In order to encourage improvements, especially in the working environment, as regards the protection of the safety and health of workers as provided for in the Treaty and successive active programmes concerning health and safety at the workplace, the aim of the Agency shall be to provide the Community bodies, the Member States and those involved in the field with the technical, scientific and economic information of use in the field of safety and health at work.
A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (http://europa.eu).

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PRINTED ON WHITE CHLORINE-FREE PAPER
Too many young people are being hurt at work. Across Europe, 18 to 24-year-olds are at least 50% more likely to have a non-fatal accident in the workplace, or develop occupational health problems, than those in other groups. Employers need to do more to protect young employees, and young people need to be more aware of health and safety issues when they enter the world of work.

The articles we have collected here describe the experiences of those who have been working to keep young employees safe.

The contributions come from across Europe and beyond, showing how widely the problem of young workers’ safety is recognised, and what a wealth of experience we now have, in doing something positive about it. They describe the efforts of a wide range of individuals and groups, including Occupational Safety and Health (OSH) professionals, government ministries and agencies, employers’ organisations and trade unionists. This is an issue on which we all need to work together.

Protecting young workers needs the commitment of organisations such as companies and government bodies. But it also crucially depends on the engagement of young people themselves. That is why many of the articles here are concerned with efforts to ‘mainstream’ OSH issues in schools education and vocational training, making these issues an integral part of young people’s studies, and teaching young people about workplace risks, their employer’s duties to protect them, and their own rights and responsibilities. We need to instil in young people a culture of accident prevention from an early age, which will help to keep them safe throughout their working lives.

Finally, some of these articles contain personal testimony, from people who have been directly affected by accidents and ill health among young employees. They serve as a reminder that there are human stories behind the statistics, and why we urgently need to act to prevent young people from being hurt.

We hope that you will be able to get involved in our campaign, Safe Start, to help young people stay safe at work.

Hans-Horst Konkolewsky
Director, the European Agency for Safety and Health at Work

For more information on the Safe Start campaign, see http://ew2006.osha.eu.int/
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The European Commission aims to develop risk prevention at work particularly among young workers who are more at risk than experienced people. Mainstreaming Occupational Safety and Health (OSH) into education, and training the workforce of tomorrow, is a key part of this culture of prevention. If schools integrate health and safety issues in the curricula from an early age (much like road safety is taught in some countries) young people will be aware of the potential risks at work, and a change of attitude will be achieved for the future.

In addition to the general education systems, particular efforts should be made in technical and vocational education, with special attention to sectors where there are higher risks of injuries and illnesses, such as construction, agriculture, fisheries...

The integration of occupational safety and health into education systems has to take into account several components such as the changing world of work in a global economy and the consequences of worldwide competition on the European social model. Moreover, specific measures concerning young people, including the European Youth Pact, can bring strong support as well as the EU legislative background. Finally, the strategy on occupational safety and health has specific aspects which are dedicated to young workers including training and prevention.

Globalisation as a new framework

Globalisation will challenge Europe to preserve its high level of prosperity and quality of life, social cohesion and environmental protection. The forces of global competition and the impact of new technologies will call European economic success and its social systems into question.

No Member State has all the answers to sustain and modernise education, healthcare and pensions systems but some have been more successful than others in bringing down unemployment, while maintaining high standards of social protection and risk prevention at work. The EU has to adapt these systems to face future financial challenges and to the way in which society, from the world of work to family structures, has changed.

Moreover, the globalisation of the economy may exacerbate some of the factors contributing to injuries and ill health at work. According to the ILO, “the acceleration and liberalization of world trade and the spread of new technology are generating new types of work organization and thereby new patterns of exposure to the risks of occupational accidents and disease”.

Globalisation is not new. But its pace has increased. While it raises anxieties, we must remember that globalisation is also driven by the wish of billions of people to create a better life for themselves and their families. Europe has to be an example for the rest of the world.

Commissioner Špidla, Member of the European Commission Responsible for Employment, Social Affairs and Equal Opportunities, underlines that globalisation must be met with more investment in workers’ skills, such as through lifelong learning, as well as focusing on quality jobs. To help workers made redundant due to changing global trade patterns, the Commission recently proposed a new EUR 500 million European Globalisation Adjustment Fund, designed to assist them in finding new jobs.

The European Youth Pact (1)

Young people are particularly vulnerable in terms of unemployment. Member States suggest several types of measures such as training, counselling, subsidised employment and a balance between labour market flexibility and employment security.

(1) The European Youth Pact adopted by the Council in March 2005 followed by the European Commission Communication on “European policies concerning youth” adopted in May 2005.
Young people are a key part of the renewed Lisbon partnership for growth and jobs in Europe which aims at becoming the most competitive knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs, and greater social cohesion.

Achieving this goal requires an overall strategy that includes modernising the European social model, investing in people and particularly taking action for young people in the fields of employment, integration and social advancement, education and training, and mobility.

Unemployment among young people is more than double the overall unemployment rate in Europe, while young people as a group are also particularly at risk of poverty. Moreover, statistics (1) show that young people (aged 18-24) tend to suffer more from accidents at work (40% higher risk than the average). This is also due to the fact that young people are employed as temporary workers more frequently. This fact could underpin their vulnerability at work. These factors call for attention to be paid to the situation of young generations and age groups, and the provision of specific measures.

And yet, as Europe’s population shrinks, a smaller number of young people will have to carry the burden of replacing the larger numbers of the preceding generations. Young people will be vital in ensuring that the Lisbon goals of growth and jobs can be met – as the future workforce, and as the future source of the research capabilities, innovation and entrepreneurship that Europe needs to succeed. However, these goals can only be met if young people are equipped with knowledge, skills and competencies through high quality, relevant education and training, and if barriers such as growing up in poverty and social exclusion are removed.

European Heads of State and Government adopted the European Youth Pact in March 2005. The aim was clear: improving the education, training, mobility, vocational integration and social inclusion of young Europeans.

The European Council underlined that the Pact, to be successful, requires the involvement of all actors and, first and foremost, of youth organisations and young people. The Communication invites Member States to take the necessary steps to consult young people in developing measures for the Pact and following up its implementation.

Treaty and Directives as a background

It is important to recall that, in terms of education policy, Member States are fully responsible for the content and organisation of their own education and training systems, and it is not for the EU to harmonise laws and regulations in this area. However, the European Union contributes to the development of quality education by encouraging cooperation between Member States by supporting and supplementing their action, if necessary (Article 149 of the EC Treaty). According to Article 150 of the Treaty, the EU implements a vocational training policy which supports and supplements the action of the Member States, while respecting their responsibility for the content and organisation of vocational training. One of the aims is to stimulate cooperation on training between educational or training establishments and firms to promote better integration in the world of work.

So there is scope for action in this area in terms of support for the cooperation between Member States.

The ‘framework directive’ on health and safety at work (4) provides that particularly sensitive risk groups must be protected against the dangers which specifically affect them. In the Directive on young people at work (1), Member States shall ensure in general that employers guarantee that young people have working conditions which suit their age. Work must not be harmful to the safety, health or development of young workers, and prevent their attendance at school, their participation in vocational guidance or training programmes.

Member States shall ensure that young people are protected from any specific risks to their safety, health and development which are a consequence of their lack of experience, lack of awareness of existing or potential risks, or the fact that young people are not yet fully mature.

Current Community strategy on occupational safety and health (1)

The current strategy is based on an all-inclusive approach to well-being at work, taking account not only of traditional health and safety risks but also of the emergence of new risks. The goal is to achieve complete physical, mental and social well-being at work.

The strategy is also geared to enhancing the quality of work, and regards a safe and healthy working environment as one of its essential components.

It basically aims at promoting a prevention culture. Preventive health and safety measures should become the standard in a work culture that seeks to avoid accidents and diseases rather than treating them.

Prevention culture is at the very heart of the strategy focusing on three mutually supportive elements for improving people’s knowledge of risks: education, awareness, and anticipation of risks.

The first step is education and training because a better culture of safety through information and training programmes is essential. All workers including managers should be given greater access to continuous and regularly updated training on safety issues throughout their entire career, along with the workforce of tomorrow - young people - through their school curricula.

The second element is awareness. Awareness must become more tailor-made for each specific situation because the needs of a small and medium sized business will naturally differ from those of a large multinational enterprise. The European Agency for Safety and Health at Work is considered as a driving force in these matters particularly via the European Weeks on occupational safety and health which are

(1) 89/391/EEC
(3) 94/33/EC

European Agency for Safety and Health at Work
one of the strongest elements of awareness raising in occupational safety and health throughout the EU. The 2006 European Week Safe Start campaign highlights what to do when starting work.

All businesses must be trained in how they can better adapt their health and safety policies vis-à-vis young workers. So their approach should be sensitive, targeted and inclusive, regardless of the size or type of workplace.

The third dimension is anticipation, particularly in relation to technical innovation and social change. Business in the EU must be ready to tackle new and emerging risks. Emerging health problems involving musculoskeletal disorders and psychosocial diseases including stress, depression and anxiety now represent over a quarter of all cases involving an average absence of more than two weeks from work.

Finally, a core element of the strategy is a stronger partnership approach with public authorities, companies such as public and private insurers, educational and training bodies, research institutes and especially with trade unions and employers, who play a vital role, applying legislation and developing practices at company level. European projects aimed at raising awareness of risk at the workplace or educating young workers on risk prevention can be funded under the LEONARDO DA VINCI programme in replying to EU calls for proposals published on the Europa website: http://europa.eu.int/comm/education/programmes/calls/callg_en.html

Among several possibilities, projects can be dedicated to the training of teachers and trainers in health and safety issues before introducing health and safety matters in the curricula for the pupils and students. They can also be focused on the need for schools and training institutions to relate to the world of work and strengthen their links in order to improve the quality of education and training systems.

In conclusion

Young people starting work are more at risk. New to the workplace and the job, they lack experience of health and safety risks in general. Their enthusiasm to become a working adult can even minimise their perception of risk at work. They have the right to work in a safe and healthy environment, including the necessary training and supervision.

The European Union through the EU Youth Pact and the current European strategy on health and safety at work is strongly committed to achieving the highest health and safety standards in the workplace for all. The future Community strategy will pursue this goal to ensure the fundamental right of workers to a safe working environment and to prevent a fall in health and safety standards. The EU considers that a safe and healthy working environment and working organisation are key performance factors of economic development.

Committed, and well-trained, young people getting safer jobs is a key element to enhance the competitiveness of European businesses.

Anne Degrand-Guillaud is Head of the working conditions sector in the Directorate General Employment, Social Affairs and Equal Opportunities of the European Commission in Brussels.
A statistical portrait of the health and safety at work of young workers

Overview of the labour market situation of young workers

According to the 2004 Labour Force Survey (LFS), workers aged 15-19, 20-24 and 25-29 accounted for 2.7%, 7.8% and 11.5% respectively of the employed population of the EU25 (Table 1). This means that about 43 million workers in the EU25 are aged 15-29, of which 5 million are aged less than 20 years. The proportion of young workers is higher than average especially in the sectors of wholesale and retail trade, hotels and restaurants and in other service areas.

Of course, many people in these age categories are still outside the labour market, mainly because they are studying. According to the 2004 LFS the proportion of people not considered as being in the active labour market population is 76% among those aged 15-19, 35% among those aged 20-24, and 18% among those aged 25-29. The other side of the coin, however, is that among those already in the labour market the unemployment rate is much higher in the younger age categories: 20% among those aged 15-19 and 18% among those aged 20-24, as compared to 9% in the entire working age population.

One can argue that, in terms of provision for health and safety at work, salary workers, full-time workers and workers with an unlimited contract are on average in a better position than self-employed workers, part-time workers or workers with a limited contract duration. Young workers seem to be in an unfavourable situation regarding their full-time/part-time status and the duration of their contracts, while they are more likely to be salary workers than the working population in general. In comparison to the overall workforce, workers aged 15-24 years are less often in full-time employment (72% vs. 82%), more often on temporary contracts (39% vs. 14%), and more often salary workers (94% vs. 83%).

According to the 2000 European Survey on Working Conditions (ESWC), it is slightly more unusual for young workers to feel that their health and safety is at risk because of their work (23% among those aged 18-24 vs. 28% among all workers). Workers aged 18-24 years are generally as likely as others to feel that they are well informed about risks at work (41% vs. 37% overall), and to say that they are very or fairly satisfied with their working conditions (83% among those aged 18-24 vs. 84% overall).

Table 1. Proportion (%) of young workers in the total workforce by economic activity in the EU25 in 2004

<table>
<thead>
<tr>
<th>Economic activity</th>
<th>Proportion of young workers</th>
<th>Total workforce in thousands</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-19 yrs</td>
<td>20-24 yrs</td>
</tr>
<tr>
<td>Total</td>
<td>2.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Agriculture etc.</td>
<td>2.7</td>
<td>5.2</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2.4</td>
<td>7.9</td>
</tr>
<tr>
<td>Construction</td>
<td>3.6</td>
<td>9.0</td>
</tr>
<tr>
<td>Wholesale and retail trade etc.</td>
<td>5.1</td>
<td>10.8</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>7.9</td>
<td>14.5</td>
</tr>
<tr>
<td>Transport, storage etc.</td>
<td>1.2</td>
<td>6.4</td>
</tr>
<tr>
<td>Financial intermediation</td>
<td>n.a.</td>
<td>7.5</td>
</tr>
<tr>
<td>Real estate, renting etc.</td>
<td>1.4</td>
<td>7.7</td>
</tr>
<tr>
<td>Public administration etc.</td>
<td>0.8</td>
<td>5.5</td>
</tr>
<tr>
<td>Education</td>
<td>0.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Health and social work</td>
<td>1.6</td>
<td>6.4</td>
</tr>
<tr>
<td>Other service activities</td>
<td>4.1</td>
<td>9.4</td>
</tr>
<tr>
<td>Activities of households</td>
<td>n.a.</td>
<td>6.9</td>
</tr>
</tbody>
</table>

n.a. = not available
Safe Start!

Safety at work

The 2002 data given in European Statistics on Accidents at Work (ESAW) shows that there were about 714,000 accidents at work that resulted in more than 3 working days being lost, and about 400 fatal accidents at work among workers aged 18-24 years in EU15. These figures represent 16% of the non-fatal and 8% of the fatal accidents at work recorded by the national authorities of the EU15 that year. The age distribution is obviously different for non-fatal and fatal accidents at work. The incidence rate of non-fatal accidents at work per 100,000 workers was more than 40% higher among those aged 18-24 years as compared to the total workforce or those aged 55-64 years (Table 2). This phenomenon is observed in all sectors of economic activity. Also, the decrease in the incidence rate during 1996-2003 was somewhat smaller among young workers than overall or among older workers (Table 2). For fatal accidents at work the incidence rate is greater among older workers and the decrease in 1996-2002 has been rather uniform across the age categories (Table 2).

Table 2. Incidence rate of non-fatal and fatal accidents at work by age in 1996-2003 in the EU15

<table>
<thead>
<tr>
<th>Year</th>
<th>18-24 yrs</th>
<th>55-64 yrs</th>
<th>All</th>
<th>18-24 yrs</th>
<th>55-64 yrs</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>5,751</td>
<td>4,063</td>
<td>4,229</td>
<td>3.8</td>
<td>8.7</td>
<td>5.3</td>
</tr>
<tr>
<td>1997</td>
<td>5,613</td>
<td>3,671</td>
<td>4,106</td>
<td>3.7</td>
<td>8.9</td>
<td>5.2</td>
</tr>
<tr>
<td>1998</td>
<td>5,725</td>
<td>3,602</td>
<td>4,089</td>
<td>3.6</td>
<td>8.1</td>
<td>5.0</td>
</tr>
<tr>
<td>1999</td>
<td>5,804</td>
<td>3,577</td>
<td>4,088</td>
<td>3.4</td>
<td>8.0</td>
<td>4.8</td>
</tr>
<tr>
<td>2000</td>
<td>5,856</td>
<td>3,475</td>
<td>4,016</td>
<td>3.3</td>
<td>8.0</td>
<td>4.6</td>
</tr>
<tr>
<td>2001</td>
<td>5,529</td>
<td>3,325</td>
<td>3,841</td>
<td>2.6</td>
<td>7.4</td>
<td>4.2</td>
</tr>
<tr>
<td>2002</td>
<td>5,077</td>
<td>2,953</td>
<td>3,529</td>
<td>3.0</td>
<td>7.0</td>
<td>4.1</td>
</tr>
<tr>
<td>2003p</td>
<td>4,711</td>
<td>2,787</td>
<td>3,334</td>
<td>2.6</td>
<td>6.3</td>
<td>4.0</td>
</tr>
<tr>
<td>Change in 1996-2003</td>
<td>-18%</td>
<td>-31%</td>
<td>-21%</td>
<td>-32%</td>
<td>-28%</td>
<td>-25%</td>
</tr>
</tbody>
</table>

Sources of data

1. Eurostat, database: http://epp.eurostat.cec.eu.int/
   - Population and social conditions/Labour market
   - Population and social conditions/Health

In time for the European Week Campaign 2006 on young people and occupational safety and health (OSH), a new European network for education and training in OSH has been set up.

On 1 October 2005 the LEONARDO DA VINCI project ENETOSH was launched in Bilbao. Under the leadership of the BG-Institute Work and Health, Germany, 13 core network partners from 10 European countries are now working together, collecting examples of good practice in education and training in OSH (mainstreaming OSH into education), and developing standards for teachers and trainers in OSH. For the first time, OSH and education experts are able to share their experience of integrating safety and health into education and training on a common European platform.

The background of ENETOSH

The idea behind ENETOSH is that the quality of education and training in OSH has a major impact on accident prevention. The better OSH is integrated into education and training, the more safety and health will be part of working life in the future. Therefore, education and training in OSH should not be limited to those who are already working; it should be part and parcel of the school curriculum or a vocational subject in its own right (1).

In line with the Community strategy on health and safety at work, the European Agency for Safety and Health at Work carried out a project on mainstreaming OSH into education in 2002. One of the main conclusions of the project was that mainstreaming OSH into education should encompass all levels of the educational system, from nursery school, through primary and secondary school, academic study and vocational training. Safety and health have to be an integral part of life-long learning from pre-school education until post-retirement.

The concrete aims of ENETOSH are:

- To establish a transnational network of education and OSH experts in Europe;

The overall goal of ENETOSH is to find and promote ways of improving the quality of education and training, by intensifying and systematising the exchange of knowledge and experience regarding mainstreaming OSH into education and training in Europe (2).

The main target groups of the project are end users (e.g. teachers in vocational schools), intermediaries in the field of education (e.g. head teachers) and in the field of OSH (e.g. OSH professionals), and policymakers.

The establishment of a European Network for Education and Training in Occupational Safety and Health (ENETOSH) is based on the Agency’s activities. Furthermore, it is linked to the political framework of the strategic Lisbon goals, underlining the important role that education and training play in the economic and social strategy of the EU (3), as well as to the Community strategy on OSH which identifies education and training as key factors in strengthening the prevention culture (4), and the Copenhagen Declaration, which calls for enhanced co-operation in education and training in Europe (5).

The scope of ENETOSH

The overall goal of ENETOSH is to find and promote ways of improving the quality of education and training, by intensifying and systematising the exchange of knowledge and experience regarding mainstreaming OSH into education and training in Europe (1).

The main target groups of the project are end users (e.g. teachers in vocational schools), intermediaries in the field of education (e.g. head teachers) and in the field of OSH (e.g. OSH professionals), and policymakers.


(2) Rome Declaration on mainstreaming OSH into education and training under the Italian EU Presidency, Rome October 2003; http://osha.eu.int/good_practice/sector/od/education/rome.stm.


(6) This goal covers one of the priorities of the LEONARDO DA VINCI CALL 2005-2006.

[Image: Safe Start!]

ULRIKE BOLLMANN, ESIN TASKAN AND EVA HOEHNE
International Co-operation Section, BG-Institute Work and Health, Germany
European Network for Education and Training in Occupational Safety and Health (ENETOSH)
To facilitate the distribution and use of good practice in mainstreaming OSH into education and training across national and cultural boundaries, and

To develop a European qualification standard for teachers and trainers in OSH.

The project is geared towards providing instruments to record and analyse European experience in OSH education and training more efficiently, to promote communication and co-operation between education and OSH experts, to improve the qualification of teachers and trainers in OSH by defining common profiles at European level, and to contribute to the development of a European strategy for education and training in OSH.

How a transnational network has been developed

Within the network, education experts are working hand in hand with OSH professionals at national and international level. The project involves 13 core network partners and one silent partner: there is a good mixture of partners from the old and new Member States, with one Accession State involved as well.

The partners in the core network are:

- OSH Education, Information and Services Centre (CIVOP), Czech Republic
- The Sector Safety Council for Education and Research (BAR U&F), Denmark
- University of Lüneburg, Germany
- Institution for Statutory Accident Insurance and Prevention in the Building Trade (BG BAU), Germany
- Institution for Statutory Accident Insurance and Prevention in the Health and Welfare Services (BGW), Germany
- National Institute of Occupational Safety and Prevention (ISPESL), Italy
- Lithuanian Labour Market Training Authority (LDRMT), Lithuania
- Delft University of Technology (TU Delft), The Netherlands
- Austrian Social Insurance for Occupational Risks (AUVA), Austria
- Nofer Institute of Occupational Medicine (NIOM), Poland
- Finnish Institute of Occupational Health (FIOH), Finland
- Occupational Health and Safety Centre (ISGUM), Turkey

Every partner took on special tasks according to the work programme of ENETOSH. The tasks are carried out by multinational teams, with a minimum of two partners.

The project also involves an Advisory Board which is asked to support ENETOSH at a working level, and on more strategic and political issues. Networking and sector demands are important aspects, too. Members of the Advisory Board include the European Agency for Safety and Health at Work, the European Centre for the Development of Vocational Training (CEDEFOP), the Federation of German Trade Unions (DGB), the Confederation of German Employers’ Associations (BDI), PREVENT – the Institute for Occupational Health and Safety / ENSPFO, Belgium, the Federal Association of Company Health Insurance Funds / ENWHF, Germany, and social partners at the European level, the European Federation of Building and Woodworkers (EFBWW), and the European Construction Industry Federation (FIEC).

How good practice examples are selected and analysed

On the basis of a model of mainstreaming OSH into education drafted by the European Agency, the project partners developed a list of criteria for selecting and analysing examples of good practice in education and training in OSH. In line with the integral approach of the project, ENETOSH covers all levels of the educational system and the whole range of lifelong learning. Four expert groups are working on collecting and analysing examples of good practice in education and training in OSH. There is one group at each level.

It is envisaged that selected examples of good practice will be recognised by the European Network. A Good Practice Award will be linked to the yearly Training & Innovation event organised by the BG-Institute Work and Health in Dresden. Training & Innovation is already established as an instrument for promoting communication and co-operation between education and OSH experts. Together with Training & Innovation, the Good practice Award will support the trans-national use of innovative training methods in OSH.

Criteria for selecting and analysing good practice

Good practice examples (GPEs) of education and training in occupational safety and health (OSH) should fulfil a minimum of five of the following criteria:

1. The GPE relates to standards in education and training (in OSH) (e.g. “The National Healthy School Standard”, England). (*)
2. The GPE involves the main stakeholders in this area (e.g. pupils/students, parents, schools, head teachers, teachers and trainers, enterprises, social partners).
3. The GPE relates to the concept of life-long learning.
4. The GPE relates to safe and healthy working and/or learning environments.
5. The GPE includes training measures for teachers and trainers to ensure transfer into practice.
6. The GPE includes interactive and flexible methods of education and training (e.g. art work, theatre, e-learning).
7. The GPE is directly related to the workplace.
8. The GPE defines the entry requirements that will apply (e.g. acceptance tests).
9. The GPE culminates in a test, certificate or degree.
10. The GPE allows for evaluation or feedback.

In the course of the project certain levels of the education system will be selected for particular attention. At present a competence profile is being prepared for teachers and trainers in Initial Vocational Education and Training (IVET), as well as a competence profile for OSH trainers in Continuing Vocational Education and Training (CVET).

Developing a European qualification standard for teaching and training in OSH

The project’s special focus is on the improvement of the qualification of teachers, lecturers and trainers as the determining factor for the quality of education and training in OSH. Well-qualified teachers are essential in developing a culture of prevention in Europe. They need appropriate competences to ensure the transfer of knowledge about safety and health, to promote changes of attitudes and behaviour in children and adults regarding their own safety and health, and to foster the establishment of a safety and health culture in schools and workplaces.

Following on from the recent debate on the European Qualification Framework (EQF) held by Ministers of Education and Training, European social partners and the European Commission,(10) competence profiles for teachers and trainers in OSH will be developed within the project.

The process of defining a qualification standard for teaching and training in OSH

The process covers the following steps:

1. Specification of areas of competence (knowledge/skills, communication and social competences, knowledge transfer, learning competence).
2. Specification of competence levels.
3. Definition of general descriptors.
4. Description of demands in the particular areas of competence.
5. Draft of a competence profile.

In the course of the project certain levels of the education system will be selected for particular attention. At present a competence profile is being prepared for teachers and trainers in Initial Vocational Education and Training (IVET), as well as a competence profile for OSH trainers in Continuing Vocational Education and Training (CVET).

Evaluation of the project

The University of Lüneburg (one of the core network partners) developed a concept for an in-process evaluation of the ENETOSH project. The evaluation is carried out at two levels. At the first level the project work of the 13 core network partners is the main subject of investigation. At the second level the dissemination, implementation and sustainability of the project results across Europe is surveyed. The evaluation is carried out by a panel composed of cooperation partners, intermediaries and end-users at national and international level from the areas of OSH, education and policies, and takes place through the duration of the project.

The ENETOSH platform

The main instrument to facilitate the distribution and use of good practice in mainstreaming OSH into education and training is the ENETOSH platform. Via the platform, it is possible to share experience regarding the following areas:

- Good practice in education and training in OSH at all levels of the education system;
- Innovative methods for knowledge transfer in OSH;
- The leading organisations carrying out education and training in OSH in Europe;
- The current state of the standardisation process in education and training (in OSH), and
- Education and OSH experts in Europe (who’s who).

How to join the network

ENETOSH is an open network. All experts dealing with education and training in OSH are welcome to join as members.

Members can be actively involved in the development of the network, by:

- Ranking examples of good practice in education and training in OSH;

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Submit their own ideas and new examples of good practice in education and training in OSH, and
- Adding their names to the list of 'who’s who' on the platform, for the exchange of experience between education experts and OSH experts.

Currently, within the ENETOSH project, interested parties are offered two types of membership according to the degree to which they want to participate: they can join as a silent partner, or participate in the evaluation of the project.

If you are interested in joining, please contact:
Dr. Ulrike Bollmann, Tel: 0049 (0) 351 457-1510; email: ulrike.bollmann@hvbg.de or Esin Taskan, Tel. 0049 (0) 351 457-1517; email: esin.taskan@hvbg.de
BG-Institute Work and Health, Koenigsbruecker Landstrasse 2, D-01109 Dresden, Germany
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ENETOSH is an official partner of the European Week 2006 on young people and OSH.

Ulrike Bollmann is Head of Section International Cooperation for the BG Institute of Work and Health (BGAG) and leads the European Network Education and Training in OSH (ENETOSH) project. She holds a diploma in education and philosophy, conferral of a doctorate, and is an expert in mainstreaming education and training in occupational safety and health. She is currently involved with ENETOSH in the fields of education and training in Europe, quality management in education, innovative methods in adult education, and the health of teachers and trainers.
Work design should aim not just at avoiding impairing the well-being of workers in the long run, but enhancing it whenever possible. For this purpose, a number of recommendations have been developed in labour research to help bring about competence-based and development-based work design, which focuses on a holistic approach, creative autonomy, participation, communicativeness, and professional development. This approach enables the operational organisation of labour to contribute substantially to a person’s competence for life-long learning which, in an increasingly knowledge-based economy, is a vital asset for trainees in occupational training and further education.

Thematic context – changes in vocational training and skilled labour

Current efforts to integrate health and safety into vocational training, such as those in the framework of the New Quality of Labour initiative (see www.inqa-lernen.de), should be seen within a wider context of comprehensive change, which could be summarised as a ‘transition from the industrial society to the knowledge-based and service-based society’.

While the mitigation of hazards by imposing requirements and prohibitions was predominant until the 1980s, today’s approaches to work safety and health protection call for proactive prevention. Today, health and safety are increasingly accepted as objectives for all operational processes, and so a systematic approach to the analysis, assessment and control of labour and product-related risks has gained in importance. For this reason, an approach was defined in the framework of the INQA project ‘DiaMedia for Trainers in Vocational Training’. The approach is based on the Institute’s existing research results, and is designed to implement the Equipment and Product Safety Act, using modern training concepts in the framework of Dual Vocational Training. A broad range of vocational training methods was used for this purpose, which were subsequently amended in a consistent manner.

Current practices in vocational training

For a while now, design-based vocational training has been the guiding principle in Germany. As set out in the Framework Agreement of the Conference of the Ministers of Culture on Vocational Training Schools (KMK, 1991), the objective of this approach is to enable participation in work design while considering social and ecological responsibility. This definition recognises that the competences relevant for a particular job may include creativity and innovation on the one hand, and adaptation and reproduction on the other. Design-based vocational training provides the opportunity to connect these interdependent competences in a systematic way.

However, learning methods oriented towards creativeness and innovation, with a clear focus on facilitating and promoting cognitive skills, are so far more of an exception in the actual practice of vocational training and further education. Until now, the predominant method of teaching in vocational training schools has involved the traditional ‘teacher versus audience’ classroom layout, although activity-based teaching and learning methods (such as projects and experiments) are used more frequently than they were only a few years ago (see Pätzold et al., 2004). The enterprise-based aspect of dual vocational training is also predominantly comprised of training methods focused on the trainer or instructor, as in the ‘four stage method’ and the ‘teaching conversation’. These methods assign a mostly receptive role to the trainees and are focused on adaptation and reproduction.

For example, the Vocational Training Framework Curriculum for the vocational training of plumbers for sanitary facilities, heating and air-conditioning includes ‘health and work safety on the job’ as an independent element of the job profile, as well as ‘quality management’. It should be noted that the development of curricula in vocational training schools (framework curricula) is based on the learning field approach. This approach uses complete and holistic actions and situations relevant for the particular job as a didactic reference (in the case of a plumber, one of the tasks is to build a component by using hand tools).

Generally, this approach to integrating health and safety in vocational training - so as to enable workers to act and reflect on their actions - seems more promising than the approach of defining learning content in vocational training as a mere addition of elements which are not related to concrete situations and processes. According to the Directive, the required knowledge and skills should be taught under ‘consideration of autonomous planning, implementation and control’. However, with regard to contents related to safety and health, it should be noted that these topics are covered mostly in the form of traditional instructions, the deficits of which have been frequently pointed out in research on safety (e.g., Strobel, 1995).
The Enterprise Model Project

Activity-based vocational training and further qualification, using a web-based platform for collective learning (DiaMedia) with reference to the Equipment and Product Safety Act

The guidelines for the design of learning arrangements (with a focus on design, experience and dialogue) are closely inter-related. The general guidelines for the didactic design of learning arrangements are, among other things, highly important for the integration of health and safety in vocational training. The Enterprise Model Project, for example, uses the following four criteria:

- problem-based/experience-related learning,
- learning as a dialogue/web-based learning,
- learners as designers, and
- linking individual and organisational learning.

Below is a short description of these criteria:

A) Problem-based/experience-related learning

A group of trainees works on one phase of the product life cycle (PLC) at a time, while considering the legal requirements. These phases are selected with a view to job-specific tasks: e.g. a group of future engineers, technical draughtsmen, and industrial salespeople plans and develops a product. The approach generally strives to implement complete product life cycles as sequential learning and work tasks. This helps trainees to understand interdependency with the previous and subsequent phases of a product life cycle, and helps to leverage additional insight to optimise procedures.

B) Learning as a dialogue/web-based learning

Within the process of completing tasks and tackling problems, trainees are given the opportunity to enter into a dialogue with competence drivers inside and outside of the organisation. The first step is to identify existing expertise within the enterprise. During this stage the group collects know-how which is pertinent to the solution, for example by requesting information from the relevant departments or by researching proprietary documentation (work instructions etc). A significant tool for the implementation of learning as a dialogue with internal and external knowledge drivers is the use of an Internet and/or Intranet platform. Having redefined its task, the group publishes its solution, which is then commented on by external experts (such as officers of the Federal Institute for Work Safety and Occupational Medicine) who provide ideas for improvement. Knowledge is thus supported by practical solutions to problems.

C) Learners as designers

The group is also tasked to document the course of the work and learning process, and to prepare a presentation as a digital case study. The case studies on the PLC should be used within the enterprise as well as within a cross-company ‘learning community’. From the point of view of media didactics, this promotes the objective of making use of the computer as a ‘cognitive tool’ (see Jonassen, 2005). The priority objective of media development thus creates a meta-level to reflect and build knowledge, wherein the change of perspective is of crucial importance. This change is relevant for knowledge co-operation, for example at the points of takeover and ‘seams’ in the PLC.

D) Linking individual and organisational learning:

Following the initial identification of existing knowledge, the cross-process dialogue with internal knowledge drivers and information resources, and the subsequent publication as case studies of solutions which have been improved on the basis of feedback received, the group’s learning is focused on developing work and business processes in the enterprise concerned. Therefore, this form of working and learning creates potential for improvement and innovation in the company.
Summary

This article shows that the integration of health and safety in vocational training is a demanding and important challenge, particularly in relation to crafts and technical professions. Change can be brought about according to the guiding principle of design-based training and the ability to ‘act and reflect’. There is a clear need for action to facilitate knowledge transfer in the improvement of training methods, with a focus on informal learning and experience-based learning.

The Enterprise Model Project illustrates and elaborates on this need for action on the basis of existing research.

The Working Initiative Life-Long Learning (INQA Learning) strives to help transfer these efforts into the national and Europe-wide discussion, so as to achieve the objective of integrating health and safety into life-long learning.

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References


Over the last 15 years, particular emphasis has been placed on the health and safety of young people in Denmark, with a very positive effect in relation to the number of occupational injuries.

During the period 1985-2004, there was a fall of 65% in the number of occupational accidents reported for young people under 18 years of age, from 1,482 to 511 accidents, and of 63% for young people between 18 and 24 years of age, from 14,162 to 4,937 accidents (see Tables 1 and 2).

Correspondingly, in the period between 1988 and 2004, there was a fall of 75% in the number of reported work-related illness for young people under the age of 18 from 155 to 33, and for young people between 18 and 25 years of age from 1,992 to 506 (Tables 3 and 4).

What has been done to make this positive result possible? No evaluation of the individual initiatives has been carried out, and even if it were, each and every one would only tell a part of the story. Many different initiatives have been undertaken by many different bodies including the media, national and local organisations, and individual...
people, and this may be the key to the explanation. Three conditions, however, have been of considerable significance:

- For a long time, Denmark has had and still has a political and popular desire to prevent people from becoming injured at work, and especially children and young people;
- In 1989, it was brought to the attention of the Danish population that there was a problem with children and young people's work-related health and safety, and
- This created a basis for many different authorities and organisations starting up initiatives, meaning that the topic 'children and young people's work-related health and safety' was spoken about widely in society, and that the topic was given high priority by the Labour Inspectorate in Denmark.

Political and popular desire

Legislation in the area is an expression of this political and population-related desire. Safety in the workplace has been regulated in Denmark since 1873. This first law regulated the safety of young people under 18 years of age who were employed in factories. In the 132 years that have since passed, the law has developed a great deal. The implementation of the Work Environment Act in 1978, in particular, expressed the feeling that people in Denmark had that health and safety for everyone at work was an important part of a welfare state. It was not acceptable to be hurt by your work.

Work for young people under 18 years of age is regulated both through the Work Environment Act and through special provisions regarding young people's work. In addition, the EU Directive on the protection of young people in the workplace was incorporated into Danish regulations in 1996. The legislation has thus regulated the safety of children and young people in the workplace particularly strictly.

Bringing young workers' health and safety to people's attention

Young people's working conditions have been brought to people's attention in more recent times in Denmark in connection with the publication of the annual statistics on reported occupational accidents and work-related hardships in 1989. In all the years where reported occupational injuries have been registered, annual statistics have been issued, including information on the age distribution. However, in 1989, a young journalist took a look at the figures and wrote about the issue.

His attention was directed to the number of reported occupational accidents and cases of work-related illness among young people under 25 years of age, which were shown to be at a quite unacceptable level in Denmark in 1989. The journalistic treatment of the scope and seriousness of the accidents among young people in work led to a comprehensive political and national debate.

The journalist did not just write one newspaper article - he really latched on to the problem and dug deeply into it. This gave rise to the mention of a number of concrete cases in newspapers, concerning young people who were injured in their workplace. The link between the number of injuries, the consequences and the concrete stories made not only the young people but also their parents, their schools, the social authorities and specialist organisations react. Television, and especially radio, joined in the presentation of the problem of the health and safety of children and young people, leading to a national and political debate. This debate had an effect on a large number of initiatives in subsequent years, with obvious effects.

National initiatives

The national initiatives were comprised of a large number of major and minor initiatives. Schools, local associations and local authority administrations were all involved in projects, and private initiatives and cultural activities arose throughout the country on the topic of 'dangerous work for young people'. There was no form of registration or compilation in this area, partly because the activities arose spontaneously in many places, and partly because they happened quite rapidly in the wake of the journalistic debate.

A book was released on dangerous work for young people and there were special inserts in the most popular youth magazine, and one example of the broad attention was that 'young people's work terms and risks' were among the topics of the written final exam in the Danish paper at the Danish high schools throughout the country.

Political prioritisation and plan of action

In 1995, the Danish Parliament drew up a plan of action for the next ten years, for a clean work environment. There were seven main goals, one of which was to reduce the numbers of young people being injured in connection with their work.

This was achieved in the following ways, among others:

- By cooperating with traditional work environment players and labour market parties and professionals as well as other interested parties, e.g. trainee and parent organisations;
- By initiating special activities to prevent occupational injuries in relation to those who were 18-24 years of age, as this age group is often inexperienced in terms of work and lacks routine;
- By emphasising that work environment conditions in connection with training and practical experience periods must comply with legislative requirements, as it is important for young people to learn good work practices early on.

In 1996, a kitty of over EUR400,000 was set up for targeted projects in the following areas:

- Experiments involving trainees and students in safety work in schools and training institutions;
- Experiments regarding health and safety conditions in schools and training institutions;
- Experiments with education and educational materials in health and safety conditions (in all, eight projects were given financial support);
- Initiatives aimed at young people in agriculture, with financial support of over EUR1.3million aimed at improving the safety conditions and working practices of farmers who employ agricultural trainees, and
- A special financial kitty of over EUR160,000 to focus on the work environment and introduction to work of those aged between 18 and 25.

It was thus possible to implement a number of projects and to focus on the safety of young people in many different contexts.

Documentation of occupational injuries

In connection with the debate which arose in 1989, the Labour Inspectorate implemented a thorough analysis of the occupational
accidents and work-related illness that were reported over a 5-year period (1984-1988) for young people under 25. The aim was to chart risks, particularly those that gave rise to injuries, but also to gain information on the working conditions and work tasks carried out by young people that gave rise to injuries, as well as the industries and businesses in which these were found.

This documentation formed the basis of a large number of the initiatives that were started in the subsequent years, and meant that they were targeted and action-oriented. The comprehensive analysis was carried out in 1994 to help establish a new plan of action for the work environment, and continuous monitoring has taken place since 1998.

The Labour Inspectorate's control contributions

The Labour Inspectorate has over the last 15 years implemented targeted initiatives in relation to young people and particularly in relation to young people under 18 years of age. The most important are mentioned here:

In 1990, a specially targeted initiative aimed at businesses that employed experienced young people.

In 1995, the Labour Inspectorate sent out a number of information folders to schools and businesses, on young people's leisure time work. Targeted control actions were also taken with businesses.

In 1995-2005, the Labour Inspectorate implemented a large number of industry-orientated initiatives focused on young people's working conditions.

In 1999, the Labour Inspectorate implemented a special initiative aimed at young people under 18 years of age who worked alone in the evenings in bakers' shops, kiosks, grill bars, video shops and petrol stations.

In 1999, the Labour Inspectorate launched an information campaign in agriculture, as part of a wider European initiative.

Conclusion

In Danish legislation and the enforcement thereof, consideration has always been given to the safety of young people, and particularly the safety of those under the age of 18. Similarly, there has been continuous registration of accidents that befell young people, with annual government statistics. Seen in relation to many other countries, the number of accidents in particular among young people under 18 years of age has been relatively low in Denmark.

It was nevertheless shown that the journalistic treatment of the information on the occupational accidents and work-related illness, in spite of everything, continued to occur among the young people, and was of crucial importance in drawing political and popular attention to the problem. The reason as to why this occurred in 1989 in Danish society has not been researched, but the reality is that it happened.

The motivation and concern that developed in 1989 took on a significance as regards the broad national reaction. The presentation of analyses of working conditions, risks and measures targeted both at young people and at their parents, their schools and their employers led to an understanding among those who had a responsibility and those who had influence.

The legislation has always been in place and is in line with the EU Directives. However, in connection with the government's plan of action for the period of 1995-2005, more targeted initiatives were implemented in relation to young people's health and safety, which thereby supported the preventative initiatives that schools, parents, employers and the young people themselves were able to undertake.

The result is completely positive, but it also shows that political prioritisation, broad presentation, legislation and initiatives, and national motivation and concern have been important in order to achieve this effect. The long, hard work of reiteration and maintenance is also an absolute necessity if we are to create a lasting result.

The work is continuing, particularly in connection with young people's training: it is here that they absolutely must learn to watch out for their own health and safety and that of others. This is a vital part of creating a generally improved work environment.

Information on occupational injuries in Denmark

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Background

The general rules for children and young people's work

Children under 13 years of age may not usually undertake occupational employment, but they may participate in cultural activities as agreed with the police.

Young people between 13 and 15 years of age who are normally covered by Danish laws on compulsory education may take on specific, limited types of work for brief periods, e.g. newspaper rounds, sales assistant jobs in shops and light cleaning.

Young people under 18 years of age may have occupational employment, but there are rules on the tasks they can carry out and the technical tools that they may work with.

Young people between 18 and 24 years of age may undertake all types of occupational work. The general work environment rules apply here.

Young people's occupational employment

By far the majority of young people under 18 years of age in Denmark are involved with one form of education or other, but it is common for young people to have a spare time job outside of school. In addition, specialist education includes practical work experience periods or apprenticeships. Various surveys show that 50-60% of the young people between 13 and 18 years of age have a spare time job, for on average between 6 and 7 hours a week. An even greater number (70-80%) of young people between 18 and 24 years of age who are in education have a spare time job.

Young people under 18 are employed particularly within the distribution of newspapers and advertising, the retail sector, in cleaning and babysitting, while fewer work at workshops and factories. The young people between 18 and 24 years of age have all types of work.
In our globalised communication society with its fast technological and economic changes, education and training is of high economic value and the start-up capital for personal development. It is also one of the basics for life-long learning and for the ability to face the challenges of the continuously changing labour market successfully.

Significance and acceptance of vocational and technical education in Austria

High quality vocational and technical education and training (VTE), oriented towards practical and economic requirements, is therefore of major importance. The better the VTE, the higher is the chance of employment. The fact that today more than 80% of Austrian youth want initial vocational training at secondary level schools shows its high acceptance among the population.

VTE has a long tradition in Austria, not only as far as training for apprentices is concerned, but also in full-time VTE schools. At the end of the 18th century the first vocational and technical college was introduced, and since that time a constant upward development has taken place. Today a wide variety of educational pathways are provided.

The Austrian education programmes for VTE generally include the principles of integration of occupational safety and health (OSH). But in working life the legislation for prevention of industrial accidents and occupational illness is linked to the Health and Safety Executive (in Austria: the Labour Inspectorate) and to the organisation that the author represents, the Austrian Workers Compensation Board (Allgemeine Unfallversicherungsanstalt).

Discussions on the new kind of economy took place at the beginning of the new millennium, as if the old economy, based on productive work, had served its purpose and therefore the relationship between workers and work safety had also changed. Yet this does not seem to be valid for economic development in Austria and in Europe. Since productive work has not disappeared completely, although conditions may have changed, employees’ safety is still an important factor.

All the risks associated with work have to be covered and compensated for by a social system based on social laws. Not only health insurance and pension insurance, but also occupational accident insurance must be covered. The transfer of liability from the company to the workers compensation board is one of the basic standards of our occupational insurance system, and an important part of our society now and in the future.

The situation can be compared to other countries: the Austrian Labour Inspectorate is not responsible for the situation in schools, especially not for the education programmes, and the Workers Compensation Board is responsible only for work situations, through occupational accident insurance. Therefore, most of the experience in practical prevention in these organisations does not feed through into vocational and technical education.

Prevention in a situation of change

Prevention in Austria is presently undergoing rapid change. Health and safety at work are the main objects, however to reach the target
many different approaches are being discussed. Yet the existing concept will not be substituted by another one. The changes we have seen can be understood as giving us additional opportunities to develop our methods and measures.

The cooperation of members of the European Union has resulted in the development of minimum levels of safety at work, and has set significant benchmarks. But it is not just European guidelines that have led to new approaches: looking towards the future was always the rule.

The main reason for the new situation was the understanding that production processes, tools and media have changed rapidly, and no further improvements could be brought about by safety rules. The new technologies did not lower the safety standards, but neither did they raise them.

In the European Union, harmonisation and standardisation of regulations guarantee the quality and safety of products at a high level. This system was built up not just for safety at work, but as an integral part of the European market. Guidelines and standardisation in the field of machine safety are still only partly complete. There are very few harmonised standards for OSH existing, and none in the field of VTE.

Integration of occupational health and safety into vocational training for apprentices

The integration of OSH prevention training into VTE requires cooperation between educational institutions and organisations. In Austria we are lucky to have a decree that helps to improve that cooperation. The Austrian regulation protecting children and young people at work is based on European guidelines, and it places temporary restrictions on work with dangerous machines. The regulation lists specific dangerous machines that are not allowed to be used by those who have spent less than 18 months as an apprentice.

After special theoretical and practical instruction on these machines, the restriction is reduced to 12 months. There must be a minimum of 24 training hours in vocational schools for apprentices. The training has to follow the ‘guidelines for OSH instruction’ developed and published by the Austrian Workers Compensation Board.

To begin with, few believed that a regulation valid for the protection in OSH for apprentices at work could influence education programmes. There have always been two different authorities responsible for administration in these areas. But the regulation enables education programmes to be adapted without any obligation to do so. There was some hesitation on the part of teachers after occupational accidents prevented the entire programme from being realised. Responsibility for workplace situations of course rests always with the employer, while the situation in schools is the responsibility of teachers and school directors.

The decree gave our OSH experts the chance to influence education programmes and to provide schools with state-of-the-art teaching materials for VTE, adapted to the abilities and knowledge of apprentices. In addition, schools were forced by representatives of the Chamber of Commerce to adapt their education programmes according to our guidelines for OSH instruction, because there is always a need for highly qualified apprentices that can be used for productive work. And last but not least, this has brought about an improvement from the point of OSH. Before this special training in schools was introduced, the restrictions ended after 18 months and apprentices could legally work with dangerous machines without being properly prepared.

We have developed guidelines for OSH instruction for 74 registered occupations and the number is still growing. These guidelines are based on the legal register of dangerous machines and their specific use within these professions. Together with this list of specified machines the various activities for training on these machines are stated. The guidelines were developed with the input of representatives of the social partners, and introduced to vocational schools for apprentices through a series of seminars held by local education authorities. Every apprentice who has been trained in VTE receives a certificate from the school that they can show to employers. Within one year almost every vocational school for apprentices has sent teachers to these seminars, where every participant is supplied with multi-media training materials, including a CD-ROM entitled ‘The L-Program’, with various presentations in PowerPoint.

The ‘Austrian Health and Safety Licence’ – a first step into the ENETOSH project

In our opinion, VTE is not just education for specific professions, but also training in meeting the challenges of working life more generally. We need qualified personnel with experience in information technologies, and knowledge of OSH. We already work well with the European Computer Driving Licence (ECDL) and the European Business Driving Licence (EBDL).
Safe Start!

Initial discussions on implementing the Occupational Health and Safety Licence in Austria were quite positive, even though there are still different legal situations within the European Union. Nowadays the target for occupational schools is to provide additional competences that are linked to practical working situations. To reach this target, schools send their teachers to special training seminars to enable them to teach in a way that is relevant for these new qualifications.

In Austria, since 2004 we have offered a series of OSH seminars to teachers in vocational schools and higher technical colleges. Their duration is 96 hours in total. The participants are trained in OSH and they receive certificates on completion. The education programme covers the following issues: basic laws and technical standards; organisation of OSH in practice; workplace safety; ergonomics; chemical substances; evaluation of hazards, and cost-benefit analysis. With this extra knowledge, teachers will be able to include OSH in their teaching programmes. Finally, their students receive the Occupational Health and Safety Passport.

A special working group within the European networking project ENETOSH (1) has the objective of defining the main criteria for international acceptance of the teacher’s licence and the OSH Passport as a certificate for students. (An article about ENETOSH appears elsewhere in this magazine). The examination of students, supervision by external experts and the costs of education are just some of the issues to be discussed in future within the organisations involved.

We hope that ENETOSH will play a major role in further developments in this area, and will help to follow up the implementation of OSH in the various national education programmes within the EU and in neighbouring countries.

The following table shows an overview of OSH training in occupational schools in Austria and the qualification of teachers to be trainers in OSH.

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1. European Network for Education and Training in OSH (ENETOSH) www.enetosh.net
What poor health and safety means in practice for child labourers

- In 2000, an 11-year-old girl, illegally employed on a farm in Ceres, Western Cape, South Africa, fell off a tractor, resulting in the amputation of her left leg (1);
- In 1990, a 15-year-old migrant farm worker in the USA was fatally electrocuted when a 30-foot section of aluminium irrigation pipe he was moving came into contact with an overhead power line. Two other child labourers with him sustained serious electrical burns to their hands and feet (2);
- A 17-year-old girl had part of the third finger on her left hand amputated—only one hour after starting her Easter holiday job in a bakery—after her fingers were crushed in a machine.

What is child labour?

Child labour is a worldwide phenomenon and it takes many different forms. Nearly 218 million children around the world carry out work and economic activities that adversely affect their safety, health and well-being, and hinder their education, development and future livelihoods (3). Article 2 of the International Labour Organization’s (ILO) Convention on the Worst Forms of Child Labour, 1999 (No. 182) states that “the term “child” shall apply to all persons under the age of 18.”

The ILO’s goal is the progressive elimination of all forms of child labour worldwide with priority given to eliminate without delay what are termed “the worst forms of child labour” (WFCL). The WFCL, as defined in Convention 182, include all forms of slavery, trafficking of children, use of child soldiers, commercial sexual exploitation and prostitution, and hazardous child labour globally.

(1) Personal communication to author by Joy Mehlomakulu, Deputy director, Labour Relations, South African Department of Labour, Pretoria, November 2004.

The ILO seeks to strategically position child labour elimination at the macro-level in the socio-economic development and poverty reduction strategies of its member countries, in order to encourage mainstreaming and integration of child labour issues and concerns. The ILO’s International Programme on the Elimination of Child Labour (IPEC) consults on and implements its activities among a range of key partners, institutions and stakeholders at the global level. Its work fits into and supports various development frameworks at the international level, such as the United Nations Millennium Development Goals (MDGs), the Poverty Reduction Strategy Papers and the Education for All Initiative.

As much of the work these children do is considered as ‘helping out,’ it is seldom recognised in official statistics. Thus, the real extent of the problem may be invisible to policy-makers. It is often the head of the household who is registered as working, especially where migrant workers are employed. Child labour may also go unnoticed when underage workers are supplied through labour contractors and sub-contractors. They also often start work from an early age, as young as 5, 6 and 7 years old.

Child labour is found in all regions of the world, in both developing and industrialised countries. For example, in 1996, according to data from the United States Current Population Survey, there were an estimated 300,000 workers aged 15 to 17 in agriculture. About 75 percent were paid farm workers, 15 percent were self-employed, and 10 percent were unpaid family workers (4).
Safe Start!

What is hazardous child labour?

Work which results in children being killed, injured or made ill as a consequence of poor safety and health standards and working conditions/arrangements is called hazardous child labour. It is the largest category of WFCL, with an estimated 126 million children, aged 5–17, working in dangerous conditions in sectors as diverse as agriculture, mining, construction, manufacturing, the service industries, hotels, bars, restaurants, fast food establishments, and domestic service.

Children should not carry out hazardous work. This restriction applies to the sub-category of ‘young workers’ who are female and male adolescents below the age of 18 who have attained the minimum legal age for admission to employment and are therefore legally authorised to work under certain conditions. Under the ILO Minimum Age Convention, 1973 (No.138), the minimum age for employment or work should be not less than 15 years, but developing countries may fix it at 14.

This does not mean that young workers should be engaged in hazardous work. Efforts must be made to ensure that young workers are not automatically engaged in hazardous work. (Determination of what constitutes hazardous child labour is left to individual countries).

IPEC’s strategies to eliminate hazardous child labour are based around prevention, withdrawal, and protection.

Prevention means identifying children at potential risk of entering hazardous work and stopping them from becoming child labourers in the first place. To ensure that parents see schooling as the best option for their children, families need, among other things, income security and social benefits, like health insurance, to survive short and long-term crises.

The withdrawal and rehabilitation of children already carrying out hazardous work includes: identifying those children in hazardous work; removing them from workplaces; getting them into school and/or skills training, and monitoring to ensure that children do not return to dangerous workplaces.

14-17 year old children, who have reached the legal minimum age for employment in their country, continue to be at risk and need to be protected by improving occupational safety and health and working conditions/arrangements in the workplace. Strengthening risk management (5) in the undertaking is considered to be a basis for these types of initiative.

The scale of hazardous child labour

The reality is we don’t know how many children are killed, injured, or suffer health problems as a result of their work. The ILO estimates that 22,000 children (6) are killed every year at work. Figures for non-fatal child accidents or ill health due to work are currently not available. But every year there are 270 million work accidents and 160 million cases of ill health due to work, and child labourers figure amongst these statistics.

Lack of data, linked to under-reporting of accidents and ill health, is a global problem, and may even apply to some European Union countries. It makes it difficult to assess the scale of the child labour problem, hampers prioritisation of activities/sectors for elimination, and efficient allocation of resources.


(6) Cited in IPEC Safety and Health Fact Sheet “HCL in Agriculture: an Overview”.

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Child labourers are at greater risk than adult workers

Child labourers are susceptible to all the hazards and risks faced by adult workers when placed in the same situation. They are at even greater risk from these dangers because their bodies are still growing and their minds and personalities still developing, and they lack work experience. So the effects of poor to non-existent safety and health protection can often be more devastating and lasting for them. An accurate profile of the safety and health of child workers must go beyond mortality and disease/illness (morbidity) data. It must also consider emotional, psychological and learning problems, the social and environmental risks to which they are related, the denial of education, and the total costs to countries and society. It is useful to bear in mind the World Health Organisation’s definition of health as the complete physical, mental and social well-being of a human being, and not merely the absence of disease or infirmity.

OSH hazards and risks

Child labourers are at risk from a wide variety of machinery, biological, physical, chemical, dust, ergonomic, welfare/hygiene and psychosocial hazards, as well as long hours of work and poor living conditions. In the following section, agriculture - one of the three most dangerous industries in which to work, along with construction and mining - is used to illustrate the types of hazards and levels of risk to which child labourers are exposed.

Hours of work tend to be extremely long during planting and harvesting, often from dawn to dusk, excluding the transport time to and from the fields. The intensity of the work offers little chance for rest breaks, and the length of the working day offers insufficient time for recuperation or leisure.
Much agricultural work is physically demanding and strenuous. It can involve long periods of standing, stooping, bending, repetitive and forceful movements in awkward body positions (see cutting tools below), and carrying heavy or awkward loads - baskets, bundles of crops, water containers, etc. - often over long distances.

Children must often work in extreme temperatures. They may work in the hot sun or in cold, wet conditions without suitable clothing, footwear or protective equipment. In hot conditions, they may get dizzy from dehydration because they do not have access to drinking water.

Child labourers use dangerous cutting tools, including machetes, knives, scythes, sickles, etc. to cut crops, hay, weeds, and brushwood. Cuts are frequent and even more serious injuries can be sustained, such as amputations. Repetitive and forceful actions associated with cutting can also harm their musculoskeletal development.

Children risk falling and injuries from falling objects. Child labourers are especially used to help harvest crops. They may fall off ladders or even out of trees while picking high-growing fruit, and may also be injured by fruit pods falling from trees.

Skin problems are common. Many of the crops children work with are abrasive, prickly or contain skin irritants that can provoke allergies, rashes, blistering, etc.

Child labourers are at risk of being injured or killed by farm vehicles and heavy machinery. This includes operating powerful machinery and equipment, tractor overturns and being hit by tractors, trailers, trucks and heavy wagons used to transport farm produce; climbing on or off trailers or other machines whilst these are still in motion, slipping or missing their footing, and falling under them and being crushed or run over.

Examples of IPEC-supported projects in Europe

In Albania, Bulgaria, Moldova, Romania, Ukraine and the UN-administered province of Kosovo, IPEC's PROTECT Central and Eastern European Project provides technical assistance against child labour and sexual exploitation, including trafficking. In the region, children are exploited in the agricultural sector - in family-owned farms where they are exposed to multiple hazards and risks - and in the construction sector, as well as in many other trades (from shoemaking to brickmaking). Children are also exploited for criminal activities (begging, petty theft and drug peddling), and are also victims of sexual exploitation (prostitution and pornography).

In Turkey, IPEC has run a series of child labour elimination action programmes with the Ministry of Labour and Social Security as follows:

1. Training is provided for labour inspectors on child labour. On (i) occupational safety and health risk assessment and health outcomes regarding children; and (ii) communication skills to enable inspectors to discuss with children, employers, foremen and families participatory methods to improve the working conditions of children, as well as alternatives to hazardous work. The training has resulted in enterprise-level improvements in building ventilation systems, electrical installation systems and storage systems, lowering of dust levels in workplaces, and provision of medical check-ups for child labourers.

2. A programme, ‘Analysing the Effect of Chemicals on Working Children’, has (i) measured levels of harmful chemicals, particularly hexane and heptane, in adhesives used in the footwear /leather industry, and monitored health outcomes; (ii) introduced workplace risk prevention and reduction measures by training employers and children to deal with the hazards and risks, and to treat children who are affected by the chemicals.

As a result of this awareness building, some families withdrew their children from their jobs. In addition, the programme led employers to begin improving working conditions in their enterprises.
Exposure to loud noise can harm hearing. Excessive exposure to noisy machinery can lead to hearing problems in later life.

Many child labourers also mix, load and apply toxic pesticides, some of which are extremely poisonous or potentially cancer-causing, whilst others may adversely affect brain function, behaviour and mental health, or can harm both female and male reproduction later in life. Lack of proper pesticide storage facilities or systems for disposal of empty pesticide containers can result in child poisonings or even deaths when containers are used for other purposes.

Child labourers are often exposed to high levels of organic dust especially when harvesting or storing crops, preparing feed for farm animals, and sweeping up in workplaces. Breathing organic dust can result in allergic respiratory diseases, such as occupational asthma and extrinsic allergic alveolitis (hypersensitivity pneumonia).

Child labourers are at risk of injury and diseases from livestock and wild animals. Herding, shepherding and milking farm animals can be risky and children are frequently injured by being jostled, butted, or stamped on by farm animals. Working barefoot in fields or around livestock also exposes them to cuts, bruises, thor injuries, skin disorders, or even catching water-borne diseases, especially where soils are wet and sticky.

Mobilising stakeholders to tackle hazardous child labour

Suggestions include:

National health and safety policies and programmes
Eliminating hazardous child labour must become a central component of national health and safety policies and programmes. The ILO encourages countries to develop national OSH programmes that focus on specific national priorities. National OSH programmes in general aim to promote compliance with good standards in practice, and often include a wide range of activities, such as labour inspection, publicity and awareness-raising campaigns, training and educational activities, etc. This includes working with labour inspectorates and labour inspectors to build their capacities to deal with child labour issues. See box for an example of such work in Turkey.

Developing and implementing national lists of hazardous child labour
An important instrument that policy makers can use as part of their strategy to tackle hazardous child labour in agriculture is a legally-binding list of hazardous work activities and sectors that are prohibited for children. Countries that have ratified ILO Convention No.182 are obligated to do this under Article 4. In drawing up a national list, countries must also identify where such hazardous work is found and devise measures to implement the prohibitions or restrictions included in their list (see box 2). Because this list is critical to subsequent efforts to eliminate hazardous child labour, the Convention emphasizes the importance of a proper consultative process, especially with workers’ and employers’ organisations, in drawing up and implementing it.

Strengthening OSH risk management in the workplace
Strengthening OSH risk management in the workplace is an important element in helping protect young workers. The ‘workplace’ can also be the home, e.g. in shoemaking and firework manufacturing. So in the context of child labour, strengthening OSH risk management can involve working with a wide range of actors ranging from employers’ organisations, trade unions, companies, producer organisations to community groups and families.

Awareness raising
It is important to raise awareness on the issue of elimination of hazardous child labour, and a successful example of this is ILO IPEC’s Red Card campaign. In 2002, ILO IPEC teamed up with the African Football Federation to launch a global campaign against child labour at the African Cup of Nations. The campaign aims to use the world’s most popular sport to mobilise public opinion against child labour.

Training
Training on OSH risk awareness-raising in schools, colleges, vocational/skill training centres etc, incorporating OSH into course curricula, including hazardous child labour issues.

European Union
There is a lack of European Union data on child labour and its elimination, compared especially to statistics and studies from the USA. Therefore a focused effort to generate both statistics and studies on child labour within the EU and Accession countries, including examples of good practice on elimination, would be important.

It is also important for the European Union to take a more proactive role in the elimination of child labour, especially hazardous child labour, as this directly relates to improving accident prevention and improving workplace standards, and to raise visibility within the EU on the problem of child labour. The European Agency for Safety and Health at Work could help to generate statistics and studies so that informed action and preventive measures can be taken to eliminate child labour in the EU and beyond, and these should feature in campaigns such as Safe Start.

In cooperation with hundreds of partner organisations around the world, the International Labour Organization, via its International Programme on the Elimination of Child Labour (IPEC), is active in 75 countries, removing children from abusive child labour, providing them with rehabilitation and education and providing their families with income-generating alternatives.

For more information see the ILO IPEC website: www.ilo.org/childlabour

Peter Hurst has over 15 years experience at the international level of working on OSH, labour, agricultural, and pollution prevention/environmental issues. He is currently the Occupational Safety and Health Specialist for the International Programme on the Elimination of Child Labour of the International Labour Organization. His work focuses on the elimination of hazardous child labour across many occupational sectors, with a special emphasis on agriculture.
On 19 November 1994, 19-year-old Sean Kells died of burn injuries suffered in a workplace explosion near Toronto, Ontario, Canada. Sean, hoping to save money for Christmas gifts and to attend university the next year, was killed while working in a small warehouse on his third day of a part-time job.

Until that day, I had no concept of the enormous impact of the ‘issue’ of workplace safety and its debilitating consequences not only for victims but also for family and friends left behind. Sean was, and is, my son. His completely preventable death and my subsequent realisation of the magnitude of the problem were the beginnings of a personal journey. In time, it led to the creation of the Safe Communities Foundation in Canada and to ‘Passport to Safety’, now an international web-based challenge for young and new workers.

It goes without saying that my discovery that inexperienced young people are especially vulnerable to workplace injury came the hard way. In Canada, recent studies show that work-injury rates for young workers (under the age of 24) across the 13 provinces and territories are 1.25 to 2.00 times higher than for their adult counterparts. In my own province in 2002, almost 50,000 young workers filed injury and illness claims with the Ontario Workplace Safety and Insurance Board (WSIB), 15,000 of them serious enough for young people to miss at least one day from work.

Some six months after Sean was killed, a coroner’s jury investigated his death to determine what might be done to avoid a similar fate for others.

Through these proceedings, I learned that laws, regulations and rules surrounding workplace safety in Canada are largely in place, as they are in most countries around the world. I have yet to discover any jurisdiction that has legalised death or injury at work. Yet it still happens, with tens of thousands of people hurt, disabled and even dying on the job every day, everywhere on the planet. Why?

For me, the answer that emerged from the inquest was clear. We simply accept things as they are. Our ‘culture’ has not yet evolved to the point where we utterly reject the notion that injury at work is inevitable. Hundreds of thousands of health and safety professionals, workers, responsible employers and victims know this to be a false premise. They work diligently day after day to make a difference, often with great success in specific applications.

But to a large degree, they operate within their own bubbles. The rest of us, from ordinary people to leaders in many walks of life and in all areas of society simply don’t ‘get it’, much less rally to the cause of eliminating workplace injury. We may not ‘get it’ because, as in my own case, most of us do not even understand there is a problem. Others simply accept the proposition that injuries are a natural outcome of work. Still others, by far the smallest group in number, recklessly jeopardise other people’s lives for an ulterior motive, be it in the name of progress, profit or the greater welfare of the state.

While the coroner’s jury did not spell out the words ‘culture change’ in their findings, this was the essential direction behind many of their conclusions. They recognised traditional enforcement and inspection as part of the answer but the continuing carnage proved it could not possibly be the only one. Over time, root causes of cultural indifference and ignorance had to be addressed, to bring the full weight of societal pressure to bear.

The jury understood that while many employers live and breathe health and safety in everything they do, like it or not, many more
employers do not comply at all, particularly those in small or medium-size enterprises.

Sean, for example, was working in a small warehouse that violated many safety laws. Tragically, Sean had no way of knowing that anything was amiss. His employer did not train him or equip him properly. The regulators and inspectors never came. I had never taught him anything about health and safety because I knew nothing about it myself. The school system utterly failed him and thousands of other young people in preparing them for a workplace environment.

Thus, the jury recommendations went beyond compliance and standard workplace alerts. They called for integration of OHS into education systems. They called for extensive public awareness programmes aimed at people of all ages and walks of life. And they recommended a targeted, unrelenting focus on young people themselves, inside and outside the school system.

It was the first step leading towards a full-blown social movement, perhaps comparable to the evolution of the environmental movement but with a long way to go yet. It seems poised to evolve into a sweeping culture change led by knowledgeable young people and supported by those of us in a position to empower them with the knowledge they need to succeed.

Today, in part as a result of this jury’s findings, Ontario has conducted youth and general awareness campaigns for ten unrelenting years. It has embedded workplace health and safety into 86 subject areas within its secondary schools, including the introduction of Passport to Safety as a measurement tool for students. It has done all this, and much more. Among the results:

- Severe trauma injuries to young people in Ontario workplaces went down 45% from 2000 to 2004, compared to increasing numbers in every other province but one (where it stayed the same) over the same period;
- Workplace injury is now young people’s number two concern as a risk to personal well-being, behind only drinking and driving;
- A 27% reduction in overall workplace injuries among this group, and
- As one possible measure of culture change, there was widespread public and political support last year for doubling the number of labour safety inspectors to tackle high-risk, poor-performing employers.

What is Passport to Safety?

Passport to Safety is a standard, not simply a test or challenge. Its learning outcomes speak to the question ‘What is the minimum anyone should know before going to work?’

The vision behind it is to foster a culture shift, driven by youth, parents and progressive employers, to create a demand for higher standards in education and overall employer practices, to reduce youth injuries. It supports and encourages training in workplace health and safety for young workers, although ultimately it involves the health and safety of all workers.

Since the programme went online in May 2004, almost 200,000 tests have been ordered by teachers to distribute to students in Ontario and New Brunswick. Passport to Safety is offered as the standard test following classroom delivery of health and safety education, paid for by Worker Compensation Boards (WCBs) through a small participant user fee. As a charity, all proceeds go back into maintaining and further developing the system. Both teachers and the departments of education have embraced it as a perfect fit to test retention of health and safety information taught in schools. It can also be used as a stand-alone teaching and testing method when such curriculum options do not exist, or where teachers do not feel confident about teaching around health and safety issues. Teachers or employers can manage participation through a personalized, on-line administration area as well as having access to new tools.
The Passport to Safety programme provides relevant and timely information at a time when adolescents are faced with making choices and decisions in their new role in the workplace. Participants take an online, no-fail 'test' and are given a transcript verifying completion of the test to attach to their résumés.

The goal of the test is to establish a pre-work foundation of minimum health and safety knowledge. Passport holders are then encouraged to add credits to their transcript from other courses that help them manage risk, covering subjects such as first aid, babysitting, water safety, driver education and even extreme skiing training. The benefits to youth include:

- A transcript that is recognised across Canada
- A valuable ‘risk management’ add-on to accompany a job application
- Improved safety awareness for them and for others
- Being prepared to apply what they know and ask questions, and
- Credit for previous safety-related achievements.

Passport to Safety is also marketed to employers. By requiring the successful completion of the test, employers have a platform on which to build job-specific training. Some employers use the programme as part of new employee orientation. As an example, the Workplace Safety and Insurance Board in Ontario requires all summer students to complete the test before their first day of work, incorporates Passport to Safety into employee orientation for all workers, and offers free passports to the children of all employees.

At the same time, Passport to Safety is not a substitute for the job-specific health and safety training that employers under provincial, territorial or national laws are required to give their workers. All employers must still provide the training necessary for each worker to be able to carry out his or her role safely. While the programme in no way relieves the employer of their legislated responsibilities and obligations to provide training and a safe place to work, it does introduce a new measuring tool and platform for basic understanding through a standardised test.

Finally

I do not know whether my son would be alive today if his parents had known more, or had the education system given him more to work with. Clearly, he would be alive if his employer had done more, as they were legally bound to do. I do know, however, that Sean paid the ultimate price for the ignorance of others. There is no defence at all without knowledge. A generation from now, our children will simply not accept ignorance as an excuse. Yet, while we want our children to lead this charge, they will not be able to do it without us. The faster we empower them with knowledge and the more systematically we expose them to it, the sooner they will be able to speak up when they know something is wrong in their everyday world of work. The day that happens, when young workers speak up as the norm and not as an act of courage, is the day we know our richly imagined future is not far off.

Passport to Safety is a programme under the umbrella of the Safe Communities Foundation. The Foundation is a national, not-for-profit, charitable organisation dedicated to making Canada the safest country in the world to live, learn, work, and play. The Safe Communities concept is supported by the World Health Organisation. More information about Passport to Safety can be found at: http://www.passporttosafety.com/

Paul Kells is the founder of the Safe Communities Foundation in Canada: he is also the executive director of the Passport to Safety programme. Paul has been recognised for his leadership in injury prevention and volunteerism. He has been awarded the Meritorious Service Medal (Civilian) of Canada, is a member of the Order of Ontario, and has been awarded the Ontario Award for Outstanding Achievement in Volunteerism.
Safe Start!

A little fewer than two million people live in Slovenia in an area of just over twenty thousand square kilometres. There are 150,871 young people aged from 15 to 19 years in our country, making up 7.6% of all inhabitants.

Approximately 8.7% of these young people are economically active, working especially in the banking and finance area (over 45%), trade, in the construction industry, in the health sector and in social work.

There were no deaths among those aged under 19 due to work-related accidents in the period between 2004 and March 2006. Between 2004 and 2005, 352 work-related accidents were reported, of which 3 resulted in severe injuries. Data on accidents among young people in Slovenia is obtained from Slovenian European Statistics at Work (ESAW) methodology statistics, managed by the Labour Inspectorate.

Non-fatal accidents

If we compare the number of accidents between the genders, it is clear that young female workers are less at risk than young male workers. Among all the injuries at work involving young workers in the years 2004 and 2005, injuries to fingers (eg cuts and sprains) are the most frequent. In second place are injuries to feet and ankles, often caused by sprains and objects falling on the feet. In third place are injuries to the palms of the hands, again usually cuts. In fourth place are eye injuries, accounting for as much as 6% of all injuries at work, usually diagnosed as foreign bodies in the eye and electric ophthalmia. The proportion of these injuries is relatively high compared to other countries, and we are of the opinion that this is due mostly to insufficient use of protective goggles.

Among young workers, injuries to fingers represent as much as 40.4% of all injuries. If we add palm and wrist injuries we account for more than half of all injuries among young employees. All other body parts are considerably less affected than in the remaining working population. Areas that pose an increased risk to young workers are the construction industry, accounting for 14.5% of all accidents, followed by the production of non-ferrous metal ores (8.2%), and manufacturing (5%). Young female workers sustain injuries mostly in the manufacturing of wooden products or in farming. Injuries are caused mostly by hand tools, machines and fixed equipment. It could be said that the rate of severe injuries at work among young workers is relatively low compared to other age groups (Figure 1).

The most risky period for non-fatal accidents is during the first year after a young person has started work.

The law and young people

In Slovenia young people at work are protected by the law. The primary legal act governing the safety and health of workers under age 18 is the Employment Relationship Law. The law recognises that young people at work may be at particular risk. A worker under the age of 18 may not be ordered to carry out certain high-risk activities, such as: underwater work; work involving exposure to agents which are toxic and carcinogenic; work involving exposure to radiation, and work involving exposure to extreme cold, heat, noise or vibration. The executive Regulation based on this law has been issued by the minister responsible for labour, in agreement with the minister responsible for health. Regulations governing the health and safety of young people at work set out the basic obligations that employers have in relation to young workers, as well as the conditions under which a worker under the age of 18 can undertake work prohibited under normal circumstances.
Provision of information and training in safe working practices

The employer must provide, for new young workers, information, instruction and training on safety and health issues. The Labour Inspectorate found that health and safety is not covered in educational programmes, constituting a weak link in young worker protection. All employers must ensure that young people starting work are under the supervision of a competent worker, and have received practical training. Nevertheless, inspectors frequently discover a lack of safety and health awareness, with young workers often unfamiliar with basic hazards in the workplace. The following two case studies illustrate this point:

Case study 1
A 19-year-old married couple working with styrene were planning to have a child. During the supervision period, the inspector discovered that they were unaware of the potential impact of styrene on health and particularly in relation to pregnancy. Biological monitoring has confirmed a high concentration of styrene metabolite in the young workers’ urine.

Case study 2
Exposure to both hard and soft wood dust has long been associated with a variety of adverse health effects, including dermatitis, allergic respiratory effects, mucosal and non-allergic respiratory effects, and cancer. During the surveillance period the inspector discovered the widespread belief among young workers exposed to oak and beech wood dust that wood dust is beneficial, due to its pleasant smell.

Major effects on young workers’ safety and health at work

The safety and health at work of young workers depends to a large degree on circumstances in their work environment. Some of these are shown below:
Absence from work

The leading cause of absence from work among young male workers is injuries, followed by musculoskeletal disorders, respiratory diseases and mental illness. As far as young female workers are concerned, the leading cause is musculoskeletal disorders, followed by injuries, mental illness and respiratory diseases.

Conclusion

Over time the accidents to young people have decreased due to demographic changes. However, fluctuations in the employment rate of young people, the lack of programmes related to their specific circumstances, and lack of overall safety and health awareness, emphasise the importance of preventive efforts in relation to young workers. As far as concrete technical progress is concerned, there are enough experienced workers in workplaces ready to advise a young co-worker on how to carry out his or her role properly and safely. The problem remains how to make an awareness of safety and health issues part of the basic education of young people.

Positive effect | Negative effect
--- | ---
Legislation | Good (positive) and comprehensive legislation. | Young workers do not understand the basic points of law, their rights and responsibilities as workers, as well as the responsibilities of others within the workplace.
Education-programmes | Regular education | Lack of programmes related to specific activities.
Data | Good data based on ESAW methodology. | No other specific data on young workers.
Evidence-based surveillance by inspectors | | The inspectorate does not have expert research support to provide it with additional information to support its interventions.
Basic education | Basic principles concerning the protection of health in the workplace are not being instilled in children at school. Just as road safety is taught even to the youngest children, it would be useful to remind children continually about safety in the workplace.
Awareness | | We still have not brought about a culture change in relation to safety and health at work among young workers.
Cost of accidents | | Insurance covering accidents at work is still part of the overall health care budget, and so it is not clear exactly what is the cost of accidents at work.

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Boris Ruzič is the Director of Safety and Health at Work Supervision in the Labour Inspectorate of the Republic of Slovenia. He graduated in Electo-Technical from the University of Ljubljana in 1972. After finishing his studies he was a lecturer at the Higher Technical School in Maribor and has worked in the Labour Inspectorate of the Republic of Slovenia since 1978.

Marjan Oven is the labour inspector and responsible person for informatics support within Labour Inspectorate of the Republic of Slovenia. He graduated in Electo-Technical from the University of Ljubljana in 1992. After finishing his studies he held different jobs in telecommunications, and joined the Labour Inspectorate of the Republic of Slovenia in 2006.
Management of health starts with prevention. Informing people about health risks and how to deal properly with such risks is an essential part of health and safety. A programme was designed specifically with the target group of young people at work in mind; the Jugend will sich-er-leben scheme, set up by the statutory accident insurance institutions, has now been running successfully in vocational schools in Germany for 34 years.

The history of the scheme, which takes the form of a new competition each year, shows that the success of the programme is closely linked to the fact that the means and methods used have constantly been able to evolve.

From the beginning, the scheme was intended to reach as broad a public as possible. When the first safety competition was organised in the 1970s - Auf Draht sein – Jugend hilft Unfälle verhüten (Be on the ball – young people help prevent accidents) - for vocational school students, the main concern was that material communicated in the classroom should be duly reflected in as many correctly completed answer cards as possible. Prizes were awarded in particular for high participation rates. Since then, the scheme has of course developed; its approach today is much more sensitive not only in the approach to the aspects of health and safety at work which it takes up, but above all in its approach to the target group. For example, bearing in mind the target group, the emphasis is increasingly on how the risks at issue can be dealt with sensibly, in order to prevent dangerous behaviour. This means teaching in the form of workshops, and prizes are awarded to schools which come up with the best ways of doing this.

Each year, 800,000 vocational school students are now encouraged to take part in the scheme. The participation rate is around 50%. Events are held at the end of each competition period in the regions and centrally for Germany as whole, at which young people and their teachers give presentations on how they intend to make their concern for health and safety part of their everyday working lives.

The Jugend will sich-er-leben scheme

The scheme is run annually in vocational schools in Germany. More than five million students have taken part over the last ten years. Around fifty per cent of students at vocational schools participate each year.
the particular stage which students have reached in life, between
the world of schoolchildren, which is dominated by parents and
teachers, and the world of adults, with increasing responsibility for
their own working lives, together with all the uncertainty
engendered by peer pressure and a lack of experience. This gap
between two different worlds has widened increasingly over the 34
years the scheme has been running because, in addition to simply
learning their subject skills so as to be qualified for employment,
increasing prominence has come to be given to such factors as
social skills and methodology. As a result, young people are
increasingly called upon to take on individual responsibility, at least
by contributing to group decision-making.

However, it is precisely this that means that there is a greater chance
of discussions about health and safety as part of vocational teaching
falling on fertile ground. A positive aspect of the uncertainty of
young people is that their sense of curiosity is still intact and as a
result they are still willing to prove their worth in a new environment.
In these circumstances, health and safety campaigners shoot
themselves in the foot above all if the target group rightly or wrongly
perceives them as killjoys.

This paradox, that health and safety advocates, of all people, should
be seen as killjoys is a contradiction which the experts especially
must confront. It arises simply because traditional health and safety
measures were openly or implicitly linked with prohibitions and
restrictions. This is the first hurdle – and the most important one –
which gets in the way of a fruitful debate between experts and the
target group.

It must be said, however, that similar problems need to be overcome
if health and safety experts are to be able to communicate with
proprietors of business undertakings. An undertaking is an
undertaking because it undertakes to do something. However, it is
the job of health and safety experts to explain that the undertaking
should not undertake something, so that something will not happen.
Both undertakings and young people respond to such demands with
the same incomprehension.

Despite all the differences in intellectual levels among vocational
school classes, the target group has proved to be relatively
homogeneous with regard to these issues. The differences between
East and West Germany, which in the 1990s meant that significantly
different approaches were required because of the more
authoritarian nature of schools in the new federal states, are also
gradually fading away.

The message

Each year, the Jugend will sich-er-leben scheme is based on a
particular topic from the many occupational health and safety risks
and measures available. Naturally they are always topics which affect
young people directly, such as tripping and falling from heights,
using ladders and steps, the dangers of working with electricity, or
the use of tools and personal protective equipment. Later, attention
was devoted to the physical and chemical effects of substances.
Hazardous substances, sitting, lifting and carrying, tripping, slipping
and falling from heights, and noise incorporate aspects of
ergonomics and general health protection. Road safety, working with
data on screens, and a ‘new to the job’ topic have also been dealt
with.

This list makes two things clear, both of which derive from a holistic
approach: firstly, each topic merely provides an example of how
behaviour changes circumstances. The real influence which young
adults have, their ‘potential power’, lies in the fact that they become
involved as conscious agents in the whole sphere of interaction
between person, material, machine and environment. Through their
own interaction with the pre-existing conditions in the workplace,
they can either accept those conditions or, as part of the conditions
themselves, change them.

To take a practical example from the field of road safety, this means
that it is not physical parameters, such as braking distance, vehicle
lighting or driving at night or in fog, that are emphasised, but rather a
question that relates to the individual as an agent: what drives you,
when you are driving a car?

Addressing the target group directly about their actions and ability to
participate in brainstorming is thus the most important element of
this approach to health and safety.

The second proposition which derives from the idea of a holistic
approach for the scheme is a concern that young adults should make
little distinction in their thinking or in the way they live their lives
between the three areas of family, leisure and work, as regards dealing
with health risks. This is evident, for example, in activities concerned
with the topic of noise, as it is with regard to the use of tools and
ladders or indeed the assessment of the hazards to which chemicals
give rise. In discussing the topic of road safety it also became clear
that frustration and aggression do not stop either when you clock on
or off, or when you close your front door behind you.
Media

In the beginning slides were made available as teaching aids; now of course use is made of all modern media. Transparencies, posters and worksheets are supported by videos, CD-ROMs, DVDs and Internet presentations. All this will only have an impact if the message is communicated in an authentic fashion by staff themselves and a dialogue on the subject is allowed to develop in the classroom. In this regard, it has become clear over the years that it is essential for vocational school teachers to be trained not only in terms of content but also in terms of teaching techniques. The vocational school scheme therefore starts with a series of seminars for teachers.

The materials used show clearly how the approach to the same topics has changed over the years. For example, the topic of sitting-lifting-carrying is repeated every five years. The accompanying video used the first time shows a family of elephants who help one another to drag tree trunks. The next time, on the other hand, the video played on the TV viewing habits of the target group by using a longer advert to get across the message about the correct way to sit, lift and carry. Hip-hop songs and well-known film formats, including reality TV, daily soaps and court-room dramas, are also used to convey the message (on DVD) about occupational health and safety to vocational school students. The examples show that the various approaches to life play a significant role in connecting with the target group.
For instance, it is now a matter of course that the scheme and all media should be presented on the Internet (www.jwsl.de), while a teacher survey also allows dialogue with teachers. The associated Internet forum www.neu-im-job.de constitutes a further communications platform. It allows young people entering the world of work to exchange ideas, while also giving publishers an insight into the lives of young adults.

The role of the public

A national campaign which takes place each year also benefits from public awareness. The concerns at issue must not merely be those of experts; they also need political support and to be taken up by the press, radio and television. At regional level, the statutory accident insurance institutions therefore regularly involve the social affairs ministries with responsibility for health and safety at work, and the ministries of education. In addition to Markus Schächter, Director of ZDF television, the Federal Minister of Transport and the Chair of the Conference of Regional Ministers of Education (Kultusministerkonferenz) have acted as patrons of the scheme. The German Road Safety Council (Deutsche Verkehrssicherheitsrat) has also played a part.

The competition aspect of the scheme has become more pronounced as the years have passed. Newspaper editors want to know for which particular achievements a prize is awarded. The scheme benefits greatly from the fact that, as in a ‘young researchers’ scheme, the whole idea of creativity plays a prominent part in the presentation of the topic. This in turn ensures that those who take part identify much more with the message.

Tentative assessment

Naturally, it is impossible to answer the question ‘how many accidents or health problems have been prevented over the years by a scheme such as this?’ On the other hand, it was very clear from discussions with students, teachers and instructors that after 34 years the scheme could not simply be allowed to fade away. This is particularly worthy of note when one considers the difficult situation in vocational schools today, with a shortage of teachers, equipment and finance and an overload of teaching material.

In terms of numbers, participation has increased rather than decreased. Quality has always been and will continue to be measured by checking how the target group takes the topic on board and acts on its new-found awareness on an everyday basis. In this connection, the closing events are becoming increasingly important. They constitute a forum for creativity in dealing with the topic. As the closing events build on the creative input to the topic in individual schools, the snowball effect means that a fairly accurate assessment can be made of whether the young adults have taken the whole idea of health and safety on board or not. This can be seen from the sketches presented, the music composed by students, the heartfelt PowerPoint presentations on the illusory world of alcohol and drugs made by students, and the film and photography contributions on the prevention of fires and first aid.

The vulnerability of the scheme also becomes clear in this context. In the future the scheme should seek to awaken and strengthen the social skills of the target group, using parameters such as concern about the issue, autonomous action, communication and willingness to think for oneself. It is not for nothing that this fundamental idea requires those involved, despite all their experience of planning and organisation, to reconsider each year afresh the lifestyle of young adults and what they, the organisers, really want to get across as part of their message. Such a position can only be reached in the preparations for a scheme of this kind if the organisers, experts, teachers and students communicate. To ensure that the process is successful remains a worthwhile challenge.

Further information

Jugend will sich-er-leben www.jwsl.de
Neu im job www.neu-im-job.de

Dr Wolfgang Damberg is the Chairman of the Occupational Safety Study Group at the Landesverband Hessen-Mittelrhein und Thüringen der gewerblichen Berufsge nossenschaften, (Hessen- Mittelrhein and Thuringia regional organisation of statutory accident insurance institutions), Germany
Employment is an issue of growing relevance to the lives of young people. In addition to their contact with the world of work through work experience, work-related learning and citizenship, many young people also combine part-time work with their studies. Young people need to know about the importance of health and safety at work, how to tackle discrimination and how to exercise their rights and responsibilities in the workplace.

Trade union involvement in pre-work education

A Better Way to Work

Trade unions and health and safety

Health and safety at work is an important campaigning priority for trade unions. There are many different forms of trade union campaigning, for example:

- Campaigns for legal asbestos controls and for justice for asbestos victims;
- Awareness raising on the causes and prevention of occupational asthma;
- Hazard-spotting tools for workplace Repetitive Strain Injuries (RSI);
- Campaigns on workplace stress emphasising the organisational causes that can be remedied by good union safety interventions, and
- Gender perspectives on health and safety, making sure women’s health and the hazards they face are taken into full account in the workplace and in official health and safety policy and practice.

Some Trades Union Congress (TUC) campaigns set out to defend health and safety rights and others to extend them. For example, the TUC/Hazards ‘loo breaks’ campaign called for a right for workers not only to have access to a toilet at work but also to have the opportunity to use it. The TUC introduced Union Inspection Notices (UINs) as part of its ongoing campaign for greater safety representatives’ rights, including Provisional Improvement Notices (PINs), roving safety representatives, and greater rights to consultation and participation.

The largest single union day of action is International Workers’ Memorial Day, on which trade unions worldwide commemorate those killed, injured or made ill by their work and campaign for the right to a safe and healthy working environment. The day is marked annually on 28th April.

A Better Way to Work

A Better Way to Work is the TUC education resource pack for 14-19-year-olds. The pack supports activities which help teachers prepare students for work experience and other work-related learning. It has been designed to fit in with statutory schooling requirements, curricula and teaching methods.

The pack is divided into five sections which deal with: the role of trade unions; rights and responsibilities; health and safety; equal opportunities, and the future of work.

The Health and Safety Unit aims to introduce young people to the legal position in relation to rights at work; raise a number of questions for discussion around rights and responsibilities, both at work and on work experience placements, and provide opportunities for young people to work with trade unionists in the classroom.
The unit consists of six sections, under the following headings:

- Accidents at Work
- What Would You Do?
- In Court
- Issues Now
- Health and Safety Investigation
- ‘Goodlife’ Superstore

Accidents at work

In this introductory activity, students are given short descriptions of accidents which have occurred in the workplace. In the first set, the accidents have involved young people on work experience placements. In the second set, the injuries have involved employees who are union members. Students discuss who was at fault and how the accidents could have been avoided.

What would you do?

As preparation for work experience, students need to consider how to avoid accidents and injuries. They are provided with a range of scenarios which could lead to injury, and they are encouraged to think about how those injuries could be avoided. Some of the scenarios involve the students being assertive on work experience placements – a difficult thing to do!

In court

In this exercise, students are presented with four case studies, three of which end up in court. Students discuss the cause of each accident and the actions which could have been taken to reduce the risks.

Issues now

Students discuss eight articles from the TUC’s on-line health and safety e-magazine Risks, which covers contemporary issues such as drug testing, passive smoking, assaults on public service workers, excessive working hours and stress-related illness.

Health and safety investigation

The assignments in this set of materials provide young people with investigative work that they can carry out either during work experience placements or part-time work. The assignments require students to carry out some research on their work experience placement or at their part-time workplace, and to make a presentation of their findings with a set of recommendations.

‘Goodlife’ superstore

This is a role play of a health and safety committee at a fictitious supermarket called ‘Goodlife’. There are five issues to be discussed by the committee: stress at work, personal protective equipment, injuries caused by tripping and slipping, poorly designed checkout seating causing work-related upper limb disorders, and violence against staff and customers. Young people take on the role of committee members and decide on action points to improve the situation.

Using A Better Way to Work

The pack is designed to be a flexible resource which can be used in a variety of ways. The activities are particularly designed to prepare students for work experience. Each section contains an activity which can be used to raise issues with students before they go on to work experience. In addition, the materials can be used to introduce students to the work-related issues they will need to examine on vocational courses. Teachers and lecturers will also find the activities useful in supporting and developing students’ knowledge and understanding of citizenship. The activities could be used with groups of students on industry or citizenship days, when outside speakers from the local community are invited into schools or colleges, to help them to understand various aspects of the world of work and the local community.
Trade unionists in the classroom

Trade unionists in the classroom can make a big impression on young people. They can use their extensive knowledge of real-life examples to bring employment issues alive and to help young people to understand and reflect on the role that trade unions play in the workplace. They can also help young people to understand pay and collective bargaining, employment law, health and safety issues and the importance of equal opportunities.

The TUC has set up panels of young trade union speakers to deliver talks to school children about rights at work and the role of trade unions. This programme uses the experience of trade unionists to bring to life some of the issues that young people will be learning about within the curriculum around citizenship, work experience and work-related learning.

Schools and colleges in the UK can invite speakers by contacting the relevant TUC Regional Education Officer:

Northern, Yorkshire and the Humber – Tel 0113 242 9296
North West – Pete Holland: Tel 0151 236 7678; e-mail pholland@tuc.org.uk
Midlands – Peter Try: Tel 0121 236 4464; e-mail ptry@tuc.org.uk
Wales – Julie Cook: Tel 02920 227449; e-mail jcook@tuc.org.uk
Southern and Eastern – Maggie Foy or Rob Hancock: Tel 020 7467 1237; e-mail mfoy@tuc.org.uk or rhancock@tuc.org.uk
South West – Marie Hughes: Tel 0117 947 0521; e-mail mhughes@tuc.org.uk

Raj Jethwa is a policy officer at the UK Trades Union Congress (TUC). His responsibilities include developing better protection and enforcement for children in employment, developing policies to improve access to higher education, campaigning for better workplace rights for young people, and coordinating trade union engagement with regional policy. He is Secretary to the TUC Young Members’ Forum and represents the TUC on the European TUC Youth Committee.

Further Information

More information from the TUC for schools and young people is available at:

www.tuc.org.uk/schools
www.tuc.org.uk/youngpeople

A copy of A Better Way to Work is available for each secondary school or college, with a charge of £7.00 to cover postage and packing. To order a copy, write to EDS, Education House, Castle Road, Sittingbourne, Kent, ME10 3RL.
Safe Start!

The statistics speak for themselves. Young people suffer significantly more accidents at work than their older colleagues (1), and their injury rate is particularly high in the first few weeks of starting work (2). The majority of workplace accidents are due to failings in the management of health and safety, which is why employers have the key duties under European Union-based legislation of carrying out risk assessments, putting in place the necessary health and safety measures, providing training and supervision and co-operating with other organisations on health and safety, such as employment agencies or work placement providers (3). Top management commitment is essential to creating a good health and safety culture for when young workers arrive at work on their first day.

Nevertheless, young people themselves need to be engaged in the safety process, and inducted effectively into a safe workplace culture. They need to develop awareness of the workplace hazards where they work and the symptoms of occupational health problems. On the other hand, consultation with workers, including young workers, is an essential part of ensuring that risk assessments are adequate and measures are effective as well as being a legal requirement. When health and safety is not seen as an exciting or ‘sexy’ topic, how can the attention of young people be captured and how can they be effectively involved? This article looks at some innovative approaches that have been taking place worldwide.

Body mapping and risk mapping: involving young people in data gathering on hazards

Body mapping is a technique to gain information about hazards and ill-health effects in work, first developed by community groups and trade unions, and adapted by educators in a variety of settings. It is used as a means of pooling information on worker health problems, using visual images, and it is an alternative to using surveys, for example. The results of using this data-gathering and reporting technique can be fed into the risk assessment and subsequent review processes. This interactive technique is typically carried out at a meeting or workshop with a group of workers, as a group work activity. Using coloured pens or stickers, workers place dots on flipchart diagrams of the front and back of the body in response to the question ‘where does it hurt while you work?’

At the end of the process you end up with a map, such as the one shown in Figure 1, showing trends in employee symptoms. Symptoms can then be compared by looking at what patterns emerge. The more marks there are in the same place on the body map, meaning the more workers reporting the same symptoms, the more likely this is to be something work-related, rather than an isolated, individual problem. This comparison system works best with people working in the same area. The results can be used for discussion among employees as well as by safety committees etc. If it is used as an input into the original risk assessment it can then be redone, after introducing control measures, to help see how well they are working.

The technique is an input to, but not a substitute for, a formal risk assessment.

There are various benefits from incorporating worker body maps into the risk assessment and monitoring process, for example, body mapping:

- Provides data;
- Draws on worker knowledge and experience;
- Actively involves workers in an interactive way;
- Involves workers in risk assessment and monitoring;
- Raises awareness, helping workers to think about their workplace;
- Helps distinguish work-related problems from non-work-related problems, and
- Is particularly useful if reading skills or language is a problem.

Figure 1: example of a body map
The same technique can be applied to a map of the workplace or work area, where workers can chart where they have had accidents, for example slips and falls, helping to locate accident ‘hot-spots’. See (4), (5) and (6) for more information about mapping techniques.

Using body and risk mapping techniques with young people

As body mapping is a good awareness-raising technique it can work well with young workers who are unfamiliar with how work can cause aches and pains. For example, the technique could be used with young nursing home workers. The workers put ‘ouch’ stickers on each other to indicate aches and pains associated with different activities. After the common problems, for example in the back or shoulder area, are highlighted and recognised in this way, discussion can then be focused on questions such as ‘what causes the aches and pains?’ and ‘how can we prevent them?’

The UCLA-Labor Occupational Safety and Health (LOSH) Programme has developed risk mapping and body mapping exercises for use with teen workers in schools. They run a Peer Educators programme with a local High School, co-sponsor a Young Worker Leadership Academy (YWLA), and support a state-wide initiative called ‘Safe Jobs for Youth Month’, carried out every May, prior to students going off to get summer jobs. The concept of the Peer Education and YWLA is that young people serve as role models for other young people, and their peers benefit from their knowledge and experience. The body mapping and risk mapping exercises have been used in these programmes.

One activity they have used is to get students to work together to create ‘risk maps’ of the hazards they have faced on the job on drawings that they make of workplaces (see Figure 2). From the risk maps they create lists of hazards. Next, the students can prioritise the list, for example, by deciding on the three most important hazards and justifying their choice. They can then brainstorm possible ways to eliminate the hazards identified. Students are then asked to present their risk map to the rest of the class. Colour coding is used to create the maps – red for safety hazards, blue for chemical hazards, brown for other physical and environmental hazards and green for stress hazards. The technique gets young people talking together about safety, and encourages them to generate collective solutions to the problems they find.

Information and activities materials for educators wishing to run a session on risk mapping with youth are available to download for free at http://losh.ucla.edu/youth/resources.html (8).

The techniques are versatile and can be used in a variety of ways. Other ideas for using body mapping and risk mapping in an educational setting include:

- Asking students to mark on a map of the school where they have had a health and safety problem, for example slipping or tripping;
- Asking students to mark on a body map where they have aches and pains after a day at school.

Storytelling in safety training

Learning from the real experiences of others is as important for health and safety as for any other learning area. Anecdotal stories are an important way of passing on information and so using this technique in a systematic way, as part of the training of new recruits, has been explored by some organisations.

NIOSH, the US national safety and health institute, is one organisation that has explored the merits of storytelling. NIOSH researcher Elaine Cullen studied the use and importance of personal storytelling as an effective tool for mine safety and health training. She also looked at the components of producing successful safety training videos that build on the storytelling tradition, drawing from NIOSH’s own experiences in this regard.

The report Tell Me a Story: Why Stories are Essential to Effective Safety Training, (9), is based on the results of this seven-year research project. The intention was to develop and assess new materials for training miners in ways to work safely in a challenging and inherently dangerous setting. The method was designed to replicate traditional industry practices in which beginning miners are mentored by older, more experienced miners, and to reflect cultural values in mining. In mining there not only exists a strong master-apprenticeship training model, but also an oral tradition of storytelling handed down over centuries.

The authors believe that the importance of mentoring to develop safe, productive workers cannot be overstated, particularly in those hands-on trades that require a high degree of skill in performing work tasks and a sensitivity to potential or real hazards. The mentors are effective because they are credible. The authors also believe that storytelling, an age-old method of teaching new hires in the mining industry, is also an extremely effective means of conveying often complex information in a way that is understandable and memorable.

To make the videos, they found it necessary to train the members of the crew in all general and specific hazards of mining. Real miners were used, despite their initial discomfort in front of cameras. A close working rapport was developed between crew and miner-actors and the scripts were flexible, allowing for development according to the advice of the miners themselves. The idea was to work within the culture of mining, and to work closely with the miners to ensure that the lessons used were both relevant and interesting.

When piloting the first video, on explosives safety, they found that the miners really liked watching and hearing from people who looked like themselves. According to participants in the evaluation of

![Figure 2. Example of a risk map (taken from ‘Safe Jobs for Youth Month’ resource kit, California Partnership for Young Worker Health and Safety) (7)](image)
the training videos, the videos were credible because they were filmed underground in real mines with real miners as actors and presented realistic situations to which miners could relate, while not talking down to viewers. The videos were reported to make a sometimes difficult topic (safety) entertaining while communicating important information. The authors believe that if right experts are found, people who can share their wisdom and experiences with credibility and personality, it is possible to capture that expertise and use it to train future generations of miners. Other videos include the topics of rock falls, rescue operations, taking short-cuts with work procedures, mobile equipment hazards, and a workplace accident survival story.

According to the NIOSH researchers, stories:

- Empower the speaker
- Create an environment of trust
- Create a bond among those who hear them
- Engage the mind
- Have a unique ability to defuse conflict and differences of opinion
- Encode a lot of cultural information
- Provide a way to learn from personal or vicarious experiences
- Bring about healing.

Based on her experiences, Cullen believes that the whole idea of using stories, particularly to train or teach, would work for other young workers just as well as it does for young miners. People tend to trust others who look and talk and walk like they do. So if a young person were to relate an accident they had been involved in, for example, it would capture the attention of the young people in the audience, because they can relate much more easily to the person and also find it easier to place themselves vicariously into the story and test what they would have done and how they would have reacted. They have seen many examples where police and schools have teamed up to use this type of technique, showing the students what has happened to other students who have chosen, for example, to drink and drive. It is powerful and hits the target audience pretty effectively. They have also found that the mining videos are being widely used, suggesting that it does not seem to matter that an audience is not made up of miners, the fact that it is made up of other working people seems to be a strong enough connection.

Concluding remarks

Although the two approaches described in this article are quite different, they have at least two similarities. They involve peers in the education process and they both focus on real work situations. With the mapping processes, peers work together to begin to recognise and solve problems they have encountered themselves. With the videos, real workers are used to pass on real workplace experiences.

Sarah Copsey is a project manager with the European Agency for Safety and Health at Work, based in Bilbao, Spain. She has worked on a variety of projects including research, good practice case studies, website development and the annual Good Practice Awards organised in conjunction with the European Week. Topic areas have included gender and occupational safety and health (OSH), disabled workers and OSH, information for the health care sector and musculoskeletal disorders. Sarah was previously head of health and safety at UNISON, the UK trade union for public service and health care workers. Her academic background is in psychology and ergonomics.

References and bibliography

7. Information and sample teaching activities for Safe Jobs for Youth Month can be found at the California Partnership for Young Worker Health and Safety. http://socrates.berkeley.edu/~safejobs/downloads/index.html#resourcekit
8. UCLA-LOSH Youth Project http://losh.ucla.edu/youth/index.html
Two thousand, six hundred NoisyBoxes and their noisy young owners showed how safety and health can be integrated into the school curriculum as part of the European Week for Safety and Health 2005. Noise was the theme of the Week, and noise was exactly what was made when the winners of the IOSH NoisyBox competition took to the stage in Earls Court, London to receive their prizes.

The Institution of Occupational Safety and Health (IOSH) in the United Kingdom organised the NoisyBox competition in support of the European Week to raise awareness of the revised Noise at Work Regulations coming into force in 2006.

IOSH is Europe’s leading body for health and safety professionals with over 28,000 members in more than fifty countries. An independent, not-for-profit organisation, the Institution regulates and steers the profession, maintaining standards and providing impartial, authoritative guidance on health and safety issues. IOSH provides a centre of excellence for professional standards; promotes awareness of the importance of health, safety and sustainability; advances research and disseminates knowledge; encourages, facilitates and leads communication of information, good practice and expertise; and supports and develops the competence of members.

IOSH has promoted the European Week in schools since 2001 with a variety of activities: a local schools competition quiz in 2001 to support the theme of Musculoskeletal Disorders (MSD); a one day
within the workplace - is not just a problem in obvious sectors like manufacturing, construction or the armed forces - the leisure industry is also taking its toll, with people like DJs falling victim to tinnitus, where the sufferer hears almost constant buzzing, ringing or hissing, even when trying to get to sleep or when everything is quiet.

Hearing loss - complete loss or hearing noises in a muffled way - will inevitably leave people struggling with everyday things, and feeling isolated when others are chatting normally around them. The competition was organised to help raise awareness of these issues at an early age, and to show young children how vital the sense of hearing is, and how important it is to look after it. IOSH believes that thinking about noise in a positive way will help children to see the significance of looking after their hearing from an early age.

Mainstreaming OSH into education

With help from Ann Davey, head teacher of Trinity Lower School, Northamptonshire, IOSH were able to encourage teachers to think about how the children in their class might be able to build NoisyBox into one of the following areas at school:

- Work towards the National Healthy School Standards
- Coverage of 3D shapes at different stages - exploring the cube shape
- Coverage of the senses at different stages - focusing on the sense of hearing
- Art sessions - harnessing creativity not just in a visual way, but also asking children to think about what object might represent their favourite sound

Teachers were also invited by IOSH to try out a quick question on the children in their class. They were asked how many of the following things did the children think could damage their hearing?

- Headsets
- Earphones
- Earpieces
- Motorbikes
- Clubs and discos
- Referees' whistles

The answer, of course, was that all of them have the potential to cause harm. By focusing on how important sounds are for children, IOSH believed that children would start to see that their sense of hearing is well worth looking after. Reminding children that unwanted or excessive noise - at work or at play - can have dramatic negative effects on hearing was an important key message of the initiative.

Sound Off Conference

Everyone at IOSH was proud of all the NoisyBox entries, so they decided to display them at the Sound Off Conference in London! This was a perfect place to showcase all the hard work and creativity, and to use the NoisyBoxes to demonstrate how vital our sense of hearing is. To ensure that the NoisyBoxes were centre of attention, IOSH built two giant NoisyBoxes to display at the conference! That way, they combined all the favourite sounds of the young entrants into one big NoisyBox that was guaranteed to get the message heard!
IOSH philosophy, policy and activities in relation to OSH in education

- IOSH believes that, as far as possible, the education of young people should prepare them for working life by helping them to avoid accidents and work-related ill-health, and that this process should start at the earliest stage.
- We believe that health and safety should be fully integrated into schools, further and higher education, and workplace induction programmes and associated activities.
- Our activities in this area include:
  - ‘Education for health and safety: Preparing your people for a safer working life which sets out our views on this important issue and challenges all stakeholders to assess their policies and practices in this area
  - An Education Specialist Group with 12,000 members providing a forum for IOSH members working in the education sector to debate and disseminate key issues
  - Partnership working with Heads Teachers and Industry (HTI), Department for Education (DfES), Learning and Skills Council (LSC) and the Health and Safety Executive (HSE) to develop the ‘B Safe’ project to prepare young people for safe work experience through theatre in education
- Future plans…
  - Potential development, in partnership with the Health and Safety Executive (HSE), of a ‘hazard spotting’ teaching resource for schools, aimed at year 10 and 11 pupils.

IOSH has won regional awards in the UK for their activities relating to the European Week, and is very keen to organise activities which fit well with the organisational aims of raising awareness about health and safety to the general public, especially from an early age, as well as encouraging its members to do so within their own organisations.

IOSH has also been very keen to work in co-operation with the European Agency and to engage in mutual promotion of their campaigns. The organisation is the responsibility of the International Affairs Department of IOSH headed by Sarah Hamilton, and coordinated by Laurence Dufour since 2002 using the expertise within IOSH of communication personnel, graphic designers, and technical staff.

Promotion of European Week activities is done through the IOSH website, press releases, the membership and other relevant media. Planning for European Week 2006 is well under way and IOSH are again planning to organise a competition aimed at young people.

For more information about NoisyBox, the activities of IOSH and their plans for European Week 2006 visit the IOSH website: www.iosh.co.uk

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In many European countries, and especially in Finland, careers are often short. People begin their working life fairly late, and retire relatively early. Studies may continue for too long and there may be difficulties integrating into working life. The main reason for early exit from working life, on the other hand, is often the insufficient resources of workers in an increasingly demanding work environment. Mental health and behavioural problems are currently the most common reason for people receiving a disability pension in Finland. Short careers are even further threatened by precarious employment, and constant changes in working life for financial reasons, including redundancies and increasingly common periods of unemployment.

These external challenges to working life require workplaces to adopt new approaches, throughout the length of a career, which enable workers to participate and remain in working life for longer. The Finnish Institute of Occupational Health (FIOH) has set up a Work and Life Course Theme Area, the frame of reference of which is the age-integrated work-life model (Riley and Riley, 1994; Salokangas, Vuori & Huuhtanen, 2005). The Theme aims to meet the challenges described in this model, differentiated by age. According to the model, lives are divided into three periods: childhood and youth, which is extended by education systems and characterized by financial dependence, active working age, and retirement age. The age-differentiated model (figure 1) is problematic in many ways from the viewpoint of working life, education, and retirement. The pace of working life prematurely depletes the resources and competence of the majority of people, and work-life arrangements are not flexible enough to meet peoples’ learning needs or their changing life situation. Knowledge is outdated quickly, and training is needed throughout life, rather than as an intensive package at some stage or other. Discriminatory attitudes and practices towards the older generation, for their part, push many people out of working life and into retirement, where they are often faced with too much free time and a feeling of uselessness.

Figure 1. Age-Integration work life model (Riley and Riley, 1994; Salokangas, Vuori & Huuhtanen, 2005)
In age-integrated working life (figure 1), education, work and leisure are more flexibly within the reach of people of different ages. This kind of society offers flexibility according to life situation and opportunities for life-long learning. Dividing work more evenly throughout life frees-up time for training, leisure, family and other activities to better suit each person's needs. There are many positive aspects of age-integration in working life, such as a more effective exploitation of skills, the extension/increase of activity and social participation, and relieving social security funding.

As a result of R&D activities, the Work and Life Course Theme Area has produced innovations for improving work and career management, for increasing orientation towards work and lengthening careers, and educational innovations based on age management, through which we can influence the different ways in which organisations treat employees of different ages. The main channels of dissemination are meso-level intermediary organisations such as those in the education, employment and health sectors. We search for partners through employers and employees themselves in order to ensure maximum impact on working life.

**Young people's career choices and transition into working life**

As in many Western countries, the transition of young people from school to working life has become more difficult in Finland in the last few decades due to changes in work structure and the tightening of educational demands (Gangl, 2002; OECD, 1998; Suikkanen; Martti & Huijala, 2006). In the current Finnish employment market, new entrants require at least an upper secondary education level qualification (upper secondary education is study beyond the most basic secondary level but below university level, typically by 17 and 18-year-olds). Thus, those who discontinue their studies before completing this level are at the greatest risk of displacement. The majority of those who begin upper secondary vocational education make their educational choices rather arbitrarily. This in turn weakens their motivation and increases the tendency to discontinue studies in vocational colleges. Over the last few years, 94% of the relevant age group began upper secondary education, and 84% completed their studies and graduated.

Even if a young person completes their upper secondary education, success in the Finnish employment market is not guaranteed. The level of education of young Finns is among the best in the OECD countries, and due to its quick rise in standard, the discrepancy in education levels between different age groups is greater in Finland than in other OECD countries. Despite a good education, young people's work careers are plagued by precarious contracts and difficulty in finding a job to suit their level of education. Finding employment straight after graduation is believed to predict later career stability in OECD countries (OECD, 1998). Another critical factor, next to actually getting a job, is the quality of employment, since taking poor quality employment straight after graduation, which does not correspond to a person's level of education, makes it harder to pursue a career later which matches a person's educational level (Scherer, 2004).

Extended periods of unemployment or an unrewarding job also pose the risk of mental health problems for young people. Employment difficulties have a negative effect on mental health among those young people, in particular, who consider work a central part of life. In addition, it must be taken into account that the success of the transition from school to working life may also be linked to other changes in a young person's transition to adult life, such as leaving home, achieving financial independence, and preparing for a relationship or family life. It seems that strong foundations for life-management and well-being are best supported by work tasks which:

1. Correspond to a person's professional goals, interests and expectations
2. Offer opportunities to exploit their current knowledge and skills
3. Allow a person to affect his/her work content and load
4. Set realistic professional goals and provide opportunities for development
5. Offer support and guidance in professional development, and feedback.
Promoting young people’s career management and mental health

Due to the increasing pace of change in working life, many young people have to face challenges regarding career choice, education, and re-integration into working life more than once in their lifetime. Overcoming these challenges requires good career management preparedness on the part of the worker, which includes career planning skills, job-searching skills, the skills for adapting to new tasks and new organisations, and life-long learning skills. The teaching of these has set new challenges for those involved in the guidance of young people moving onto the next level of education, or transferring from school to working life. We will present two group counselling models developed by the FIOH in order to promote young people’s career management. The first, the ‘School to Work’ group method is for use at the upper secondary vocational college level. The second, the ‘Towards Work Life’ group method is targeted at secondary education level. Both methods attempt to enhance career management preparedness, which is nowadays essential for successful transition from education to career.

The ‘School to Work’ and ‘Towards Work Life’ group methods are structured and thus established models, in which the contents and teaching techniques are well-planned, well-guided, and theory-based. As they are structured, the methods are easier to put into practice, and we aim to ensure high quality of instruction. In addition to this, other special characteristics of the methods are their intensive course form, the cooperation model of two instructors, and the collaboration of the employment and education administrations. Multi-skilled cooperation takes place at the local level through colleges and employment offices instructing groups together. The group methods are based on the Michigan Prevention Research Center’s preventative group activity model (Caplan, Vinokur & Price, 1997). The positive effect of this model in supporting re-employment of unemployed adults, and the prevention of depression symptoms has been shown in random follow-ups to field experiments in Finland and the USA (Vinokur, Schul, Vuori & Price, 2000). The group model has been mostly applied at the critical transition stage for young people, in teaching essential career management preparedness and attitudes toward meeting the challenges involved through active learning and social support techniques.

Impact of the ‘School to Work’ method in vocational education

The ‘School to Work’ group method (Koivisto, Mäkitalo, Larvi, Silvenen & Vuori, 2002) aims to improve the quality of employment and career management of those graduating from vocational college, as well as to prevent the depression often linked to those in a poor employment market position. The method can also be used to promote the career management of those graduating from polytechnics. The courses are arranged during the last year of studies, and group work takes the form of a five-day intensive course.

Vocational college teachers guide the groups, together with local employment office trainers. The local cooperation network also consists of employer representatives. The students acquire knowledge by interviewing guest employers about their recruitment processes and integration into working life, as well as measuring their own competence against the employer’s criteria. In this multi-professional cooperation, the different skills and authority of different parties complement each other in the counselling of the young people.

The ‘School to Work’ group method aims at developing the participants’ career management preparedness for transition to working life through active learning. The content of the intensive course focuses on providing career management preparation for job searching and organisational socialisation, and on acquiring a life-long learning attitude. In the job-seeking exercises, students learn to acquire information on job vacancies, to contact employers directly, and to emphasize their personal strengths in a job interview. In the organisational socialisation exercises, they study how to create good contacts in a new organisation to promote their own work, and how to get the correct information and training for their own tasks. Life-long learning is introduced though participants comparing their strengths against the employer’s requirements, and recognising the kind of skills needed in the employment market, which they should develop after graduation. In addition, the counsellors encourage participants to come up with survival tactics in case of possible setbacks, which those moving from vocational education into the employment market often face in job seeking, in unsatisfactory employment, and during organisational socialisation.

The effects of the group method on the students’ employment, mental health and setting of personal targets was studied as part of a field experiment which concluded in 2003. (Koivisto, Vuori & Nykyri, 2003). The ‘School to Work’ group method’s long-term effects on the employment rate of the students was assessed with a follow-up questionnaire, an average of seven months after the students graduated. The result showed that using the ‘School to Work’ group method during the final phase of study saw a statistically significant increase in the employment rate of young people. The absolute increase in employment rate was estimated to be about 6.3%. This would mean a relative increase of 27%, achieved without any supporting measures. The quality of employment results showed that the group method significantly improved employment rates within jobs which corresponded to education and career plans. According to the research, group intervention also has a preventative effect on psychological distress and depression symptoms, in this group classified as being susceptible to mental disorders. This means that the group method helps young people who are at a risk to overcome the stress factors which threaten mental health and well-being which are associated with the transition to the job market. The group method was also seen to help young people plan and anticipate the future in other transition phases such as entering working life, leaving home, and achieving financial independence.
Safe Start!

The ‘Towards Work Life’ method (Vuori, Koivisto, Larvi, Jokisaari, Sutela & Salmela-Aro, 2006) is aimed at pupils nearing the end of secondary school, to promote work and educational career management, life-long learning and mental health. The group method’s aim is to provide support in the choices to be made regarding upper secondary education and to help prevent discontinuation of studies. The ‘Towards Work Life’ method is organised as a one-week intensive course at the end of basic education. It must be timed so that the students have enough time to take advantage of the career planning skills they learn during the course before they make their choices regarding upper secondary education. The group counsellors work in pairs so that the secondary school teacher (usually the student’s Guidance Counsellor) leads the group together with a teacher from the vocational college or the employment office. The students spend one day interviewing the staff of the employment office regarding career planning. The methods can also be applied to support the career planning of high school students.

With the help of group-work, the young people create a career plan by defining their personal strengths and interests and relating them to the educational options and professional careers offered by society, and to the challenges these pose. They also learn to recognise and use important social support systems, guidance and sources of information in creating career plans. The aim of participants is to create concrete action plans for the promotion of their education and career, and to commit themselves to realising them. Life-long learning is approached through encouraging students to think about their own responsibilities in managing career transitions and the challenges of studying in the future. In addition, they think about what kind of learning opportunities leisure time activities and other hobbies present for exploring their own vocational identity and developing the skills important for their work and educational career. The students are also prepared in the sessions for facing setbacks in their career choices and finding the right place to study.

The group method strengthens ninth grade pupils’ career choice skills. By doing this at a critical transition period in their education, we try to create long term positive effects on young people’s career choices and mental health. Assessment of the group method’s effectiveness was begun in a field experiment in 2003.

Use of methods in schools and colleges

Schools and colleges play an active role in locally implementing these group methods. Based on scientific research and theory we can define the core elements of the group method on which their effectiveness is based (Price, Friedland, Choi & Caplan, 1998; Vuori, Price, Mutanen, & Malmberg-Heimonen, 2005). Recognising, understanding and paying attention to the core elements is important when considering the application of these methods in schools and colleges. The ‘School to Work’ and ‘Towards Work Life’ methods contain the following core elements:

1. Career management preparedness practice. Participants are encouraged to define and practise career management in a safe and supportive environment.
2. Active Learning. We use active learning techniques in the teaching of career management preparedness. Instead of lecturing the participants, we use their own knowledge and career management preparedness as teaching tools.
3. Trained counsellors. Succeeding in achieving an active learning process and creating a supportive learning environment requires
knowledge of teaching methods on the part of the instructors. The FIOH organises a two or three day instructor course for this purpose. It is useful to build up a local counsellor network in order to ensure the quality of instruction and the solution of possible problems.

4. Supportive environment. The instructors work to create a supportive learning environment for the group, which enables the participants to support and learn from each other. This occurs through modelling and strengthening the use of social support in the groups.

5. Preparing for setbacks. The participants are guided in problem-solving processes, in which they learn to anticipate possible setbacks and develop survival techniques to cope with them.

6. Cooperation between education and employment administrations in group instruction. Through multi-professional cooperation between the education and employment authorities, counselling is made more effective and counsellors assert their expertise and authority in the eyes of young people. This cooperative model loses its advantages when, for example due to financial reasons, the course is held with only one instructor.

7. Intensive courses. The active learning process and supportive learning environment is best achieved and maintained through intensive courses. Activating and creating a supportive learning environment for a group that gathers once a week will require starting from scratch each time. In addition, with a weekly group it is harder, for both the participant and the counsellors, to link earlier insights born from conversations to new contexts. The advantages gained by an intensive course are lost when, for example, the intensive course has not been taken into account when planning the school timetable.

Summary

1. The risks to young people’s career management and mental health have proved to be the discontinuation of studies and the difficulty in finding a stable, rewarding career after graduation. From the point of view of career management, the critical stages are moving from lower to upper secondary school and from vocational college to work life.

2. Moving from lower to upper secondary school and from vocational college to work life can be supported by taking advantage of the group method principles of active learning, and a socially supportive learning environment. The group method’s immediate target is to strengthen the career management preparedness needed in these transition phases. Its long-term goal is promoting employment and career quality as well as preventing mental health problems brought on by unemployment or unsatisfactory work. Use of the ‘School to Work’ method can be justified by its successful research results, however, the assessment of the effectiveness of the ‘Towards Work Life’ method is still in progress.

3. When employing these methods, it is important to bear in mind that the positive effects on career management achieved in field experiments required that the important core elements have been understood and realised in the achievement of the desired impact.

References:


Causes of job insecurity and work stress in Spanish young people

In today’s society, work takes up a considerable slice of adult life and has a clear impact on health, well-being and personal development. It may be a source of satisfaction and personal development or, on the contrary, give rise to alienation and poor health.

At present, labour markets and work activities are showing the effects of significant socio-economic, technological, cultural and political change. While these transformations are giving rise to new opportunities, new threats and risks at work are also appearing and may have a negative effect on workers’ health and well-being.

In this context, the European Union and its Member States have developed a series of legislative measures to safeguard health at work and prevent potential occupational risks. A Community strategy to promote health and safety at work for the period 2002-2006 has also been developed(1). This strategy pays close attention to psychosocial risks, particularly emerging risks that may be damaging to people’s health and well-being. These include work-related stress caused by mental overload and emotional work, violence, bullying and sexual harassment at work. The social partners, also aware of the importance of this type of risk, have signed an agreement on work-related stress(2) in order to provide employers and workers with a framework for identifying and preventing problems linked to work-related stress.

Nonetheless, stress and other emerging risks are all too common in work contexts, as is clear from the data obtained in the latest European survey on working conditions(3). The survey revealed that in addition to common psychosocial risks, such as monotony, work overload and lack of suitable resources, there are others, such as mental overload and job insecurity, due to contract instability, bankruptcy and closure of undertakings(4) and mergers, and other types of restructuring that involve downsizing and changes in human resources policies.

Job flexibility in Spain over the last few years has reached levels that the European Union considers excessive, as is clear from the recommendations made by its Employment Observatory(5). A commission of experts, set up in 2005 in Spain, conducted a study of job flexibility in Spain and potential measures to reduce its effects on the insecurity of its workers(6).

Young workers are frequently exposed to this type of risk. As statistics from the Encuesta de Población Activa (Active Population survey) and the Observatorio de Inserción Laboral de los Jóvenes(7) show, there is a higher proportion of unemployment and work with flexible contracts among young people than among other groups of the working population. It is also more likely that young people will hold posts for which they are over-qualified – a situation which could also give rise to stress and job dissatisfaction.

Furthermore, some situations encountered in the early stages of career development may later trigger work-related stress(8). In this context, it is advisable to analyse those work experiences of young people which could be sources of stress and a potential risk to health and well-being at work. The study of these phenomena is particularly important at that stage in life when they have their first work experiences and undergo the process of integrating into working life.

(1) The authors would like to thank the FUNDACIÓN BANCAJA and the IVIE for granting permission to use information from the Observatorio de Inserción Laboral de los Jóvenes on which this study was based. We also wish to thank Rodrigo Aragón, specialist at the IVIE for all his support in the use and analysis of the information.
(6) The threat may be felt either directly (given a company’s situation) or more indirectly (through fear that globalisation will result in many industrial activities moving to China, for example) depending on media influence.
(7) http://www.eu-employment-observatory.net/
which shapes their work values, working habits and the meaning of work in their lives (10).

The aim of this study is to analyse the levels of job insecurity and role stress among young people and to identify the main causes of those experiences which could pose a risk to their health and well-being. We define job insecurity as the fear of not being able to maintain continuity, in a situation where there is a threat of loss of employment or where a job is perceived as being unstable. This is a subjective experience in which the job itself is seen as being threatened. On the other hand, role stress arises from difficult demands being placed on performance in a work role. These episodes of stress are the result of an excess of such demands (role overload), the incompatibility of some demands with others (role conflict), and a lack of information to enable the employee to deal with them (role ambiguity).

In this study, we have considered the following potential causes of stress:

1) **Demographic variables.** Specifically, an analysis is made of the relations between job insecurity and role stress related to age, sex, level of qualification, nationality (whether Spanish or foreign) and home situation (whether living with parents or away from home).

2) **The subjects’ personal resources.** This derives from a transactional understanding of stress, that characterises it as a result of the interaction between the demands placed on a person and the resources they have to deal with or manage these demands. In this study we consider a series of resources. First, the perception of employability. A subject who views him/herself as employable will have lower levels of stress with regard to job insecurity, given that if they lose a current position, there are always more chances of finding another. Second is personal initiative. People with initiative can increase their chances of finding employment, as well as adapting that job to suit their preferences and interests. Finally, we consider self-efficacy at work. People who are more self-efficacious are normally equipped with more resources and skills to carry out their work in such a way that it proves less stressful.

3) **Type of contract.** Types of contract are a significant cause of various episodes of work stress. The temporary nature of the contract or, on the contrary, its permanent nature may be considered as an important factor in these experiences.

4) **Relations with the undertaking.** Studies have shown the importance of relations between the employee and employer, and perceptions relating to promises made by the company and the honouring of these promises, as well as fairness vis-à-vis performance and rewards (11). This study will examine the young workers’ perceptions of whether promises made by an employer are honoured and the degree to which these promises enable them to achieve the expectations they had when they commenced work. We also consider the relation between the young person’s performance and rewards given by the company.

5) **Required qualifications for the job.** Another element that may have a stressful impact is the required level of qualification for the job and its relation to the qualifications held by the young worker. Levels of training and qualifications have increased dramatically over the last few decades for a large majority of the young population. Qualifications required for jobs have not increased to the same extent, and this therefore produces an imbalance between the quality of work and the level of education of the young person. Over-qualification is not uncommon nowadays and may be a stressful element at work, as may under-qualification, although this is less common. In this study, we examine how both phenomena can have a potential effect on episodes of work-related stress.

6) **Involvement at work.** A further cause of stress is involvement at work. On the one hand, people who are more involved at work are those who perceive that they have good relations with their employer and value their work positively. On the other, this involvement could lead to greater levels of stress. It is therefore important to clarify the relation of this variable with episodes of stress.

**Methodology**

This study was carried out with a representative sample of young people in the Autonomous Community of Valencia, and other young Spanish persons living in towns with more than 50,000 inhabitants (urban Spain). In all cases, the age range was between 16 and 30. The sample from the Autonomous Community of Valencia is made up of 1,926 young people (46.8% male) and urban Spain (12) of 2,969 young people (45.75 % male) (13). Of these young people, 39.62% from the Autonomous Community of Valencia are male and 60.38% are female, and 54.99% from urban Spain are male and 45.01% are female.


(13) Note that the sample of urban Spain also includes towns with more than 50,000 inhabitants in the Autonomous Community of Valencia.
Autonomous Community of Valencia and 39.84% from urban Spain have joined the labour market over the last five years, having already had previous work experience. The information provided by these young people provides the data used for this analysis.

This study, therefore, has been based on information obtained from 1,564 Spanish young people aged between 16 and 30, 44.31% of which are male. 44.63% have had secondary education and 20.78% have a university degree. 91.3% of the study sample hold Spanish nationality.

The age range is as follows: 29.6% are between 16 and 19, 48.72% are between 20 and 24, and the remaining 21.68% are between 25 and 30.

The variables considered for this study are as follows:

Employability. This has been measured with three statements that examine the level of agreement with statements describing good levels of employability. The reply choices range from 1 (strongly disagree) to 5 (strongly agree).

Personal initiative. This refers to interest in participating actively in tasks, other than those established on the worker’s own initiative. There are three statements, and replies range between 1 (strongly disagree) to 5 (strongly agree).

Self-efficacy at work. This measures the degree to which the person thinks him/herself capable of overcoming the difficulties or problems involved in the job. It has been measured with three statements, with replies ranging from 1 (strongly disagree) to 5 (strongly agree).

Fulfilment of initial expectations. This measure uses a single statement, with three possible replies, that evaluates the degree to which the person's expectations on joining the organisation have been fulfilled.

Honouring of promises. This uses a single statement, with five possible replies ranging from ‘very little’ to ‘a lot’, measuring the degree to which promises made by the organisation have been honoured.

Fairness in the link between performance and rewards. This uses a single statement, with three possible replies, which assesses the consistency between the worker’s performance and the rewards he/she receives from the employer organisation.

Involvement at work. This assesses the degree to which the person invests a lot of his/her time and gets involved in seeing that his/her work gets done. It has been measured by using three statements with replies ranging between 1 (strongly disagree) to 5 (strongly agree).

Job insecurity. This refers to the subjective assessments made concerning the risks of losing the position currently held. It has been measured using three statements, with replies ranging between 1 (strongly disagree) to 5 (strongly agree).

Role overload. This refers to the existence of a large amount of work and insufficient time, to the extent that it is not possible to obtain optimum results. It has been measured using three statements, with replies ranging between 1 (strongly disagree) to 5 (strongly agree).

Role conflict. This has been measured with three statements that refer to the existence of inconsistencies in the demands of the job. The choices for replies range from 1 (strongly disagree) to 5 (strongly agree).

Role ambiguity. This measures the degree of awareness of the objectives, responsibilities and skills to be used at work. There are three statements, with replies ranging between 1 (strongly disagree) to 5 (strongly agree).

Results

Table 1 illustrates the results obtained. It shows that the average values for job insecurity, role overload and role conflict come close to the central value of the scale, whereas those for role ambiguity are lower. It also illustrates the descriptive values of the independent variables considered in the study, and the alpha value of the scales.

In order to identify the causes or the significant predictors of episodes of stress, we have conducted, for each of the variables of stress considered, a multiple regression analysis in which all the independent variables mentioned have been included. The results are set out in Table 2.

The analysis conducted for job insecurity illustrates that the independent variables considered allow 13.73% of its variability to be predicted. This insecurity tends to be greater in women than in men and also in young graduates. Furthermore, it tends to be lower in young persons who perceive that they have good levels of employability and self-efficacy and among those who have jobs with an indefinite contract. It is also lower for those who work in companies which honour their promises and offer rewards that are in line with the performance of their workers. Insecurity tends to be greater for those who are over-qualified for a post and lower for those who show greater involvement at work.

The analysis of role overload enables 18.12% of its variance to be predicted. This type of stress tends to be greater among the upper age-range of young people who live away from home, perceive that they have good levels of employability and personal initiative and who work with an indefinite contract, in jobs that are either above or below the young person’s actual qualifications. It is also greater for those who have good levels of work involvement. It is interesting to highlight the fact that employability, personal initiative and involvement at work are associated with greater role overload, as is having an indefinite contract. On the other hand, there are resources such as self-efficacy which reduce this role overload. The company

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Table 1

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</tr>
</tbody>
</table>

---

Table 2

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>VARIABLE</th>
<th>JOB INSECURITY</th>
<th>ROLE OVERLOAD</th>
<th>ROLE CONFLICT</th>
<th>AMBIGUITY OF ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>INTERCEPT</td>
<td>5.44</td>
<td>&lt;0.0001</td>
<td>3.55</td>
<td>&lt;0.0001</td>
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<tr>
<td>Control</td>
<td>SEX (MALE)</td>
<td>-0.01</td>
<td>0.85</td>
<td>0.23</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td></td>
<td>AGE</td>
<td>-0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>NONCOMPULSORY SECONDARY EDUCATION</td>
<td>-0.01</td>
<td>0.86</td>
<td>-0.007</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>UNIVERSITY EDUCATION</td>
<td>0.25</td>
<td>0.01</td>
<td>0.12</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>NATIONALITY (FOREIGN)</td>
<td>0.06</td>
<td>0.47</td>
<td>-0.01</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>AWAY FROM HOME</td>
<td>-0.03</td>
<td>0.59</td>
<td>0.12</td>
<td>0.01</td>
</tr>
<tr>
<td>Young person’s resources</td>
<td>EMPLOYABILITY</td>
<td>-0.08</td>
<td>0.002</td>
<td>0.09</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td></td>
<td>PERSONAL INITIATIVE</td>
<td>0.017</td>
<td>0.66</td>
<td>0.18</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td></td>
<td>SELF-EFFICACY AT WORK</td>
<td>-0.19</td>
<td>0.001</td>
<td>-0.38</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Type of contract</td>
<td>INDEFINITE CONTRACT</td>
<td>-0.35</td>
<td>&lt;0.0001</td>
<td>0.16</td>
<td>0.016</td>
</tr>
<tr>
<td>Employer relations</td>
<td>INITIAL EXPECTATIONS MET</td>
<td>0.0007</td>
<td>0.98</td>
<td>-0.06</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>HONOURING OF PROMISES</td>
<td>-0.28</td>
<td>&lt;0.0001</td>
<td>-0.23</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td></td>
<td>FAIRNESS PERFORMANCE/REWARDS</td>
<td>-0.17</td>
<td>0.03</td>
<td>-0.21</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Features of post</td>
<td>UNDER-QUALIFIED FOR JOB</td>
<td>-0.33</td>
<td>0.21</td>
<td>0.49</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>OVER-QUALIFIED FOR JOB</td>
<td>0.16</td>
<td>0.03</td>
<td>0.17</td>
<td>0.008</td>
</tr>
<tr>
<td>Young person’s attitude</td>
<td>INVOLVEMENT AT WORK</td>
<td>-0.09</td>
<td>0.03</td>
<td>0.18</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Degree of involvement/expl. variance</td>
<td></td>
<td>&lt;0.0001</td>
<td>13.73%</td>
<td>&lt;0.0001</td>
<td>18.12%</td>
</tr>
</tbody>
</table>

---

The analysis conducted for job insecurity illustrates that the independent variables considered allow 13.73% of its variability to be predicted. This insecurity tends to be greater in women than in men and also in young graduates. Furthermore, it tends to be lower in young persons who perceive that they have good levels of employability and self-efficacy and among those who have jobs with an indefinite contract. It is also lower for those who work in companies which honour their promises and offer rewards that are in line with the performance of their workers. Insecurity tends to be greater for those who are over-qualified for a post and lower for those who show greater involvement at work.
that honours its promises and rewards with fairness also manages to reduce this role overload.

The variability of role conflict is predicted at 17.64% by the independent variables. This type of stress tends to be greater among males, in young graduates and among those who live away from home. It is also greater among those who perceive that they have good levels of employability. On the contrary, it is less among those who perceive that they have good levels of self-efficacy at work and among those who work in companies which honour their promises and offer rewards that are in line with the performance of their workers.

Finally, the variability in role ambiguity is predicted at 30.6%. That ambiguity tends to be greater for those who live away from home and less for those young people with high levels of self-efficacy and involvement at work, and those who work for companies which honour their promises.

**Summary and conclusions**

Cases of work-related stress are phenomena caused by multiple factors. They may arise as a result of the workers’ personal and social factors and also because of the relations they forge with their employers, the features of the actual job and the way in which they deal with the job. Additionally, those causes play a greater or less important role depending on the source of stress. We shall summarise here the role of the different variables depending on the case of stress considered.

With regard to the demographic variables, age (negative figures) and university studies (positive figures) predict job insecurity, whereas episodes of role stress are consistently greater for those who live away from home. The upper age-range also tend to experience greater role overload and those with university studies experience more role conflict. As we can see, some personal or social conditions are significantly related to work-related stress.

Personal characteristics which may prove useful in stressful situations (employability, self-efficacy and personal initiative) have shown consistently that they reduce episodes of work-related stress. On the other hand, employability plays a different role depending on the situation of stress: it reduces cases of insecurity, but increases cases of role overload and role conflict. Personal initiative also increases role overload. These results raise the question of whether more complicated work demands are placed on persons with more initiative, and this may contribute to increasing their employability.

Contract instability also plays a different role in the various situations of stress. A permanent contract helps reduce cases of job insecurity and role ambiguity, whereas it increases role overload. These results suggest that employers tend to make greater demands on permanent workers.

Relations between the employer and employee can be a significant source of stress or, on the contrary, can help reduce stress. Honouring promises made by the employer and fair rewards in line with performance are consistent with lower levels of work-related stress in all the cases considered. These results highlight the importance of an adequate handling of the psychological contract with regard to honouring promises and showing fairness.

Imbalances between the young person’s level of qualification and that required for the position play a significant role in the case of job insecurity and role overload. Over-qualification is closely related to job insecurity (a position requiring a low level of qualification occupied by a well-qualified young person does not provide security) and also role overload (excessive demands placed on workers carrying out uninteresting and varied tasks). On the other hand, under-qualification is closely linked to role overload, even though, in this case, the overload is due to demands made on the worker who is not sufficiently qualified to deal with them.

Finally, involvement at work has an impact on role experiences, although these may undergo variations: A high degree of involvement is linked to lower job insecurity and lower role ambiguity. It is, however, linked to more role overload.

All of these results lead to the conclusion that episodes of stress among young people at work do not only depend on the actual characteristics of the job and the degree of involvement they show at work. These characteristics play an important role in the way in which relations with an employer are perceived (whether the latter honours their promises and shows fairness) and the type of contract (permanent or temporary). These cases of stress also depend on the young person’s personal resources (self-efficacy) and employability. Finally, certain demographic characteristics, in particular living away from home, are elements that contribute to levels of work-related stress. In order to prevent that stress, these results will have to be taken into consideration, bearing in mind that its causes go well beyond the actual characteristics of the job.

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Let's face it; OSH can be boring – especially when it is repeated at every opportunity. What can be done to present OSH in a different, more exciting light; to entertain the spectator, to provide them with some food for thought or to make them feel the shiver of anxiety running down their spine?

We can look for a means of expression that, in the words of “Winnie the Pooh, will say: “think, think, think.” The poster, which communications experts call “the obsessive communicator”, fits this role perfectly. A visual sign will not replace a set of actions conditioning safety at work but it can be an exclamation point – an alarm bell, or a suggestion working on the imagination. The point, impulse and symbol play an important part in the image culture. After all, visual stimuli constitute 87 per cent of the information we gather from the world around us.

A glimpse of the past

The basic form of a poster as an announcement existed back in the Middle Ages. The modern poster was born in the 19th century as a colourful advertisement - a bill in a theatre, cinema or circus - and evolved as graphical and printing techniques were perfected. Colour posters were first introduced in England, Switzerland, Germany and France, the creations of artists such as Henri de Toulouse-Lautrec and Pierre Bonnard, whose work later had a great impact on Polish poster artists.(1)

Throughout the 20th Century, posters were shaped by fashionable trends in ‘plastic arts’. Today, they are produced not only by artists but also by advertising specialists, as we witness the revival of the poster as a discipline of the ‘plastic arts’. It perfectly serves the role as an inexpensive and original painting that adorns our apartments and offices.

The poster has a special place in Polish applied arts of the 20th century. There is even the name “Polish Poster School” that defines Polish posters from the beginning of the 1950’s to the beginning of the 1970’s, and includes the artists, characteristic artistic features and the historic conditions of its genesis. Furthermore, the term was coined outside Poland in the Swiss magazine Graphis in 1960. The phenomenon of the so-called “Polish Poster School”, formed by painters, full of imagination and freedom, largely existed because of the absence of commercial posters in the times of socialist realism.

(1) Ayumi Hirako „Polska Szkola Plakatu [Polish Poster School]” <http://www.tufts.ac.jp/tv/personal/setakchii/Placer%20dysplomowe/PracaHirakoAyumi.pdf>
Advertisements on the posters mainly dealt with spiritual and cultural values. This reference to social values, free from commercial aims, also influenced and liberated the graphical form. Theatre, cinema and circus bills used an innovative tradition of photomontage and decorative painting qualities. In 1966, the dynamic growth of poster art sparked the creation of International Poster Biennale, which to this day attracts artists from all over the world. In 1968 in Wilanów, on the outskirts of Warsaw, the world’s first poster museum was founded and continues to flourish.

Because work safety posters clearly stand out from other groups, specialists often treat them as a separate phenomenon in the history of this art form(1). This first emerged in the inter-war period as the poster’s natural functionalism was used for educational tasks. This feature was used by Instytut Spraw Społecznych (Social Issues Institute), which existed before the Second World War, to organise two competitions for the best poster about safety at work. Among the criteria for evaluation of the works were such factors as the strength with which the poster captured the worker’s attention, faithful reflection of the reality of the situation, understanding the essence of the worker’s toil and getting into the spirit of their work. The criteria also show that the posters were meant for low-qualified workers and for display in industrial settings. This Institute was honoured with the grand prize at the International Exhibition in Paris in 1937. Thanks to the competitions, graphic artists became interested in the work safety issue, and the subject gained new professional execution.

After 1945, this art form blossomed but the subject of work safety and social issues in general were slowly being forgotten as the artists focused on playbills and movie posters. The post-war poster can be classified according to two different criteria: its function and pragmatics. The former identifies warning, training, information and propaganda, while the latter divides posters into realistic, satirical and symbolic.

Posters produced from 1954 to 1965, both stylistically and chronologically, belong to the Polish Poster School, and were produced by artists associated with the school of painting that created the cultural poster but still retained their separate identity thanks to their concise composition, suggestive nature and their comprehensibility. The free internal space of the movie and play poster was exposed to the discipline of legibility and expression in the OSH poster. Often, the integral element of composition is the text in the form of the slogan, warning, ban or command expressed through uniform lettering, style and colour which is a message in itself.

At the beginning of the 1970s posters emerged from the surrealist school of painting and the interesting use of photographic portraits of children.

**New beginnings**

The search for an attractive means of expression for OSH issues and the poster tradition led the Central Institute for Labour Protection to organise the first competition for an OSH poster. The subject was of current interest – “Stress at work.” The Institute won the support of the Ministry of Labour and Social Politics, and it was co-organised by the three Academies of Fine Arts of Warsaw, Cracow and Łódź. Many artists and students, or graduates of Academies of Fine Arts from Poland and abroad, were invited to take part in the contest. Over 200 projects were submitted, delighting with creativity, imagination and careful preparation. The awarded posters continue to amaze new audiences with the accuracy of their message, like this slogan from one of the submitted projects: “Stress at work – uncertainty, danger, pressure”

Since the first competition, the poster has become an important and consistent means of work safety promotion once again. Consecutive, annual competitions have dealt with: dangers related to the work at a computer station, occupational risk, noise, chemical hazards, ergonomics, agriculture, construction, school safety, transport, electricity, work of the handicapped and biohazards. Last year’s competition was once again devoted to the issue of noise following the theme of the European Week for Safety and Health at Work - “Stop that Noise”, and the 2006 “Safe Start” information campaign is the subject of this year’s competition.

The contest has brought a fresh look and introduced modern means of expression to the issue of safety at work, and this is demonstrated by the continuing success of the competition. Each competition attracts over 200 projects from Poland and abroad. The jury consists of representatives from the Ministry of Labour and Social Politics and Ministry of Education, as well as artists, employers and union representatives. Each year they award three grand prizes and five honourable mentions. The diplomas and financial prizes are presented during the opening ceremony of the exhibition, which takes place every autumn. Traditionally, during the ceremony students from primary schools receive their own prizes for winning a concurrent contest on safety. Furthermore, 50 of the submitted works are displayed at the exhibition after the competition and included in the competition catalogue.
The value of poster competitions and publishing the results is exemplified by the amount of attention that the posters almost always draw to themselves and their popularity among OSH specialists, for example, who put them on display at their workplaces, offices and schools. Posters increase the impact of other forms of communication and prevention - training, seminars and films. One of the representatives of a construction union who took part in the opening of the “Building in Safety” exhibition, said: 'As a literal person I wasn't convinced about going to this ceremony. But when I saw the posters, I changed my mind - the exclamation point made from bricks will have a greater impact on a worker than a list of warnings'.

The posters are displayed in many different places, from post-competition exhibitions at the Academies of Fine Arts to conferences, seminars and open-air events. In 2000, The Museum of Poster in Wilanów organised an exhibition of 300 OSH posters and the specialists involved in the event decided that such contests influence not only the process of fighting work-related hazards but also act as a reviving force for the modern Polish poster.

Prof. Wladyslaw Pluta, an artist and one of the originators and jurors of the contest, confirms that such events have gained widespread response from the artistic community, including both renowned artists, and students and graduates from academies of fine arts. Such competitions are an opportunity for young artists to prove their worth and to kick-start their careers. Additionally, the presence of professionals gives posters an artistic value, at the same time developing in the work environment a sensitivity for such forms of expression.

Ever since the first events connected with the European Week for Safety and Health at Work were organised in Poland, posters from previous competitions that shared the subject with the campaign were widely used, for example, as illustrations in publications.

During the campaign the posters are given away free. After the campaign ends, they are available for purchase from the Institute at a nominal price of €1.5 per poster.

New posters are significantly different from the old ones. First and foremost, they have a wider scope of associations and more often they venture outside the stereotypical image connected with the workplace. It is best observed in such competition themes as “Stress”, “Ergonomics” and “Biohazards”. The posters portray a new reality, moving the stress from physical to mental work that is clearly visible in the “Occupational Risk” theme. Workers are no longer depicted as "shocked workers" or people who frequently break the rules. Their new image is of a different labour market, and of different tools depicting the workaholic, the stress victim or the computer victim.

The variety of means of expression has increased, and now includes drawings, artistic graphics, paintings and collage of different techniques. Traditionally they will include a written layer – a slogan. Sometimes an additional effect is achieved through an accurate new term, like in the "Homocomputerus" poster.

Among the modern projects you seldom see a training or didactic poster. Most often the poster refers to subtle but comprehensive symbolism, frequently using satirical drawing, humorous message or a surprising composition of objects. The language of the poster is diverse but still its message comes through.

A selection of posters from every edition can be seen at http://www.ciop.pl/1215.html

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