Technology and home economics

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Technology and Home Economics

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Abstract
This research is an investigation into the changes taking place within Home Economics, as it moves into Technology in the National Curriculum.

Its objectives are to investigate:

* the concept of Technology in Home Economics
* existing practice in schools (1989-90)
* the planning and preparation undertaken for the delivery of Technology
* classroom practice
* evaluation of materials produced
* resources

There are 12 schools in seven LEA’s involved in the Project, three primary and nine secondary. The main focus has been year 7, although work in year 1, year 6 and year 10 has also been looked at.

The work has consisted mainly of classroom observations. It is hoped this will lead to findings which show the factors which support curriculum change, and how these can be encouraged. The observations continue until December 1991.

The work is funded by the All Saints Educational Trust and based at Sheffield City Polytechnic.

This project started in January 1989, funded for three years by the All Saints Educational Trust, a London-based trust which provides financial assistance to projects in religious education and Home Economics.

The main purposes of the Project are to investigate the development of Home Economics, following the introduction of National Curriculum Technology, and to support teachers during this time of change. It is a curriculum development project as well as a research one.

Rationale

The main area of research is into how schools are implementing the requirements of the National Curriculum and, in particular, the changes taking place in the content and teaching of Home Economics. The research began with a brief investigation into the history of the subjects which contribute to Technology. This found that many common elements already exist between them which could be built upon in the future.

The resource implications of the new requirements are also being considered. This is a major area of concern to all those involved, and the Project intends to find out what out what resources the schools have and how these are used.
The Project will also consider the broader issue of the management of change; how schools introduce, develop and support curriculum initiatives; and how teachers adapt their teaching to suit the new requirements.

The whole area of collaboration and joint planning is of interest, as this is an opportunity to break down the traditional barriers between male-dominated CDT and female-dominated Home Economics.

Methodology

The methodology selected for this work had to be suitable for one person working alone. Curriculum development INSET work with groups of teachers was considered but was decided to be unsuitable.

The case study method was selected as the most appropriate. This would allow regular visits to a small number of schools and recording of developments over a period of time. The benefit of working in this way was stated by Bassey (in Bell, 1989), "The relatability of a case study is more important than its generalisability": that is, it is important that classroom teachers can understand the work, recognise that they work in a similar situation and correlate the findings to their own work.

During the case studies, I have used documentary evidence and questionnaires for obtaining factual information and for comparisons, teacher interviews to explore some of the issues and classroom observations and photographs to record events.

Background

During the first year the Research Officer wrote to all the LEAs in England and Wales to find out if they had a policy statement on Technology and Home Economics and, if they had, what it was. The responses showed a definite commitment to the delivery of Technology education and many of the responses showed clearly how Home Economics could contribute in a major way to this.

Authorities geographically close to Sheffield were approached and asked if they were interested in becoming involved in the Project. Several Authorities agreed and were then asked to identify one or two schools in their area which would be willing to participate in the research work.

At this stage, December 1989, the first Research Officer left to take up a post elsewhere. I was appointed and took up the post in April 1990.

My first task was to re-establish contact with the Authorities, Advisers and schools involved. Then, to identify objectives for the project, and through them the work to be done. The aims had been clearly set out in the research submission - to provide a broad picture of the changes taking place within Home Economics and to support Home Economics teachers in their evolving
role within Technology curriculum. The following objectives were drawn out of these aims:

* to investigate the concept of Technology in Home Economics
* to investigate existing practice in schools (1989-90)
* to assist teachers in the planning and delivery of Technology
* to evaluate materials produced, for their strengths and weaknesses in teaching and learning

The Case Studies

There are three primary schools and eight secondary schools, in seven different Authorities, involved in the Project. One primary and secondary are linked, one of the secondaries is a boys' school and one is a girls' school. The focus of the research is Year 7, but one Year 1 and two Year 6 classes are also being observed.

I first needed to establish relationships with the teachers and pupils in the schools I was to visit. Research indicates that 'strangers' in schools are not shown a true picture of classroom life, so my initial observations were very general whilst I was becoming an accepted presence in the classroom. I was also finding out how the schools were organised and where Home Economics fitted into the structure.

During this phase I conducted a 'resources audit' in the schools. This was to discover what the departments had in terms of staff, rooms, equipment, audio-visual aids or other equipment, the purpose being to see if these changed due to the introduction of Technology. This survey also covered contact time with pupils.

The start of my second term, September 1990, saw the official introduction of Technology onto the curriculum.

Questionnaires

I gave out questionnaires to teachers at the beginning of September 1991, to provide information on their pre-Technology curriculum, their preparation and planning, their concepts, their post-Technology curriculum and their resources. Due to time constraints, this questionnaire was not pilotted, I now feel that it would have elicited more information if it had been.

Concepts

The concepts of Technology held by these teachers were based very much on the Statutory Orders, they used phrases such as "designing and making", "problem solving" "meeting needs". One teacher said it was "preparing pupils for life in the 21st century" and another referred to it as "anything and
everything, natural and not natural, in our lives”. These differences in understanding were common within schools, as well as between them.

Pre-Technology Curricula

The pre-Technology curriculum in secondary schools covered areas familiar to all Home Economics, hygiene, health and safety, equipment, the cooker, weighing and measuring, basic foods, basic nutrition and basic practical and organisational skills. Textile work was more varied, some schools concentrated on manipulative, practical skills, some on theoretical work about fibres and fabrics and some on creative design textile work.

In primary schools, where Home Economics existed, it was 'cooking' taken by parent helpers, withdrawing a small group of pupils from the classroom to the staffroom, or wherever the cooker was. One of the primary schools in the project does have a specialist Home Economics kitchen, but this was used in exactly the same way.

Planning and Preparing for Technology

All the teachers had read the Statutory Orders and all, except one, had had meetings with colleagues to discuss and plan. The number of meetings varied from an occasional one or two to regular, frequent meetings.

The secondary schools seemed to be more involved in preparing for Technology than the primary schools. This was for the obvious reason, that the secondary school departments and fewer other considerations whilst the primary schools were still in the process of setting up and implementing schemes to accommodate the requirements for Maths, Science and English.

LEAs were, at this stage, unable to offer much in the way of in-service provision, due to the constraints of finances and, of course, the lack of information being given to them. One Authority provided two one-day courses for teachers to discuss the Interim, then the Final Report. Another Authority provided a weekend course, in an hotel, for Advisers, Senior Managers and Heads of Faculty to discuss and plan together. The others had provided courses on specific aspects of Technology e.g. IT and Food Technology, Textiles and Technology, or had run no courses at all.

Post-Technology Curricula

This varied according to the curriculum model the school had adopted and, in secondary schools, which Departments were involved, (see Figure 1).

Three schools involved in the Project are following Model E, alternating subject-based work with integrated projects. One began with 'Home Sweet Home', then moved into basic nutrition, basic foods, use of the equipment and basic skills. Another began with an integrated project on 'Identification', in
**Model E**

<table>
<thead>
<tr>
<th>Open Project (intergrated)</th>
<th>Technical knowledge (intergrated)</th>
<th>Open Project (intergrated)</th>
<th>Economic knowledge (intergrated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Open and closed projects evenly interspersed</td>
</tr>
</tbody>
</table>

**Model F**

<table>
<thead>
<tr>
<th>Manipulative skills</th>
<th>Material knowledge</th>
<th>Evaluation skills</th>
<th>Open project (intergrated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Closed projects prepare the way for application in an open project</td>
</tr>
</tbody>
</table>

**Model G**

<table>
<thead>
<tr>
<th>Graphic skills</th>
<th>Aesthetic investigations</th>
<th>Marketing knowledge</th>
<th>Information technology skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Closed projects are set within the context provided by the open project and find immediate application within it</td>
<td></td>
<td></td>
</tr>
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Figure 1 (with acknowledgement to Louis Brough, Humberside LEA)

which pupils did the same work irrespective of the area they were working in, they all produced a logo for their group and storage boxes for their work. They then went on to basic skills work, the skills being those of the area in which they were based. The second integrated project involved the pupils planning an educational day visit, to be undertaken by them in the Summer Term 1991. The pupils then went to an area they had not worked in previously, CDT or Home Economics, and followed a basic skills course. The final integrated project asked the pupils to plan activities to raise money on the school charity day. Within Home Economics most of the planned activities involved cooking food to sell, although some groups produced games to be planned and one group produced a magazine to sell.

The third school also began with an integrated project on 'Identification', their pupils designed an individual logo which they then made into an acrylic keyring. Due to lack of time for the teachers to meet and plan work, they then separated into their own subject areas. In Home Economics they followed a traditional, practical skills course but with more emphasis on planning and evaluating the work. They did, however, run a small integrated project just before Christmas, 'Granny's Biscuits'. In Food, they designed and made biscuits and in CDT they designed and made a package to put them in, to present them as a gift at Christmas. The following term the two Departments
worked together on a 'Survival' topic, building shelters in CDT and making protective clothing in textiles.

Two schools are working along the lines of Model F, with pupils initially going into discrete subject areas, followed by integrated topics in which they will apply the knowledge and skills they have learnt. One school has a roundabout of the traditional skills in Home Economics, CDT, Art, Textiles and Business Studies, their integrated topic is 'Myself', this is to be started in the final half-term of Year 7, the Home Economics content of this has not yet been decided (May 1991). The second school took the pupils to Albert Dock in Liverpool, then to a local (canal basin) area and asked them to design ideas for the development of this local area into a tourist attraction. In Home Economics the pupils are working in groups to create food outlets.

In another school, their curriculum is similar to Model F, in that pupils are working in discrete subject areas, in Home Economics, CDT, Textiles and IT, and they will rotate around these areas. The subject areas are working to the same theme, Machines.

The final three schools are following Model G, but all with variations. In one, they have three 'terms' made up of one Home Economics teacher and one CDT teacher, with each team planning and delivering a scheme of work over a term. The pupils spend one term with each team. The schemes are a biscuit-making mini-enterprise, 'The Leisure Centre' and 'Shipwrecked'.

In another school, the pupils spent the first five weeks rotating around the different Departments, in order to familiarise themselves with the areas and the teachers. Their first integrated topic was context-led, based on the school and each Department looked at it from its own specialist point of view. In Home Economics, they considered the food available in school, then designed and made pizzas. The next topic, based on cereals was run as a mini-enterprise, with pupils put into companies, each company sending pupils off into the different areas, Marketing, Advertising, Production of the cereal and of the free gift. In Home Economics they looked at the different cereals available, then designed and made their own muesli and experimented with recipes using muesli. The topic for the Summer term is based on a school visit, Home Economics will focus on the provision of food during the visit.

The final school took 'Hygiene and Safety' as the first topic and asked pupils to design and make something for the kitchen, bearing health and safety in mind. Pupils were able to choose which area they wished to work in, Home Economics or CDT. In each area the pupils negotiated individual briefs with the teacher, the outcomes in Home Economics included recipe booklets, knife protectors and oven gloves. This term the topic is 'Toys and Games' and pupils have to work in the area they did not previously choose. They began by evaluating existing toys and games, and were then asked to design either their own game for the back of a cereal packet or a soft toy and its packaging. Note that there is no food work in this topic, the Home Economics input has been
on textiles and child development.

**Resources**

The questionnaires showed that no school received any extra resourcing for the introduction of Technology. All the work was based on existing resources, rooms and equipment.

In the classroom observations the Project has also been looking at the nature of the tasks given to pupils, at the skills being developed, at assessment and at the staff development available to teachers of Home Economics/Technology.

This report has been factual in nature, describing the research work done so far. The analysis, conclusions and issues arising from these will not be discussed until the completion of the fieldwork.

**Assessment of the Project**

Kay Stables, Project Director for CATS working on pilot SATs for Key Stage 1 Technology, is the external evaluator of the Project, and commented on the Interim Report published in April 1991. There is to be a formal evaluation interview in September 1991, and final evaluation comments will form part of the Final Report in April 1992.

**Dissemination of the Findings**

Information about the Project has been disseminated in the following ways:

* a Project Newsletter, printed termly and available on subscription, providing regular up-dates and information

* article in 'Modus' January 1991, Vol. 9 No. 1
  "Technology and Home Economics"

* article in 'Modus' May 1991, Vol. 9 No. 4
  "Celebrations - Technology in the primary classroom"

* article in NCET/MESU Newsletter, submitted for inclusion on this national database

* talks to various groups: NAIEI Conference, November 1990
  Sheffield teachers INSET, November 1990
  Salford teachers INSET, November 1990
  Nottingham teachers INSET, May 1991