Putting the 'T' into CDT

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Taking the theme 'Putting the T into CDT' really needs an examination of what constitutes or characterises both CDT and Technology.

What is CDT?
We are in a curriculum area that has rapidly expanded, and many teachers have not been able to keep up with the changes. A useful definition of CDT was given by HMI in 1983 in 'CDT: A Curriculum Statement for the 11-16+ Age Group'.[1]

> 'The central aim of Craft, Design and Technology (CDT) is to develop in pupils those complex skills and abilities needed to enable them to exercise some control over the quality of the man-made environment'.

This is refined to the activities of Designing and Making, applying the six areas of knowledge, namely Aesthetic, Technology, Craft, Graphic, Health and Safety, and Cultural and Historical Perspective. Technology is thus seen as a firm part of the CDT curriculum.

CDT has developed historically from roots in the separate subjects of Woodwork, Metalwork, and Technical Drawing in the 1960's, through the introduction of Graphics, often in an excessive form, to the practices recommended today as stated above. We need to question how far along this progression most schools really are despite the many agencies of change, the greatest of these being the GCSE proposals.

What is Technology?
As with Design in the 1970's, Technology appears to mean different things to different people. A definintion that appears to be widely adopted is that of Geoffrey Harrison and Paul Black in the document 'In Place of Confusion; Technology and Science in the School Curriculum',[2] namely — 'Technology is a disciplined process using resources of materials, energy and natural phenomena to achieve human purposes".

The history of the development of Technology in the school curriculum is brief. The present form of Technology appearing in schools, particularly at examination level takes two main forms:

Modular Technology with separate bodies of knowledge in areas such as Structures, Mechanisms, Electronics, Pneumatics, Control (often as a multiple module), Food Technology and Biotechnology. These sometimes have a core of Energy and Materials. The application of these bodies of knowledge mainly takes place in the final year as a separate sub-course.

The alternative is a more holistic view taken through a *systems approach.* This raises many questions as substantive content is not always totally defined.

As a discussion point, the view could be proposed that pure modular courses are similar in nature to the traditional approach in Woodwork and Metalwork.

Exploring the nature of Technology activity with a CDT course
A series of slides was presented to show work undertaken at Crewe + Alsager College of Higher Education through Design Briefs that display a greater or lesser degree of technological application. These range from an electronic timer for camera work to activity clothing. The technology in each brief was discussed.

Realism in the School Curriculum
The slides show that the range of materials and skills required for broad based Designing and Making activities has become more and more numerous, and they are difficult to deploy within the constraints of the present curriculum. Thus limits need to be set, but these can be set within the design breifs.

Strategies for implementation of problem solving approaches in CDT
Active involvement in the process of solving problems that have as much relevance and realism to the pupils as possible is central to the introduction of technological activity in CDT courses.

Different types of technological activity exist, some of these (based on work by John Lesquereux and Roger Holmes) are:

a) Car Crash Test
* Road Surfaces & Wheels
* Road Vehicles and Junctions
* Kits
* High Tech
* Take It To Bits
* Junk Tech
* Fix It Tech
* About Tech
* Play Tech

Examples of each of these approaches to Technology were given, and the value of each approach in relation to CDT courses was discussed.

This is further amplified by six types of teaching by Design in the Technology field:

* 'Pure' Creativity
* Reinforcement of Learning
* Technical Design
* Integrated Design
* Creative Design
* Investigational

Thus the nature and purpose of the Design Brief is important in introducing Technology into CDT.

References:

1. 'CDT — A Curriculum Statement for the 11-16+ Age Group': CDT Committee of HMI, 1983.
2. Black, P. and Harrison, G. 'In Place of Confusion; Technology and Science in the School Curriculum' 1985, Nuffield Chelsea Curriculum Trust.

Intense concentrates in attempting to put the 'T' into CDT