

# Raising the Profile of Food and Textiles – A Project Supported by the European Commission's LEONARDO Fund

## Abstract

This article outlines one attempt, funded by the European Commission, to raise the profile of the food and textiles industries and address some of the prejudices that currently inhibit the recruitment of suitable employees for roles with technical responsibilities. The project was aimed at school students. By involving young people in a direct experience of manufacturing practices, the potential careers in the industries were highlighted. The article charts the successes and disappointments of the project, lessons learned and future developments.

**Christine  
Masson**

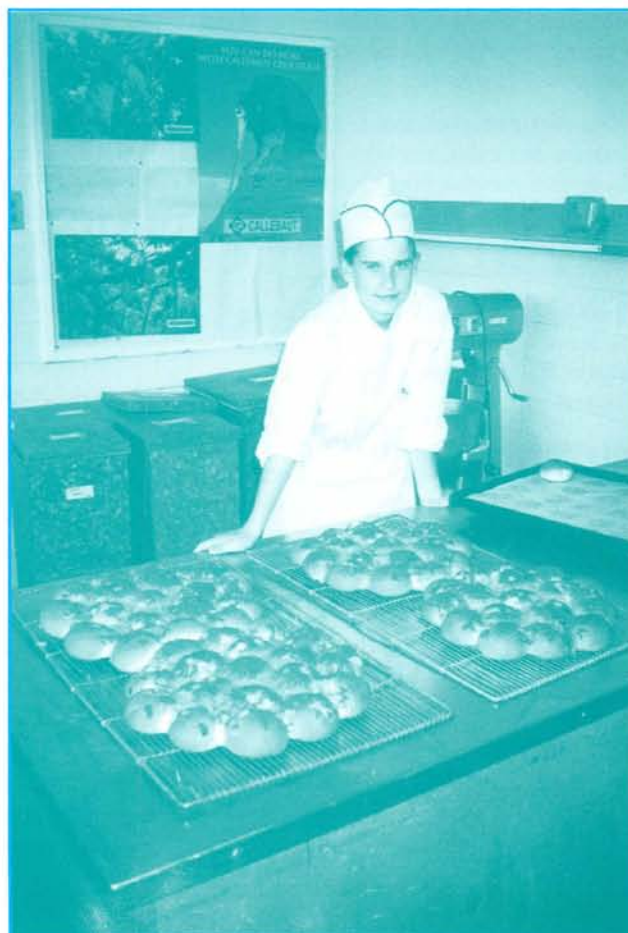
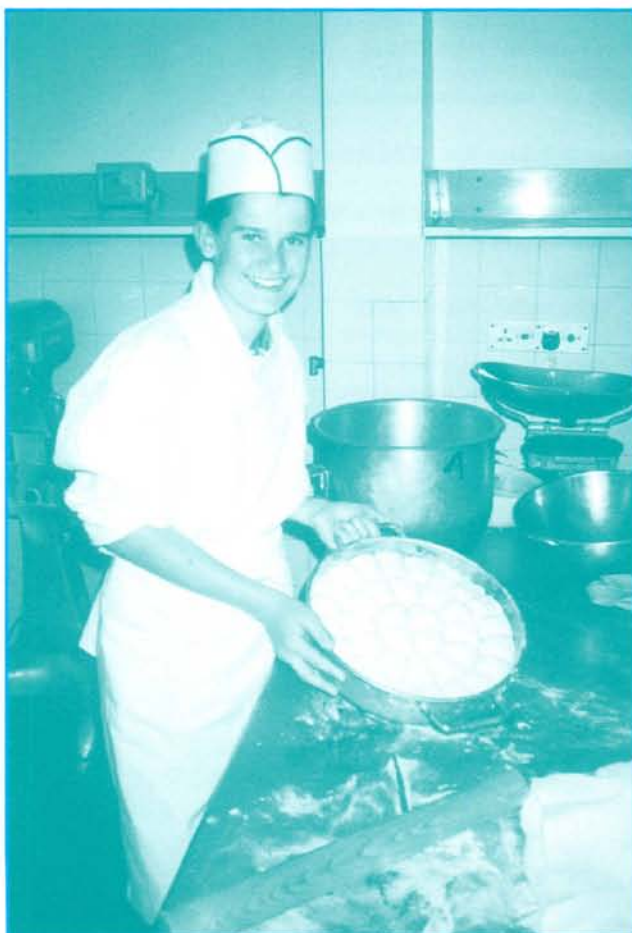
*Education Consultant*

*Figures 1 and 2:  
Quality control in  
bread-making at  
Bradford and Ilkley  
Community College.*

The PERMA (Promote Employment in Regional Manufacturing) project was born out of frustration! For two years I had been leading a development group to raise awareness of the potential of food and textiles as a context for delivering GNVQ Manufacturing. Working with schools and employers we had, step by step, put into place the necessary network of industry contacts, teacher training, school structure and resources and finally curriculum materials to support the delivery of the unit requirements. For teachers, the programme had provided a

boost to their personal and professional development resulting in renewed energy and enthusiasm. The new qualification also held out much sought after academic credibility for their subject. Coinciding with the Dearing Review, Senior Managers saw the qualification as one strategy to meet future responsibilities in line with recommendations. In the spring of 1995 the qualification was duly offered as an option to students in several schools. The results were disappointing. Where there was any interest, numbers were too small to make a viable group and tended to comprise students from the lowest ability bands. In most cases there was no interest at all. One school struggled for a year to deliver GNVQ Manufacturing at Foundation level to a small group of very low ability students and the course was not repeated. One teacher from another Authority was seconded from school and funded by the TEC to develop Manufacturing Intermediate for post-16 students using the textile industry as a context. A course from this development was eventually launched.

Manufacturing industry in general still suffers from an outdated public perception of a 'greasy overalls' occupation. It holds little attraction for young people and employers



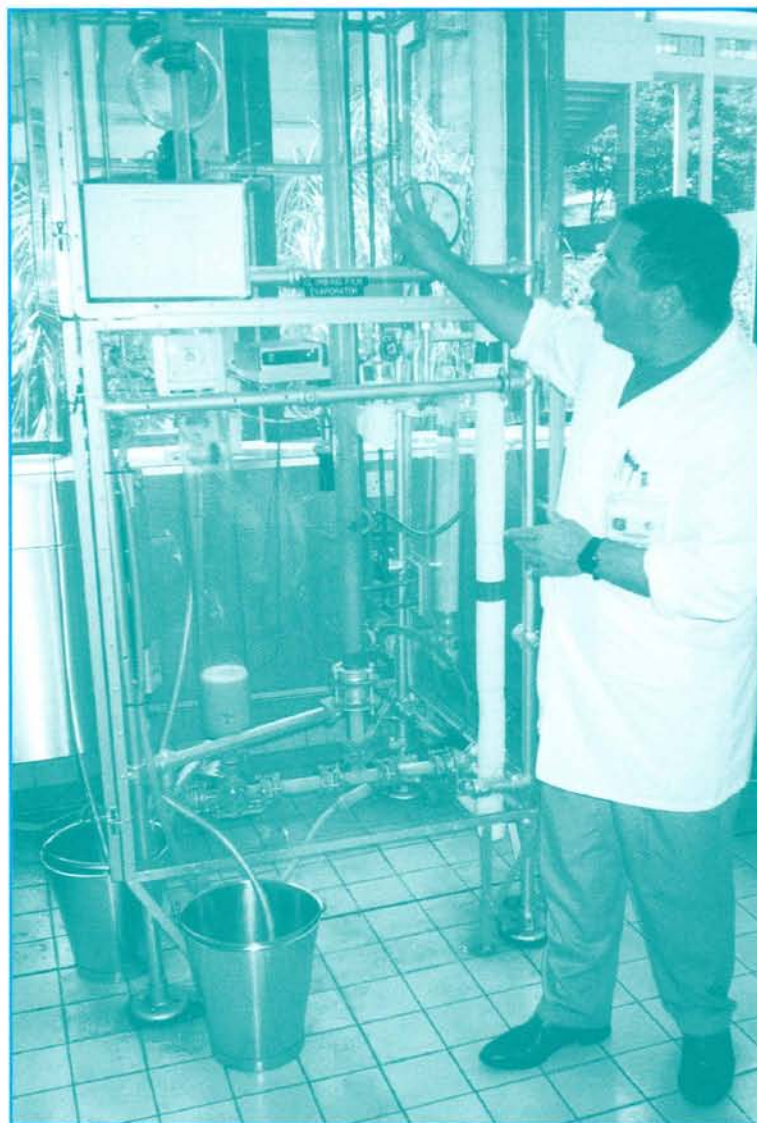


report great difficulty in recruiting employees of the right calibre for key roles. Although food is a familiar item few people have any knowledge of the size of the industry or of producing food on a large scale and are therefore totally unaware of the complexities and technology involved in modern food manufacturing. There is still a generation of workers in West Yorkshire, who were victims of the last major downsizing, who still offer dire warnings to youngsters about the hazards of employment in the textile industry. Such a reputation does little to help with the recruitment of well qualified young people to sustain its enviable marketing edge for high quality, innovative textiles in a very competitive world market. Lack of knowledge, parental and peer pressure and inadequate career guidance all militate against young people considering careers in the industries when compared with occupations which have perceived social status. Such prejudices were a definite contributory factor in the lack of recruits to the Manufacturing courses. Something needed doing if the industries were to maintain the momentum and development which had been built up.

The LEONARDO fund is concerned with supporting projects which have a vocational relevance. A glance at the criteria for the second call for proposals convinced me that what we needed to do to overcome these obstacles coincided with both the National and European priorities. Lacking experience myself I turned to Careers Europe, who are the UK Resource Centre for International Careers, for help in drafting the proposals and finding partners to develop the all important transnational element. Having faxed draft proposals across the European network we were eventually joined by Athens and Cork as partners and PERMA was launched with the aim to **Promote Employment in Regional Manufacturing (Industries)**.

The UK activities were to focus on the issues which were inhibiting recruitment into the industries. The aims of the project were:

- To change young people's perceptions of modern manufacturing.
- To raise awareness of the nature of modern manufacturing practice.
- To raise awareness of the career opportunities in the industries.
- To raise awareness of the skills and aptitudes that are required by the industries.
- To disseminate information about routes into employment in the industries.



The strategies proposed as objectives were:

- To give selected young people a direct experience of an aspect of manufacturing.
- To create up to date careers information, designed specifically to appeal to young people.

Three groups of youngsters were targeted:

- Year 10 (14-15 year olds ) to change perceptions before career aspirations became fixed.
- Year 11 after the GCSEs had finished and before the results were published in August to provide an opportunity for some research and thinking before critical post-16 choices were made.
- Post-16 students already studying appropriate subjects to illustrate the relevance of their studies to the needs of the industries.

*Figure 3:  
Investigating the  
effects of processing  
on fruit juices at  
Leeds University.*



Date	Venue	Description
June 1-5 and June 8-12 to	Jeromes Textile Holding PLC, Victoria Works, Saltaire	Introduction to the Manufacture of Woollen Cloth. This activity will provide an introduction the manufacture of woollen cloth and will emphasise the technical expertise which is required for high quality production. Students will spend time, under supervision, in each of the production stages.
June 4	Northern Foods, Nottingham	Production Planning. This session will be held at Northern Foods Conference Headquarters near Nottingham. Based on a sandwich making exercise students will be introduced to the principles and practice of production planning for large scale manufacture. Support and technical expertise will be provided by Northern Foods personnel drawn from their manufacturing plants in the area. The exercise will illustrate the personal skills and aptitudes which are required for successful production.
June 16 and 23	Bradford and Ilkley Community College	Quality Control / Quality Assurance in Bread making. This activity will focus on the quality control measures that are required to produce food products to a consistently high standard in larger scale production. During a 'hands on' batch production of a variety of bread products students will be required to put these measures into practice and will come to recognise their importance.
June 8 –12 and June 15-19	Jeromes Textile Holdings PLC	Computer Aided Design. Students will be introduced to the use of computer aided design in textile production which has enabled manufacturers to be at the cutting edge of market competition. Working under supervision they will develop and present their own project.
June 15	Leeds University	An Overview of the Textile Industry. Linked to a visit to pilot plant equipment students will work with a CD-ROM produced by the University's Textile Department to explore the nature of the modern textile manufacturing industry.
June 18/19	Manchester Metropolitan University	An Introduction to the Clothing Industry. This two day residential activity will provide an insight into the structure and breadth of the clothing industry and will include the use of IT in the industry as well as the impact of technology on it. Activities will include clothing design, manufacture, marketing and retailing and an introduction to garment and pattern technology
June 22nd July	Leeds University	Food Product Development. This session will illustrate the scientific knowledge that underpins modern food product development. Food ingredients are sensitive to the pressures of mass manufacturing practices and a sound understanding of their chemical composition is needed to ensure high quality products and for the development of original products.



Date	Venue	Description
July 1 and 2	Manchester Metropolitan University	Food Product Development This session will look at the use of food as a material for food product development. It will illustrate how ingredients behave in food products and how they can be used to create specific tastes and textures.
July 9/10	Leeds University	Science and IT in Textile Production. Through a series of activities involving the students in producing their own man made fibres the students will be introduced to the influence of each textile process on performance in wear of a garment. Through the activities the students will be made aware of the number of disciplines involved, the use of chemistry, physics, and IT, in the textile industry.
July 13 and 14	Jeromes Textile Holdings PLC	Science in Dyeing. Working in the laboratory students will be introduced to the application of science knowledge and understanding in recipe formulation and quality control in applying colour to textiles. Modern techniques involve the use of photospectrometry and computer controlled analytical methods.
July 16/17	Marks and Spencer, Baker Street	Food Product Development. This residential session will make use of the development kitchen facilities at the M&S Headquarters in London. With professional support students will be taken through the stages needed to develop their own food product using the facilities of the concept kitchen. Input about the manufacturing aspects will be provided by M&S suppliers.

The first few months were spent negotiating with employers and institutions possible venues and formats for the 'manufacturing experiences'. I wanted to cover as many of the aspects of manufacturing as possible although each activity would focus on only one. Positive responses were received from everyone who was approached. For reasons of insurance and safety, it became apparent that some activities would not be possible, with the age range targeted, on a manufacturing site but it was possible to give them a feel for the industry in the controlled conditions available in Colleges. In the spring of 1998 the schedule of activities (above) giving details of the dates and content of the activities was published.

Activities were concentrated in the last two months of the academic year because conversations with teachers indicated that the opportunity was unlikely to be picked up outside these dates. For logistical reasons it had to be possible to transport youngsters from their home territory to the venue so the invitations were sent to selected schools in

four of the local Education Authorities. Two copies were sent to each school; one to the Headteacher for distribution to appropriate departments and one directly to the design and technology department as the most obvious recipient. In order to comply with the aim of changing perceptions of high calibre students Independent Grammar Schools were included in the invitations. Teachers were invited to put forward names of students who were interested or would benefit from the activities.

Replies were sorted and students selected to give a gender balance to address the issue of stereotyping and a spread of representatives from a variety of schools in order to cascade the effect of the experience to as many young people as possible. Confirmation of places and information about transport arrangements, including any necessary travel tickets were duly sent out. On June 1st a frenetic period in which over 200 students from 23 different schools across the region were transported to the venues to participate in the activities. Only seven students failed to turn up at the



Figure 4: Taste testing processed fruit juices at Leeds University.



appointed time and all were safely returned at the end of the day!

#### Evaluation

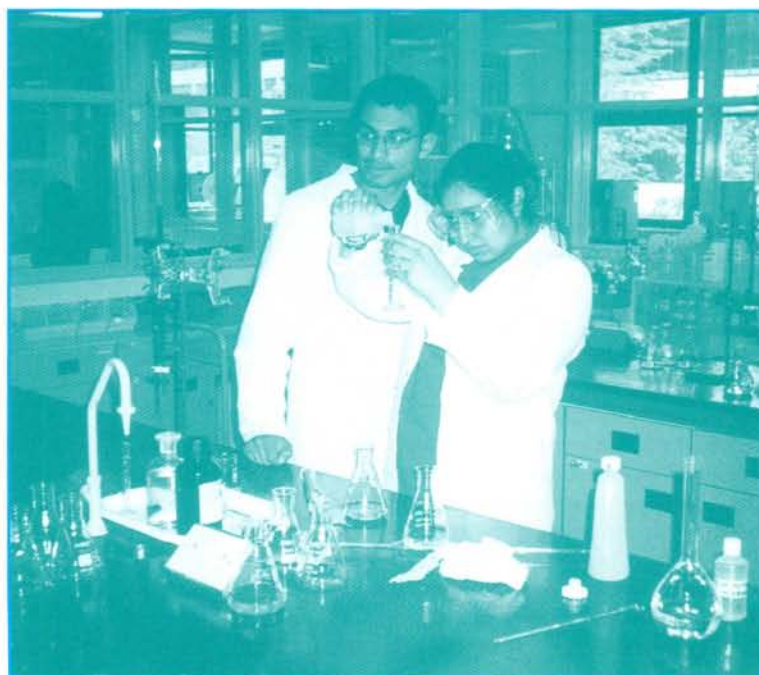
It was difficult to ensure that the information about the programme reached the targeted group. This was particularly so for the activities targeted at students studying science. Information sent to the Headteacher was not disseminated effectively to the relevant curriculum areas despite the requirements for participation being clearly stated. Most forwarded it to the food/textile departments without reading the context. When this became apparent a second lot of

information was sent out directly to science co-ordinators. This produced a more positive response. The content of many of the activities coincided with the syllabus content of design and technology food and textiles and there was an enthusiastic response from these departments and several of the activities were oversubscribed.

Despite careful negotiation the structure of some of the activities did not deliver the objectives of the programme as well as had been hoped. This was probably due to a difference in interpreting the objectives of the programme between the different organisers. Few of the activities had quite the direct experience of manufacturing that had been originally envisaged. That this was to be difficult to achieve became obvious in the preliminary negotiations and considerations of safety, suitability for the age range and level of experience and available resources determined the content of the activities as they took place. Activities which were a notable success included the general manufacturing sessions at Jeromes Textiles Holdings, the production planning with Northern Foods and the residential session at Marks and Spencer. In other cases parts of the activity were successful or the objectives were achieved without engaging the enthusiasm of the students.

There was a mixed response from students to the programme. There was sometimes a mismatch between the students expectations and the actual content of the activity, structured to achieve quite specific objectives. Few of the students had been adequately briefed as to the purpose of the activities. The

Figure 5: A titration experiment to investigate the amount of sugar in wine at Leeds University.





selection of the students by teachers had not always taken account of the purpose of the activity. Some students who participated had not any interest in the industries and had other career intentions. This was not entirely negative however as one of the objectives of the programme was to change the perception of the industries held by young people and several of the participants expressed surprise at the picture of the industry that was presented and indicated that they would like further information about it. Some students whose interests lay more with cooking were put off by the complexity of industrial food production.

#### **On the positive side**

There were some notable successes in changing perceptions from some activities. This was particularly noticeable in the textile contexts and where food activities had succeeded in recruiting students studying sciences. Two students developed a real interest in the textile context at an early activity and were invited to attend another session later in the programme to obtain a more detailed knowledge. Both have developed a real interest in pursuing a career in the industry. All the textile activities succeeded in conveying the nature of the modern industry.

Student evaluations indicated that there was a high level of success in changing the perceptions of the industries even where students stated that they personally would not be interested in pursuing a career in the industry. It was clear that much more work was needed to make science students aware of the career possibilities in both industries.

The most positive legacy of the programme was the unintended outcomes. Since the original bid for funding was made a significant number of schools in the region now offer GNVQ Manufacturing as an alternative qualification for young people. This qualification requires industry specific information to deliver unit specifications. As well as the information gained as a result of the activity several groups of students received additional information and resources relating to industrial practices to take back into school. This information, which cannot be obtained in school text books, will provide valuable resources for examination purposes and help to perpetuate amongst young people an up to date image of the industries. These have been welcomed by teachers.

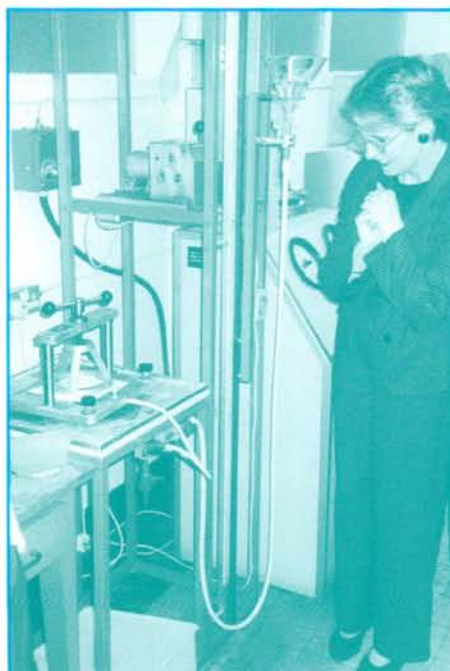
Difficulties in recruitment produced offers of support for the school curriculum in the form of technical information and access to industrial equipment and processes. Two

schools were linked to each other and to the same textile manufacturer in an innovative triangle of Independent/State school/industry co-operation. Three other schools were recommended to create a direct link to the Proctor Department of Food Science at Leeds University. The development of the links will be left to the parties concerned.

There was concern that the impact of a one-off event would be limited to the schools and students taking place when circumstances required a sustained strategy. Many of the hosts regarded the time and effort involved in setting up the programme as an investment for a more permanent policy. Teachers from schools who participated and from those that did not, but have heard about the activities, are asking about repeat activities in the coming year. Discussions have continued with some of the organisations to see what aspects can continue and what lessons can be learned from the programme to improve the impact.

The Proctor Department of Food Science is planning for the summer term a series of activity days for students studying sciences at A' level focused on the application of science knowledge in the food industry. The Textile Department at Leeds University is planning some practical activity days for teachers to update their knowledge of the industry. The focus on teachers is to maximise the effect of the activities for generations of students rather than limit it to one person.

The existence of the programme has brought about unexpected developments, which are likely to have much greater effect than was possible from the original objectives.



*Figure 6: Testing fabrics at Manchester Metropolitan University.*



Discussions with contacts during the development stage revealed that a number of organisations associated with the food industry were planning, in isolation, to set up a web site as a means of promoting the industry. This seemed to be a duplication of effort and in July 1998 a meeting took place between the British Nutrition Foundation, the Food and Drink Industry National Training Organisation, Marks and Spencer Plc and the UK partners to try to co-ordinate activity. It was agreed to establish a combined web site which would provide a one stop shop for teachers and students for information about the industry. From the one site browsers will also be able to gain direct access to the individual organisations and information about individual companies. The first areas to be developed will concern careers and technical processes in the industry. The site will provide an efficient and effective strategy for disseminating information about the modern food industry to a wide audience and since it will provide much needed support for curriculum requirements in schools and colleges it is likely to be well used. It will achieve the desired effect of dispelling the out of date perception of food production currently widespread in the general population as well as providing information about the nature of career opportunities and job vacancies in the industry.

This development has occasioned a change in the nature of the original project objective to produce careers information. The existence of the web site will provide a more effective way to publicise information about careers in the industry than a paper based exercise. The

project is thus developing careers posters to link with the web site. The posters will highlight some of the careers in the industry where recruitment is most difficult, emphasising the subject disciplines and routes into the industry. They will be distributed on a national basis to school science, food technology and careers departments as a permanent visual stimulus for students of appropriate subject disciplines. They will also be sent to all the UK careers offices to encourage accurate careers guidance for young people. The website will be incorporated into the poster to allow students to access more detailed information.

Less success has been achieved with the textile industry because it is more fragmented. However the project has led to discussions with the Confederation of British Wool Textiles to see if the experiences with the food industry can be applied to the textile industry. Initial discussions focused on bringing together relevant agents (TECs, CBWT, Careers, Education, Teacher Placement organisers) to provide the much needed co-ordinated approach.

The project acted as a catalyst for much needed development. The emphasis on young people in education and manufacturing required contacts to be made with agencies active in both sectors. The project has, therefore, provided a vehicle of communication between the two and led to a degree of co-ordination that would otherwise not have taken place as easily. Agencies which would not normally have contact with each other are now cognisant of the activities of other parties and a number of projects now support each other, providing added value. It is envisaged that, having been established, this aspect will continue beyond the life of the project and continue to address the problems which provided the original focus. The effect of the activities in achieving the objectives are not quantifiable but evaluations indicate a high degree of success in changing perceptions. Any influence in the choice of career is unlikely to be known. Feedback from teachers suggests a considerable amount of momentum was generated by the project. The project created a context in which the objectives can be achieved over time. Given the transitory nature of the school population the long term developments are likely to have a more lasting impact than even successful activities would have been. The problems faced by the industries will require a sustained effort by all parties but it is felt that this project has made a significant contribution to addressing the issues concerned. Website address for information about the project: [careersb.bradtec.co.uk/europe/index.htm](http://careersb.bradtec.co.uk/europe/index.htm)

Figure 7:  
*Investigating the  
effect of chemical  
processing on the  
flammability of  
fabrics, Leeds  
University.*

