Evaluation of Healthworks in Newham
Health and Safety in Schools Programme

Sharon Robinson and Hywell Dinsdale
Evaluation of Healthworks in Newham
Health and Safety in Schools Programme

Sharon Robinson and Hywell Dinsdale

Centre for Institutional Studies
University of East London

December 2001

Published as CIS Commentary No 100

ISBN 1-902494-45-8
THE CENTRE FOR INSTITUTIONAL STUDIES

The Centre for Institutional Studies (CIS) is a research unit which was established in 1970. The Centre undertakes studies of public policy and public institutions. Its distinctive approach is to identify the problems to which the policy is seen as a solution and assess the capacity of the institutions to put new policies into practice. The Centre's name and approach derive from the work of Sir Karl Popper and in developing this approach the Centre is unique in this country.

Since 1970, the Centre has completed a range of studies in the fields of education, voluntary organisations, urban regeneration local government, local government finance and other public services. Current work is focussed on higher education, the voluntary sector and urban regeneration in East London.

URBAN REGENERATION TEAM

The Centre's urban regeneration evaluation team has a number of current research projects including the monitoring of evaluation of three Single Regeneration Budget Programmes in East London, and the assessment of some crime prevention and community safety projects. Alice Sampson heads the team. Hywell Dinsdale, Afsia Khanom, Emma Ahmad, Rahila Ahmed, Sharon Robinson are research fellows working on a variety of projects. The report has been written by Hywell Dinsdale and Sharon Robinson.

ACKNOWLEDGEMENTS

We would like to thank all the school students and members of staff who participated in this research. Without their co-operation this research could not have taken place.

We would also like to thank the Healthworks staff who spent valuable time liaising with the researchers, and who were committed to running a highly professional initiative.

Sharon Robinson and Hywell Dinsdale
Centre for Institutional Studies
University of East London
December 2001
EXECUTIVE SUMMARY

This report has been written by the Urban Regeneration Evaluation Research team at the Centre for Institutional Studies, University of East London. It was commissioned by the Fit for Work Single Regeneration Budget (SRB) Partnership in order to provide an independent assessment of the work Healthworks in Newham has been doing with young people in local schools.

This SRB funded organisation works towards achieving the SRB strategic objective 07, to enhance the quality of life of local people, by attempting to reduce the incidence of work related accidents. This project, one of three run by Healthworks, focuses on young people.

Health and Safety at Work: the context

Research has shown that large numbers of young people are in employment, or have been in employment, even before the school leaving age. Much of this work is of a cash in hand nature, and so comprehensive data is unavailable. Estimates suggest that around 38 per cent of school children have done paid work (TUC 1997).

Although it is easy to demonstrate that large numbers of young people work, it is more difficult to collect data on work related injury for this group. Underreporting of work related incidents and a lack of data suitably sorted by age provide the main reasons for this. It is thought that around 25 young people aged 16-24 are killed at work each year, and a further 18,000 suffer injuries, many of them serious (Institute of Occupational Safety and Health 1999). Other estimates suggest that 44 to 48 per cent of children aged 10 to 16 in paid work have experienced work-related ill health (O'Donnell and White 1999). Even with only limited data available it is clear that there are large numbers of young people sustaining work-related injuries.

Young people are thought to be particularly at risk of work-related ill health. Factors such as immaturity, a lack of familiarity with the work environment, lack of strength, and lower body weight are all thought to contribute (Sources: GMB 1997 and Heptinstall et al. 1997). The health effects can also be more devastating for them, potentially causing irreversible damage to their physical and physiological development, including permanent disabilities, with serious consequences for their adult lives (Forastieri 1997).

Many work-related accidents and much ill health at work can be prevented. The Health and Safety Executive has stated that up to 80 per cent of accidents could be prevented if people have proper training (HSE 1999b). Unfortunately proper training is not given to many young workers. One recent study found that 80 per cent of smaller employers had not made the necessary provisions for workers under the age of 18 (Norwich Union 2000), and another suggests that 37 per cent of 15-24 year olds in employment did not have proper health and safety training, even though this is a legal requirement (TUC 2000).

With such figures in mind the Health and Safety Commission has set targets to reduce work-related ill health, injuries and death by 20 per cent for fatalities, and
10 per cent for major injuries. These targets are to be achieved by 2010 (HSE 2000a).

One reason for this policy is the great cost to the economy caused by work-related ill health. This is estimated at around £11 billion annually (HSE 2000b), with 25,000 workers being forced to give up work due to work-related injuries (HSE 1999b), and other estimates suggest that at least 20 million working days are lost per year in this way (DoH 1999). The cost of this ill health is borne primarily by employers, and the burden falls particularly heavily on smaller firms, which constitute a substantial proportion of businesses in the London Borough of Newham.

Healthworks in Newham: Young People's Project

The SRB funding for the work with young people started in 1998 and has funding to continue until April 2002. The project has not secured funding beyond this point and the service will no longer be available if no alternative sources are found.

The project provides health and safety training lessons in schools for young people who are preparing for work and work experience placements. Each class of year ten and eleven students are given a one-hour health and safety lesson before they start work or work experience. This lesson has a focus on interaction, and uses handouts, a 'safety signs' guessing game, role-play and a short video to teach the young people. This session has now been delivered to over 4,500 schoolchildren in Newham.

Some classes also participate in a one-hour interactive drama, commissioned by Healthworks from a local drama group. The drama puts the health and safety lesson into visual context, though not all the schools have the drama due to cost and school timetable constraints.

It is the responsibility of schools to provide health and safety education before work placements, and the responsibility of the work placement organiser to ensure the young people receive health and safety training. Many schools try and incorporate Health and Safety information into other lessons, but the Healthworks project provides a dedicated session, with the advantages of specialist knowledge and teaching tools.

The Research

In order to evaluate the effectiveness of the project, and to look for an impact as a result of the lessons, the researchers tested the health and safety knowledge of 138 students before the health and safety lesson. These students were tested again after they had returned from work placements and, along with an additional 109 students, gave feedback from both the lesson and their work experience. Six members of teaching staff who usually supervise these students were also interviewed.
Findings

The evaluation saw a statistically significant improvement in the tested level of Health and Safety knowledge between the pre and post-intervention results. Before the lesson the average score was 81 per cent, whereas after it was 91 per cent, showing that the lesson does impact on health and safety knowledge. This was backed up by positive feedback from both students and staff, suggesting that the vast majority of young people both enjoyed the lesson and found it useful.

Ninety-five per cent of pupils, and all teachers interviewed, thought that health and safety should be taught in schools, suggesting that Healthworks is targeting the right audience.

The research looked for any differences in Health and Safety knowledge with gender, ethnicity and age, but concluded that the impact of the project is constant across these groupings. It appears that Healthworks is providing an inclusive service which appeals equally to all parts of its audience.

The findings from the research highlighted some areas in which the project could make improvements. Young people suggested making some additions to the safety file handed out, for example to include information on first aid, and the student's remarks on different parts of the lesson suggested that perhaps the video shown could be made more interesting for the audience. From the teacher's comments it was suggested that the lesson place an even greater emphasis on interaction to further engage the young people.

The research also demonstrated that those individuals who participated in the Health and Safety drama presentation scored significantly higher than those who did not on the post intervention test. This finding suggests that the drama lesson is an effective one, and should be provided to all classes if funding can be made available.

Feedback from Work Placements

Two hundred and one young people answered questions on their work placements. Thirty-four per cent of students report that they were given no health and safety information on their placement, and 29 per cent report identifying health and safety hazards whilst on the placement. These included:

- Smoking on site in no smoking areas
- Blocked fire exits
- Wet or oily floors
- Broken plug sockets
- Faulty stairs.

This feedback demonstrates that despite the other checks which may be in practice, for instance by employers or work placement organisers, a large number of young people will still be exposed to risk in the workplace. If they are not given education and a basic understanding of Health and Safety issues, they will be at risk of accident, injury, or possibly worse.
Conclusions

The report concludes that Healthworks are essentially providing a useful and much needed service. There is clearly a problem with health and safety for this age group, yet the provision of Health and Safety education varies from school to school and employer to employer.

Although some areas have been identified where improvement can be made, these are not so serious to affect the positive impact of the project. If these recommendations are followed it is hoped that the project will be even more effective in future.

There seem to be clear advantages of an specialist body leading health and safety lessons at schools, with some teachers remarking on the expert advice and specialist information the project could offer over that available to regular teachers.

The report does raise some concern that increasing Health and Safety knowledge and awareness (as this study has done), may not necessarily translate to improved health and safety in the workplace if the young people do not implement the new information. The recommendation is made that the project continues to make the lesson enjoyable and interactive, in the hope that, by playing an involved role in the lesson, pupils may be more likely to recall and implement what they have learnt.

The report recommends that the principle of Healthworks' work in schools is made available for all school children in Newham before they go to work placement.
INTRODUCTION

The Urban Regeneration Evaluation Research team at the Centre for Institutional Studies, University of East London, was commissioned by the Fit for Work Single Regeneration Budget (SRB) Partnership to undertake an independent assessment of the impact of the Health and Safety lessons for schools provided by Healthworks in Newham. The research took place between April and September 2000.

Healthworks in Newham works towards achieving the SRB strategic objective 07 to 'enhance the quality of life and capacity to contribute to urban regeneration of local people' by reducing the incidence of work related accidents, particularly amongst sections of the community who are at greater risk. As part of a range of SRB-funded programmes the project aims to raise awareness of work related accidents and ill health amongst young people at school and to provide them with information about health and safety issues in preparation for their work placements.

This report provides an analysis of the need for the initiative, describes the activities of the Healthworks project and presents the findings from the pre-intervention self-completion questionnaires filled in by 138 young people and post-intervention questionnaires completed by 247 young people. Six teachers also completed questionnaires.

Health and safety at work: the context

Research on young people and employment has shown that around two million school children are in some form of employment (Short 1998). Other work has suggested that between one third and one half of school age children are in paid employment at any one time, translating to between 1.1 and 1.7 million children (Mizen et al. 1998). Another study, conducted by MORI, looked at the working patterns of 4,295 school children and found that 38 per cent either currently had a paid job, or worked in the summer holidays. Types of employment included babysitting, paper rounds, and shop work (TUC 1997). Whilst these figures are for young people still at school, numbers are likely to be much higher for young people beyond the school leaving age.

Data on the number and type of accidents that happen to young people at work is extremely inadequate. Both major and minor accidents appear to be under-reported and data on age and location is not systematically collated and recorded (Heptinstall et al. 1997). The following figures give some estimate of the size of the problem:

- In 1997-98 46 injuries were reported to the Health and Safety Executive (HSE) for workers under the age of 16. One was fatal, 19 were major and 26 required over 3 days or more sickness. Figures from 1998/99 showed 46 injuries, this time with 14 major injuries, and 32 requiring over 3 days sickness (source: HSE).
- In 1998-99 the HSE reports that 21 young workers under the age of 25 died and a further 3,844 were seriously injured (source: HSE).
- Ten young workers (15-24 years) are seriously injured every week at work because they are unaware of their basic health and safety rights as an employee, and are not given adequate training by their employers (TUC 2000).
• Every year in the UK around 25 young people aged 16-24 are killed at work, and a further 18,000 suffer injuries, many of them serious (Institute of Occupational Safety and Health 1999).

These official figures are high enough to cause concern, yet with the acknowledged high level of accident under-reporting, the actual numbers are likely to be considerably worse. A study by the Royal Society for the Prevention of Accidents (RoSPA), comparing accidents for 1995-96 reported through the official channel (RIDDOR) with those from the Labour Force Survey, estimated that only 42 per cent of accidents are properly reported and recorded (Bibbings 1998). In addition RIDDOR only records data for accidents which result in fatality, major injury, or cause over three days absence from work, and so potentially large numbers of less serious injuries may go unnoticed.

This is backed up by a number of self-report studies. Two studies by O’Donnell and White (1999) looking at 2,725 young people aged 10 to 16 working in Norfolk and North Tyneside found 48 and 44 per cent respectively suffered from a range of work-related injuries including dislocated joints, bruises, and broken bones.

Some of these injuries required time off school to recover, and there is even potential for long-term health problems to develop. Due to the anatomical, physiological and psychological differences between children and adults, and also the process of growth and development, young people may be more susceptible to occupational hazards at the workplace than adult workers. The health effects can be more devastating for them, potentially causing irreversible damage to their physical and physiological development, including permanent disabilities, with serious consequences for their adult lives (Forastieri 1997).

The MORI/TUC study also included a question on injuries sustained at work. In this study 19 per cent of child workers reported having suffered an accident or injury whilst at work. The study also revealed a significant difference in the accident rate for boys and girls, with 24 per cent of boys reporting accidents compared to 13 per cent of girls (TUC 1997).

Below are two brief examples of some of the recent injuries to young people whilst in the work place:

• A Bradford food Company has been fined £21,000 and £15,000 costs after a 16 year old employee amputated his little finger and broke the remaining fingers on his left hand while trying to clean the loading conveyor chain-drive of a wrapping machine. The fire brigade had to free the unconscious youngster by cutting the chain-drive and forcing open a top fixed guard on the machine. The person investigating the accident described above found that there were no appropriate instructions on how to clean the machine. (source: Environmental Health News, September 2000).

• A 16 year old had been sent on training in Newham, learning tyre and exhaust work. The trainee was briefed on the work and was shown the machine that stripped the tyres from the rims using a power ram. Whist showing the trainee how to remove a tyre the manager was called away. The manager told the trainee to let the air out of the tyre and remove the valve. The manager did this and in the manager's absence the trainee also removed the tyre and placed it in the ram. The tyre had slipped from the correct position so the young trainee slid his hand onto the shaft of the operating ram. He then pressed a switch that
applied 140 pounds per square inch of pressure to the ram. The machine had cut off the top of a finger, which was only retained by the skin (reported to Newham Environmental Health Department, November 2000).

Information on the number of young people who have had a work related accident whilst in employment in the borough of Newham are unavailable. However, the number of injuries to employees reported to the HSE's Field Operations Directorate for the London Borough of Newham in the service industries was 216 in 1998-99. One was reported to be fatal, 24 major, and 191 involved over three days incapacity for work (HSE 1999a). In neighbouring boroughs over the same period the reported injuries were:

- 181 in Waltham Forest, 14 were major and 167 of the reported injuries involved over three days incapacity for work.
- 255 in Tower Hamlets, 35 were major and 220 involved over three days incapacity for work.
- 109 reported in Redbridge, 20 were major and 89 involved over three days incapacity for work (HSE 1999a).

The London Borough of Newham is shown to have the second highest number of reported injuries in service industries when compared to neighbouring boroughs. This shows that there is an overall need for raising awareness of health and safety. These figures for service and retail industries reflect the type of work in which young people in Newham are most likely to be occupied (from personal communication with the Healthworks team and the results of the post-questionnaire (see 'Findings')).

National figures in the same year for the service industries showed there were a total of 59,134 reported injuries. Thirty-nine were reported to be fatal injuries, 8,969 major injuries and 50,126 injuries involving over three days incapacity for work (HSE 1999a). With such high numbers of incidents, it is clear why improving health and safety in the workplace has become a high priority for government. The Health and Safety Commission has set targets to reduce work-related ill health, injuries and death by 20 per cent for fatalities, and 10 per cent for major injuries. These targets are to be achieved by 2010 (HSE 2000a).

One reason for this policy is the great cost to the economy caused by work-related ill health. This is estimated at around £11 billion annually (HSE 2000b), with 25,000 workers being forced to give up work due to work related injuries (HSE 1999b), and other estimates suggest that at least 20 million working days are lost per year in this way (DoH 1999). The cost of this ill health is borne primarily by employers, and the burden falls particularly heavily on smaller firms, which constitute a substantial proportion of businesses in the London Borough of Newham.

As part of the drive to reduce these problems it is important to target young workers. This group is at high risk of accidents for a variety of reasons:

- lack of experience
- greater levels of risk-taking behaviour
- vulnerability to fatigue
- lack of physical strength
- lower body weight, and hence greater vulnerability to chemicals
they find themselves outside the disciplined and highly supervised environment which they are used to at school
possible lack of confidence (Sources: GMB 1997 and Heptinstall et al. 1997).

Another consideration is that many accidents and much ill health at work can be prevented. Indeed the HSE has stated that 80 per cent of accidents are preventable if people have proper training (HSE 1999b). With this in mind, and in order to address the risk factors outlined above, a number of guidelines have been drawn up.

These, in the Health and Safety (Young Persons) Regulations (1997) and more recently incorporated in the Management of Health and Safety at Work Regulations (1999), include the following demands of employers for their employees under 18 years old:

- To provide information, instruction, training and supervision on health and safety matters for all employees
- To carry out risk assessments (identify and control hazards) and record findings.

Despite these guidelines recent studies have shown that many employers are still not complying and, as a result, are putting their young employees at risk. A study found that 80 per cent of smaller employers had not made the necessary provisions for workers under the age of 18 (Norwich Union 2000). This lack of training and information is apparent from a TUC poll, collated as part of the TUC Play Safe at Work campaign. A study of 355 employers revealed that 37 per cent of 15-24 year olds who were in employment did not have proper health and safety training, even though this is a legal requirement (TUC 2000).

In the same study, six per cent of employers admitted that a young person had suffered an accident whilst at work and one in three of these accidents were serious enough to require treatment. The survey revealed that one in seven of the businesses said that they did not have the resources to train young people in health and safety, and 90 per cent admit they are not always confident that the young workers they take on are ready for the world of work. Importantly, four in five blamed the schools for not preparing young people for the work placement (Norwich Union 2000).

These studies show the large number of young people experiencing accidents and ill-health as a result of working, the lack of safety training by employers, and the belief held by some employers that it is not their responsibility to train young people. With this background the need for such a project as that offered by Healthworks to young people is clear.

**Healthworks in Newham**

Healthworks in Newham is involved in a number of activities. Members of the team work with primary care groups providing advisory sessions and giving occupational health and health and safety information to both patients and GPs in surgeries and health centres. Newsletters and leaflets are regularly displayed in primary health care centres and GPs surgeries along with translations into the local communities' languages. To date the team has seen over 170 GP referrals with work related
injuries and in addition the project continually receives referrals from Physiotherapy departments in the borough.

Other services provided have included giving health and safety advice and information to other organisations and groups, for example voluntary organisations and homeworkers, for whom the project has also piloted a safety equipment loan service.

There are also fortnightly 'Drop In' advisory sessions at Stratford College, and Health and Safety lessons for unemployed young people participating in the Gateway for New Deal programme. Training and advice has also been provided to over 100 young people, aged 15 to 21, who attended the 'Youth Workers for the Summer' scheme during the summer school holiday.

By providing advice to the various organisations the Healthworks team believe it will help prevent and reduce accidents at work, raise awareness of Health and Safety issues amongst employers and employees, and create a safer working environment.

The SRB funding for the work with young people started in 1998 and will end in 2002. The SRB funded aspect of the Healthworks project is planned to be a continuous programme offering training and giving advice to those who are more likely to be at risk from work related accidents. The aims and objectives of the young person's health and safety initiative are outlined below:

**Objective:**
- To provide health and safety training lessons in schools to young people who are preparing for work and work experience placements.

**Aims:**
- To raise young people's awareness of health and safety at work.
- To encourage young people to think through the consequences of their actions on both their own and others' health and safety.
- To equip young people with the skills and knowledge to protect themselves and others at work from accidents and ill health.
- To improve young people's health in Newham through the provision of occupational health advice and information.

To achieve these the Healthworks team has developed a comprehensive Health and Safety programme. Activities include:

- An interactive health and safety exhibition and quiz which will tour schools and colleges around Newham
- Health and Safety at Work for Young People leaflet
- Health and Safety at Work for Young People poster.

The focus of activity is a one-hour health and safety lesson to be delivered to each class of year ten and eleven students before they start work or work experience.

This fits with government recommendations for best practice which state:

'It is essential that the school is clear about its responsibilities in arranging placements for students and introducing them to health and safety at work issues, prior to their placement.' (DFEE 1999:20).
Guidelines also state that

'A briefing on the health and safety aspects of their placement can either take place in specifically designed training sessions, or can be integrated into the overall curriculum (or preferably both).’ (Quality and Performance Improvement Dissemination 1999:16).

With the government pushing for a 'risk-literate' society, and with Health and Safety introduced as a topic in the curriculum under 'Citizenship' in September 2000, Healthworks in Newham is aiming to meet these requirements.

To date health and safety programmes have been delivered to 9 of the 15 secondary schools in the borough. These are part of a rolling programme, with many of these schools visited more than once by the Healthworks staff. To date over 4,500 young people in Newham have taken part (figure from Healthworks in Newham).

The lesson includes:

- 'Hazards and Risk': this was to help the young people to understand key concepts in health and safety
- Information on the legislation on the Health and Safety Act and young people at work
- Information on the young people's rights and responsibilities and the responsibilities of the employers
- Safety signs guessing games where the young people could identify and learn the meaning of safety signs
- Accident case studies.

In addition a short video is shown to enable the young people to spot hazards and to analyse health and safety risks in a work environment, and also an interactive activity as an introduction to Personal Protective Equipment (PPE). This was to enable the young people to identify safety equipment and to learn the type of working environment the equipment would need to be worn in. Safety files and booklets are also included to consolidate and complement the lessons.

Healthworks have also developed a one-hour interactive drama to supplement the lesson, which is produced by a local drama group. The drama puts the health and safety lesson into visual context and it was hoped that it might help those young people who speak English as an additional language or who have learning difficulties. Included in the issues the drama session covered was the importance of following work safety regulations and to teach the young people to think through the consequences of their actions. In practice not all the schools have the drama due to cost and school timetable constraints (see appendix for lesson plan and drama description).

It is the first time this type of initiative had been developed in Newham and it appears that no other organisation delivers such a unique initiative. As a result, Healthworks has been approached by other organisations in and outside London requesting the Health and Safety programme, advice, materials and information.
Conclusions

1. There is evidence that nationally there are high numbers of children in paid employment. Theory suggests that young workers are at a high risk of work-related injury and this is backed up by the available data on accident rates, both from official statistics and from self-report studies.

2. Although regulations and guidelines exist to protect young workers, it seems that these are not effectively policed and appear to be failing. In this context it is increasingly important that young people know their rights and responsibilities before entering the workplace.

3. Government guidelines do place some emphasis on schools to provide their pupils with some degree of health and safety education, especially before they embark on work experience.

4. Healthworks in Newham provides a one-hour lesson, with the potential of an additional drama exercise, to secondary schools in Newham to meet the health and safety education needs of the young people.
THE RESEARCH

Introduction

The research took place between April and September 2000 and aimed both to assess the progress made by the project towards achieving its aims, and to evaluate the quality of service provision and its effect on its participants.

Research method

In collaboration with the project co-ordinator and occupational health and safety advisors, four schools representing the cultural and ethnic diversity across the London Borough of Newham were selected to participate in the research. This represented just under 50 per cent of the schools participating in the project. Two of these schools were then selected and self-completion questionnaires administered to a sample of young people prior to the start of the health and safety lessons. The findings from these questionnaires provided information about the young people's knowledge of health and safety issues before they participated in the lesson. This pre-intervention or baseline information was then used to compare their existing knowledge and understanding with that after completing their lessons and work placement.

The questionnaires were designed in close collaboration with the Healthworks team. The baseline questionnaire was developed from a questionnaire used by Healthworks in Newham to evaluate and develop their work. The questions included the young people's views about who is responsible for health and safety at work, and the action they would take if faced with health and safety problems.

The post intervention questionnaires were administered two to five months after the young people had been given their health and safety lesson and after they had completed their work placement. The differences in timing were caused by the different times at which schools had lessons and work experience placements. The questionnaire again measured health and safety knowledge, and also collected feedback on the lesson from the young people.

At this time the teachers' questionnaires were also administered. This was to find out what the teachers thought of the lessons and drama session and to collect their views on how the programme could be developed.

The Healthworks team made initial contact with the schools informing them about the independent research. The researchers then contacted the Personal, Social and Health Education (PSHE) teachers directly. All the teachers were welcoming and co-operative. In each school researchers administered questionnaires to three classes.

The schools

The schools involved in the research are described briefly below, using information from the most recent available OFSTEAD reports. In order that schools cannot be identified we have referred to them as schools A to D for this research.
School A was co-educational with over 1300 young people aged 11 to 16, predominantly Asian, and over half (54 per cent) received free school meals. GCSE results for five or more grade A to C were well below the national average (47 per cent) at 22 per cent. School B was a single-sex school with approximately 1062 young people on its register. Providing education for young people between the age of 11 to 18 years old it is ethnically diverse, and described as a good school with GCSE A to C results in line with the national average.

The two additional schools included in the post-intervention phase of the research were also culturally diverse and are described as co-educational comprehensives catering for pupils aged 11 to 16. Both schools have a large proportion of young people from ethnic communities where English is not their spoken language at home. School C has 964 pupils and in the OFSTED report was described as having a poor reading standard, and a standard of writing well below the national average. The school's GCSE results were 25 per cent at five or more subject at grades A to C, and just under a third of pupils qualify for free school meals.

School D has just over 1600 young people, 48 per cent of who were eligible for free school meals. The school's GCSE result with five or more grades A to C was 23 per cent, again below the national average. Thus the schools selected for this study are a representative sample of the type of schools within the London Borough of Newham and are probably typical of many inner city comprehensive schools situated in disadvantaged areas.

The difficulties encountered by the researchers administering the questionnaires varied. Some classes were disruptive and young people found it difficult to focus on completing the questionnaires whilst in other classes there was silence and the young people filled in the questionnaire without any problems. In certain classes some young people were identified as having special needs and therefore required help with the questionnaire.

Findings

This section of the report outlines key findings from the pre-intervention and post-intervention questionnaires.

A total of 138 young people completed a pre-intervention questionnaire, with 247 completing the post-intervention questionnaire. All these were year 10 pupils and aged between 14 and 16 years. The majority of young people were 15 years old, with approximately 60 per cent male and 40 per cent female. Forty-seven per cent described themselves as Asian, 24 per cent as Black, 22 percent as White, and four per cent identified themselves as having dual ethnicity. Three per cent described themselves as from other ethnic backgrounds.

Pre-intervention results

The purpose of the pre-intervention questionnaire was to measure the existing level of health and safety awareness amongst the young people in the study. Overall this was found to be high, with respondents scoring an average of 81 per cent of questions correct. A high level of awareness was expected as the questions were
designed to prompt young people to demonstrate what they knew, rather than to specifically expose weaknesses. Some questions on the pre-intervention questionnaire were answered particularly well, with over 90 per cent identifying the correct procedures for working with machinery (93 per cent), dealing with a general health and safety problem at work (92 per cent), and for wearing safety equipment (93 per cent).

Despite these high levels of awareness, the young people were found to score less well on some of the other questions. When asked who has responsibility for their health and safety at work, only 55 per cent correctly identified both themselves and their employer.

Another weak area of knowledge was revealed when the students were asked the correct procedure to follow in the case of an accident at work. Here only 76 per cent correctly answered that they would report it to their supervisor. In fact for the three questions where there was an option of informing the supervisor, at most 80 per cent of students chose this for any given question. Although the majority of students recognised the importance of informing their employer on health and safety matters, this still leaves one in five students seeking help from colleagues and elsewhere, with possible implications for health and safety.

Post-intervention

The post-intervention questionnaire also included a section to test the level of health and safety awareness in order to compare with the baseline measurements. Whilst the questions were changed slightly to prevent students in the two schools in the pre-intervention study being familiar with the questions, similar scenarios were presented to give comparable results.

The post questionnaire suffered a much larger number of non-responses to questions. There are a number of potential explanations for this, one of which is that the young people did not know the answers to these questions and so left them blank. Although this is a possibility, it seems unlikely given that each question had an option of 'don't know' which was only used in three per cent of all responses. A total of 13 of the 247 students (5 per cent) didn't respond to three or more of the questions testing health and safety awareness on the post questionnaire. In contrast all respondents to the pre-questionnaire attempted all questions. The missing responses prove to be unevenly distributed in the study, being predominantly boys from the 'black' and 'other' ethnic groups in school B. In order to stop results for these groups being artificially deflated these 13 individuals have been excluded from the analysis.

Overall there was a slight increase in the general level of health and safety awareness as demonstrated by the pre and post questionnaires. After the health and safety lesson the average score was 88 per cent, as opposed to the 81 per cent of the baseline measurement. If we look solely at the results from two schools from which the baseline measurement was taken (A and B) we can see a statistically significant improvement. The mean health and safety awareness score as tested after the health and safety lesson (91 per cent) is significantly better than that before the lesson (81 per cent).
There were no significant differences between self-reported ethnic groupings, gender, or age on the total scores, suggesting that neither health and safety awareness, nor the impact of the health and safety lesson were affected by these characteristics.

This questionnaire also quizzed students about their work experience placement, and included questions on their health and safety behaviour whilst there. Two such questions were asked, firstly whether those young people not given health and safety information asked their supervisor for any, and secondly whether they notified their supervisor of any health and safety hazards spotted. Forty nine per cent of students reported that they asked their supervisor for information, whilst 57 per cent who spotted hazards said that they told their boss. These percentages are lower than would be expected from both the baseline and the post-intervention awareness assessment, where well over 70 per cent were recognising the importance of their supervisor as a first port of call. These figures suggest that the attitudes reported in the questionnaire do not necessarily translate directly to behaviour in the workplace, possibly due to factors such as a lack of confidence or an unfamiliar environment.

Opinions of the young people:

Despite this note of caution, overall the students reported favourable opinions of the health and safety class as a whole. Just under three quarters (71 per cent) of the young people said that they had learnt something from their lessons and almost two thirds (62 per cent) said that their lessons had been very useful or useful. All except seventeen students (7 per cent) found some areas of the lessons useful.

The most common things that the young people had learnt from their lessons were:

- About hazards and chemicals
- How to be safe and careful
- Things to do and not to do
- Awareness of dangers in the work place
- Safety signs
- How to do things safely and be safe in the work place
- Where to run if there is a fire
- To ask if in doubt
- The importance of health and safety.

The vast majority of students thought it important to learn about Health and Safety, with 67 per cent replying that it was very important and another 30 per cent classing it as important. In addition 95 per cent thought it a good idea to teach health and safety in schools. The most important things the young people said they had learnt from the lesson were:

- Fire exit and alarm
- Asking employers for health and safety rules
- The meaning of safety signs
- Safety signs and how to follow them in general
- Legal laws
- Being careful, awareness of signs and exits
- To be safe in the work place
• Reporting accidents and problems
• My rights.

Some students thought that the least important were:

• That chemicals are dangerous
• To wear sensible clothing
• To shut draws
• Safety signs.

Learning aids: video, safety signs guessing game, and health and safety file

Again overall the students gave positive responses when questioned about the learning aids used during the health and safety lesson. Three quarters (75 per cent) of the young people said that they found the safety signs guessing games very useful or useful. Only a small number of young people (12 per cent) did not find the guessing games useful. The things the young people liked about the safety signs guessing game included:

• Learning to recognise safety signs
• The repetition of the lesson to ensure understanding
• Made the lesson more fun and exciting
• Learning new information
• Learning that taking precautions can save you from having problems.

The majority (61 per cent) said that the safety hazards spotting video was very useful or useful, while 23 per cent said that it was useful in some ways. Only a minority seven per cent (16 students) did not find the safety hazard spotting video useful in any way. Comments from the young people on the video were overall positive and included:

• Increased awareness of hazards
• The video was easy to understand
• It was useful to see accidents and to learn how to avoid them
• The video showed 'do's and don'ts'.

The Healthworks team also provided a lesson safety file and leaflet for the young people. Fifty-seven per cent of those responding to this question reported receiving the safety file and leaflet, and 60 per cent took time to look at the file. Three quarters (75 per cent) of these students said that they found the safety file very useful or useful. Twenty per cent said it was useful in some areas and only five per cent did not find the file useful at all.

A small number of students (13 per cent) said that other health and safety issues should have been included in the safety file. They included:

• Chemical hazards
• First aid
• What to do if someone puts you at risk.

Analysis of the responses to questions on the Health and Safety file reveals that there is a significant difference between numbers of males and females actually
looking at the file. Sixty eight per cent of females read the file compared to 55 per cent of males. This suggests that there may be potential to improve the file so that it appeals more to boys and prompts them to read it.

Drama

Generally the students reported positive attitudes towards the one-hour drama session. One hundred and eight students watched the drama workshop, and 73 per cent reported it as very useful or useful, with 18 per cent rating it as useful in some areas, and nine per cent as not useful/don't know. Although one of the aims of the drama was to appeal to those young people who spoke English as an additional language, there was no significant difference in the usefulness rating given by students from different ethnic groups.

The most commonly reported benefits of the drama session were:

- *Increased awareness of risks and hazards (28 per cent)*
- *Showed what to wear and do in the workplace (14 per cent)*
- *More effective than listening so students learnt more (12 per cent).*

Another trend from the data is that the mean health and safety awareness score of the 108 individuals who participated in the one-hour drama workshop was significantly better (at 92 per cent) than the score of those who did not (85 per cent). In addition those individuals who watched the drama gave significantly more positive answers when asked whether the Health and Safety lesson taught them anything, showing that the students themselves are recognising the benefits of the drama lesson. This seems to suggest that the positive effects of the Health and Safety lesson can be strengthened and increased by the inclusion of the drama session for all classes.

Work placements

Two hundred and one respondents gave details of their work placements. Of these 169 (84 per cent) worked in placements in the 'Low' risk banding, 20 (10 per cent) in 'Medium' risk placements, and 12 (6 per cent) in 'High' risk positions. 'Low' risk includes sales, retail, administration etc. 'Medium' includes security work, warehousing, animal care etc. 'High' risk covers manufacturing, construction, and garage work amongst others. Despite the majority of students being in low risk placements, there is still an obligation for all employers to provide an induction, complete with health and safety information, for all students on work experience.

Within Newham work experience placements are handled by an outside body, the Trident Trust. They have the duty of checking employers and work environments are well managed and safe before young people attend for work experience. Employers have to be inspected every 12 months for 'high' risk positions, to every 48 months for 'low' risk. Despite this check 34 per cent of students report that they were given no health and safety information on their placement, and 37 per cent report identifying health and safety hazards whilst on the placement.

The descriptions of these hazards show that a few young people have identified hazard signs, such as 'No Smoking', rather than actual dangers. Seventeen
individuals spotted such 'hazards', leaving 29 per cent spotting real risks to health. The most commonly identified hazards included:

- **Boxes and bins in places where people can trip over**
- **Smoking on site**
- **Blocked fire exits**
- **Wet or oily floors.**

Many of the hazards reported are 'temporary' hazards and could easily be removed or hidden for a Health and Safety inspection. It seems that even with the checks provided by work experience providers young people will still be exposed to unnecessary risk in the workplace. There is also some sign that the checks in place to protect young people may not be as watertight as they could be. A minority of individuals mentioned more 'permanent' hazards, of the nature which would be picked up and corrected at an inspection, for instance:

- **A broken plug socket**
- **Faulty stairs**
- **Wires taped across the floor which people could trip over.**

Students were also asked to whether the health and safety lessons proved useful during their work placement, and 39 per cent of responses reported that it was. The most frequently mentioned information which had proved to be of use included:

- **Picking up heavy boxes**
- **Being careful**
- **Not endangering the lives of others**
- **Putting gloves on to handle chemicals.**

The post-questionnaire also provided information on what the students felt was missed out of the health and safety lesson, as a result of their experience on work placement. Eighty one per cent of students did not think that there were other issues that needed to be included. The 29 per cent who did mentioned:

- **Fire exits and procedure for fire alarms**
- **Information about different fire extinguishers**
- **What to do if you see a health and safety incidence and are not sure if it has been reported.**

**Teacher's Responses to the Health and Safety Lesson.**

In addition, feedback was collected from the teachers who supervised the classes during the lessons. The results of this are summarised below:

- Of the six responses received, three teachers found the lesson very useful, two classed it as useful, and one thought it useful in some areas (though did not state which).
- All six teachers thought the lesson suitable for the age group of the students.
- Five teachers responded to whether or not they would ask Healthworks back if it were their decision. All five said they would.
• All six teachers thought raising awareness about health and safety was an important lesson that should be part of the curriculum.
• Two teachers mentioned the expert experience and useful resources that Heathworks in Newham could provide, enabling them to do a better job of Health and Safety education than PSHE tutors.
• Three teachers mentioned the practical/interactive parts of the lesson as being important, and two of these suggested that there could be more emphasis on these to encourage the students to participate and get involved. One teacher suggested that dividing the students into smaller groups might make this easier.
CONCLUSIONS AND RECOMMENDATIONS

1. The baseline assessment shows that young people do have a basic level of health and safety awareness, but there are definite areas of weakness in the student's knowledge, and so clear room for improvement.

2. The significant improvement in the students' scores between pre and post intervention awareness questions provides compelling evidence that the young people are learning from their one-hour lesson.

3. The lack of significant difference in performance on health and safety awareness questions between the various gender, ethnicity, and age groupings seems to suggest that Healthworks is successfully delivering an 'inclusive' programme, which is equally effective for all students.

4. Although this evaluation has gone some way into looking at the impact of the Healthworks schools programme, if the project is to go for mainstream or further funding it will be essential to provide a more rigorous body of evidence showing the impact of the lessons. This could possibly consist of a before and after assessment, much in the same way as the pre and post intervention test worked in this research, or could maybe be done in conjunction with work experience providers.

   Recommendation: Healthworks investigate the possibility of a standard health and safety knowledge test, given to all students who participate in the programme. This would establish a much larger sample than that used in this study, and could be used in further evaluation to add weight to the findings.

5. The feedback collected from both students and staff at the four schools is universally good. The young people in the study not only expressed that they enjoyed the lesson, but also that they saw it as being useful.

6. The teachers also saw the lesson as beneficial, and highlighted the benefits of the specialist knowledge and resources that Healthworks provided, over and above what would be included in any in-house health and safety teaching. The difficulties in providing health and safety education in-house are well recognised, primarily due to lack of teachers who are confident in addressing health and safety issues, and the lack of teaching materials that can help them (Morris 1994).

   Recommendation: Health and Safety lessons in Newham are provided by a specialist organisation such as Healthworks, not by teachers at the school. In order to advertise the services to other schools the findings of this report, either in full or in an abbreviated summary, could be distributed to head teachers. The report could highlight that this was an easy, available, effective and proven means of meeting their responsibility in the national curriculum to provide health and safety education and hopefully get this or similar programmes onto the curriculum at more schools.

7. In general the students gave very positive feedback on the learning aids used by Healthworks. The safety signs guessing game, health and safety file, and drama
all came out well, with around 75 per cent of respondents finding these to be useful. The video was less well rated, with only 61 per cent of students describing this as useful.

Recommendation: There may be some room to improve the video shown in the Health and Safety lesson. (Healthworks are currently bidding for funding to have the video brought up to date, made more relevant to young people, and more representative of Newham’s diverse population).

8. There is a significant difference between the proportions of males and females looking at the health and safety file. Whilst this may tell us more about gender differences than about the file, at present boys are less likely to look at or read this handout and so are accessing less health and safety information than their female classmates.

Recommendation: Healthworks are applying for funding to improve the health and safety file with the addition of colour etc. If the file is reworked, it may be possible to make changes which help to increase the file’s appeal to boys.

9. The drama workshop can be shown to make a significant improvement to pupil's overall health and safety awareness, as tested by their performance in the post-intervention test. In addition, participating in the drama workshop seemed to have a positive effect on the young people's overall enjoyment of the lesson. The drama is not currently offered to all pupils due to the high cost (around £500 per session) and problems with timetabling sessions.

Recommendation: Healthworks should explore ways to make the drama session available to all classes and schools. Perhaps the exercise could be scaled down to cost a little less, making it more affordable whilst still providing the same degree of interaction and education.

10. The drama production provided a chance for young people to participate in the lesson in a more interactive way, and seems to leave the young people with a better knowledge of health and safety issues. Although the Healthworks team tries to make the one-hour lesson interactive, some teachers have commented that this element could be improved, giving a greater degree of student involvement.

Recommendation: Look at ways to make the lessons more interactive.

11. One reason for the limited level of interaction in the current lesson is the timetabling constraints, which often make it difficult to arrange even one-hour health and safety sessions. Moving to a longer session time would enable the Healthworks staff to involve more practical activities, to cover information in more detail, and thus improve effectiveness. The results of the drama (where students effectively had two hour-long sessions instead of one) also support this conclusion. Healthworks already have enough material to stretch to a two-hour session (as this is the length delivered for the New Deal sessions).

Recommendation: Healthworks in Newham should try to get the two-hour session delivered to schools.
12. The third of students who said that they did not receive health and safety information on their work placement is cause for concern. In Newham it is the duty of the Trident Trust to communicate with employers on Health and Safety issues involving work experience, and they conduct three checks to ensure standards are met. These come from the employer, the student, and the visiting teacher or school representative. It seems unlikely that all three of these checks can be failing for a third of students, so it may be the case that the young people are not recognising the training they receive 'on the job' as 'Health and Safety information'.

Recommendation: There may be a need for more clearly defined or formal training for young people on work experience. It could be that a separate, short 'Health and Safety' induction would be more effective than combining this with a general induction or training given 'on the job'.

13. The 29 per cent of young people who reported spotting real health and safety hazards at work provide more evidence for the importance of the Healthworks project. Firstly it is a good indication that the students were able to spot and identify the hazards in a practical situation. Secondly we can see from the breakdown of these hazards that often these are not the sort of hazards which would easily be identified in a health and safety inspection. This shows that we can never eliminate dangerous situations for young workers, and highlights the importance of educating them to recognise risk themselves.

14. The young people who reported more permanent hazards on their placement show that there is still some room for improvement within the inspection system.

Recommendation: There may be a need for more regular company inspections for work experience providers. At present some low risk placements may only be inspected every three or four years. To avoid this process becoming too expensive it may be worth looking at the possibility of targetting the re-inspection of companies on the basis of the feedback reports from work experience students, visiting those where students identify health and safety problems.

15. One concern is whether the young people will actually implement the knowledge they have gained from the lesson. Evidence from the questionnaires seems to suggest that although a large proportion of students can describe the correct health and safety behaviour when asked, fewer are implementing this in the workplace. There may be room for further study to investigate more thoroughly the precise reasons why young people may not act on the knowledge they have when actually in the workplace.

16. At present the only suggestions that can be made are that longer lessons and more interactive sessions etc. may have a role in changing this. By spending more time on each topic, and by getting the young people to act out situations with their peers, they will hopefully be more likely to remember what they have learnt and have increased confidence to act on it in real life situations.

Recommendation: Greater stress in health and safety lessons on the responsibilities of the individual and the pro-active role young people can play to ensure good health and safety practice in the workplace.
BIBLIOGRAPHY


HSE (1999a) *Safety and Enforcement Statistics Briefing*. HSE. Liverpool.


Lesson Plan

1. Introduction
   • Health Works in Newham
   • Aims & Objectives
   • H&S File
   • Leaflets

2. What is Health & Safety About?
   • Questions and answers

3. Hazards, Risks & Controls Definitions
   • Example: Chemicals
   • Questions and answers

4. Hazard spotting video
   • Office & Construction
   • Questions and answers

5. Brief look at Health & Safety Responsibilities at work
   • Why Young People are at risk?
   • Questions and answers

   • Management of Health & Safety At Work Regulation 1999
   • Roles & Responsibilities
   • Examples of actual accidents & outcome

7. Case Study and situations
   • Accident at Work, Group work

8. Where to get advice and assistance
   • Questions and answers

9. Safety Signs
   • Guessing Game

10. Personal Protective Equipment and Clothing (PPE)
    • A fun activity in which a volunteer is dressed in PPE and the class have to guess the name, use and industries where the equipment & clothing is used.
    • This activity is extremely well received by the students & staff!

The lesson on its own gives the young people an introduction to the issues of health and safety. It was felt that this basic knowledge could be reinforced through the development of an Interactive Health & Safety Drama. Healthworks commissioned a local drama group to provide the drama and outlined the projects' aims and objectives. The drama would compliment the Health & Safety lesson and
encourage the young people to apply the knowledge gained in the previous session to a work situation acted out by the professional drama group.

The drama commissioned covered key issues including the need for young people to:

- receive health and safety training, instruction and supervision
- obey reasonable instructions and work safely
- take reasonable care of their own health & safety and not to put workmates or the public at risk from what they do
- follow correct procedures when doing their job
- the safe use of PPE, using properly and what to do - peer group pressure
- consequences of messing around
- what to do if you have a problem - don’t do it and ask for help and advice
- report accidents.

The drama production team were given background information and an outline of two accidents and a chronic health problem (which had developed as a result of not wearing a protective face-mask) for them to include in the performance. Throughout and prior to the performances we provided health and safety advice to the actors and gave them a summary of the law on each accident.

---

1 In our analysis of the data there was some concern that a proportion of young people may not have read or understood the instructions to the questionnaire. Although this question required two boxes to be checked, a number of young people ticked one box only. This figure must therefore be treated with some caution, as it may have been partly deflated by this trend, rather than by lack of knowledge.

2 This and other significance testing in this report are all tested at the 5 per cent level.
<table>
<thead>
<tr>
<th>#</th>
<th>Title</th>
<th>Author(s)</th>
<th>Date</th>
<th>ISBN</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>Lea Bridge Gateway SRB: An assessment of business activity and needs</td>
<td>Neil McInroy</td>
<td>July 1999</td>
<td>ISBN 1-902494-12-1</td>
<td>£8.50</td>
</tr>
<tr>
<td>86</td>
<td>Gradient: A report on desk research on developments in higher education</td>
<td>Ginny Eley</td>
<td>August 1999</td>
<td>ISBN 1-902494-15-6</td>
<td>£8.50</td>
</tr>
<tr>
<td>87</td>
<td>South Leytonstone SRB: A Contract for Change</td>
<td>Rebecca Fearnley and Fiona Roberts</td>
<td>July 1999</td>
<td>ISBN 1-902494-16-4</td>
<td>£5.00</td>
</tr>
<tr>
<td>88</td>
<td>Lea Bridge Gateway SRB: an evaluation of the Customised training initiative</td>
<td>Neil McInroy</td>
<td>August 1999</td>
<td>ISBN 1-902494-17-2</td>
<td>£5.00</td>
</tr>
<tr>
<td>89</td>
<td>Evaluation of the Towards Employability SRB: Year 2 report</td>
<td>Rebecca Fearnley, Fiona Roberts and Vikki Rix</td>
<td>August 1999</td>
<td>ISBN 1-902494-18-0</td>
<td>£8.50</td>
</tr>
<tr>
<td>90</td>
<td>&quot;Evaluation of the Fit for Work SRB Provider Development Project&quot;</td>
<td>Julie Shepherd</td>
<td>September 1999</td>
<td>ISBN 1-902494-19-9</td>
<td>£5.00</td>
</tr>
<tr>
<td>91</td>
<td>Evaluation of the SRB Fit for Work Support Worker Training Project</td>
<td>Vikki Rix</td>
<td>October 1999</td>
<td>ISBN 1-902494-00-8</td>
<td>£5.00</td>
</tr>
<tr>
<td>92</td>
<td>Lea Bridge: Gateway To Opportunity Baseline update and progress report</td>
<td>Alice Sampson</td>
<td>December 1999</td>
<td>ISBN 1-902494-01-6</td>
<td>£8.50</td>
</tr>
<tr>
<td>93</td>
<td>South Newham: Towards an understanding of Racial Violence and Harassment and its prevention:</td>
<td>Alice Sampson, Julie Shepherd and Marilyn Vaz</td>
<td>April 2000</td>
<td>ISBN 1-902494-03-2</td>
<td>£8.50</td>
</tr>
<tr>
<td>94</td>
<td>Evaluation of the Lea Bridge Gateway SRB Neighbourhood Agenda 21 Project</td>
<td>Rebecca Fearnley</td>
<td>June 2000</td>
<td>ISBN 1-902494-02-4</td>
<td>£8.50</td>
</tr>
<tr>
<td>96</td>
<td>'A lot of friends. A lot of appreciation and a phone that never stops ringing': Voluntary action and social exclusion in East London - a pilot study</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
97 Green Street SRB: Fifth Year Impact Evaluation
Alice Sampson, David Sloan and Amanda Tucker
March 2000 ISBN 1-902494-06-7 £8.50

98 Football and Social Inclusion: The Thames Gateway Youth Project
Vikki Rix, Alice Sampson, David Sloan
April 2001 ISBN 1-902494-08-3 £8.50

99 An Evaluation of Newham Community Health Services NHS Trust: Bilingual Co-Workers Project
Hywell Dinsdale, Sharon Robinson
December 2001 ISBN 1-902494-09-1 £8.50

Address orders to:
Centre for Institutional Studies
University of East London
Maryland House
Manbey Park Road
Stratford
London E15 1EY
England UK

Telephone: 0208 223 4290
Fax: 0208 223 4298

£1.50 POSTAGE AND PACKING FOR EACH COMMENTARY REQUESTED, CHEQUES SHOULD BE MADE PAYABLE TO UNIVERSITY OF EAST LONDON