additional resources such as the Prevention Classroom, the "¡A salvo!" campaign and the rocket with novelties. The attic is 'our trunk of memories, and in it we can find other actions carried out in the past'.

In the space dedicated to the "¡A salvo!" campaign there is a section for parents and teachers where they can find some of the campaign material, the comics and the "A jugar" (Let's play) section where there are online games and games for each age group.

3. Kick off publicity campaign to disseminate, promote, raise awareness and draw the campaign to the attention of as many schools and children as possible. The advertising campaign had three different components:

Information Mailing. Delivery of an informative envelope to all Primary Education Centres and institutions; 1.075 deliveries have been made:

- Institutional letter with information concerning this initiative;
- Leaflet with complete information about the contents of the Trolley suitcase and the operation of the web and a publicity poster;
- Different promotional elements (poster, mouse pad, keyring and pen).

Presentations. Different presentations were carried out in different areas:

- In each province, the Provincial Directorate of Education made an announcement to all the directors of public and coordinated schools of Castilla y León, in order to present first-hand the resources in the trolley suitcase, the web and the publicity campaign, and to hear their first impressions, with the purpose of adapting, as much as possible, the campaign to the needs that they expressed;
- Different media presentations were carried out: a general one to launch the campaign which took place in Valladolid, and further ones, in each of the provinces of the Autonomous Community, coinciding with the arrival of the "¡A salvo!" bus in the province.

Travelling Show. A travelling campaign using an articulated, full-length bus that covered the nine provinces of Castilla y León equipped to inform students about the prevention of occupational risks and to draw them closer to the information. Equipment on the bus included multimedia devices, a plasma screen TV, game panels, furniture, and display cabinets with campaign materials as well as telephone connections. Two instructors on board - experts in occupational risks - guided the students during the visit.

Next to the "¡A salvo!" bus, a 6 metres high, inflatable balloon with the mascot's image was set up along with a tent where "Salva", the mobile Mascot (an entertainer), received the students.

For visits to the bus, each 28-student primary school class was divided into two groups of 14. One group would go to the front part of the bus (interactive room) and the other to the back of the bus (classroom) for 25 minutes. At the end of the session they swapped rooms. This enabled the teacher to be present during the visit and to observe how the materials in the "¡A salvo!" Campaign Suitcases were used. Before each game began the instructors would give a brief explanation about the content of the games.

Internet Follow-up: a specific section was created from the web portal about the '¡A Salvo!' bus to provide information about its whereabouts, its schedule of visits to locations with dates, the number of visits and a press area where all the news generated during its trip was recorded.

Results

The campaign was directed at over 118,000 students registered in primary education for the school year 2005-06. The project and materials were designed to be used over several years, so that the resulting cost per child is estimated to be less than 3.5 euros.

Comments

This example targets a wide range of people, including 118.000 students from nine Spanish regional educational communities, their teachers and parents, policy makers, occupational safety and health experts and public institutions. The learning materials are original and well-designed and awareness raising activities are fun and effective.

2 'FUTURE COMPETENCE' SKILLS IMPROVE APPRENTICE SAFETY

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Issue

While promoting risk awareness as early as possible, young employees are also supported in their personal development. A new skill, 'Future Competence', is acquired through the interplay between safety, health, social and technical skills.

Problem

The increased vulnerability of new, young employees to work accidents.

Solution

The training approach is based on the concept of lifelong learning. Continuous development is achieved by employees increasing their knowledge on their own initiative. In this approach the development of technical skills alone is not sufficient, just as safety or health skills on their own are not sufficient. Only in conjunction with a person's own competence will the individual skills become effective. This is the philosophy behind the company's 'Future Competence' skills approach to training apprentices.

'Future Competence' project

When training apprentices as fitters, electricians, mechanical/electronics engineers, etc., the company aims to make them 'profitable' for the future by providing them with a new skill called 'Future Competence'. An inter-disciplinary and multi-disciplinary approach is taken to safety within 'Future Competence' which includes occupational medicine, occupational psychology, safety techniques, sports science, apprentice training and styles of management. By bringing together the learning of four basic skill components in an integrated way, apprentices also achieve the fifth skill of 'Future Competence':

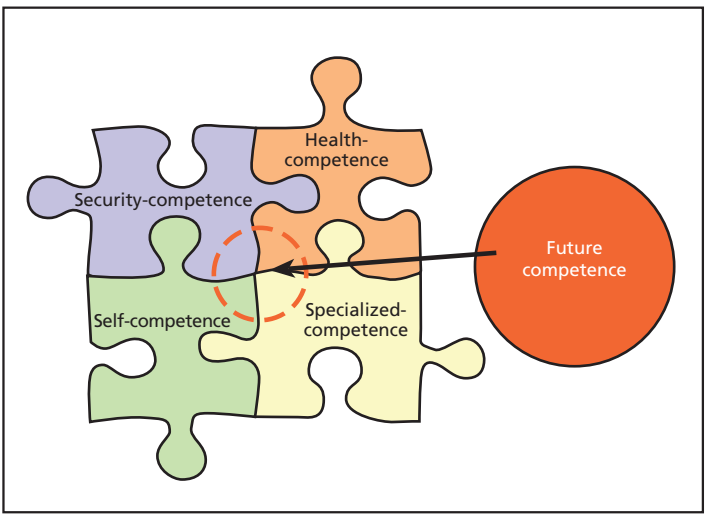
Safety competence: Through the 'Wide Angle' project apprentices are actively involved in dealing with the issues relating to safety at work. They take photographs of situations in the workplace with a digital camera which are then analysed by the team and any problems are resolved under expert guidance.

Health competence: In the second year, apprentices are given a 'PRO-FIT lifestyle week' which is specifically tailored to this age group. The main topics include healthy backs, stress management, preventing drug addiction, occupational health and safety, health promotion at work, health cycle, and performance at work and in sport.

Personal competence: In certain seminars during the apprentice training, rhetoric, team formation, self-esteem development, etc, are offered within the framework of a dedicated personal development module ('I am worth it'). Mixed ability groups help to develop social skills.

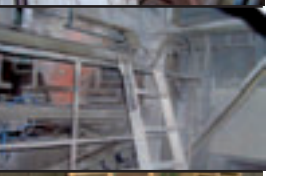
Technical competence: Training in the individual professions ('job-fit') takes place in close collaboration with the vocational schools covering both theory and practice. Senior employees in the company (master craftsmen, foremen) are prepared and trained to be able to pass on their know-how and experience.

Future competence: A new skill is seen as an investment for the future which combines well-established skills and introduces new skills which are only successful for both individual and company when combined.



Safety competence training within the 'Weitwinkel' (Wide-angle) Project

The safety competence element of 'Future Competence' includes the 'Weitwinkel' or 'Wide-angle' project. As it involves photographing the work area, a comprehensive information meeting involving the Works Management and Works Council was held at the start of the project to explain to the technical workers the reason and purpose of the 'hidden camera' situation and to allay any fears that the Works Management would use it to introduce any additional monitoring of workers. The younger generation was called upon to support the older workers. Below are a few examples of the observations of the young employees:

Weitwinkel subject	Hazard	Solution to problem	
Example 1: Broken board in the floor of a raised connecting walkway	Falling	Board was renewed and secured	
Example 2: A feeder-line ladder was not properly suspended from the hooks	Ladder tilting	The attention of employees was drawn to it and the ladder was properly suspended	
Example 3: A wooden pallet in the store was badly stacked, with parts displaced at the bottom - poor stacking work	Tilting of entire pallet, stack falling on workers etc.	Pallet was restacked. The employees concerned in the department were given additional training and instruction	
Example 4: An iron warning post was supposed to protect against danger but it had been installed in such a way that people were likely to fall over it	Falling	Warning post was removed, repaired and correctly positioned	
Example 5: Safety in an area in which there is a danger of falling was ensured only by a warning tape	Falling	A safety rail was fitted. A course was provided on different ways of fencing off dangerous situations	

Additional training activities include:

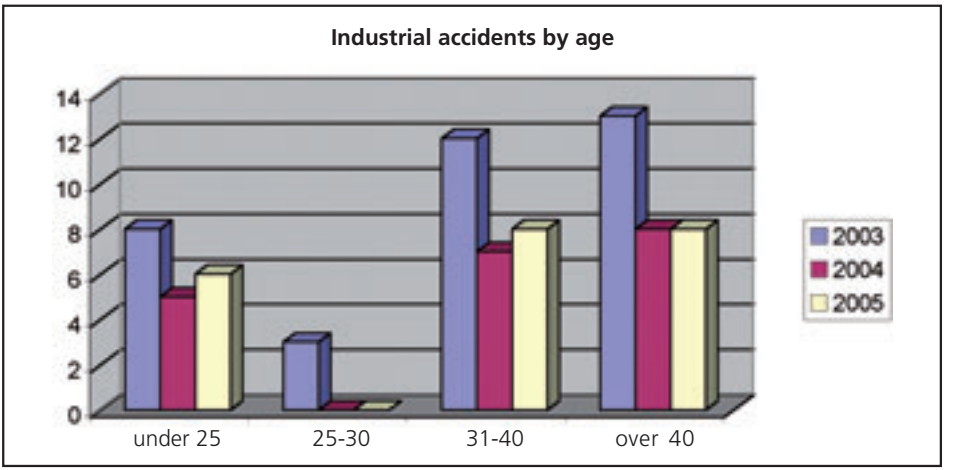
- An annual 'Safety Day' including machine protection, protection of the skin, electrical protection, first aid and the company fire service;
- Master Craftsman training sessions on teaching young employees, 2-3 days (every 3 years);
- An additional Safety Training Day, once a year, for young employees (examples of topics included Personal Protective Equipment, general work and environmental protection measures, emergency alarm plan, action in the event of fire, safety data-sheets, handling hazardous substances, explosive atmospheres regulations (VEXAT) and statutory requirements;
- Training of all young employees in First Aid;
- A Health Circle for young employees.

Results

The project has had the following effects:
1. A considerable reduction in the number of accidents at work among young employees since the project started in 2003, which is lower than for older workers:
2. Improved communications between younger and older employees;
3. Promotion of tolerance towards disadvantaged young people integrated in the team;
4. Transfer of skills (especially the interaction of all skills) to outside the workplace.

The benefits of the 'Future Competence' approach for safety training include:

- From a personnel point of view: reduction of accidents and use of skills in private life as well;
- From a social point of view: improvement in communication and reinforcement of self-awareness;
- From an economic point of view: lower worker turnover, reduction of down times and lower costs through reduction of down times



Comments

Health and safety has been included as an important and integral part of an overall training and skills development project for apprentices. Real work situations are used to develop hazard-spotting skills and involve the young apprentices in hazard rectification.

3 3D INTERACTIVE SIMULATOR - SAFETY TRAINING IN PROCESS PLANTS

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Issue

Developing a simulator for safety training in complex systems.

Problem

Process plants are very complex systems. Safe working calls for specialist know-how and experience. Lack of training, inexperience and uncertainty can lead to unsafe operations which pose considerable personal and economic risks, particularly in 'out-of-the-ordinary' situations. The example of a simple commissioning procedure (below) illustrates the problems.

Commissioning procedure for a simple process pump

The following need to be checked:
0: Use of appropriate personal protective equipment when entering the plant
1: Drains/vents closed
2: Fittings (slide valves) correctly set; pressure gauge in order
3: In the case of centrifugal pumps, suction slide-valve open, pressure slide-valve closed
4: Test leak-tightness of cooling water pipe present
5: Cooling water flow indicator working
6: For winter service, cooling water bypass open slightly
7: Blocking-pressure unit filled and at pressure
8: Electric motor electrically connected; direction of rotation; Ammeter; switch position
9: Pump is preheated
10: Pump tested for leaks
11: Filled with right oil – in gears and oiler
12: Check cleanliness of pump surroundings
13: The measuring station is informed

Start
14: Start pump A
15: Pump A: slowly increase delivery rate (by opening pressure slide-valve slowly)
16: Pump B: slowly reduce delivery rate (by closing pressure slide-valve slowly)
17: Avoid disturbances to plant operation (e.g. through improper turning of slide valves)
18: Shut down pump B
19: Pump B – close all valves
Preparing pump B for repair
20: Close valves
21: Drain pump B properly
22: Electrically block pump B (fusible cut-out)

Problems that may arise:

Re 0: Machine operators can be put in jeopardy through the lack or incorrect use of protective equipment.
Re 1: If a drain or vent is not closed substances could escape, ignite, and harm the environment, and/or injury the machine operators.
Re 2: Incorrectly set slide-valves can lead to anything from minor faults to costly loss of production in plant operation.
Re 5/8/13: Incorrectly set cooling water lines may freeze up in winter, necessitating costly repairs.
Re 7: Badly maintained blocking-pressure units can lead to material damage and to the escape of substance (effect as in 1).
Re 9: If a pump is not properly preheated and enters service, this may cause material damage and leaks (effect as in 1) – requiring costly repairs.
Re 10: If a leaking pump is started up, substance may escape into the atmosphere (effect as in 1).
Re 11: Too little lubricant or the wrong lubricant in pumps can lead to premature wear, making costly repairs necessary.
Re 14/15/16: Incorrect commissioning of process pumps can lead to anything from minor faults to costly loss of production in plant operation.
Re 21/22: If a pump is dismantled, it must be properly drained – risk of substance escape (effect as in 1). Electric current must be switched off in order to prevent involuntary switch-on (risk of injury).

Solution

Training activities cannot be carried out in process plants which are in continuous operation. Instead they are practised in a 3D Simulator with interactive operation facilities. In this way, 'on-the-job training' and 'learning under realistic conditions' are still achievable. At the Schwechat Refinery work safety training is carried out using the Interactive 3D Simulator – SAVE (Safe, Acting, Virtual and Experience).

Taking the example described in the box, the commissioning of a process pump, the training works as follows:

1. In a discussion with 3-5 apprentices, the procedures for commissioning a particular apparatus (in this case a process pump) are devised and written down.
2. The training team produces a work programme including all the necessary steps to be followed. An experienced trainer acts as moderator.
3. An apprentice enters the simulator and performs the work interactively as instructed. His activities are observed on a screen by the trainer and the other apprentices. The trainer is now the 'director' of the sequence to be practised. Any incorrect operations can be challenged immediately by team members, and a repetition with the 'correct' execution be called for.
4. The sequence and correctness of operations are noted on a checklist in order to reconstruct later what was right and what was wrong.

The computer simulates the corresponding refinery landscape and the equipment. Correct and incorrect operations are fed back both visually and acoustically. The consequences of incorrect operations can be represented to scale and made close to real life situations. They can cover a substance escape right up to a serious fire, and danger to employees and the environment. Close attention is also paid to the use of protective equipment according to specification. Experience has shown that a very high learning effect and a considerable improvement in safety awareness can be achieved with this training method.

Results

Training with the 3D Simulator has the following benefits and effects:

- It produces an increase in work safety, a reduction in risks, the prevention of incidents involving interruptions to production, and possibly the risks to persons and the environment;
- The reduction and elimination of risk is through proactive measures, instead of reaction to events;
- Through virtually experienced events, the awareness of possible dangers in various activities in the plant is heightened;
- 'Out-of-the-ordinary' operational conditions are reproduced, and the correct reactions can be practised repeatedly;
- Play-like learning with a serious background goes down well not only with apprentices;
- Reactions in stressful situations can be tested, practised and a degree of safety can be achieved, even in extreme situations; correct conduct in extreme situations, as well as stress reduction, can also be practised;
- The ability to recognise sources of danger is increased, and the effects of incorrect operations can be vividly demonstrated and made life-like;
- The training time of employees, and particularly of apprentices, is reduced, and they arrive at the process plant, their future workplace, with a great deal of practical knowledge.

Comments

Simulators are widely used in process plant training. This is a good example of the design and use of a simulator for safety training.

4 APPRENTICES TEACH APPRENTICES

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Issue

Apprentices use their own experiences to pass practical health and safety lessons on to their newer colleagues.

Problem

RWE Westfalen-Weser-Ems AG has some 250 apprentices being trained in different professions at various locations - most of them in technical / industrial areas. The importance of industrial safety is highlighted from day one and the company constantly seeks new opportunities to improve performance in this area.

The company recognised that the majority of industrial training work accidents occurred during the practice of 'basic skills' - typical work processes such as sawing, welding, etc. These basic skills are taught in the first year of apprentice training which is done almost exclusively at the in-house training centre under professional instruction. After the first year, the apprentices gain practical experience in the business departments and external companies. It is during this second period, characterised by frequently changing conditions when practising the skills learnt, that most of the accidents happen.

Solution

The project 'Apprentices teach apprentices' was launched in autumn 2004. It is an additional component of the safety training which uses the experience of apprentices who have completed their second year of training to convey knowledge to apprentices of the same profession from the year below in a 'peer approach'. The concept implies that acceptance of the information conveyed is higher when coming from peers than with traditional training methods.

The programme consists of four parts:

1. Senior apprentices identify issues:

The more advanced apprentices together with instructors and the safety engineer discuss occupational safety issues arising in their day-to-day work. Based on their own experience, incidents or accidents, topics are identified which they could present to their junior colleagues.

2. Project work:

Two or three apprentices work together in a group. Together with the instructors, the apprentices are given two to three months' to deal with topics of their choosing. They are free to use any type of presentation or media - presentations, discussions, short films etc. The only rule to be followed is that the briefing should not take longer than 30 minutes. During the entire project work phase, the apprentices have the opportunity to get support from all the company's institutions. The project is permanently supported by the occupational safety unit.

3. "Dress rehearsal" and briefing:

The groups meet for a 'dry run' on a specified date. The results are presented to the instructors and occupational safety staff, and any necessary corrections are made after the presentations. This is followed by the briefing of younger apprentices and a subsequent "feedback" discussion.

4. Presentation in the company:

Once a year, all groups have the chance to present themselves and their project results within the company. Representatives from all levels, occupational health and safety professionals and works council members, use the opportunity to talk to the young apprentices about their jobs and to share some of their own experience.

Results

All parties involved confirmed the success of the pilot project which has become a core component of the company's training programme and is carried out with all industrial apprentices each year. The independent work on safety issues not only helps the apprentices but also produces a direct benefit to the company whenever risk assessments are updated or supplemented. The forms of instruction freely chosen by the apprentices showed a great deal of imagination. They have ranged from a simple PC-based presentation to practical instructions with real tools and equipment using media such as flipcharts and pin-boards to a self-produced short video.

Success is also reflected in the accident rate. In the first year of the project (2005), the accident rate for apprentices was 40% lower than in the previous year. Serious accidents were down with inactive periods due to accidents reduced by 88%.

The expenditure incurred is very low. Since the project is included in the training plan and the apprentices work with available equipment, the only real resource required is the time of the safety engineer involved.

The project helps create awareness among young people of occupational safety and encourages their engagement in further cooperative ventures. Moreover, the project work phase involves close contact with the various individual company departments affected by these subjects. Consequently, in addition to promoting an exchange of experience between 'old' and 'young' staff, occupational safety issues and tasks are now also communicated to the individual departments through new channels.

Comments

This project is an interesting support to formal apprentice safety training using peers. It serves as general training for newer apprentices and improves their safety during their first practical work experience. Older apprentices are provided with the opportunity to learn from their own experiences, and they are actively involved in improving their own safety at work. In essence it is a simple formula that could be used in larger or smaller companies.

5 MEDIA 'YOUTH PROGRAMME' FOR BUILDING TRADE PROFESSIONS

BG BAU
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Issue

The production of educational media material to prevent accidents, particularly for use with apprentices in the building trade by external industry training centres.

Problem

The building trade generally has a higher rate of accidents and health risks than other sectors and the severity of accidents is on average more serious. Young workers are particularly vulnerable as they often lack the experience to assess hazards correctly, or do not even recognise the risks. It is particularly important therefore that apprentices in the building trade are informed about all aspects of occupational health and safety during their training so that they have the understanding to deal with hazards in the workplace.

Alongside the training by companies and vocational schools, the building trade's external training centres also play a decisive role in informing apprentices about the prevention measures they can take. It is part of their responsibility to make young people aware of the need for safe and healthy working practices early on during their first contact with the world of work by:

- Always linking factual content with health and safety information relevant to their profession;
- Opening apprentices' eyes for sources of danger and risks, and training their senses as to where hazards may occur;
- Transforming occupational health and safety knowledge into action.

These external building trade training centres look for support in fulfilling this role.

Solution

The 'Youth Programme' Run by BG BAU
BG BAU, the Accident Prevention and Insurance Association for the Building Trade, has supported external industry training centres for apprentices in teaching various topics about occupational

health and safety since the 1980's by offering a complete training programme. The resources provided by BG BAU are referred to as 'youth programme'.

BG BAU also offers consulting services, specialist information, and assistance and tools for integrating the topics of occupational health and safety into the workplace.

Resources for the 'Youth Programme'

CD-ROM

The 'youth programme' CD-ROMs offer trainers comprehensive, targeted and problem-orientated assistance and tools for practical teaching, developed by BG BAU with the publishing company BC GmbH Verlags- und Medien-Forschungs- und Beratungsgesellschaft (BC GmbH Publishing, Media Research and Consulting).

The trainer is provided with ready-to-use, student-orientated teaching units with background information and slide presentations dealing with all aspects of occupational health and safety.

The apprentices receive worksheets and questionnaires to test their own learning as well as a summary of the lesson content which they can take home with them to read later.

There are separate 'youth programme' CD-ROMs for different professions within the building trade including:

- Main construction trade
- Painters and varnishers
- Plumbers and fitters
- Specialist building cleaners
- Chimney sweeps
- Carpenters and roofers

Training films

Resources also include training films dealing with a number of important issues. These provide a useful entry point to the teaching units and play an important role in motivating

young people and raising their interest in the topic. There is also a video film on drug abuse prevention as part of the 'youth programme' plus a CD-ROM and slide presentation with background information about drugs.

Demo case

The 'youth programme' also features a case containing a wide range of items of personal protective equipment which can be used as demonstration materials in lessons, and apprentices can test them out in practice.

Structure and content of the 'youth programme'

Each CD-ROM contains teaching units on the most important occupational health and safety topics for the specific profession covered.

Each teaching unit consists of:

- Learning goals;
- Lecture texts for use by the trainer as a stimulus to help present the topic of occupation health and safety in an interesting way, and designed using the method of teaching discussions to link in with young people's experiences and integrate the apprentices actively into the lesson;
- A list of the demonstration materials required for the teaching unit;
- An animated slide presentation;
- A description of the training films suitable for the topic together with an interactive order form;
- Work materials for the apprentices such as worksheets, self-test questionnaires, and lists of answers for the trainer;
- Information materials for the apprentices based on a summary of the most important content in the teaching unit designed specifically for young people;
- A literature survey with the relevant regulations, laws, rules and further information for the topic.

The teaching discussions contain, among other things: suggestions for the lecture; stimulating questions for apprentices; slide images; concrete stimuli for turning knowledge into methodical action; and links to further information for trainers.

Assembling unique interactive teaching units

This feature of the programme allows trainers to integrate the topics of occupational health and safety into practical lessons related to the apprentices' real activities rather than in isolation. Trainers are able create their own lesson plans and select their own content depending on the topic of the lesson. The trainer can:

- Sort the learning sequences/learning steps in a teaching unit into a different order;
- Combine elements from different teaching units with each other;
- Process, save and re-open the individually produced lesson plan.

For example, the topic of soft soldering is on the lesson plan. This topic is dealt with in the teaching unit "Metal working and machining". This contains a summary of the hazards caused by:

- Hazardous materials (vapours and fumes, soldering water);
- Dangers of burns;

- Fire and explosion hazards (sparks, liquid gas);
- Electrical hazards.

The corresponding protective measures are also described.

The trainer can select and put together learning sequences from the five teaching units to provide concrete examples of the protective measures required during soft soldering, "Metal working and machining", "Hazardous materials", "Personal protective equipment", "Dealing with liquid gas" and "Electrical power". Once this lesson plan has been saved, it is available for use in the future from the CD-ROM.

Training and consultation services for trainers

BG BAU runs a two-day 'briefing event' for trainers as an introduction to its 'youth programme' that includes training on the didactic method the use of the 'youth programme' CD-ROMs. BG BAU offers regular one or two-day further training events providing trainers with the opportunity to exchange their experiences in using the 'youth programme' and help to keep them up-to-date on the latest developments in occupational health and safety.

BG BAU also offers personal consulting services and support for external industry training centres and trainers on how to implement the 'youth programme' and in general about occupational health and safety issues.

Results

The 'youth programme' is now an integral part of the training provided in external industry training centres for apprentices. All trainees in the construction industry are covered by the 'youth programme'.

Comments

The 'youth programme' is the result of a successful partnership between external industry training centres and BG BAU, which has been developed overtime. It covers both teaching resources and active teaching methods. Training is provided for trainers on both the resources and the teaching methods. Refresher training is also provided. There is also a mechanism to obtain feedback from trainers on the use of the programme.

6 THE VALUE OF MILK – FROM FOOD SAFETY TO OCCUPATIONAL SAFETY

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Issue

Promoting risk awareness in children and young people through a collaborative approach between enterprises and schools / universities; dissemination of examples of good practice based on effective risk evaluation; and, a subsequent action programme involving a holistic approach to the employment of young workers.

Problem

The culture and experience of many young job applicants could be improved through the information and training they receive about occupational safety and health (OSH), and many companies do not make allowance and plan for this lack of OSH knowledge and experience. The Del Giudice Company undertook a number of initiatives to mitigate these deficiencies, led by the Head of the Prevention and Protection Unit.

Solution

The company produces and markets milk and dairy products. The company started its initiatives in 1990 focusing on food safety and subsequently extending them to include OSH. The aim is to contribute to the provision of information and training for new generations of workers in the fields of safety at work and environmental safety. The initiatives cover all school-age groups, and are based on a collaborative approach between enterprises and schools / universities. A key element is the dissemination of examples of good practice based on effective risk evaluation and an action programme involving a holistic approach to the employment of young workers. Some of the activities involved are described below.

Guided tours of the company:

each year some 5,000 pupils and students familiarise themselves with the practical application of occupational health and safety, food safety and environmental safety. The initiative is directed towards pupils and students of every kind and at every level, from primary school children to university students, and includes young people about to enter the world of work with a school-leaving certificate or degree. Visitors also include young people who have taken courses on occupational health and safety, the environment and food safety. The programme comprises:

1. Lecture room: theoretical introduction to the concepts of occupational safety, food safety and environmental safety, including viewing filmed case studies.
2. Production unit: practical demonstration of solutions adopted through a guided tour to show the measures implemented for occupational safety, food safety and environmental safety.
3. Back to the lecture room: for a discussion about what has been learnt, with explanations by the head of the prevention and protection unit, with particular reference to the real examples of good practice to reduce work accidents.

Summary of the company approach to safety presented to visitors:
To reduce the number of accidents to the workforce - young workers having been most at risk - it was decided to put in place a revised safety management system based on risk evaluation. Work organisation and working hours, dangerous substances, ergonomics, safety risks, psychological factors and job rotation were all covered. Departmental safety officers were put in place and trained in technical safety, and interpersonal and leadership skills. The workers' representative was trained to be effectively involved in the reorganisation. The company introduced a method for constant improvement in every department, not only the improvement of equipment, materials and methods but also, and in particular, that of young workers. This involved the full participation of all concerned in the company, especially young workers themselves who were specifically involved in information and training activities so that they could take part in safety, health and quality aspects of their work in a meaningful way. Workers, including young workers, are encouraged to put forward suggestions and proposals, and this is an important part of making sure they participate. At the same time, steps were taken to ensure that the flow of information within the organisation was not limited by organisational barriers. The organisation was transformed into an 'association of problem solvers'.

Promotion of European Week 2006, for example by:

- Putting the slogan 'SAFE START! Safety at work begins when you're young' on 1-litre bottles of high-quality pasteurised full-cream and semi-skimmed milk, and by putting a sticker with details of the Week on the neck of about 60,000 bottles a day for ten days, for sale to families in central and southern Italy;
- Supplying literature on European Week to the schools that will be touring the company (three classes a day), starting at the end of September 2006.

Input to university courses: for example, giving a class on 'Environmental and Workplace Prevention Techniques' in the degree course of the University of Chieti's Faculty of Medicine and Surgery; working with about 20 undergraduates per year on preventive disciplines.

Academic public relations work at meetings, congresses and seminars organised by the Prevention Departments of Local Health Agencies in the field of preventive disciplines.

Results

- The safety programme introduced into the company, with its focus on the involvement of young people, resulted in an 88% reduction in accidents over a 3- year period;
- Contribution to the instruction of the over 80,000 pupils and students, and their teachers since 1990, and the positive feedback received from the educational institutions involved. Enthusiasm of young people and their families who have participated in activities of the company.

Comments

A collaborative and cooperative approach both in and outside the workplace which demonstrates integrated safety management and communication at company level that pays special attention to young workers and is also used as a teaching example to students visiting the company. There is active participation of the workforce, including young workers, in risk prevention and the enterprise engages in community activity to disseminate its experiences to students.

7 E-LEARNING FOR MEDICAL SCHOOL STUDENTS

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Issue

OSH training for medical school students attending the teaching hospital to learn safe work practices through e-learning.

Problem

To develop an occupational safety and health training programme for medical students that would not only satisfy legislative requirements for providing workers and students with the necessary information before they start practical work at the teaching hospital but also would be comprehensive and attractive to young people, ensuring good learning outcomes.

Solution

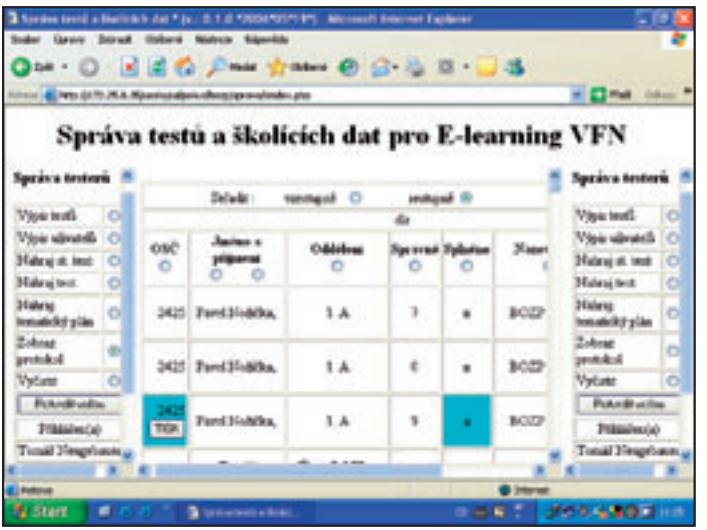
Several nursing and medical schools use the General Teaching Hospital in Prague, the largest hospital in the Czech Republic, for the professional training of their students. The hospital organises basic occupational safety and health (OSH) and fire protection (FP) training courses for students. The training is delivered when the students begin their practical work at the hospital, and relates to the tasks that students are expected to perform and to their workstations. Traditionally the course was conducted in a traditional lecture format by a staff member trained at the local OSH and FP Department (the authorised OSH officer).
Since digital information is appealing to young people, and e-learning can be more effective than lectures, the OSH and FP Department decided to redesign the educational tools used to train the staff of the teaching hospital and the students taught at the hospital.

The pilot project, 'FP Training', was developed jointly by the OSH and FP Department, and the Computer Department, and the experience was

used to conduct the project OSH Training. In the development of the course material, legislative requirements for training courses, including the need for staff to participate in such training on the day they start work or work experience, were included. The programme familiarises staff first with the e-learning method and then progresses to specific OSH and FP requirements of the workplace. E-learning provides interactive training and the student is actively involved in learning, for example by being asked for suggestions of practical solutions to specific problems.

The courses are divided into two parts: Part I is the main part of the training and meets the requirements of the legislation in relation to local OSH policies and practices. Supplementary Part II includes a folder containing more detailed information in relation to both OSH and FP projects.

In the main part of the training, basic and general information, (Part A) is provided electronically (classical e-learning). Specific information (Part B), related to work or a workplace such as methods of evacuation, is provided in a lecture form delivered by a manager or an officer authorised by the manager (authorised OSH officer).



The folder is designed to provide for more detailed familiarisation with the subject, and can be used independently of the training courses whenever an employee or student shows interest. The information can be obtained in an electronic form from the internal computer system. It is expected that it will be used in the future in schools as a part of study. It is informative only, providing information outside the framework of the legislative requirements. It is complementary to the website of the OSH and FP Department, although it can never replace it as it does not contain operative information. Its contents include interactive fire protection and occupational safety learning, for example, on putting out a fire with a portable extinguisher or choosing a fire-fighting aid according to an internal regulation.

The team developing the training paid special attention to the graphic design to make the tool lively and to incorporate relevant OSH symbols in a meaningful way. Some animation is used in the OSH training, and the resources also include interesting or humorous stories which help increase interest in the project. For example, for the FP project they are preparing Fire Fighting Regulations for the Czech Lands issued by Joseph II in 1785. There is a link here not only to fire protection but also to the hospital because it came into being during that period and Joseph II participated in its establishment.

The authors of the project are planning to create the simulation of practical situations that workers or students may encounter, for example, testing the right reaction to a fire (fire fighting game).

OSH and FP programmes can be updated and upgraded to reflect changes in legislation or working conditions or to expand and enrich their content.

The new approach also improves formal testing and facilitates keeping record of who has passed and failed the course. For example, it is possible to calculate the average number of times a student has taken the course before passing, which is an indicator of the difficulty of the subject. The training course dates are monitored by the manager. In future this could be done by a computer sending out e-mail notifications.

The training parameters, such as the number of questions in a test and the minimum number of correct answers, can be changed by the administrator to suit the needs of the group. The tool can generate a list of all successful or unsuccessful course participants sorted by different criteria, for example, by workplace or date of passing the course. It can also be used to search for a concrete person and find out whether they took the training course by a prescribed date or print out their certificate.

Results

The results include:

- A more systematic and comprehensive delivery of training;
- Increased availability of OSH and FP information for students who can acquaint themselves with information originally targeted only at the staff of the teaching hospital, broadening their knowledge in the areas that are of interest to them;
- Closer cooperation between schools and the teaching hospital;
- Content processing satisfying conditions of the teaching hospital Easy update of thematic training plans, training and test texts, and the possibility of further content and thematic development;
- Provision not only of training and testing but also a source of information over and above the requirements regarding training content.

Comments

An example of a flexible interactive electronic training method that is easy to update. It has also opened up information provision to students as the electronic system has made information available to students that was previously only available to staff.

8 PIZZA DELIVERY BY MOTORCYCLE

PHC Franchised Restaurants Public Limited

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Issue

Minimising motorcycle related accidents and other incidents during pizza delivery.

Problem

There had been a significant number of accidents involving food delivery personnel riding motorcycles ranging from minor ones, such as scratches after falling off the motorcycle, to major ones including accidents resulting in fatalities. The majority of the riders were young workers. Incorrect use of helmets was a factor that increased the severity of injuries resulting from the accidents that took place. The company wanted to reduce the number of accidents and injury severity, and improve their safety performance.

Solution

The company investigated the problem and possible solutions in cooperation with external consultants.

They introduced a system to educate, train, assess and actively monitor the riders. This included the use of cameras, video recording, continuous monitoring of drivers, ongoing issue sensitivity training, and ongoing 'spot-checks' of the drivers at various intervals. A formal procedure was introduced to document and evaluate the performance of the riders, drivers and their vehicles.

The objectives of the process were to:

- Ensure that all riders and drivers were aware and understood how to follow the company's policies about health and safety standards in their work place;
- Ensure that all riders understood the importance of following the safety procedures, and were motivated to do so;

- Provide a system to carry out 'spot-checks' on riders to monitor their adherence to established safety procedures and standards;
- Ensure that all riders wore and used their helmets in the correct manner, which was critical for their protection during a possible accident;
- Achieve good cooperation between restaurant managers and riders / drivers on safety, where riders informed them of any problems they or other co-workers may face with health and safety, including the maintenance of their vehicles or their safety gear.

They engaged the support of the local police department, especially in the preparation of the road assessment/evaluation procedure and its content.

To accompany the training and monitoring scheme, the company revised their safety policy for motorcycle riders and van drivers to cover the safety conditions that must be checked on vehicles, and other issues, for example:

- Ensuring the maintenance and condition of delivery vehicles including their cleanliness and the condition of the tyres, headlights and brake lights, and that all other lights and indicators were working properly;
- Checking that the engine oil and water levels were within the appropriate limits;
- Checking that accessories such as horns and mirrors were in good working order;
- Ensuring that the insulated food carrying box was clean and closed properly;
- Reporting of any damage or malfunction immediately;
- Approving helmets by the company's health and safety officer;
- Complying with traffic laws and regulations, and the responsibility of drivers for any traffic violations;
- Ensuring that the delivery route was decided before the driver left the shop;
- Instructing drivers not to get involved in a dispute with another party, never assume responsibility

for an accident and only answer questions to police officers and their manager;

- Maintaining a log book by managers at each shop for all information related to drivers (personal details, complaints from customers, complaints from the public etc);
- Ensuring the competence of drivers to apply the necessary procedures regarding customer service and that other company and restaurant policies were checked;
- Instructing drivers in how to avoid violence and robbery, for example: never handling money in public view, parking in well lit places; being aware of any suspicious persons; never entering customer's houses or flats;
- Instructing that if there was any indication that a delivery might endanger a driver it should not be carried out and that if a driver felt uneasy about a situation to inform their manager and leave the area immediately;
- Instructing what to do in the case of robbery, for example: remain calm; cooperate with the robber; try to make as many observations about the robber as possible;
- Instructing drivers to avoid unnecessary stops, for example: filling up with fuel at the beginning of their shift; never taking on a passenger; never offering help unless it was in an emergency;
- Instructing what to do if there was no answer at a place of delivery, for example, the driver must leave and inform their shop manager;
- Instructing on the wearing of uniforms and the safe parking of bikes;
- Instructing van drivers about carrying spares and equipment in good condition in case of breakdown: hydraulic jack, torch, spare tyre, and coins for making an emergency telephone call;
- Instructing shift managers to check vehicles, especially: tyres; oil and water; brakes; lights; indicators; horn; seat belts; mirrors; fenders; helmets and the chin clasp; any damage on the vehicles seat or bumper shields;
- Ensuring that vehicle parking places had fire extinguishers;
- Reporting accidents to the company Health and Safety Officer;
- Instructing about assisting an injured person;
- Instructing never to speed even if the order is late.

Results

The company noted a significant decrease in the frequency and severity of incidents involving their motorcycle riders. In addition, the condition in which motor vehicles were kept improved significantly. Cooperation between managers and staff on health and safety also improved considerably.

Comments

Although primarily aimed at reducing road traffic accidents, the instruction and training also covered how to deal with violence from members of the public, which is an important safety issue for young delivery people.

9 ENSURING OCCUPATIONAL SAFETY DURING VOCATIONAL TRAINING AND ON-THE-JOB LEARNING

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Issue

Including occupational safety and health (OSH) as an inherent part in vocational training by ensuring that practical work is carried out without risk and giving young people instruction on risks and their prevention so that they obtain knowledge on how to avoid risks, an awareness of the importance of OSH, and are trained in a safe environment.

Problem

Young people have the right to work in a safe environment in training school premises and during on-the-job training. They also have the right to learn about occupational safety and health risks, and their prevention, relevant to their future professions as an inherent part of obtaining vocational qualifications.

There were a number of challenges to ensure that trainees were well educated about OSH and put into practice what they had been taught:
Information necessary for teaching occupational safety and health was scattered in diverse publications and books, and on web pages;

- Some students were not safety conscious and young workers' risky behaviour was dangerous for themselves and for the environment;
- Teaching must take account of the inexperience of young people and their mental, social and physical immaturity in relation to their work;
- Before their vocational studies, most students have never seen how different types of craft tools or other similar machines and equipment are used;
- User instructions and safety notices for machines and equipment needed to be explicit and easy to read but often use vocabulary and terms aimed at adults and experienced workers.

Solution

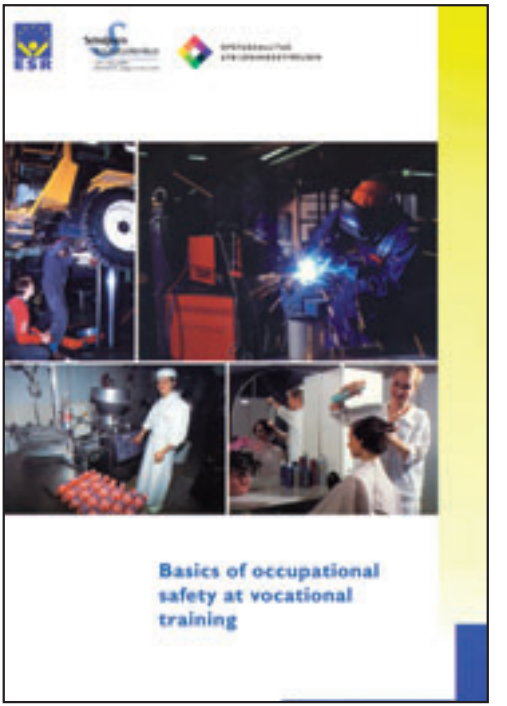
OSH forms part of the basic vocational training qualifications. The vocational training school decided that it wanted to improve occupational health training and awareness among its students. They wanted students to develop positive attitudes to OSH and they also wanted to give OSH more prominence in the courses.. They felt that the approach needed to recognise young people's disposition towards risk taking and that the vocational training should be modified to take account of young people's special characteristics as workers.

Supporting the tutors, targeting the right materials at students

To improve the amount and content of OSH instruction, they developed new teacher support packages, PowerPoint presentations and a series of 'teaching occupational safety and health' guides for tutors. They also developed guides giving the basics of OSH for students that were specific to different vocational study areas covering the clothing, food, machine and metal working, motor trade, natural resource and wood industries; tourism and restaurants; trade and administration; HVAC technology; household and consumer services; and laboratory technology and chemistry.

In the student health and safety guides for the different industries special attention was given to young people's values, and the guides were made as interesting and attractive as possible.

The safety guides and reports were piloted and evaluated, and then included in the study material of the basic vocational qualifications. The material was distributed to the students' training workplaces and to other vocational schools both directly and via the Internet (see web page ttp://sedu.fi/tyoturvallisuus/). The guides were also published with support from the



European Social Fund and the Finnish National Board of Education, enabling them to be made available free of charge.

Learning via a safe learning environment

Simple machine safety cards (1 side of A4) were drawn up for each of the different machines and equipment used in the courses. The cards included a photograph of the piece of equipment for easy reference. Safety instructions for the most important and dangerous machines and equipment were attached next to each machine so that they could be referred to easily. This made it simple for the students to check the user instructions and hazards before starting to use the machines.

All near-miss incidents and accidents must be reported. The importance of reporting hazardous incidents was emphasised to students and was made an instrument of learning. These real, reported incidents were then used to teach about hazards and their prevention.

Health and safety as an inherent part of the qualification

The students received a health and safety passport corresponding to the requirements of the trade they had been studying.

Results

Developing positive attitudes among young people towards safety by means of training and instruction helped to promote the health and safety culture of the study environments. Occupational safety and health teaching carried more weight than before in the education of young people for occupations in different industrial sectors. Feedback from teachers and workplace tutors on the materials was very positive.


TYÖTURVALLISUUSOHJEKORTTI

Työväline Kutteri

Comments

This case was focused on raising awareness of OSH issues at the very beginning of vocational training with the goal of achieving OSH culture changes at workplaces. It combined learning in theory and practice, and used the steps taken to make the learning environment safe as a teaching tool. The case also demonstrated good consultation between education centres and workplaces (management, trade unions/workers, OSH experts).

10 PASSPORT TO HEALTH AND SAFETY SKILLS - RESOURCES AND COMPETITION

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Issue

Promoting safety and health in general vocational education through resources and integrating it into skills competitions.

Problem

Work competence not only covered working efficiently and carefully but also safely without endangering one's own or any other person's life. Occupational safety and health issues should therefore be integrated into instruction and work guidance. This process needed to be stimulated

and practical tools were needed on occupational safety and health for vocational schools and for on-the job training. In Finland, vocational education was traditionally provided by educational establishments but it was not always easy to transfer and apply the knowledge and skills acquired in educational establishments to working life. In particular, good cooperation was needed between education establishments and enterprises.

Solution

An educational package - 'Passport to health and safety skills' - was developed in the project 'Top Excellence in Health and Safety at Work (2004-2005)', coordinated by Skills Finland, and health and safety was included in the WorldSkills competition for vocational training.

The project was carried out in cooperation with the Finnish Institute of Occupational Health, and funded by the Finnish Work Environment Fund and the Veto Programme of the Ministry of Social Affairs and Health. The aim was to develop health and safety material to support teaching and learning in the different fields of study, and to plan practical tools for promoting occupational safety and health in the education of young people in vocational schools and in on-the job training.

To achieve this goal, special emphasis was placed on developing methods for achieving effective cooperation in health and safety between the young people, workplaces and educational establishments. Planning started in spring 2004, and the objectives of the health and safety passport were established:

- To raise students' awareness of safety and teach them to appraise their own health and safety knowledge and skill;
- To make students familiar with the central safety issues of the trade concerned;
- To analyse the safety of the workplace and to develop the student's and the workplace's way of action;
- To develop the students' health and safety knowledge and skills for skills competitions.

Structure and contents of the passport

The health and safety skills passport was divided into four units containing seven task cards. The contents of the skills passport units and the study goals of the task cards are presented below.

Unit I

The students appraise their health and safety knowledge and skills, and chart out areas to be developed. The aim of task card 1 was to find out the strengths and weak points of the student's knowledge and skills and to set improvement goals. Taking the skills passport ends at the self-appraisal of the knowledge and skills, on the basis of which the student's competence and learning will be improved.

Unit II
The safety and health issues of the student's field of study were analysed. The aim of the task card 2 was to get to know the occupational safety and health factors involved in the student's work and trade so that students knew how to use and apply this information comprehensively, particularly in preventive action. There were task cards for 15 trades and one common trade card.

Unit III
The subject areas related to the safety of the workplace were studied. The task cards were taken in cooperation with the workplace (coaching business, on-the-job training place) representative. The study goals for each task card are given below.

Task card 3 - Introduction to occupational safety and health - enabled the student to learn about the employee's and the employer's basic rights and obligations concerning occupational safety and health, and orientate themselves to the safety organisation and safety procedures of the workplace.

Task card 4 - Wellbeing at work – provided the student with an understanding of the comprehensiveness of mental wellbeing (work, leisure time, etc.) and the employee's and the workplace's role in maintaining and improving employee wellbeing at work.

Task card 5 – Ergonomics – required the student to identify ergonomic hazards in their work and how to reduce them.

Task card 6 - Personal protective equipment - enabled the student to understand the importance of personal protective equipment in preventive action and how to identify the hazards and risks at work, and to know the factors to be taken into account when selecting protective equipment, and how recognise situations where protective equipment itself can present a hazard.

Unit IV
Task card 7 of this unit could be used when preparing for a skills competition or a skills test through a self-assessment of performance and working from the safety aspect (competition and practice situations). There were cards for 27 different trades.

There was a passport to safety CD-ROM.

Skills competition

Skills Finland chose the promotion of occupational safety and health as one of the themes for WorldSkills 2005 - the world championships in vocational training. The theme received a great deal of positive attention and was highly commended nationally and internationally. The importance of occupational safety and health as part of occupational skills as highlighted during the project Top Excellence in Health and Safety at Work, which was ongoing during the event.

For the first time during the 50-year history of the WorldSkills competition explicit safety instructions were drawn up for all 40 trades. Occupational safety and health was a significant factor in the evaluation process. All technical delegates of the 46 countries participating in the competition were provided with instructions on occupational safety and health in vocational skills competition.

During the competition training was provided for the many groups of players involved in vocational education at the national level including relevant aspect of occupational safety and health. Training was provided, for example, for trade organisers, coaches and high school students who acted in various tasks such as team guides.

The test cards of the health and safety skills passport were piloted among coaches, and the importance of occupational safety and health in successful work performance was highlighted in the Finnish national team camps in spring 2005. The health and safety skills passport will be used in the coaching of the next Team Finland for the WorldSkills competition in Japan in 2007. The skills passport can be accesses on the Internet: www.skillsfinland.com

The aim was to use the results at the European level in 2008 when EuroSkills – the European championships in vocational competition - will be organised in Rotterdam, The Netherlands and disseminate the knowledge and experience among all the European Union Member States.

Results

Running competitions and coaching young competitors was found to be an excellent method to promote occupational safety and health. The competitions involved enterprises and educational establishments from about 40 different trades. As such it helped to promote cooperation between schools and businesses and, through this cooperation, both partners become more aware of the importance of OSH issues at work and for workers' health. The young competitors who were awarded were good examples for students in vocational education and for other young people at the start of their work careers.

Comments

This example integrated health and safety into a vocational training not only at national level, but also into initiatives the international level.

11 FAOS – BUILDING ACCIDENT AWARENESS FOR A LIFE-TIME – A SCHOOLS PARTNERSHIP PROJECT

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Issue

Combining health and safety education in schools with improved safety and accident prevention in schools through a partnership involving education, health and safety, and companies.

Problem

There was a need to improve accident prevention in schools and to improve the safety of school buildings. This included making pupils more safety aware. At the time there were no teaching facilities or training opportunities for accident prevention in schools, and so an important life-time learning opportunity was being missed.

Solution

There was an opportunity to improve safety and accident prevention in schools and to use the opportunity to promote the education of pupils in general about health and safety. An accident prevention and awareness building programme was combined with a school repairs programme across both primary and secondary schools in Achaia: 'FAOS – Building awareness for a life-time' was a local partnership programme involving the private and public sectors which aimed to promote accident prevention at school.

Establishing the partnership approach

The idea of creating a partnership between private companies and the public sector to support mainstreaming of best practices in preventing accidents at schools was launched during the European Week for Safety and Health at Work in October 2000, during a public meeting attended by a government minister, representatives of local authorities, parent's associations and the press. A team of volunteers was formed to prepare the groundwork and then launch the initiative.

The Directorate of Secondary Education of the Prefecture of Achaia was an obvious partner. It had its own Departments of Environmental and Health Education that had developed a range of activities in related programmes and had experience of cooperation with organisations and agencies across the local community. The departments had supported local teachers by providing methods, educational material and networks, while also offering financial support for the programmes designed by active citizens to create schools more open to community life and action.

The Ministry of Labour's Centre for the Prevention of Accidents at Work brought its experience in the prevention and recording of accidents, and accident-related dangers in industry and public works.

The private sector was involved through TITAN Cement Company. They had a strong commitment to risk prevention and experience of developing programmes of safety training and raising awareness among their own staff. The company also had experience of sharing its health and safety experiences with other interested enterprises in both public and private sectors.

Additional professional expertise and experience was brought to the team by the involvement of the Vice Chairman of EKAB - Greek Emergency Services Organisation -, a university professor who was already active in promoting accident prevention in schools.

Objectives and how they were met

In March 2001, the various partners agreed to collaborate to promote better accident prevention and an improved school environment. The partners set themselves five objectives within a 3-year pilot programme:

Objective 1: To set up an extended partnership with representatives of both public and local authorities, and local companies. The partnership was named FAOS - 'Frontida, Agogi, Organosi, Symmetohi' - which translates as 'Care, Education, Organisation and Participation' but also means 'light' in the language of Homer. FAOS was formally registered as a legal entity in March 2002. Partners engaged in the extended partnership included senior university figures and the Medical Department of the University of Patras, the heads of the departments of health education and the departments of environment in both the primary and secondary education directorates of Achia, senior figures from the Titan Cement Company, the head of the Centre for Prevention of Occupational Risks of Western Greece and teachers.

Objective 2: To engage a number of schools in the pilot project on a voluntary basis to be inspected by a team of experts for possible dangerous defects or potential causes of accidents. Fourteen

schools agreed to cooperate and twenty companies volunteered to share the bill and repair the most serious defects immediately.

Objective 3: To develop experienced task forces among teachers to act as training facilitators within schools.

A very positive response was received, and a long-term training programme was developed for teachers who could subsequently act as trainers for other teachers. The programme included the following topics:

- Introduction to safety principles;
- Preventing risks as an individual and as a team;
- Safety at schools, risk assessment, risk management, investment and monitoring;
- Development and implementation of safety programmes in schools;
- First aid.

As a result of the dissemination of the project via trained teachers, FAOS was actively introduced in over half of Achaia's high schools, with a variety of programmes and activities being run.

Objective 4: To motivate parents' associations and society at large to support the development of a 'preventing accidents mentality'. This proved the most challenging goal to take forward, although some limited support was offered by some parents' associations. As most childhood accidents occur not at school but at or near home, parents needed to be made aware of the issues and engaged in the process. Therefore further activities were planned in this area.

Objective 5: To make FAOS self-sustaining and extend its use and the support for it. This was a goal for the future. The FAOS team believed that it was achievable. The aim was to extend the programme and transfer it to other communities and regions of Greece. For example, a new FAOS-type partnership was set up in Thessaloniki in July 2005.

Implementation of the FAOS Programme –summary of activities

A variety of activities were implemented:

- Identification of safety problems;
- Safety audits and assessment of school buildings;
- Implementation of a recording system of accidents and potential accidents inside schools;
- Awareness seminars for teachers and students;
- Safety training for teachers;
- Open conferences for the local communities;
- Interactive workshops;
- Creation of educational material;
- Education programmes at schools;
- Cooperation with specialised government authorities and NGOs;
- Contacts with local businesses, unions and individuals for promotion and sponsorship purposes.

Overcoming difficulties and challenges

The project confronted a number of challenges during its development.

The private and public sectors operated in very different ways and were not used to cooperating,

so that barriers and stereotypes among the partners had to be overcome. There was no tradition of partnership working, so there was a lack of experience on how to build and manage partnerships It was a new experience for partners from companies and the public and local authority organisations, and needed very careful management.

It took time to engage society at large in the project; therefore it was important to ensure that partners did not get frustrated and that they planned the project and looked for results over a long timeframe.

It was found that there was no official system for monitoring accidents in schools and this hindered assessment. A voluntary recording system of accidents and potential accidents was operated inside schools and will remain a core objective for FAOS. Monitoring was also used to assess the need for other changes such as having specialists in health and safety in schools and for the introduction of safety training as an obligatory course.

Building on the pilot programme

The first three-year pilot phase of the programme offered a valuable experience on which to found the second three-year Action Plan (2004-2007), particularly to make it more coherent and target-oriented.

FAOS was built on voluntary actions. Motivation and broader acknowledgement of the work of the volunteers were important in the sustainability of FAOS. At the same time, cooperation building with other NGOs as well as government organisations sharing the same core objectives, needed to be examined and developed in order to strengthen the qualitative impact of initiatives undertaken.

Results

This was a long-term project with funding to date of some ¤73.000,00. The programme resulted in a reduction in the number of accidents at schools and the development of safety awareness. Its transfer to other regions of Greece showed that it was perceived as a useful model to follow. Considerable hurdles regarding new ways of working were overcome by the partners.

Comments

This project is founded on a voluntary partnership that included health and safety, education and cooperation with employers. It recognised the importance in training teachers in their role. They took an open, problem solving approach to develop the methods of working and to overcome the challenges encountered.

12 DEMOLITION SAFETY

DEMCON - Papasavas Nikos Explosive and Conventional Demolitions

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Issue

To provide systematic training and support for young workers on safety and health standards in demolition work, integrated into the overall policy of the company on risk prevention and health and safety promotion.

Problem

DEMCON are demolition contractors involved in both explosives and conventional demolition projects. It is hazardous work so attention to health and safety, including training, is essential. Young and new workers, especially if they are unfamiliar with demolition work, are particularly at risk so they need to receive adequate training and instruction about safety policy, procedures and their role, and their competence on safety must be assured.

Solution

Integrating young worker safety into the company health and safety policy
The company is committed to providing high standards of health and safety, and to paying particular attention to the special needs of its young and new workers. It provides continuous training and guidance to young employees at the beginning of their employment and following any changes that may occur in their duties or the conditions of work. The training forms part of the overall policy of the company on risk prevention and health and safety promotion. The training and education provided to young and new workers is certified by international organisations for safety and health in demolition work.

The specific programme for young and new workers is integrated into the company's general health and safety policy and programmes that include the following elements:

- Safety and health standards;
- Hazard communication, including dangerous substances;
- Recording and evaluation of hazards;
- Safety standards and the use of Personal Protective Equipment (PPE);
- Initial and planned periodical medical follow-up.

Key elements of the young worker/new starter health and safety programme

Theory and practice: health and safety training is provided through both educational seminars and practical exercise.

Training based on risk assessment and analyses of training needs: the company is careful to assess all potential dangers to young employees because of their lack of experience and knowledge, including training needs, and for new technologies, materials or systems of work which the young or new workers are unfamiliar with.

Job assignment system: job assignment depends on the abilities of each worker and the company objectives.

Worker competence for tasks: the company has clearly defined ability requirements for carrying out tasks. Workers are not allowed to carry out certain tasks until they are trained and then assessed as competent. The level of certified training, knowledge, skill and experience for a worker to carry out different tasks and / or to be assigned different responsibilities is clearly stipulated, and there is a system for ensuring that this is followed.

Supervision and mentoring: each project has its own foreman who supervises and educates the workers at the workplace. In addition, each young or new worker has their own exclusive experienced worker who watches and explicitly guides them at work.

Content of worker training:
Training covers all the key areas in the company health and safety policy including general standards, hazard communication, work with contractors and the use of PPE. Young and new workers are trained not only about the specific safety instructions that they must follow but also more broadly about the company's safety policy, their role in implementing it and how this is accomplished.

Areas covered during the health and safety training include:

- Work practices and procedures to be followed;
- Dangerous substances: for example, identification and evaluation or risks, use of Material Safety Data Sheets (MSDS), policy and procedures regarding labelling etc., preventive measures to be taken, etc;
- How to read and interpret the health and safety information on product safety labels;
- Implementation of a Hazard Communication Programme in the workplace;
- How available information about safety is received and understood by all;
- How the available information about hazards and risks is used;
- Use of Personal Protection Equipment and which equipment to use in which situations;
- Procedures for dealing with emergencies, and serious and imminent danger;
- Techniques for briefing employees on emergencies and serious and imminent danger and on chemical substances by piping that do not have label of warning;
- Methods used to inform employees of high risks, such as cleaning reactor tanks or the dangers related to chemical substances in unlabelled pipes.

Training stages

Setting the scene: on their first day of employment, the job of the young or new worker is presented and explained to them at the workplace by the instructor. During the presentation it is emphasised that they must never carry out any task that has not been authorised by their instructor.

Theoretical training: theoretical training is given in the form of seminars to train young and new workers to the standards of health and safety in demolition work.

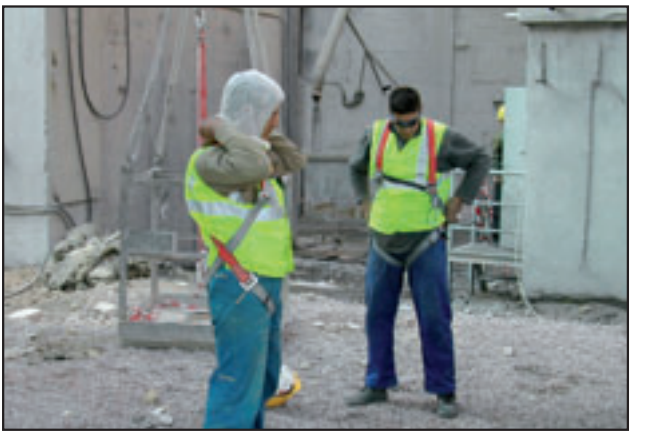
Sequence of theoretical and on-the-job training

- Day 1: The instructor presents the theoretical part of the processes for dealing with hazards. This training takes place at the workplace during working hours.
- Day 2: Learning how to confront dangers practically by simulation of emergency situations.
- Day 3 to 29: real work starts under supervision and, during this period of on-the-job training, young workers are accompanied not only by their instructor but also by an experienced employee who acts as an example or mentor to the young person during their training.
- Day 30: the instructor assesses the worker about their knowledge of company health and safety, their ability to carry out the job effectively and safely with reference to their own safety, co-worker safety, public, road, equipment and environmental safety, and what they have been taught to date.
- Day 31 to 40: the young or new workers receive further instruction and training over a 10-day period, focusing on the areas where the assessment has shown that improvement is needed. Day 41 and after: the instructor reassesses the young or new worker taking into account the suggestions of the experienced worker who has been working with them during the training

period. Further 10-day periods of instruction and training are given until the instructor, in collaboration with the experienced employee, judges that the young or new worker can carry out the job correctly and safely, and knows what to do in emergency situations.

Mentoring and supervision

Foremen supervise the new workers. A mentor is assigned to each new recruit. Their role is to educate them and make them a good worker and a responsible colleague. The mentor is responsible for their safety at all times during their training, and reports to the foreman.



Only a maximum of two trainees undertake the training programme at any one time. Having more trainees would be unsafe for the whole working team and it would not be practical or safe to take up the time of more than two experienced workers as trainers at the same time.

Mentors are those with the most experience and the longest cooperation with the company. They have the know-how to educate young employees and to help them in their work, and the knowledge to predict dangers and deal with them. The longest serving workers in the company are also the most experienced in dealing with extraordinary circumstances. If a problem or dangerous situation arises, their experience and their ability to keep calm is an advantage.

The experienced staff receive special training to learn how to educate younger/new workers. This includes lessons about how to treat young workers and what to expect from them, how to communicate their knowledge and how to keep younger/new workers interested and motivated in their training. Young workers may lack concentration and the mentors need to understand young workers and that, for example, they may need to be patient with them.

Supervisor training

Supervisors are trained about what safety measures and procedures they must supervise and how they must carry out this role. This training covers supervision of their employees and the employees of contractors. For example they are trained in:

- Their role and responsibilities in the 'hazard communication programme';
- The methods that the supervisors will use in order to inform another employer about any preventive measures that should be taken to protect their employees not only during the regular operations but also in emergencies;
- The methods that supervisors will use to inform the other employer of the system of label placement to be used, and the methods to help guide workers on how to put on the labels;
- How to guide the employees of other employers;
- Attention to the performance of the employees of contractors and what to do if they spot problems.

Training the mentors: programme of learning how to train

First day: Lessons about how to communicate knowledge, covering:

- Talking calmly and clearly - meaning talking quickly and saying what you need to say;
- Being assertive in explaining what they have do in their job;
- Rewarding trainees by making them feel that they are doing the job perfectly if that is really happening.

Duration: 8 hours

Second day: Lessons about keeping the young/new workers interested in their training, covering

- Selecting the most important points of work and doing them as an example;
- Representing the job that has to be done;
- Doing the job with the young/new worker observing;
- Observing other employees doing their job;
- Teaching safety rules;
- Carrying out emergency procedures;
- Explaining the benefits of this training to the young/new worker and their colleagues.

Duration: 8 hours

Sharing results, making information accessible

DEMCON seeks to share the results of its health and safety practices through its involvement in international organisations for the safety standards in demolition projects and through publication in construction trade journals in Greece. They have also translated their demolition safety manual and hazard communication manual into other languages.

Results

The company has achieved a very low accident record (zero working accidents in 1.865 days of work) by a commitment to high safety standards that includes integrating a specific programme for young and new workers into their approach. A demonstrable observation of safety standards is an important selling point for demolition contractors. Using older staff as mentors means that they are able to gain new skills and become more efficient trainers. The real advantage to the company is the improved work standards from having properly trained staff, and the resulting business benefits from gaining the respect of international companies.

Comments

This case recognises the importance of paying special attention to young and new workers within the company's health and safety arrangements. Important elements in the case are that it takes a staged-approach to training spread over several weeks, makes use of theoretical and supervised on-the-job training that complement each other, the training schedule is adapted to the needs of each new worker and uses a system of buddying and mentoring by experienced workers.

13 'GOT A GOOD IDEA?' – COLLEGE STUDENTS SOLVE PHYSICAL WORKLOAD PROBLEMS

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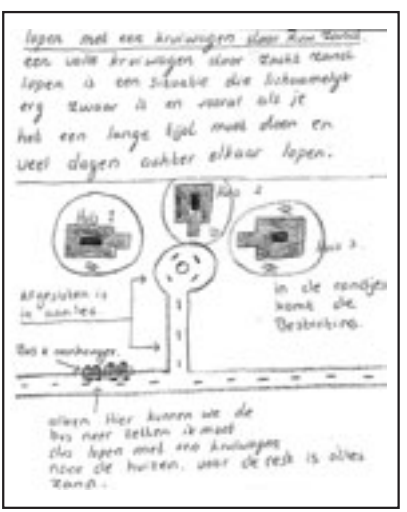
Issue

Active involvement of college students in finding innovative solutions to prevent workplace hazards in the agriculture and horticulture sectors through assessment of their own workplaces and a competition.

Problem

Young people with jobs in the agriculture and horticulture sectors are exposed to physically demanding working conditions causing risk to their health and safety. Take, for example, pushing and tipping a full wheelbarrow in loose sand, or offloading sand from a lorry and then loading it again with garden waste. Young people are especially vulnerable due to their lack of previous work experience. Effective awareness raising about the risk factors which they might face in the sector as well as training in hazards prevention is therefore essential for young workers. The competition on innovative preventive solutions entries painted a clear picture of the nature of the heavy work and the least popular chores.



Lay the path before pushing the wheelbarrows to and from the site.
This idea was adopted by the employer.

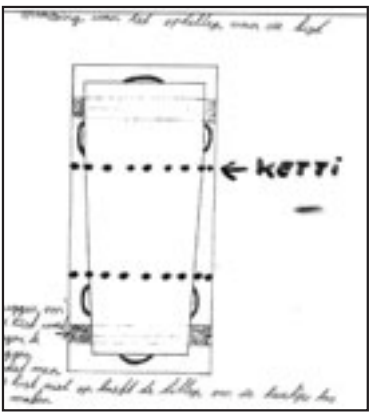
Solution

Background

This project took the form of a training programme, and targeted over 300 male and female agricultural students (aged 16-20 years) who were employed and attending a college at the same time. The programme had two main goals. First, it aimed to educate students on physical strain and how to cope with it; second, it sought to challenge the students to assess their own work environments and to think up ways of improving it. It also gave them an opportunity to enter a competition in which they could creatively tackle a workplace problem.

The programme was an extra-curricular activity for employed teenagers who were following vocational education at level 1 or 2. The aims and content of the programme were completely separate from the exit criteria for vocational education. Students in level 1 and 2 of agricultural education are only taught accident prevention. This programme was supplementary and focused specifically on physical strain.

SOLLT and STIGAS worked together on the project because SOLLT has experience of transferring knowledge to teenagers and STIGAS has experience of advising on physical strain in agricultural work environment. The agricultural colleges were asked to create room for this course during the compulsory weekly training day.



This is a grave, where the coffin is lowered with chains or bands. After the ceremony the coffin is lifted manually so that the chains can be removed. Two planks placed horizontally on the floor of the grave dispense with the need for manual lifting. The employer adopted this idea.

How the project was organised

- A folder of course material was compiled;
- Consultants from STIGAS and SOLLT used this material to provide a training programme of two half-days at 22 agricultural colleges;
- Over 346 students followed the programme, against a target of at least 300 male and female students;
- The colleges wrote to the students' employers and explained the project;
- The students were given an AgroArbo pass with the phone number of STIGAS which they could call at any time during the project to get advice on the working conditions;
- Suggestions for improvements were worked out by groups of 3 or 4 students. They made a rich harvest of proposals and, though the students are not used to written homework, they went to a lot of trouble to get their ideas down on paper;
- The students could then enter these suggestions into the competition on how to prevent physical strain at work.

The competition entries

A total of 42 ideas were received, some consisting of extensive photo coverage of the workplace and others just a few lines scribbled on a sheet of paper.

The main characteristics were as follows:

- Most of the ideas were for technical improvements to tools and equipment, for example a platform with a four-stroke engine for driving poles into the ground, or a wheelbarrow that can be emptied through a flap in the front;
- Some ideas focused on improvements to the way the work was organised, for example laying a path to the site so that the wheelbarrows could be moved more easily instead o pushing them through loose sand as the path was laid when the job was finished. Task rotation was also mentioned a few times;
- Raising the level of the workplace or the worker was also mentioned (for example, a platform for grooming horses);

- Some suggestions showed that the students had clearly understood the meaning of prevention but the improvements, for example a metal construction to lift big bags by the handles with a forklift truck, had already been implemented elsewhere in the company;
- Some of the suggestions were adopted subsequently by the employers.

Nineteen suggestions stood out as excellent practical ideas, and these were discussed with the health and safety consultants in the project. The winners of the first, second, and third prizes were selected by the social partners. The first prize was a visit to the cinema for all the students in the class. The winning colleges also received a certificate. It is proposed that the entries be presented in a brochure and distributed among schools for use by students and teachers.

Results

Costs: the budget for this health and safety project was ¤ 82,284 (excl. VAT).

Benefits: the competition motivated the students to engage in the prevention exercise. The standard of the entries indicates that the training was successful and that the students gained a clear understanding of how to deal with physically strenuous labour. Some businesses and employers also participated and some of the solutions were implemented. Many colleges asked if there are plans to repeat the project the following year as it met with considerable enthusiasm.

Comments

Making students look at real situations and come up with real solutions for workplace safety is gaining importance as a training method. However this example, incorporating a competition element, provides extra motivation for the students to get actively involved in solving hazard problems. It also provides the possibility for sharing the results. In addition, the approach could easily be applied to other types of workplaces or hazards.

14 'KANSARME JONGEREN' - PROMOTING SAFE AND HEALTHY COMPUTING AT SCHOOL AND HOME

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Issue

To increase the knowledge of students and the application of safe and responsible computer use in VIA, a comprehensive secondary school.

Problem

Computers now play an important role in the lives of children. They learn to use computers from their very first year in primary school and, in some secondary schools, the entire curriculum is presented via the computer. Working with computers has much to offer but there are also pitfalls. The results of a nationwide study indicated that 60% of secondary school students in the Netherlands have serious arm, neck and shoulder problems when they sit their final exams.

Solution

Children undergo a crucial phase of development between the age of 8 and 14 years. What they learn during this time remains with them for the rest of their lives. This is a reason to target children and teenagers in order to tackle computer-related disorders, which can be prevented by reducing the main risk factors - the long periods of time spent without appropriate breaks behind the monitor and poor postures.

Introduction to the project

The 'Healthy Computing' project was based on an approach that focused on posture, relaxation and movement to prevent arm, neck and shoulder complaints.

The aim of the project was to:

1. Increase students' knowledge of healthy behaviour patterns;
2. Make the students apply their knowledge of healthy behaviour patterns.

Preparatory work

Before the project began, the school invested in equipment and classroom improvements. For example, VIA amended the notebook facilities by providing new holders, (mini) keyboards and a wireless (vibrating) mouse.

Methodology

Various aspects of healthy computing were highlighted in a series of themes: 'How do you sit?', 'How long do you sit?', 'Get moving!', 'Let go of that mouse!' and 'Get fit!'. Specially designed student workshops were held to introduce each theme which was accompanied by a solution. The workshops took the form of, amongst others, a short introductory film, a quiz and a keyboard-shortcut contest. The solutions were tried out for a month after the workshop. Each workshop was accompanied by a gadget to enhance its attraction. For instance, there was a digital kitchen

timer for 'How long do you sit?' and a pedometer for 'Get fit!'. The solution was evaluated at the end of the month and the next theme was introduced. At the end of the project, groups of students presented the different topics to their classmates.

Themes and solutions

Theme 1: How do you sit?
This covered posture and the workplace. The students were instructed in how to adopt a good posture and how to arrange their notebooks. They were also given the necessary accessories. Their muscular tension was made visible and audible to them using myo-feedback.

Theme 2: How long do you sit?
A presentation was given about physical strain during computing work highlighting the need for regular breaks and variation to give the muscles time to recover. The students worked with pause software during the month and calculated the average time spent at a computer at school, the average number of key-hits and the average **number of mouse-clicks in a day. At the end of the month they received feedback on the actual time spent at a computer and the number of key-hits and mouse-clicks, as registered by the pause software.**

Theme 3: Get moving!
A presentation was given on movement and relaxation. Exercises were added to the pause software. During the 'theme month' the students did stretch exercises in the computer breaks.

Theme 4: Let go of that mouse!
An explanation of mouse use and shortcut-keys was given to students. A competition was held between a 'normal' computer user with (multiple) mouse movements and an experienced user of shortcut-keys. Hoverstop, the vibrating mouse, was introduced in an instruction film. The students were given a list of shortcut-keys to practise during the month. They received various e-mails during the month with a graphic explanation of shortcut-keys. They also used the Hoverstop mouse throughout the month.

Theme 5: Get fit!
This involved using games on computers outside school, and especially exercise. Young people need to take at least one hour of exercise a day outside school hours. Many of them fall below this norm. During the month the students kept a physical exercise logbook for a week. As the exercise was measured in numbers of steps, the gadget was a pedometer.

Theme 6: Presentations and performances.
The students held group presentations about the content of the different themes.

Results

Effectiveness:
The students increased their knowledge of the workplace and posture guidelines (from 43% to 87%, and from 67% to 96% respectively). The students were explicitly asked about the ideal level for a monitor, as this could now be adjusted with the stand. At the start of the project, 50% said that the monitor should be positioned high. Only 25% said that this misplaced position was ideal at the end of the project. Around one-third of the students knew the guidelines for breaks and physical exercises by the end of the project. The school will continue to stress the importance of breaks. Physical activities will be addressed regularly in the health and exercise lessons.

The students applied the solutions with mixed success. The mouse did have a positive effect. Half of the students let go of the mouse when it started vibrating but after a month of working with the mouse only one-third of students let go of it before it even started vibrating. They had become more alert to holding the mouse without using it, and adapted their behaviour accordingly.

The majority of the students used the mouse and the shortcut keys, and adjusted their posture. Only 25% or less took the computer breaks or micro-breaks. The school has since revised its policy in this area. The students will continue to work with pause software.

The notebook stands and the keyboards were not used enough. The students found them awkward to position and used them only when they were working (or expected to work) with the notebook for a longer period of time. The school made the accessories compulsory in order to increase levels of use.

Costs: The investment (cost of materials) for the Healthy Computing project was ¤ 250 per student.

Benefits:
Improvement of the students' knowledge, behaviour patterns and workplace

- Development of a comprehensive 'Healthy Computing' method with a lesson book, plans, presentations, workshops and posters
- Creation of a climate in which healthy and unhealthy computing can be discussed, where teachers and students can be approached on the subject, and where students know where to go if they do develop symptoms
- Most of the true benefits, namely the prevention of arm, neck and shoulder complaints, will be reaped in the longer term when the students have left school.

Comments

This is a well-structured and well implemented project which is easily transferable. It is of direct practical value to students' health as well as educating them for healthy working in the future.

15 'FACKET I SOMMARLAND' - TELEPHONE HELPLINE FOR SUMMER JOBS ADVICE

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Issue

Integrating health and safety into trade union summer outreach and advice activities for young people

Problem

Young people face various problems in their temporary summer jobs. Health and safety problems include young people under age working until 23.00 in the evening as well as hazards in the working environment. After wages related issues, working hours, working environment and illness is the second most frequent group of problems raised by young people in the experience of LO. Other common problems include labour law, membership and assurances.

Solution

Every year LO conducts union outreach activities, called 'Facket i sommarland' (trade union summer assistance for young people) among young people of 16-20 years with a summer job / extra job.

This is done by visits to workplaces and through a special telephone helpline accessible during the summer. By phone or via e-mail, young trade unionists answer the questions that other young people have about their working conditions. The aim is to make it easier for young people with summer jobs / extra jobs, who may or may not be trade union members, to put questions about their jobs to trade unions.

The LO districts carry out visits to young people with a summer job /extra job at their workplace

and inform them of their rights. Those engaged in these trade union outreach activities are young trade unionists from the different LO member unions. If there is a problem at a workplace, the union outreach workers contact the union concerned.

The young people answering the phones undergo a two-day training, a substantial part of which focuses on health and safety, including psychosocial issues. Problems reported via the union help-line are solved in different ways, for example, the trade union may:

- Propose solutions directly by referring to collective agreements and legislation;
- Refer the person to the local trade union organisation who then give further help to solve the problem.

The trade union representatives solve most problems arising at workplaces through direct contacts with the young people.

The LO districts carry out visits to workplaces covered by most LO sector unions. Special attention is given to workplaces covered by the Hotel and Restaurant Workers' Union and the Commercial Workers' Union, where many young people work and where, according to LO, they have particular problems.

'Facket i sommarland' activities, including the telephone helpline are promoted via a campaign which has two stages.
Stage1: During the spring representatives from the 17 LO union districts visit schools and distribute the brochure 'JOBBA!'. This small brochure contains information on working life. Letters and posters with information about the helpline are sent out on two separate occasions; first, with the special logotype '020' (the help-line number), and second with the campaign slogan on the posters.

Stage2: With the helpline in place, the LO districts carry out the 'Facket i sommarland' campaign consisting of, among other things, visits to workplaces. Some of these visits are done together with the Labour Inspectorate. They distribute the brochure 'Minijobba' which contains basic facts on working life. There is also promotion via the radio, 'Lunarstorm' (a website for young people), electric signs at bus stops, advertisements in the evening papers, postcards and different union news publications. There is a dedicated website for young people, HYPERLINK "http://www.lo.se/ung" www.lo.se/ung on the LO homepage.

The campaign will be carried out again in 2007, and examples of some of the health and safety problems raised by the young workers will be added to the website.

Results

During the period June – August 2006, the trade union telephone helpline received 5,489 contacts, out of which 1,819 were by telephone and 3,670 by e-mail.

These contacts with the union helpline were divided between the different issues as follows:

- Wages, holiday compensation, unsocial hour bonus, tax 44,9 %
- Working hours, working environment, illness 14,7 %
- Labour law, notice, employment certificate, "test" job 12,5 %
- Membership 4,5 %
- Assurances 2,7 %
- Organising issues, workers in the informal sector 1,3 %
- Other 19,4 %

However, the health and safety queries that the union has been able to help with are far greater than the figures suggest. While the main problem raised by young people may be with wages, it often turns out that they also have a query about health and safety which could range from temperature in the workplace to bullying. They may not have voiced concerns and received help about the health and safety issues if they had not first raised the concern about wages. LO have found this to be the value of having a helpline that covers all working conditions.

The age-profile of those who contacted the trade union helpline was as follows:

- Under 15 years 3,6 %
- 16-18 years old 49,3 %
- 19-25 years old 33,7 %
- Over 25 years 5,1 %
- Age unknown 8,3 %

Out of all the contacts 57.2 % were women, 40.4 % were men, and 2.4 % were of unknown gender.

Comments

Health and safety is an integral part of working conditions. Therefore an important feature of this initiative is the inclusion of health and safety in a general initiative to support young people in temporary, summer work. Another interesting feature is that young people are used to provide advice and support to their peers.

16 PREPARING NEW PHARMACEUTICAL WORKERS: IN-HOUSE AND WITH EDUCATION ESTABLISHMENTS

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Issue

This pharmaceutical company developed training and mentoring for new employees, and developed partnerships with schools, universities and relevant ministries to improve the knowledge and practical skills of schoolchildren, students and young workers' in occupational health and safety, and environmental protection.

Problem

Knowledge of occupational safety and working environment risk factors is especially important in the chemical and pharmaceutical industry. Many factors can affect the risk from a chemical and the dangers it presents, for example mixtures of substances may be more dangerous than the separate components. Therefore, special attention should be paid to young people who have no previous work experience. Education and training is needed both for specialists and production workers. They need this both on entering the workplace and in their prior education. The company therefore wanted to promote the development of relevant university and vocational training and education as well as ensuring that it had suitable arrangements in place for new workers and students on work placements or who are carrying out research projects.

Solution

Co-operation with educational establishments
To promote the development of relevant university and vocational training and education, Grindeks has worked with various educational establishments setting up cooperation agreements and activities with them:

- Latvian Education Fund target programme 'To education, science and culture' (from 1996 to 2004);
- University of Latvia, Riga Technical University, Riga Stradiņš University, Riga1.Medicine College, Olaines Mechanics and Technology College (in 2003);
- Riga Technical University Faculty of Materials Science and Applied Chemistry, as well as Olaines Mechanics and Technology College (in 2005);

- Āgenskalns Gymnasium, Tukums Rainis Gymnasium and Daugavpils No.10 Secondary School (in 2005);
- Ministry of Education and Science, developing cooperation between educational establishments and entrepreneurs, as well as promoting young people's interest in natural sciences (in 2006). It implements the Project of National Programme of Structural Funds for natural sciences and mathematics at the secondary education level;
- Olaines Mechanics and Technology College students as well as the students of Public Health Faculty of Riga Stradiņš University, by reading lectures on working environment control methods and supervision, as well as by organising study tours to company;
- Since 2004, ten part-time jobs have been established in Grindeks to help students gain practical experience during their studies.

Within the framework of these activities young people have an opportunity to acquire professional skills and occupational safety and health (OSH) knowledge during their studies. The knowledge acquired is general and is useful for working in their chosen speciality (chemist, electrician, mechanic) and in similar enterprises.

Step-by-step approach to prepare new and young workers for safe working

In 2005, 11% of all employees were new employees aged from 19 to 24 years. Attention to their health and safety, especially during their integration into the company, includes various elements.

Induction: OSH specialists provide the initial instruction and introductory training of new workers including students on work experience. Special attention is paid to young workers as many of them lack previous work experience. A reminder, describing the general requirements in the field of occupational safety and environment protection is handed out to each employee.

Theory, practice and mentoring: after the introductory training, new employees continue with three months theoretical and practical training under the mentoring of experienced colleagues. The new young workers are able to observe the safety requirements at their particular work place. The theory and practice helps them acquire the necessary knowledge and practical skills needed for the work with technological equipment.

They receive instruction about how to perform all procedures and operations covering nearly 1000 standard operational procedures and instructions. Each manufacture and maintenance procedure description includes a specific section on the procedure to take following a mishap to prevent it turning into a more serious accident. Safety Data Sheets, elaborated for more than 400 chemicals, are available at workstations. In addition, 57 general instructions for environmental protection and safe work (for example, about working with acids, and individual protection measures) are mandatory

for employees. Different types of instructions and training are given to ensure that new, young workers really do achieve a thorough knowledge of these essential work rules and how to follow them in practice.

Assessment: at the end of the study course employees have to pass an assessment. The assessment commission, in which the head of the particular structural unit, technologist, OSH specialist and a trustee participate, checks the ability of an employee to perform the work independently. During the assessment the commission verifies how well employees have acquired the knowledge in their speciality and in the field of workplace health and safety. During the assessment employees have the opportunity to make certain of their knowledge, as well as to ask questions and get replies. Discussion is important when starting independent work and so actively it is encouraged. New employees are able to give their opinions and their proposals regarding the improvement of conditions.

Follow-up and additional training: each employee who has received permission to perform work independently attends a regular follow-up and additional training. Different forms of theoretical and practical training sessions for employees are organised by the company's OSH unit. This year training was organised in cooperation with the State Fire-fighting and Rescue Service in which participants had the opportunity to take part in simulated emergency cases of conflagration or leaks of chemical agents.

Additional lectures and seminars: In addition to the three month mentoring period, new employees participate in lectures and seminars organised in the company and also outside, for about 12 hours a year on average. Every month a special 'Information day for new employees' is organised at the company with the following aims:

- To familiarise new employees with the goals, mission, vision, personnel policy and mandatory requirements - effective production, environmental protection and occupational safety among other requirements;
- To promote loyalty and a feeling of belonging to the company.

The information day is organised by the Personnel Department in collaboration with the OSH Unit, Communication Department, Head of Quality Management System Unit, as well as with the quality and production unit specialists. Besides the materials provided during the information day, a handbook for new employees is being prepared at the company which will include brief explanations on the principles of the OSH system.

Risk assessment and control

When the OSH specialists carry out the regular risk assessments, they specifically cover risks to young workers and ensure that the assessments are made with the specific involvement of young workers.

Sharing knowledge with students

The company provides students with pre-diploma work placements. During this work practice they are involved in tackling labour and environmental protection problems and developing their understanding of these issues, and they frequently dedicate their diploma papers related to their work placement to an OSH issue.

Examples of student studies that have contributed towards their diplomas: a candidate for a diploma at Riga Technical University in 2005 carried out a study on the emission of volatile organic compounds in the working environment used for the production of Mildronate, as well as on the increase of ventilation system effectiveness. During 2006 three students of Olaines College and one Master of Riga Technical University and the University of Latvia investigated the composition of emissions in the working and surrounding environment, as well as the effectiveness of the ventilation system in work premises. They took measurements and recommended how to ensure a proper air flow in the premises, as well as carrying out risk assessments together with OSH specialists.

In addition, Grindeks has explained and offered the course 'On good manufacturing practice', to educational establishments, and its specialists deliver the lectures to university students, as well as introducing them in the company.

In order to explain the importance of chemistry, as well as to promote the interest of schoolchildren about the chemistry, Grindeks supported the Latvian Chemistry and Pharmacy Employers' Association and published an informative brochure for schoolchildren 'Chemistry and us' in 2004. In 2005, a video film 'Chemistry is a future' was presented to Latvia schools with the aim of promoting professional orientation. Five TV broadcasts were made at Grindeks during 2006 to acquaint teenagers with technical specialities, including environmental control.

Results

Benefits for the enterprise include:

- Comparatively small number of occupational accidents, retention of employees' health, improvement of professional skills and work efficiency;
- Involvement of students and new specialists in investigation and tackling of labour protection problems;

- Ensuring that students returning to work at Grindeks already have a good grounding in OSH and a positive attitude towards the company and their profession.

Benefits for schoolchildren and students include:

- Students acquire knowledge on occupational health and safety, and protection of the surrounding environment during their pre-diploma practice; during 2005-06, ten out of 30 diploma papers produced at the company were dedicated to OSH and environmental protection;
- Schoolchildren obtain better knowledge about chemistry and safety.

Comments

This project seeks to provide a foundation in OSH for young people through a variety of measures. It covers both young people employed at the company and those still studying. The company, in order to reach its goal, has established a strong cooperation with a number of educational establishments.

17 HOW EASY CAN IT BE? - INTERACTIVE EDUCATIONAL SOFTWARE ABOUT RISKS IN RETAIL

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Issue

Interactive electronic training resources about working environment issues addressed to young people working in the retail sector and their employers.

Problem

Because many young people are employed in the retail sector, the number of work-related injuries to young people under-18 is high compared to other business sectors.

According to the Danish Working Environment Authority's Surveillance report of 2003, most working injuries reported arise in supermarkets, hypermarkets and similar businesses. Within the period 1993-2003 these businesses accounted for 23% of all reported working injuries among young people under-18.

Risks occur in particular during manual handling and the transportation of goods, such as:

- Lifting goods in shops and shelf-filling;
- Pulling/pushing pallet lifter transporting goods from storage to the shop;
- Pulling/pushing trolleys from parking areas to the shop;
- Lifting beer and soda crates and pulling/pushing pallet lifter at transportation in connection with sorting of bottles;
- Lifting and repeated movements while handling goods and scanning at the check-out desk.

Additional risks include:

- Working in bad postures;
- Lone work or working at a specific time of the day where there is an increased risk of attacks or muggings;
- Operating dangerous machines;
- Using dangerous substances.

Most injuries and accidents to young people happen early in their employment. Therefore resources for the instruction of young workers and employers are needed.

Solution

The Sector Work Environment Council for Retail decided to produce interactive educational software - 'the training programme' – for the information and instruction of young people about their working environment in the retail sector. Its development was based on an assessment of young people's working environment problems and an analysis of the target group. The aim was to make it relevant and interesting to young people and something that would also be instructive for employers.

The training programme uses 'informative stories' (lærerige historier) to show to young people in an easily understandable way the importance of safety, how work may influence their daily life and how to act safely, for example, through the section on 'Good practice' (Den gode praksis). The programme is based on interests appealing to the target group. Through the entire programme a sarcastic and humour filled scenario is the set-up. It uses humour, fast changes of photos, trendy language, up-to-date music and graphical sources inspired by popular Danish music videos and comic TV-shows for the youth.

The easy-to-use training programme is divided in to five parts:

1. A moving and active introduction sequence 'Do you know?' (Kender du det?).
The programme begins by showing examples of the young people's tasks. Each example ends with the question "what is wrong and what is correct?". In addition it includes a short introduction on what is the working environment and instructions showing safe behaviour.

2. Presentation of three characters in 'Have you tried?' (Har du prøvet?).
The characters are two young people (a girl and a boy) and an employee Morten who will instruct the young people and act as a role model. The introduction is built as a story about the attitude of the three characters to after-school jobs, the working environment and how to take care of oneself. One actor plays the two young people. The reason why only one person plays both parts is to stress the humour and to caricature the type of people the boy and girl represent.

3. The training part 'Have you tried?- Start your working day' ('Har du prøvet? – Begynd arbejdsdag').
This parodies a documentary soap opera in which the user is following Morten, the role model, who has the overall responsibility for training the new employees in correct working techniques and safety. The training part is based on six cases which cover typical work situations for young people such as sorting bottles, removal of goods, collection of trolleys, shelf-filling and working at the cash desk.

Every case begins by showing scenes from the working situation and ends in a dilemma where the user can answer two ways – right or wrong. Depending on the answer the user is guided further and all users experience 'consequence and best practice'. Each dilemma is completed by good advice on how the task should be done correctly, and additional questions are asked in relation to what the user should do in this particular working situation.

4. Quick Guide 'Have you thought of?' ('Har du tænkt på?').
At this stage the user receives good advice on the six tasks. The advice is written in simple and succinct language with the aim of making it easy to learn and remember.

5. Follow up for the manager 'For your manager' ('Til din leder').
At this stage the employer/manager is given good advice on how they can use the programme for instruction of young people. The information is divided into 'before', 'during' and 'after' using the training part with the six cases.

In addition, 'other useful information' ('Anden nyttig information') is included in a form of fact sheets that can be printed off. They provide information on working time, working alone, dangerous materials, machines and correct lifting, and pulling and pushing. In addition, a checklist for instruction, Bar Handel's written guideline material about young people's work, 'Unges arbejde' and a leaflet for the young people, 'Styr dig', 'Behave yourself' are available at: www.barhandel.dk

Launch and promotional activities for the training programme have included advertisements in the magazines of employer and employee retail organisations represented in the Sector Work Environment Council for Retail. The adverts were designed using the same graphical format as used in the training programme.

Results

Total costs of the project are Euro 93 075.

Effectiveness of results:
Prior to launch, the training programme was tested in selected large supermarkets. Employees were asked about the use of the programme, user-friendliness and whether it was motivating. All responses were positive and therefore no alterations were made.

For assessment purposes, a question survey was produced for users of the training programme. The user is requested to evaluate the programme before they shut down. The provisional results (April-September 2006) show positive reactions on the instruction, the acquired knowledge and the usage in daily life, and starts a dialogue about the working environment. Finally, it raises awareness of the importance of looking after oneself, and it is easy to use. Users have described the programme as interesting, educational, different, funny in a 'cool' way, good variety and appealing to the user.

Comments
In preparing the resources it was taken into account that they should be useful to employers as well as to the main target audience, young people. Care was taken to focus on the most important tasks, to use interesting formats and language, and to make it easy to use. Attention was also paid to the need to assess and evaluate tools such as this.

18 SAFE PRACTICE IN THE MEAT INDUSTRY

The Danish Meat Industry's Working Environment Committee
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Issue

Activities for the meat industry, especially aimed at preventing knife-related injuries and musculoskeletal disorders among young and new employees, that are targeted at various levels: the individual level, group training and recommendations for the whole organisation

Problem

The background of this initiative is a study made by the Danish Meat Industry's working environment committee (SAU) in 2000. SAU is made up of representatives from the meat industry's biggest organisations Danish Crown and Tican, and representatives from the social partners and Fødevare-BST. The study revealed an increased rate of work-related accidents, pain and injury among 18-24 year-olds and new employees who had been working for less than one year in the meat industry. The incidents predominantly involved knives, skin problems and pain related to musculoskeletal disorders, such as tendonitis. The incidents could be attributed to lack of confidence; lack of knowledge about prevention; unfamiliarity with the work; new and repetitive movements; and immature behaviour.

Solution

Following the study, SAU initiated several activities between 2000 and 2006 to reduce risks and create the basis for establishing good working habits including: those aimed at the individual's knowledge, attitude and behaviour; training key personnel; and recommendations to safety organisations. These activities support the many local activities taking place throughout the sector's enterprises.

Training young people and new employees

A compulsory working environment module of 20 hours was introduced into the sector's five week induction training. This training was followed-up by individual ergonomic guidance sessions which employees received at work. New employees receive individual ergonomic guidance sessions six weeks and thirteen weeks after starting their new job. The ergonomic guidance is tailored to the prevention of the typical strain injuries associated with work in the sector.

The training is managed by specialist teachers from the Danish Meat Trade College and Fødevare-BST (the industry's Occupational Health Services). Fødevare-BST covers lifting techniques, safe working techniques, workplace adjustment, good skin care, optimum use of protective equipment, and risks with repetitive work.

The training methods involve the active participation of course members, for example through solving tasks in practice, and by involving them in the production process, focusing on the real working environment and possibilities for prevention. The aim is to focus on the trainee's potential and responsibility for influencing their safety and health, and to create awareness. The two individual guidance sessions include ergo- or physiotherapeutic observation of the individual, combined with video recordings to increase their awareness and to ensure that the knowledge gained from the training is followed. The focus is on the individual's working technique, habits and experiences of strain etc.

To support the entire initiative specialist teachers, instructors, local safety organisations and local management have also been trained in induction methods for new and young employees.

The training method and contents are continuously evaluated and further developed by SAU, the Fødevare-BST and specialist teachers from the Meat Trade College. The initiative was evaluated in 2005, and the results passed to the interested parties in the sector.

Young workers from other ethnic backgrounds

A growing number of employees in the sector are from an ethnic minority background and not from Denmark. This situation affects the training, follow-up and structure of the initiative. To better understand the situation an anthropological analysis was made which examined the barriers and measures that needed to be considered. The results of the analysis were disseminated and debated in the sector, and were used to develop a specific initiative, the 'Take good care of me' programme.

One of the main messages in the study concerns 'decoding'. The less you know of the Danish language, the more decoding is necessary. New employees are particularly keen to please their manager and to react according to the signals from the manager

that they think indicate its importance or value. The most essential messages from the study are highlighted in the folder on "Take good care of me - my role in training new employees."

'Take good care of me'

This web-based training programme (see: www.bevarmigvel.com) is a support tool for the introduction of young and new employees from an ethnic minority background, for new employees taught by their partner at work, and as a supplement to the standard training programme. It is a programme that initiates dialogue and is studied carefully with a key person involving the active interaction of the young or new employees through the dialogue. It provides them with advice and, through the accompanying exercises, employees demonstrate whether the advice is understood. The programme uses simple visual and audio to give access to information about the main risks and conditions in the sector.

The programme focuses on attitudes to safety and draws a parallel between starting a new job and performance in sports. There is also a focus on attitude and the consequences for quality of life should an accident happen. The training philosophy is based on the principle that' I do it and I understand it'.

The programme was presented to the sector in 2006 and, in addition to the advice and exercises mentioned, it includes recommendations that the induction should be included as part of an entity where 'systems', 'visibility', 'understanding your role' and 'follow-up' are key words.

Leaflets and training materials

To support the training elements they developed leaflets and other materials for the use of both young and new employees, and their more experienced colleagues.

Recommendations at the strategic and operational level

On the basis of experience and evaluations of the activities between 2000 and 2005, a guide will be written which will include a series of recommendations on how new and young employees may be introduced at a strategic, tactical and operational level. The guide 'Well started' will be finished at the end of 2006.

Results

Approximately 2,000 new employees completed the training course between 2000 and 2005, of which approximately 750 were between 18 - 24 years-old.

Over the same period there was a 30% reduction in the number of accidents to new employees with less than two years work experience. The same enterprise calculates that the direct cost per working accident amounts to DKK 30,000 which gives a direct saving of almost DKK 6 millions per annum . To this should be added the financial costs of compensation, extra recruitment and, of course, new employees and their families are spared the human cost.

The development costs of the initiatives in relation to the meat industry are estimated to amount to approximately DKK 1.5 million over 5 years.

For the training and instruction of new employees the individual companies make a contribution

towards the cost (equivalent to the cost of 1.5 hours of training per new employee); the rest is paid through the Danish Adult Vocational Training Centres (AMU). The companies have financed this through their BST membership.

Comments

Interesting features of this case are: that it takes a partnership approach including partnerships between industry organisations, the social partners and occupational health services; it includes the training of specialist trainers, and it pays special attention to the needs of new workers from other ethnic backgrounds.

19 'WISEUP2WORK' ONLINE RESOURCES FOR YOUNG PEOPLE

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Issue

Online resources for young people as part of the "Safeguarding the next generation" campaign incorporating the IOSH Workplace Hazards Awareness Course.

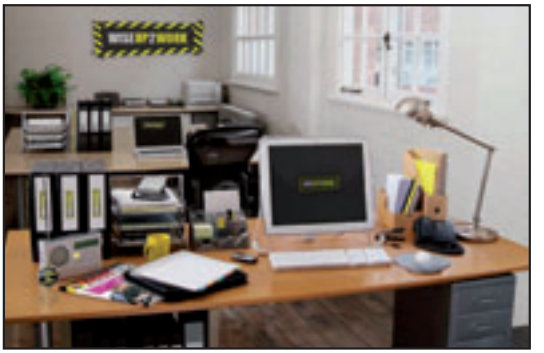
Problem

Over the last decade in the UK, an average of six under 19-year-olds were killed each year in the workplace. Additionally, an average of over 1,450 suffered major injuries, and over 5,150 suffered injuries meaning they couldn't come to work or do their usual job for more than three days. This means that an average of 6,600 families in the UK every year receive news they dread to hear – that their son or daughter has been injured or killed at work. There is therefore a need to prepare young people to ensure their health and safety at work in the many different work environments in which they may find themselves. Part of this requires raising their awareness and giving them access to suitable information. However, young people as an audience are notoriously difficult to reach and retain.

Solution

IOSH, the professional organisation for health and safety in the UK, decided that the health and safety of young people was sufficiently important as to warrant a significant initiative which was called the "Safeguarding the next generation" campaign. To support the campaign, they developed, provided and promoted a free online resource called Wiseup2Work specifically designed for young people, teachers/educators, parents and employers. It contains practical health

and safety information and materials, and includes a free Workplace Hazard Awareness Course for schools and colleges.



The aims were to:

- Safeguard tomorrow's workforce, helping them become more risk aware before entering the workplace and positively influencing work behaviour in the longer term – potentially reaching almost 700,000 young people each year before they begin work experience placements and modern apprenticeships;
- Help young people develop transferable skills, improve their employability and gain a recognised national qualification;
- Provide a sustainable resource, delivering health and safety information and teaching materials, freely accessible to thousands of secondary schools and colleges across the UK;
- Use innovative, exciting and interactive media, including competitions, games and a chat forum, to help make learning about health and safety enjoyable and fun.

The online resources include various elements: sharing best practice, raising awareness and providing free resources to young people, teachers, placement officers and employers. The aim was to develop an attractive online resource that would appeal to young people, provide them with useful, fun tools and help equip them for a healthy and safe working life.

Before and during the development of these two projects, IOSH adopted an inclusive approach by working and consulting with partners:

- Trade Unions (the TUC);
- Organisations working closely with young people:
  - The Learning and Skills Council (LSC) - responsible for funding and planning education and training for over 16-year-olds in England;
  - The National Youth Agency - which claims to advance youth work to promote young people's personal and social development, their voice, influence and place in society;

- British Chambers of Commerce – a national network representing more then 135,000 businesses and the equivalent of 5 million jobs;
- OSH practitioners / IOSH members;
  - Young people and their parents;
  - Teachers, educators and youth workers.

In designing the website IOSH ensured that stakeholders, education experts working with young people, and young workers themselves were consulted. A focus group of young people aged between 14 and 19 was created; regular feedback and suggestions were sought from them throughout the whole development of the website to ensure that it not only contained up-to-date, relevant and useful information but was also entertaining, fun, attractive and easy to navigate.

They also carried out substantial promotional and media work to disseminate the campaign and web resources, This included engaging a number of organisations to help promote the initiatives such as Scottish Enterprise, Careers Scotland, Connexions, Local Learning Partnerships, ELWA Wales (now the Education National Assembly for Wales) and other relevant organisations.

The website was created in the context of the 2006 European Week for Safety and Health at Work "Safe Start", and the intention is to ensure its sustainability over time, including updates and improvements on an ongoing basis to ensure maximum exposure to the target audience.

Results

Costs: setting up www.wiseup2work.co.uk cost in the region of £30,000 (excluding promotional and staffing costs and also the cost of developing WHAC, which was around £50,000).

Benefits: It is felt that by making innovative, interactive online resources freely accessible to schools, helping future workers to become more risk aware and developing transferable skills that this will make a valuable contribution to:

- Saving the time and resources of employers in educating young workers about basic hazard awareness during their health and safety induction;
- Reducing accidents and ill health in the workplace, benefiting individuals, employers and society as a whole.

Measuring effectiveness:
Real improvement to young people's safe and healthy working practice will only be measured in the long-term. Change of habits and behaviour is difficult to evaluate. However, positive direct feedback in terms of encouraging comments from website users (teachers, young people and OSH practitioners) is a good indication that the tool is effective in providing useful and relevant information.

The website also aims to assist effective participation of young workers by encouraging them to raise concerns and queries about health and safety in their workplaces. This is one of the topics raised in the chat forum area of the website.

The effectiveness and uptake of WHAC cannot be measured yet, as it is still being piloted and is not due to be completed until November / December 2006.

By autumn 2006, the Wiseup2work campaign had already made good progress, with:

- 121 articles and news stories, primarily in local and online media;
- In August 2006, IOSH held a 'national Wiseup2work day' and stories about Wiseup2work featured on a number of local radio stations and Meridian TV in September, it achieved its highest rated article so far;
- Potentially, the messages about Wiseup2work could have been seen by an estimated 8.9 million people to date.

Comments

This is a sizable project into which a lot of resources have been committed to develop an extensive and useful resource. The project includes a strong partnership approach. They made sure employer organisations, work experience organisations, educators, health and safety players and young people themselves were involved in its development. This kind of approach is important for both large and small-scale projects in this field.

20 LEARNING THROUGH THEATRE

East Riding of Yorkshire Council, Education Business Link Organisation, Impact Drama.

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Issue

Dramatised training resource for under-16 year-old work experience students.

Problem

12,000 pupils aged from 14 to 16 years are registered for Work Experience Programmes each year. Work Experience placements are made across various industrial sectors and these are often the first encounter pupils have of the workplace. Pupils require not only preparation on how to behave in the workplace, including their individual learning outcomes, but also what is required about health and safety in the workplace. They also require lively, up-to-date, engaging teaching methods and resources.

As part of the Council's (Municipal Government) monitoring procedure all accidents/incidents are investigated. They tended to fall into broad categories:

- pupils not wearing PPE and clothing because they found it unfashionable or awkward;
- pupils not following instructions;
- slips, trips and falls.

While the accident rate of work experience students is low, investigations carried out into the causes of these accidents showed that health and safety preparation in the 75 schools across the region lacked consistency. Other incidents of a child protection nature were also investigated and addressed.

The Council carried out multi-faceted research in which all stakeholders were consulted using the once-a-term meetings of Work Experience Co-ordinators' held in each of the four municipal government areas in the region to obtain the teacher perspective. The independent audit of the Work Experience Programme provided evidence of the pupils' views about the current level of preparation for work experience and their understanding of health and safety issues. They sought the views of employers involved in the programme; the Education Business Forum and the Humber Education Business Link Organisation (EBLO) Board with their employer representatives provided important viewpoints. Connexions, the sub-contractors appointed by the Council to visit placements, provided a further understanding of the health and safety issues raised by employers and the opinions of pupils.

Audits carried out in schools found that health and safety preparation was a problem for many of them. Existing commercially produced videos contained sound messages but were often out-of-date and caused much hilarity when shown to groups of pupils. There was also a lack of follow-up material which diluted the key messages and worksheets were often tatty and dull.

An excellent computer programme, by Dynamic Distance Learning (DDL), had been provided to all schools by the Learning Skills Council. However, its use required pupils to have access to individual computers which caused a number of problems in many schools due to a lack of facilities. This type of learning only appeals to a specific learning style and it was found that some pupils were ticking boxes at random in the hope of achieving the correct answer.

Interviews carried out by an independent auditor with the pupils in the workplace found that they remembered a 'Health and Safety in the Workplace' drama performance. A five-week drama tour by Impact Drama, subsidised by the Humber EBLO, had been used for the previous three years. The drama was a modern, fast moving humorous performance, and Impact had written the script to the Council's specifications. It contained serious health and safety messages, which were presented in a contemporary,

amusing way and had a dramatic effect of getting the health and safety message across.

Impact Drama Tour was evaluated using a questionnaire completed by 265 adults and 5969 pupils who had watched the drama. Of these, 99% of adults and 92% of students said they enjoyed the performance, and 96% of the adults said the performance stimulated the pupils to think more seriously about health and safety. This was felt to be an excellent result but could wider use be made of this method?

Solution

The challenge was to develop a product that could be used in the classroom along the lines of the drama. Partnership working between the Council, Humber EBLO and Impact had led to the production of the drama and they decided to take it a step further and produce a DVD 'Health and Safety on Work Experience'.

They used the information gained from the investigations and audits to inform the scenes and Impact delivered a script in their unique style. They also recruited convincing actors and shot the footage in real workplaces. The scenes are credible, yet amusing.

The learning styles of different pupils were considered in order to appeal to auditory, visual and kinaesthetic learners. It is hoped that the resource can be used in special schools with adapted materials to meet the individual needs of the pupils. The product was checked for accuracy by safety and legal experts. Throughout the development, they kept in close contact with colleagues across the region to ensure that they would appeal to the largest possible market. Likewise, throughout the project, they consulted with Education Business Partnerships across the whole of the region – as each area has different industrial and racial profiles and they wanted the product to be used by all cultures.

The DVD is aimed at standardising preparation and helping young people understand the importance of health and safety in the workplace. It emphasises their role with regard to their own health and safety and that of others, with four scenes that highlight relevant issues, each lasting about 10 minutes. These relate to the work experience accident categories found in the Council's monitoring process:

- What is health and safety?
- The Rules - how work experience students are responsible for their own health and safety and that of others and the use of PPE and clothing;
- A New World - working in an unfamiliar environment with examples of slips, trips, falls and the consequences of not following instructions;
- Respect! - an original approach to child protection issues with a dual stress on rights and responsibilities.

The DVD is accompanied by a resource pack of classroom activities designed for non-specialist teachers to deliver including lesson plans and development work, with advice on keeping a register of pupils so absentees can have catch-up sessions before they go on a work placement.

The DVD can be watched from beginning to end in half an hour. It is recommended to use the DVD in four separate half-hour blocks together with activities from the resource pack. It can be adapted for any lesson length or be used as part of a whole day programme with the follow-up materials.

To ensure the content of the DVD was suitable for the end-user, it was mapped against the Learning and Skills Council's (LSC) Safe Learner Framework Level 1. As a result, the LSC are promoting the

product on their website with a hyperlink to the Impact website so that users can download revisions and updates.

Teachers from each school received training during the Work Experience Co-ordinators' meetings in November 2006. The product has also been presented at various conferences, locally and nationally.

Results

The production costs of the DVD and CD Rom were met by Impact and are estimated to be in excess of £30,000. Impact was willing to work in partnership where they provided the technical expertise in relation to producing the DVD and the Council provided the knowledge, research and scenarios.

The overall effectiveness of the product will be evaluated throughout and at the end of the first year via scheduled Work Experience Co-ordinators' meetings. Impact will conduct a wider scale evaluation by enclosing a form in the resource pack with a substantial prize to encourage completion of the questionnaire. The results of the Work Experience audit in 2007 will be used to assess how well it has achieved its objectives. The 2007 audit of pupils will also record pupil' views. Feedback will enable amendments or revisions to be made to the DVD and support materials. The Council will continue to work with all stakeholders to monitor progress.

The benefits are to provide a consistent approach to the health and safety side of work-based placements and improved relationships between pupils and potential employers.

Comments

Theatre can be a compelling way to get a message across. A product based on theatre has been produced in order to bring safety and health at work it to a much wider audience. A strong partnership approach was taken during the project development, which includes actively involving children.

21 A SAFE START FOR YOUNG WORKERS IN THE METALLURGY SECTOR

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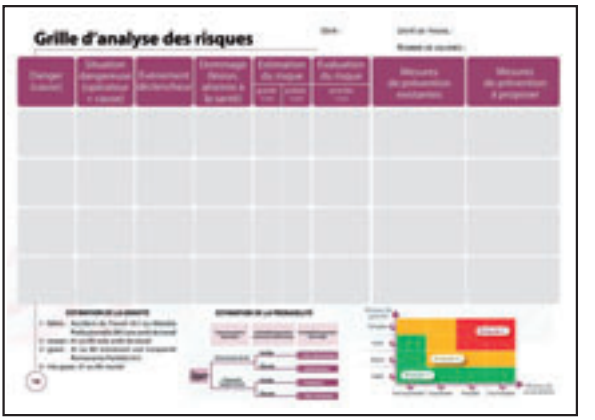
Issue

Cooperation between a regional insurance body, vocational training providers and a metallurgical industry organisation to promote health and safety training in vocational courses and implement workplace solutions for young workers in individual workplaces.



Problem

Young workers starting a new job are at increased risk of industrial accidents. Programmes are needed therefore to ensure that young people are trained in occupational safety and health (OSH) as part of their vocational training, and that

OSH is taken into account when they arrive at their new place of work. To achieve this cooperation, joint activity is needed between OSH experts, education bodies and companies.

Solution

The CRAM, vocational training schools and companies in the metallurgy sector have cooperated in various ways to promote the safety of young workers. The approach and some examples of activities are given below.

Setting up cooperation agreements
Within the general framework of its occupational safety and health (OSH) risk prevention activities, the Regional French social security department in charge of medical insurance of Pays de la Loire (CRAM of Pays de la Loire) has included OSH in the initial training and preparation for vocational and technical diplomas. The aim is to ensure that each holder of a vocational diploma is equipped to play an active role in the workplace regarding OSH.

The approach started in 1988 when CRAM of Pays de la Loire signed partnership agreements with the education office of Nantes, the French Pays de la Loire region (covering the public apprentice training schools) and the regional union of private technical teaching (covering private establishments). These partnerships have built an active cooperation between the education office and CRAM's experts in prevention, which has included defining and setting up training for vocational and technical high school teachers and providing tools and methods for the students' training.

Training the trainers
Teacher training is organised by industry, covering clearly defined content and following a set programme lasting four days. During this time a prevention expert takes them through three occupational risk analysis methodologies specific to the industry. A whole day is dedicated to setting up two of the analysis methodologies including feedback of the work done by teachers to the company manager. Having been trained in this way, teachers are then able to explain the methodologies and put them into practice in workshops during student training.

During the training period within the workplace, students have to put into practice one of the three methodologies and include their analysis and proposals in a training course report which is assessed. The choice of the methodology and the vocational situation is decided with the company manager. This also serves to involve enterprises in the programme.

Partnerships between apprentice training schools and companies
Partnership is achieved in the project work to improve safety for new apprentices through cooperation between the vocational school and the company on safety. An example is given below.

The SED firm from the La Fonte Ardennaise group specialises in machining cast iron pieces in the agricultural machinery sector. The firm, located at la Flèche, has 80 employees and owns a machine park mainly consisting of digitally operated machines of different capacities which are operated continuously. Faced with difficulties in recruiting qualified personnel, the company decided to train its own maintenance mechanics and technicians in partnership with the training school AFPI Le Mans.

All new recruits receive a copy of an induction booklet about the firm which includes on-site safety procedures, and first aid and emergency instructions. During the first half day of work, the booklet is given to the new recruits and introduced by the personnel manager and the head of production.


SED
FICHE DE SECURITE

The second integration period requires two or three additional days of training and covers the particular post in which the young person will work. This training is delivered by the team leader with the help of supporting documents about the workplace such as operating methods.

As the safety instructions and procedures included in this practical training at the workplace were not formalised, the site director decided to have visual aids pinned near the operator to show the instructions to be followed at each workstation. These aids form part of the educational method documents available for the task team leaders. This has made it much easier to communicate health and safety requirements to potential operators who may otherwise have had difficulties understanding them, and so could not have been assigned to the post. At the same time, the vocational school AFPI Le Mans developed a computer system to give apprentices the opportunity to face real-life work situations and to acquire experience.

New young employees take a test in the form of a multiple choice questionnaire at the end of the induction period to assess their understanding of safety instructions, procedures and behaviours. If they achieve less than 80 % of correct answers their training is continued.

Transfer of OSH knowledge between experienced operators and young people new to the job

A second example involves working with a company to introduce a mentoring and training programme. CNH from the New Holland group located in Coex, Vendée specialises in the production of parts and the assembly of harvesting machines. It has about 200 employees, with a relatively high average of age of 47.

The management of the company together with the trade unions raised the issue of knowledge transfer. They had identified the need to share know-how in order to keep it inside the company through properly training new recruits, especially in maintaining a safe and healthy workplace.

The plan is as follows:

- The objective: to set up and train a team of people and transfer their competences with the aim of developing operators' versatility and improving the integration of new, young recruits and also temporary workers;
- The human resources manager, with the help of a management consultant, set up an internal organisation and a training process to achieve the transfer of knowledge;
- Ten people were chosen for their technical abilities in production, welding, painting and assembly, and also for their pedagogical and social skills, and these 'sponsors' given dedicated time within their usual functions to work with new, young workers;
- The 'sponsors' act as role models and so must be highly valued by their peers, enthusiastic about their trade, irreproachable in terms of safety behaviour, concerned to transmit his

knowledge, receptive, and a professional who knows how to encourage and reassure, who is appreciative and able to give clear explanations;

- Sponsor training, of about twenty days in length, consists of spotting good practices, including safety, analysing and sharing skills, watching over know-how, and learning to chair and to assess results (more detailed information on the sponsor training in the frame below);
- Two teams are formed to work with teaching supporting documents, and team leaders drawn either from the quality department or the method department;
- Project coordination by the human resources department;
- Pilot programme validated, formalised and made widely accessible to a large audience, and a training file elaborated trade-by-trade;
- Sponsor assessment by the trainees made immediately after the sponsors' session of training, followed by a second assessment made by the management and the sponsors themselves.

Details of the CNH training for sponsors

1st Part	2nd Part (runs parallel to the first one)
■ Definition of the training process ■ Pinpointing sponsors' competences (as far as safety and their occupation is concerned) ■ Pedagogical techniques to conduct training in the field ■ Complementary information about risks, prevention and ergonomics ■ Trainer's pedagogical training ■ Trainer's role acknowledgement	■ Pedagogical referents definition ■ Setting up the training plans and the pedagogical programmes ■ Setting up the vocabulary linked to the trade ■ Content understanding and dissemination ■ Selecting (and training) the 'project pilot' ■ Setting up a catalogue of training modules ■ Setting up a process of ongoing improvement ■ Evaluating the project results

Results

Since the project began in 1988 more systematic and more professional attention is given to the safety training and workplace safety of vocational students and new recruits in the metallurgical sector in Pays de la Loire. In particular, cooperation between the regional CRAM, the vocational schools and the regional industry body has increased attention given to young worker safety in individual companies and facilitated effective solutions being planned and introduced at the company level.

Comments

Here an industry body has actively cooperated with the insurance body and local vocational schools to improve vocational training and also to implement projects to improve health and safety for young recruits within individual companies.

22 PUTTING YOUNG PEOPLE'S SAFETY AND HEALTH AT WORK INTO A GLOBAL EDUCATIVE POLICY

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Issue

Promoting a prevention culture by integrating health and safety at work as a subject to be taught through partnerships between teachers, employers, work placement providers and young people.

Problem

To create a framework for sustainable and dynamic action for the 'promotion of a culture of prevention, health and safety at work' for the benefit of young people and enterprises.

Solution

The aim was to develop an approach that was:

- In a structured framework and developed in consultation with the different actors in the project;
- Open to all in order to integrate as many different partners as possible, according to their

potential and priorities: CRAM - Pays de la Loire branch of French social security department in charge of medical insurance; ARACT - regional association for the improvement of working conditions; DRTEFP - local service of the French Ministry of Labour, and others;
- Adaptable to incorporate current developments and actual conditions;
- Accessible for students.

Educational methods teams and a steering committee were used to develop and implement the project. The educational methods team included management, teachers, administrative and technical personnel, nurses and a social worker. The steering committee consisted of health officers, inspectors and representatives of the company safety committee (CHSCT), national fund for the disabled workers, national fund for the improvement of working conditions, CRAM and others.

The approach has four main elements (bases) which are described below.

Base1 - setting up resources and promotional materials, including:

- An accessible and permanent resource stock which continues to be developed and compliments existing tools by having a local and specific character;
- A databank of 'occupational risks and prevention' within the documentary resources centre;
- Development of educational method sheets -support documents made with the French health and safety technical organisations ANACT, the national office of ARACT, Emergences, CRAM, INRS and others;
- Creation and moderation of a website 'Lycée Viette prévention' 'Lycée Léger prevention' by future young workers under the supervision of the project steering committee together with the educational teams;
- Regular poster campaigns inside establishments with a variation of themes chosen by the educational teams;
- Regular dissemination of advertising messages about prevention;
- Use of video resources.

Base 2 - acquisition of competences

Elements and strategies of this base include:
- Training seminars and training by operators organised by the educational teams in conjunction with the company health and safety officers 'ACMO', the safety, hygiene and working condition committees 'CHSCT', and the steering committees;
- Training as a continuum with a first module of 2/3 days delivered by an operator, a systematic update of a further 1/2 days, and the company health and safety officers acting as resource persons;
- Ensuring that the diverse requests from the educational methods teams can be answered regarding the development and use of technical and teaching tools;

- Extension of training for future young workers proposed by the resources people: biomechanics/ MSD knowledge, first aid, occupational pathologies, European and national regulation approach;
- Inclusion of prevention experts and associations and business representatives within the framework of the courses, according to the approach and themes proposed by the educational teams and the steering committee.

Base 3: sustainable approach

In conjunction with the enterprise:

- Development of a charter of good practices including awareness of the vocational risks for new, young recruits;
- Development of an analysis and research grid 'prevention, health, safety at work', approved by the training course instructor and the educational methods team, for use when making the work placement coursework report, using real experiences within the company, the know-how of the enterprise and their prevention polices;
- Exploitation and publishing of data on the website.

In connection with the health and safety committees inside enterprises:

- Using a common approach of the vocational school establishments - sector-by-sector, workshop-by-workshop - to make an inventory of the different types of risks in the form of poster sheets;
- Development of a framework for an educational method approach to carry out awareness raising and training with young people.

Base 4: capitalisation and transfer

Collation of filmed testimonies from different partners participating in the project:

- To highlight how they were involved in the project and how they cooperated, and to show that 'health at work is everybody's business' and that prevention depends on coordination of all those concerned both inside and outside the enterprise;
- To assist in the transferability of the project by providing a method showing the approach to school establishments and enterprises;
- From young people who relate their experiences, what they have learned, what they have discovered, and the things the experience has brought to them on a personal level;
- From young people engaged in the project to show the different activities and the reality of the world of work which awaits them, illustrated by sequences describing concrete work activities within enterprise where trainees will carry out their training;
- From members of the educational methods team who cover the educational method issues of the approach, in relation to the health and vocational future of young workers;
- From different external participants, such as experts in charge of prevention, ergonomists, people from the enterprises who are responsible for welcoming trainees, etc., explaining their approach to health, prevention, and working conditions, and also their perception of specific

problems young people can encounter in the workplace;

- In-depth interviews with members of the educational methods team and external participants from the different disciplines and organisations explaining their particular approach to working conditions problems, safety, prevention, health, and the way to prepare young people to face them providing further input into the contents of the different educational method modules.

Results

The benefits of the action include:

- A structured approach;
- A method to facilitate the transfer of the approach;
- Wide ownership and acceptance of the approach from the involvement of different actors;
- A cost-effective approach.

Comments

The partnership approach and the attention to creating a method for transferring the project are important elements of this case.

23 A SAFE START IN MOTOR VEHICLE MANUFACTURING

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Issue

Recruitment induction and training processes on health and safety for young and new workers, integrated into the overall health and safety approach of the company, including close supervision of new workers, and training programmes for young people and future professionals that incorporate health and safety.

Problem

Salvador Caetano has three separate premises at Ovar, Carregado and Vila Nova de Gaia. The main activity at each location is the assembly of Toyota commercial vehicles, the treatment of metal surfaces, and the import, sales and after-sales services for Toyota forklift trucks, respectively. Due to increased production and in response to peaks of production, the company employs both qualified and unskilled staff in the production and storage areas, especially temporary workers, and has around 1000 workers of which about 10% are temporary.

The company is well aware of the risks of taking on new, young workers at the start of their career who may not be very aware of good health and safety practices at work. Factors that increase the risk of accidents to themselves and others include: lack of awareness about using Personal Protection Equipment (PPE); improper use of machines and tools; incorrect handling of chemicals; and lack of information about the manual handling of loads.

Typical incidents to the youngest workers such as cuts, splinters, burns, minor poisoning, skin problems, allergies and irritations of the respiratory tract resulting from improper handling of chemicals also result in costs to the company when they are temporarily unable to perform their duties.

Solution

Salvador Caetano has adopted a series of actions to minimise the hazards, risks and outcomes resulting from employing young workers. These actions fit in with the company's general objectives on health and safety, which include:

- providing working conditions that guarantee the health and safety of workers;
- reducing the accident rate through risk prevention and thereby reducing the social and economic costs;
- promoting a safety culture, and improving performance;
- contributing towards the competitiveness of the company and increasing its productivity and quality with better conditions for the execution of the work.

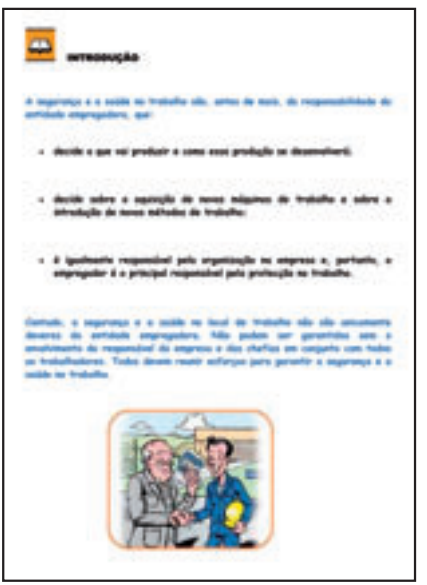
The specific actions for young workers include:

- preventive measures implemented throughout the recruitment and induction process for new workers, aimed at a culture of awareness raising and promotion of good practices of health and safety at work;
- health and safety training of young people as an integral part of the vocational training of apprentices delivered at its vocational training centres.

Salvador Caetano needs to coordinate its actions across its three centres, and has a cross-plant health and safety structure, part of the Directorate of Human Resources. This is coordinated by a senior hygiene and safety at work technician from the company headquarters at (Vila Nova de Gaia with individual senior hygiene and safety at work technicians at the two other sites. Designated workers who are trained in their role which includes the induction and welcome of new workers in the context of health and safety at work.

Elements of the induction and training programmes for new and young workers:

- Instruction in risk prevention and health and safety from the moment young workers join the enterprise, either as trainees or as workers;
- A welcome pack and a safety pack;
- A specific welcome pack for temporary workers which, in addition to information about the employment relationship, rights and duties as workers, contains information on the procedures to be adopted in case of an accident at work;
- Introduction of the new worker to the premises and their work post by the plant safety technician;
- The role of the safety technician includes handing over the work tools and individual protective equipment, and responsibility for making new members of staff aware of the hazards and risks inherent in the performance of their work, of risk prevention and maintenance of good practices of health and safety at work, promoting the correct use of the individual protective equipment, passing on information about the internal safety rules, based on the Internal Emergency Plan, and discussing the causes of any accidents and incidents with the young person concerned;
- Close supervision of new workers on health and safety;
- Frequent supervisory visits to the work stations by the safety technician, to check and promote the adoption of good practices and diagnose training needs;
- Ongoing training and awareness raising that involves all staff including awareness campaigns, active involvement of workers in the European Week campaigns, and analysis and feedback on any accidents;
- Strong practical components using the actual working environment so that young people develop sound technical skills and a real awareness of the need to adopt good practices of health and safety at work.



Vocational training

There is a training centre at each of the three Salvador Caetano sites which provide training programmes leading to qualifications and certificates for young people aged from 15 to 25 years, developed in partnership with the Institute of Employment and Vocational Training. They cover an apprenticeship system and training geared towards the acquisition of skills necessary to achieve professional status. Health and safety is integrated into all phases of this vocational training process and the induction process for these trainees follows the same approach as the one described above for new workers. The training involves theory and also a strong practical component.

Coordination with recruitment agencies

All agencies used by the company in the recruitment of temporary staff must provide an accurate description of the risks and hazards of the job, specifying levels of experience and the need for candidate to adopt a greater or lesser awareness of a culture of risk prevention and good safety practices.

Results

The strategies adopted towards new and young workers have helped the company reduce its overall accident rate to permanent, fixed-term contract and temporary workers, and the health and safety performance of newly-qualified apprentices who have passed through the training centre is of a very high standard.

The table covering 2004-2005 shows that there was a reduction in the number of accidents at work requiring first aid attention despite the number of workers increasing.

Salvador Caetano	Permanent Workers		Fixed-Term Contract Workers		Temporary Workers	
Location	**2004**	**2005**	**2004**	**2005**	**2004**	**2005**
Ovar	20	17	2	4	12	11
Carregado	21	21	4	0	15	5
Vila Nova de Gaia	21	15	0	0	0	0
Total	61	53	6	4	27	16

NB: Mean annual total of 1047 workers working for Salvador Caetano- IMVT, S.A., of which 142 are fixed-term contract workers and 108 are temporary workers.

Costs:

- Development and production of the welcome packs – 2,500€;
- Training of staff – 6,500€;
- Training of young people – 3,500€;
- Training of designated workers – 500€.

Benefits:

- Adoption of more organised and effective integration practices;
- Effective awareness raising of the different workplace risks among the workers;
- Adoption of safe work practices by the workers;
- Reduction of accidents at work at all the sites.

Ongoing development and sharing of experience

The good results achieved in this project have encouraged the company to continue their efforts to improve their programme for young and new workers, and also to design strategies for the engagement of other companies of the Salvador Caetano Group in similar activities.

Comments

Health and safety for young and new workers is integrated into both onsite induction and apprentice training and includes a strong emphasis on supervision.

24 A SAFE START IN THE PHARMACEUTICAL SECTOR

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Issue

Safety strategy and induction to provide a safe start for new young workers and trainees in the pharmaceutical sector including activities on risk awareness and health promotion carried out with the local community.

Problem

A large proportion of the company's employees are young workers. They also offer work experience places and apprenticeships. Attention to their safety in terms of their induction and other measures is very important. Induction programmes also need to be effective to minimise the stress of entering the world of work.

Solution

Context
GlaxoSmithKline (GSK) has set principles and launched various initiatives to help young workers to assimilate into their new work environment and to ensure that they make a safe start in their working life. Actions towards young workers and students working onsite are carried out within the context of the company's general policy on risk prevention. First, the prevention of risks at source, for example, through technical means, the substitution of the dangerous with the less dangerous including dangerous substances, and the use of safe working methods. All the company's safety actions are based on a strong philosophy of worker consultation and joint working with its trade unions representatives.

Induction

The company has developed a formal induction or work adaptation process during which new employees are prepared for their future roles within the company. Induction is based around the acquisition of a core set of job competencies. Health and safety is one of these core competencies. As part of the programme, all new employees, irrespective of the type of employment and entry level, learn about their workplace, the tasks to they will perform, work methods, organisational customs and culture. Health and safety is integrated into all these induction elements. The process is divided into several stages, spans a period of approximately one year and is facilitated by a mentor or 'Guardian' who guides them throughout the induction process.

Before the new employee starts work an individual 'Job Description Card' is drawn up for them containing a list of the duties and tasks. The workstation for the new employee is prepared and equipped. Risk assessments are conducted for all individual workstations. To avoid overloading new workers with information and risking unnecessary stress, familiarisation with the workplace is gradual, starting with essential information, and then broadened to include an introduction to the tasks performed by others within the same department and the history of the company. During the first year, young employees attend periodic training on health and safety in order to develop their skills. Managers regularly review the induction process.

The Guardian is one of the most important people in the new employee induction process. Guardians:

- Assist new workers in their assimilation into their new workplace, provide guidance and support;
- Are nominated for the role by the departmental manager;
- Are trained in all aspects of their role, including the health and safety aspects;
- Have specific skills which go beyond good knowledge of the company;
- Need a positive attitude towards the challenges in their role before them;
- Play a key role in helping new employees form positive impressions of the company in the short and longer-term.

Student safety and acquisition of safety skills

The company has students involved in unpaid training, paid apprenticeships and carrying out research on grants. The company ensures that learning about high standards of health and safety forms an important part of the student's overall experience. They gain experience of working in a safety conscious environment – one that is designed for safety and that is operated for safety. They learn to follow safety procedures and to use personnel protective equipment which helps them to develop safe work practices and good habits for their future working life.

Educational visits to the company

The company receives visits to their premises by university and other students in higher education, from secondary school students and members of other organisations, mainly those associated with the pharmaceutical industry. Learning about working standards and safety at the company forms a part of these visits.

Risk awareness and various health topics are promoted to the wider community through a Science and Public Centre that the company has established to encourage disease prevention, promote health and cooperate with patient organisations. It offers open, free-of-charge training and educational workshops for adults, youth and children. Since the Centre opened, about 2000 children and teenagers have taken part in its programmes.

The Centre is involved in organising a variety of local and national competitions to promote risk

awareness and healthy lifestyles among children and youth. In 2005, for example, involving primary schoolchildren in the 'Stop that Noise' campaign as part of the European Week for Safety and Health at Work information campaign via a 'Box of Sounds' competition. Children were asked to present their favourite sounds in a box made of environmentally-friendly materials. The aim was to make children aware of the importance of hearing in the perception of the world and more than 200 entries were received.

The Centre also participated in the 2006 European Safety and Health Week by organising a competition for children aged 8-13 years entitled 'My room without faults'. The aim of the competition was to develop awareness of how important it is to organise your own environment so that it is safe and comfortable, for example, so that faulty postures or eye discomfort are avoided.

Other actions have included rescue and first aid demonstrations related to ice skating and ice hockey activities that they had organised.

The Centre also hosts free workshops for junior high school teachers which are jointly organised with the local Department of Health and Social Affairs. Teachers obtain knowledge and skills about how to effectively organise and conduct risk awareness and health promotion classes for teenagers. During practical classes and discussions, a professional trainer shows the teachers how to create a class plan, how to run classes, how to deal with any challenges that might occur, and how to deal with the range of health care topics to be discussed with parents. The workshops are attended by teachers of all subjects as preventive activities should be taken by both school pedagogues, and biology or Polish teachers. The teachers' positive feedback after the workshops proves that the need for such classes exists.

Results

Based on opinions received from its young workforce, the induction process is well prepared, making their start in the workplace easier, less stressful and safer. There is a high take-up of activities organised in the wider community which receive very positive feedback.

Comments

The project is a good example of activities promoting safety culture among not only their own employees but also students and in the general community based on the philosophy of Corporate Social Responsibility. It is worth noting that most of the organisational solutions and undertakings presented in the project are designed by and implemented through the creativity and commitment of staff. It is a good example of successful cooperation between the management, staff and trade unions.

25 SAFETY OF YOUNG TEMPORARY WORKERS IN THE STEEL INDUSTRY

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Issue

Cooperation on young worker safety between a temporary worker employment agency, a steel manufacturer and an insurance company.

Problem

As in most industries, flexibility has become increasingly important in the steel industry. In the region of Liège (Belgium) young people are very likely to be employed in the steel industry

as temporary workers. Having no experience of such a working environment, it is crucial for them to be aware of possible risks and the safety regulations in force.

The Manpower employment agency supplies young, temporary workers to the Arcelor steel company. The young people had to be familiarised with Arcelor's safety regulations as set out in a safety booklet and gain a 'safety passport' before they could be employed and go on site. It was found that young temporary workers seemed to have problems understanding the booklet as around 30% were failing the subsequent assessment, meaning that they did not get their passport and could not be employed.


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POUR LES INTERIMAIRES

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Solution

A training tool for the Arcelor s safety passport for temporary worker candidates

Manpower decided to invite the relevant parties - the safety departments of Arcelor and AXA (their mutual insurer) - to collaborate in developing a training tool to help the young workers learn the regulations more easily. This tool:

- Takes a step-wise approach and is divided into chapters;
- Makes use of illustrations;
- Allows self-paced learning; candidates study the 'General Health and Safety Instructions' at their own pace in the employment agency branch itself;
- Allows users to check their own performance – at the end of each chapter is a small quiz.

Everything is clearly explained but, if necessary, the candidate can ask additional questions. Once candidates feel ready they can take the computer-based multiple-choice test at Arcelor. If successful they obtain the 'Safety Passport' for working at the company. This training method has proved to be much more successful as the pass rate is now 100%.

The training method was developed by young people for young people as two young staff members at the mutual insurers worked on it. It forms part of a wider group of measures related to the safety of temporary workers that are described below.

Safety and working with temporary employment agencies

The project was planned within Arcelor's general approach to safety and the use of temporary employment agencies, in which the company:

- Includes safety requirements in all its tendering procedures for labour supply by temporary employment agencies;
- Has developed a formal safety agreement with the agencies;
- Meet regularly with agencies to discuss the health and safety of temporary workers and put in place any measures needed;
- Analyses the safety performance of temporary employment agencies;
- Requires agencies:
  - to be VCU certified (safety checklist for employment and posting agencies);
  - to check the safety abilities of the temporary workers they supply;
  - to inform temporary workers on safety matters.

The selection and job placement process

Manpower has developed some general tools to assess candidates' understanding of safety. The 'Safety test' helps to assess whether candidates understand how to deal with potential risks and how to act in a safe and preventive way, and the 'Ultradex test' is used to assess the candidate's competencies to assist in placing them in a suitable job. The two tests are used together to help ensure that the right person is put to work in the right place.

Once candidates have passed these two initial assessments they must study Arcelor's General Health and Safety Instructions in order to obtain the 'Safety Passport'.

n addition, young temporary workers have to pass competency tests at Arcelor before they can use equipment, drive engines or carry out certain safety functions, and pass any associated medical checks that are organised by the employment agency.

When the young temporary worker starts work

On their first day at an Arcelor site, temporary workers receive an introduction by the safety manager of the site who tells them about the risks of the sector and all the specific safety measures taken on site. They have a 'guided tour' of the factory and each is assigned a coach - an experienced worker - who will watch over them until they are sufficiently competent. Arcelor treats temporary workers in the same way as permanent staff; for example, the job of a temporary worker cannot be modified without the advice or approval of the employment agency. In this way Arcelor seeks to have temporary workers fully involved in the company, including in matters of safety.

Illustrated job descriptions

Every temporary worker receives a job description developed by or in conjunction with Arcelor, and approved by their committee and by the works doctor. These indicate what the job consists of, the job requirements, what tools are used, the risks and which medical visit is needed. These 'job descriptions' are illustrated with photos and incorporate safety instructions and advice, and serve as an introduction to the jargon used on site. Manpower worked with Arcelor to develop these documents for each site.

Additional information and instruction for temporary workers

Arrangements are in place to provide additional information and instruction to temporary workers on an ongoing basis and according to need. This can be about a particular risk they have been confronted with, about a specific need for awareness-raising, or following a specific request from Arcelor, such as on their rules for working at heights.

Communication between Arcelor and temporary employment agencies

Arrangements are in place for communication and cooperation on safety between the company and temporary employment agencies to facilitate the exchange of information and experience, and to solve problems.

Regular meetings are organised between all temporary help companies and the prevention department of Arcelor with quarterly meetings between the company and all the safety managers of the temporary employment agencies. At these meeting, all accidents and incidents that have taken place are analysed and discussed, and action is taken as necessary. For example following the reporting of many cuts and grazes to hands action was taken to ensure the correct wearing of gloves.

People from the temporary employment agency branches participate in the meetings. This is important because they are the people who have the direct contact with the temporary workers and it provides an important exchange of information and experience.

Arcelor provides its temporary employment agencies with additional information such as their in-house magazine and the reports 'Return of Experience' that they make following the occurrence of any serious incident within the Arcelor group.

Safety agreement between Arcelor and its temporary employment agencies

Safety managers of Arcelor and the temporary employment agencies collaborated to develop an agreement in the form of a safety charter which has been signed by the top management of each company. Each temporary worker receives a one-page summary of this signed charter which sets out the parties' commitment to safety.

Results

Close communication and collaboration between the temporary employment agencies and the company has resulted in widening the pool of potential employees and better informed temporary workers. This is reflected in a reduction in accidents involving young workers. On 28th April 2006, the International Day for Safety and Health at Work, the opportunity was taken to celebrate the fact that there had been no accidents involving temporary workers from Manpower in the previous year.

Comments

The achievements of this project are the result of a close partnership between a steel manufacturer, an employment agency and an insurance company. The training and instruction for young temporary workers form part of a wider safety approach for young workers where attention is paid to preventing risks and ensuring that they are properly supervised.

Annex: overview of examples

ANNEX: OVERVIEW OF EXAMPLES

	Title	Country	Sector/ education level	Issue
*	"A Salvo!" Campaign - raising awareness in primary education about preventing school risks	Spain	Primary education	A campaign to make children between 6 and 12 years of age aware of the importance of safety and of acting in a safe and healthy manner in any area of everyday life
*	'Future competence' skills improve apprentice safety	Austria	Construction	Promoting risk awareness while also supporting young employees in their personal development. 'Future Competence' is acquired through the interplay between safety, health, social and technical skills
	3D interactive simulator - safety training in process plants	Austria	Refinery	Developing a simulator for safety training in complex systems
	Apprentices teach apprentices	Germany	Energy	Apprentices use their own experiences to pass practical health and safety lessons on to their newer colleagues
		Germany	Building trade	Educational media material to prevent accidents, particularly for use with apprentices in the building trade by external industry training centres
	The Value of Milk – from food safety to occupational safety	Italy	Dairy products	Risk awareness promotion via collaboration with schools / universities; dissemination of good practice examples based on risk evaluation; an action programme involving a holistic approach to the employment of young workers
	E-learning for medical school students	Chez Republic	Hospitals	OSH training for medical school students attending a teaching hospital: learning safe work practices through e-learning
	Pizza delivery by motorcycle	Cyprus	Pizza Delivery	Minimising motorcycle-related accidents and other incidents during pizza delivery
	Ensuring occupational safety during vocational training and on-the-job learning	Finland	Multi-sector vocational training	OSH as an inherent part in vocational training: instruction on risk prevention; training in a safe environment

*** Award winner**

	Title	Country	Sector/ education level	Issue
*	Passport to health and safety skills - resources and competition	Finland	Multi-sector vocational training	Promoting safety and health in general vocational education through resources and integrating it into skills competitions
	FAOS – Building accident awareness for a life-time – a schools partnership project	Greece	Schools activity	Combining health and safety education in schools with improved safety and accident prevention in schools through a partnership involving education, health and safety, and companies
	Demolition safety	Greece	Demolition	Systematic training and support for young workers on safety and health standards in demolition work, integrated into the overall company policy on risk prevention and health and safety promotion
*	'Got a good idea?' – college students solve physical workload problems	Netherlands	Agriculture and horticulture	Active involvement of college students in finding innovative solutions to prevent workplace hazards in the agriculture and horticulture sectors through assessment of their own workplaces and a competition
	'KANSarme jongeren' - promoting safe and healthy computing at school and home	Netherlands	Schools activity	To increase the knowledge of students and safe and responsible computer use in a comprehensive secondary school
*	'Facket i sommarland' - telephone helpline for summer jobs advice	Sweden	All	Integrating health and safety into trade union summer outreach and advice activities for young people
	Preparing new pharmaceutical workers - in-house and with education establishments	Latvia	Pharmaceuticals	Training and mentoring for new employees; partnerships with schools, universities and relevant ministries to improve the knowledge and practical skills of schoolchildren, students and young workers'
*	How easy can it be? - interactive educational software about risks in retail	Denmark	Retail	Interactive electronic training resources about working environment issues addressed to young people working in the retail sector and their employers

*** Award winner**

	Title	Country	Sector/ education level	Issue
	Safe practice in the meat industry	Denmark	Meat	Activities especially aimed at preventing knife-related injuries and musculoskeletal disorders among young and new employees targeted at: the individual level, group training and recommendations for the whole organisation
*	'WiseUp2Work' online resources for young people	United Kingdom	Educational activity	Online resources for young people as part of the "Safeguarding the next generation" campaign incorporating the IOSH Workplace Hazards Awareness Course
	Learning through theatre	United Kingdom	Educational activity	Dramatised training resource for under-16 year-old work experience students.
	A Safe Start for young workers in the metallurgy sector	France	Metal working	Cooperation between a regional insurance body, vocational training providers and a metallurgical industry organisation to promote health and safety training in vocational courses and implement solutions in individual workplaces
	Putting young people's safety and health at work into a global educative policy	France	Multi-sector vocational training	Promoting a prevention culture by integrating health and safety at work as a subject to be taught through partnerships between teachers, employers, work placement providers and young people
	A safe start in motor vehicle manufacturing	Portugal	Vehicle manufacture	Induction and training processes for young and new workers, integrated into the overall health and safety approach of the company: supervision; training programmes that incorporate health and safety
*	A safe start in the pharmaceutical sector	Poland	Pharmaceuticals	Safety strategy and induction to provide a safe start for new young workers and trainees, including activities on risk awareness and health promotion carried out with the local community
	Safety of young temporary workers in the steel industry	Belgium	Metallurgical	Cooperation on young worker safety between a temporary worker employment agency, a steel manufacturer and an insurance company

*** Award winner**

European Agency for Safety and Health at Work

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