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C.D.T. at Norwood Girls School

In this brief article I hope to convey the extent to which innovation can develop by constraints which act as a framework for action. Teaching in a small department endows one with something akin to the 'pioneer spirit', heightened by the fact that this 'small department' is set in a girls' comprehensive.

There has been a 'craft workshop' at Norwood School for many years and until ten years ago, craft was offered as an option for senior pupils to work in wood. Developments at national level have so raised the status of the subject area in the school that our pupils are able to enjoy these opportunities as an integral part of their curriculum. Without the confines of traditional workshops it has been possible to expand the work of the department to suit the needs of our pupils.

We are moving away from the 'leisure-craft' image of the past to make a substantial contribution to our pupils' designing and technological development.

Recently, a visitor to our department asked a fourth year group why they had chosen Design and Technology as an examination course. A pat reply was not forthcoming, only a measure of surprise that the question had been asked at all. They were following the course because they both liked the subject and were achieving success with the work. It must be unusual for many visitors to our school to see the workshops full of females – teachers and pupils, but for many of our pupils the subject is a 'normal' choice.

Developments in teaching materials and examination courses that can be offered in a multi-media workshop have opened the door for an improvement in the status of the subject area within the school generally. When I joined the staff at Norwood in 1973 we were in the fortunate position of expanding and groups consisted of half classes timetabled for half the year, the rest of the time

In the Design & Technology workshops girls are designing and making the chassis for their rubber band powered vehicle.



spent in the Art department. Liaison between the departments was strong and joint projects were undertaken. As the effects of 'falling roles' are felt, groups have become larger and time allocation is shorter.

Until we were able to standardise the timetable for Art and Design and Technology to a double period a week for one term, pupils were complaining about the inequality of their experience of the subject. 'Take up' for examination courses was so great that we were able to offer Design and Technology in two option blocks. We offered the CSE Mode II Innovation in Craft (LREB) in Jewellery and Plastics. The plastics module had, to a large extent, grown out of our workshop due to the work of the previous Head of Dept, Malcolm McDougall. We were used as a trial school in the early years of the examination and the two modules suited our facilities. Last year resources allowed us to introduce a third module – furniture. Out of the girls' success in this course has grown the demand for O and A level courses. In the early years of sixth form consortium, we were already sharing resources with a neighbouring school.

Three years ago we offered Graphical Communication as an examination course. Last Autumn, my colleague Gerry Savage took the fourth, fifth and sixth form Graphical Communication groups to Marchants Hill Rural Centre. The weeks course helped to bring to life many of the principles learnt in the drawing office. The two orienteering courses at the beginning of the week showed clearly to the girls the need for accuracy in their drawings as a couple of degrees either way meant ten minutes wandering around the trees looking for the correct marker. The girls covered a great deal of work including map making, surveying and statistic display and back at school there was enough follow up work to fill the rest of the term.

Although the design process runs strongly throughout our work, my colleague and I have been concerned about the technological element. We have struggled to fit as much tool and material technology into our syllabus that the short time we have with the first three years allows and have tried to build as much 'problem solving' into projects as possible. Like many CDT teachers we are constrained by time to offering problems which we have already solved.

Although our pupils could manipulate materials and tools and communicate their ideas well graphically, they were not having the opportunity to apply their knowledge in realistic problem solving activities.

When an integrated Science and Design and Technology course for first year pupils was proposed by the Inspectorate, it seemed that here was an ideal opportunity to pool our resources and to offer our pupils the experience of applying technological concepts through practical problem solving. Although only a few weeks into the course, we feel very optimistic about the venture. While

In the Science Department these girls are investigating the properties of elastic bands.



during the Design and Technology lessons the girls are designing and making simple, elastic powered vehicles, the Science input backs this up with tests and experiments with materials, methods of joining etc. As soon as the vehicles are operable, we will test and modify them together using the computer to monitor the results. Literacy and numeracy are also integral components of this course with a joint folder containing records of the design process as well as technological data.

Another innovation – I believe that the greatest success we can claim at Norwood is that we are developing courses during a time of economic and social change to suit our pupils' *changing needs*.