

Technology for Girls

The following account was written as a piece of course-work for the Technology teaching-methods component in the Keele post-graduate education course; it describes the student's experience with a group of fourth-year school-leaving girls in a Staffordshire comprehensive school.

B. Llewellyn

Post-graduate student, Department of Education, University of Keele.

At full strength the class numbered eight girls only, but because several of the girls were frequently away from school the class averaged six. The girls were all fourth year leavers and supposedly of 'low ability'. Amongst many of the staff the two classes from which the eight girls came had a reputation for 'being difficult' and once branded the classes seemed to feel obliged to 'act the part'.

As I saw it, the biggest problem that I faced with this class was one of arousing and sustaining interest. Clearly, arousing and sustaining interest were vital and consequently deciding on the problem we would tackle was very important. Yet before a teacher decides on the work he must have a firm idea of his objectives and what he wants that work to achieve. With my class I felt the work must relate to them in their position – young women about to leave school. I felt that if the girls could recognise the work as 'relating to them' and if they could see it as offering to them something useful then I would have a strong incentive and motivating force. The girls were about to step into society; the work should give them some awareness of their society and an insight into their environment. The very first period spent with the class was a discussion about how the course might run. I mapped out my idea for the course and although the girls didn't appear over enthusiastic I hoped that once involved the girls would enjoy it.

I gave the class the dimensions of a room and the sizes and locations of the doors and windows together with a fairly detailed description:

- Floor-covering: red tiles 6" x 6", mostly cracked.
- Wall-covering: floral unwashable wallpaper, floor to ceiling, peeling.
- Ceiling: painted white, peeling.
- Lighting: single 60 watt bulb hanging from the centre of the ceiling.
- Heating: none.

The problem was to convert and lay out this room as a kitchen. Initially I thought that I would give each girl three budgets within which to work and according to these each girl could produce three layouts. Structural problems of the room were also involved e.g. I

hoped that the class would notice that the location and sizes of the windows in the room did not provide adequate light. However, due to shortage of time we focused our attention on the following aspects:

Practical Aspect

1. What is required of a kitchen, and what are the features of a 'good, well-designed' kitchen?
2. What should go into a kitchen? Why?
3. What is the best position for the separate pieces of equipment?
4. Advantages and disadvantages of different methods of heating and lighting; gas or electricity.

Aesthetic Aspect

We considered the overall style, tone of the kitchen.

Economic Aspect

We always kept an eye on cost and price, value for money. The possible methods of paying for goods, h.p., cash etc. One of the girls filled in an h.p. form.

The first reaction of the class was to suggest washing machine, dish washer etc. as the requirements of the kitchen. They were offering solutions without a full analysis of the problem. Clearly, it was necessary to get the girls to appreciate the problems involved in laying out a kitchen, help them to appreciate the features of a good, well-designed kitchen.

As a start to get them to appreciate the considerations involved I asked the girls to draw a plan of their own kitchens at home and list what they thought were the good points and the bad points. I hoped that we might compare the different kitchens and see if we could isolate any common features.

At this stage the first real problems cropped up. The standard of the drawings was very poor and in response to asking them to list the good and bad points about their kitchens a typical answer was "No good points and no bad points, sir, – all average points." At this stage the discussion was very much between me, the teacher, on one side and the girls, the class, on the other. As the above answer suggests the girls were very much trying to give sharp, witty answers to my questions. I found that the answer to this was to let the class as a group have the discussion while I – sometimes as referee and sometimes as the proposer of outrageous suggestions to provoke criticism – chaired the discussion.

When talking with each other the attitude of the girls was different from their attitude when talking to me. Instead of merely making statements such as "we cook with gas in our house and gas is best" when talking to each other the girls would point out the controllability of the gas flame, in fact they were more prepared to offer reasons. Arguing

with each other the girls became aware of other points of view and alternatives; they began to appreciate the problem was not straightforward.

Looking at the kitchens the girls isolated common features, such as in every kitchen the sink unit was by the window. The girls decided that this was the best place because it gave the housewife something interesting to look at while she did the 'boring' washing-up. The girls agreed that a good kitchen needed to be easy to clean, have plenty of work-top space with things in easy reach. We spotted that the positioning of kitchen equipment was very important if we were going to save the housewife's feet. The girls decided that certain facilities were essential for a kitchen: sink unit, cooker, refrigerator, kitchen table and seats, sufficient cupboard space and washing-machine. Now was the time for the class to get down to details.

To get down to details the class needed information about cost, size etc. of the different brands of the pieces of equipment necessary for the kitchen. We asked the class to bring brochures, magazines, in fact any information that they felt relevant from home. The girls wrote several letters to different companies explaining the project and asking for information. My colleague and I collected from the shops and stores in the area a large pile of brochures, relating to kitchen equipment, heating, lighting, gas, electricity, paints, wall coverings, floor coverings and we even managed to get a couple of h.p. forms for the girls to complete.

At this stage I think the lessons were organized rather badly. The afternoon would begin by my depositing the pile of brochures and literature on the desk for the girls to sift through looking for whatever piece of equipment they wanted. The girls tended after a time to 'flick' through the glossy magazines merely glancing at the coloured pictures, occasionally saying 'that's nice' or 'I'll have that'. I don't think I was directing the class enough, maybe I should have been more specific in what I asked them to do. Eventually, this was what I did, I got them, in their books, to list the equipment they chose, along with its cost, dimensions and some sort of reference so that it could be looked up later.

This was the part of the course when I should have been getting the girls to make comparisons, point out advantages and disadvantages and judge which product best satisfied what was demanded of it together with giving value for money. It was very difficult to get the girls to make objective decisions and to offer reasons why they chose A instead of B. I would pick up their comments and point out alternatives to try and provoke criticism. The most successful tactic was for me to bring together two girls who had chosen different types of the same product although they tended to argue with each other on subjective grounds. The economic aspect too seemed to lose its influence on the decision making process although this was my fault since my initial budgets revealed my own ignorance concerning the prices of kitchen equipment. The next stage of the project was for the girls to lay out their kitchen on a scale plan.

I had not anticipated the problems that would arise at this stage. The main stumbling block was that the girls were not able to calculate the scale dimensions from the actual dimensions. This was not really surprising since some of the dimensions were complicated to convert but even my fiddling the lengths and widths to what I felt were workable numbers did not significantly improve the situation. I finally converted most of the numbers myself. The lesson was not a mathematics test and so maybe I should have

performed the calculations myself as soon as difficulties arose so that we might sustain what interest was left and move onto more fruitful activities. For example, I had hoped to conclude the course with a general discussion of the results and examine the merits of the individual solutions to the original problem. By taking the best points from each design we might have produced the optimum layout between us. Unfortunately, I failed to allocate time to the priorities efficiently and apart from a very brief discussion of the course we didn't reach this stage.

A fault that ran throughout the course – although more especially in the second half – was that I did not inject enough variety into the activities. Consequently, interest and enthusiasm faded and this was reflected in the falling quality of the work. The activities themselves were too much classroom based, sitting at the desk. With only eight girls and two teachers it should have been possible to obtain much more enthusiasm from the girls. I might have tried using the desks, chairs, cupboards etc. in the classroom to represent the kitchen equipment and 'physically' lay out the kitchen. There was a domestic science room in the school – next door in fact – and instead of getting the girls to appreciate the good and bad points of a kitchen by looking at a plan of their own, we should have gone into the domestic science room and 'found' them. The fact that the vast majority of the information was gathered by my colleague and me probably didn't encourage the girls to think of the project as 'their' project. They were presented with it by the teacher. Now I feel that a team approach rather than each girl producing her own solution would have been better because it would have encouraged communication.

Perhaps there was a degree of success in that each girl was surprised at the high price of kitchen furniture – which is by no means a problem unique to kitchen equipment! And for me, I have a better idea for next time.