Avon Design and Technology
A Modular GCSE

Brian Williams
Brimsham Green School

BACKGROUND

During the first phase of GCSE training in 1985, there were discussions and debates as to the merits of the 'new' examination. The expression of anger, frustration and disbelief, from teachers, excuses from the examination boards that they were starved of funds and obliged to train 'on the cheap', and protests at having to run both the old and new systems side by side for a whole year!!

It was certainly a victory for the CDT subject area to have its very own National Subject Specific Criteria. At last the mould of isolation had been broken and out came the subjects new found academic acceptance. For those who had been teaching CDT for a number of years, and hadn't managed to convince their colleagues and managers of its real worth, the tablets of stone sent down from above provided a higher level stick with which they could legitimately beat Headteachers and Curriculum Deputies. Once past this stage and through the timetable hoop it was no trouble convincing the students and their parents. They were interested to listen, anxious to get places on courses and enthusiastic to get started on the work. (in some cases the parents as well!)

It seemed a 'golden opportunity' for the subject area to develop and establish real status in schools colleges and with prospective employers. The increasing acknowledgement of 'A' level Design & Technology, by institutes of Higher Education and employers, also helped to give this situation a boost.

The subject, CDT, was sub-divided into 'three strands',with a core of common content. Candidates are offered all three strands by larger institutions with enough staff, resources and space on the timetable. Smaller organisations have to make the decision to offer two or maybe only one of the three. Where this happens the decision is usually based upon current practices and local trends. The strand that is least popular, more difficult to staff, requires more resourcing, attracts lower ability students or alien to the local community requirements in employment, is often ignored.

The three strands are divisive in their construction. The Design Outcomes are expected to accommodate the requirements of the course. The work covered is engineered to cover the syllabus content and often teaching in the final term of the course is manipulated by the overwhelming amount of 'theory' that still has to be covered.

At this stage it is necessary to examine the Philosophy of CDT. The very nature of the subject area does suggest that to split it up into three separate courses is counter productive. The emphasis placed upon the direction taken by the Design Outcome should be determined by the Design Activity itself.

> 'The purpose of CDT is to enable pupils to be inventive in designing practical solutions to problems and so bring about change and improvements in existing situations'.[1]

It is difficult to direct the work towards a confined number of criteria without restricting the scope of study. If the student identifies a design situation, specifies a need, covers analysis, research and investigation, suggests alternative possible solutions, shows evidence of formative evaluation and development of ideas, the natural progression is for the student to specify the nature of the outcome. The materials, tools and resources should be determined by the decisions made by the student during the design activity.

There are a vast number of examination candidates who have produced work that could easily have fallen into any one of the three CDT strands. Design Communication Projects that would have benefitted from full Realisation and had a Technological emphasis, Design Realisation projects that were highly Technological and emphasised sophisticated Communication skills and Design Technology work that equally covered Communication and Realisation.

DEVELOPMENT

With all this in mind, and the introduction of TVEI into the Avon Local Education Authority, a team was established to write a suitable GCSE Modular Course that would satisfy the needs of examination candidate schools, colleges and teachers and reflect the true nature of CDT as it was perceived.

It is not by chance that the course structure has combined the three strands, avoided formal examinations in the second year of the course, and made significant moves towards the integration of curriculum areas.

> 'The central core of the course is based upon design activity and draws upon a variety of practical skills and technological resources and applies them to design problems found in a range of contexts'.[2]

During the development period the notion of a National Curriculum was introduced, but the syllabus was in it's final draft, prior to submission for approval by the Secondary Examination Council, before the announcement of a Design & Technology Working Party. The current CDT criteria upon which the course is very firmly based, does not take account of the emphasis placed upon the cross curricular links expected in Design & Technology in the National Curriculum. There is however a strong possibility that by engaging in a programme of 'team work', expansion into a fully integrated and cross curricular approach could be achieved. The final publication of the Design & Technology working party report will provide the starting point for this move.

COURSE OUTLINE

The course follows a Pattern of five Modules each occupying approximately 25 to 30 hours of teacher contact time.
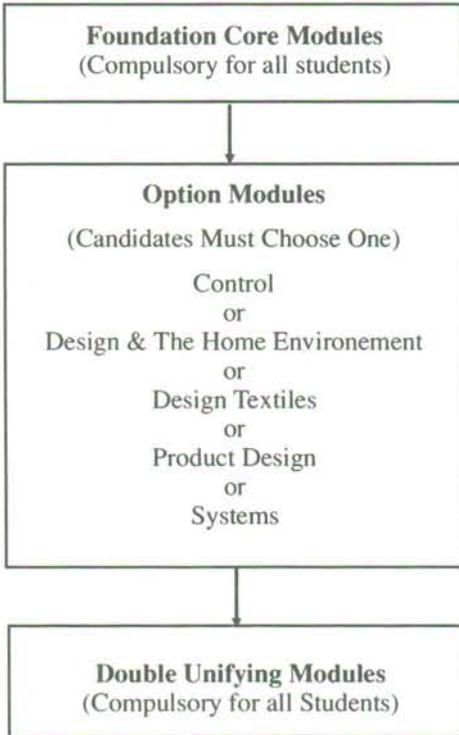
Double Foundation Core Modules

Option Module
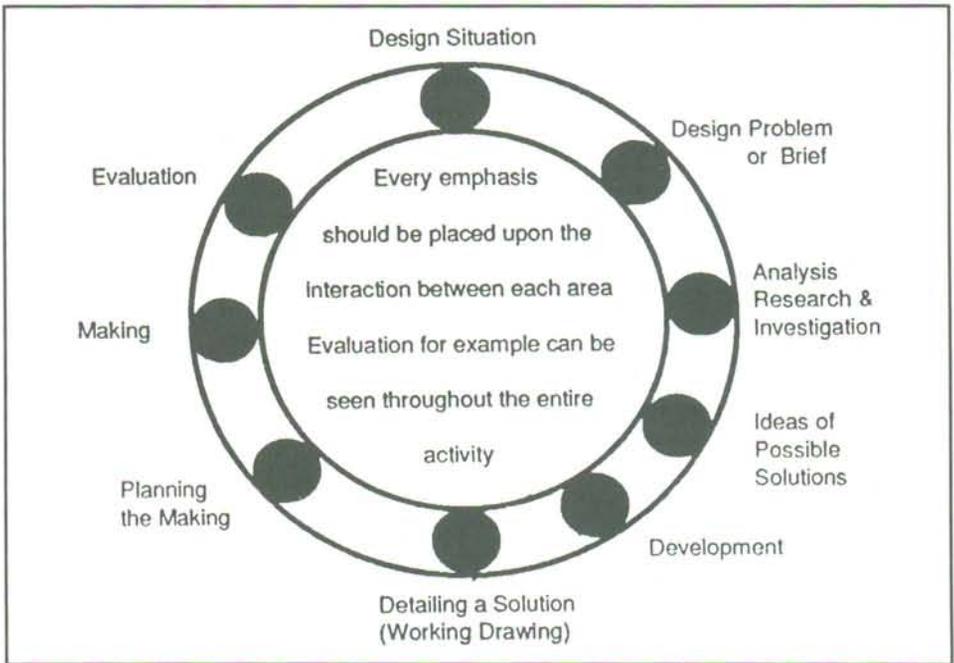
Double Unifying Modules

The first two modules are seen as one unit of teaching and called

The Foundation Core Modules. Module 1 covers Designing and Module 2 covers Resources for Design.

'As a guide it is useful to have a framework around which the course if built. Illustration 1 shows **one** example of a Design Activity and covers the Design Methods and stages outlined in the syllabus notes'[3]

Foundation Core Modules
(Compulsory for all students)

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Option Modules

(Candidates Must Choose One)

Control
or
Design & The Home Environement
or
Design Textiles
or
Product Design
or
Systems

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Double Unifying Modules
(Compulsory for all Students)

The Option Module will give the candidates the opportunity to study in depth and also provide a design context upon which the work in Modules 4 & 5 is based.

'Many of the option modules have been developed with the co-operation of industry and or commerce and will possess a vocational focus'.[2]

The last two modules are also linked as **Double Unifying Modules** and are based upon coursework where a Designing and Making approach is expected. This work calls for the application of studies undertaken in the previous modules.

'where possible the Design Problem will be negotiated between the teacher and the student. It is essential that this procedure is given serious consideration and that Design Briefs are **not set.** Candidates should be encouraged to use situations that are within their own experience and provide interesting and sufficient scope to proceed to a worthwhile conclusion'.[3]

Course Assessment Structure

MODULE	TITLE	HOURS	ASSESS-MENT	% MARKS
1 & 2	Foundation	50/60	2 hr. Design Exam	40
3	Option	25/30	45. Min	20
4 & 5	Double Unifying	50/60	Course-work only	40

Design Situation / Design Problem or Brief / Analysis Research & Investigation / Ideas of Possible Solutions / Development / Detailing a Solution (Working Drawing) / Planning the Making / Making / Evaluation

Every emphasis should be placed upon the interaction between each area Evaluation for example can be seen throughout the entire activity

The Awarding Procedure
The End of Module Examination for Modules 1 & 2 and 3, is set and marked by the Southern Examining Group. The Coursework from Modules 4 & 5 is marked by the teacher and Moderated by the Examination Board.

There is a Matrix for the award of marks, for the Design Examination Modules 1 & 2 and for the Coursework in Modules 4 & 5. The test at the end of Module 3 has a full independent Markscheme.

Each Module is awarded a Level 1 to 4. There is an awarding meeting, organised by the Examination Board, for each of the Modules. Marks give weightings to the Assessment Objectives and place candidates in rank order. Levels are awarded according to level descriptors and scrutiny of work. It is possible to resit an end of module examination.

The five levels awarded are aggregated to give a GCSE grade. There is an Interim Certificate given to candidates at the end of each module. This records the basic

contents of the module and the level awarded. The folder of certificates can be used for the purpose of enhancing a Record of Achievement and for providing information to employers or institutes of Further or Higher Education.

APPROVAL
The course has full approval from the Schools Examination and Assessment Council.

It is currently in a pilot stage within Avon Local Education Authority and from September 1989 started in other schools, both inside and outside the county.

SYLLABUS BOOK
The syllabus book contains comprehensive information on the course and specimen examination papers. This should enable readers to familiarise themselves with the requirements of the examination and provide sufficient ground upon which to start planning.