Reviews

Introducing Craft, Design and Technology

Andrew Breckon and David Prest
Thames/Hutchinson 1983

'Introducing Craft, Design and Technology' written by Andrew Breckon and David Prest, and published by Thames/Hutchinson breaks tradition with many of the books published under this title. It is refreshingly different largely because it deals with the concept of designing in an integrated way rather than by dealing with it in a specific material context like, for example, in wood. The authors clearly show the wide variety of considerations which are necessary in the design of any simple product and they have been at pains to illustrate the rich educational context of the activity.

Inevitably, in a school subject like Craft, Design and Technology teachers need to assist their pupils to develop skills in areas as wide apart as graphics, electronics, in working materials and in planning, and far too often the focus remains on them without due consideration of their place in the total process of designing. The strength of this book is in its aim to help pupils to understand the multi-facetted nature of product design and the important link which exists with human need and attraction.

The educational objectives of Craft, Design and Technology direct us towards a curriculum argument which is quite different to that of the traditional academic disciplines and it is its inter-disciplinarity which makes the subject so difficult to handle in a school system such as ours. Craft, Design and Technology activities place the pupil in a situation in which the aim is to produce a product which provides a reasonable solution, or response, to a practical problem. Product designing is an integrated activity which calls for the use of many different skills (practical and intellectual), knowledge from a variety of sources and personal judgement. Breckon and Prest show the basis for many of these elements in a form which clearly underlines their importance in the systematic approach to a design brief. They refer to the 'linking together' of these areas as a way of leading to a successful solution.

The early introductory material provides the pupil with a general view of many design criteria and, obviously, the authors can but point out a direction with minimal explanation. Nevertheless, this view of such a complex operation should prove to be a useful resource for teachers before they direct the pupil to more detailed texts for more specialised information.

The visual presentation of the book is attractive and providing teachers use it in the context in which it has been written I believe that it will make considerable impact on this rapidly growing (and changing) curriculum activity.

Tom Dodd

Aesthetic Development

Assessment of Performance Unit
Department of Science. No charge

What an imaginative and reassuring document this is, imaginative because it is willing to break new ground and reassuring because this new ground is likely to be much more fertile than the old. For too long has art been allowed to be, and, indeed, expected to be a matter of taste or feeling out of the reach of our central intellectual concerns. But here the intellectual capacity to think artistically is rightly seen as also what is required to engage in natural science – both require objectivity. How right it is to argue that in art, as in other things, there are 'objective criteria for what counts as achievement'. The familiar and tolerated if not encouraged emotivism is clearly under attack here. After all, there is nothing significantly emotional about a work of art. We can experience emotion in response to it just as we can experience emotion in response to any other human creativity. Then why should the subjective or emotive view of art have influenced us so strongly? Emotivism has been bad for art education and has made sure that art has declined greatly in our century and the self-awareness and critical thought of the people have correspondingly declined. Yet though we have recently trivialised art, it has traditionally been the means by which people have kept some sense of their true humanity. Encouraging art means encouraging critical powers – a good thing for people, but uncomfortable for states that are less open or democratic than they might be. And we must not forget that not only our Big Brothers have a vested interest in the subjectivist view, in an age when fortunes are made through the manufacture of syncopated noise or assembled or dismantled junk.

It is particularly heartening to see the influence of Popper in these pages. (For those who are unfamiliar with Popper's writing on this subject, read the chapters *Two Kinds of Music* and *Progressivism in Art, Especially in Music* in his autobriographical *Unended Quest,* Fontana 1976). In his critical philosophy he is concerned about the way that an activity like art, which should be properly critical, properly a matter of the selfless pursuit of truth, becomes confused with what is subjective. Thus fashions, trends and originality supplement the skilled attempt to further our understanding of the human condition.

Our document says, rightly, that 'not anything can count as a valid and fruitful judgment of conception, whether in the arts or the sciences'. Our range of criteria must be wide enough so as not to rule out any objective understanding, but there is the problem of what *counts* as understanding.

So, much more work is needed to *establish* objective criteria than this short document is able to supply, and this takes us into broad philosophical issues. To put art right we will need to get our

philosophy right too. Popper, in a penetrating parenthesis in *Objective Knowledge* (Oxford) observed that 'as in contemporary art, there are no standards in these worlds of philosophy'. The authors of the APU document have put the consideration of art back where it belongs, in the centre of intellectual and educational debate.

G.W. Powell

The Theory and Practice of Metalwork 3rd Edition

G. Love
Longmans. £3.95

Should you be unfortunate enough to still be teaching O or A level metalwork and not CDT no doubt Mr. Love's 3rd edition of his 'Theory and Practice' of the subject could be useful for reference. It is well priced at £3.95 but the style of text (dry), and most of the graphics (line drawings) make this standard textbook still seem to come from out of the sixties. Although, to quote the backflap, the section on iron and steel manufacture has been completely rewritten I would doubt that 'soldering' has been 'revised'. For fascinated though we are to know the correct shape of a hatchet soldering iron, nowadays we have electric ones and are required to solder electronic circuitry together with them. There is nothing about this, nor alas on the entire subject of design in metal, nothing on how to produce basic working drawings or the role of metal in jewellery work. There are just too many other examples of obvious omissions that should be found in a contemporary book. It really becomes the theory and practice of a very certain kind of metalwork teaching. CDT has come a long way in the past fifteen years and I do not think that books of this kind will take it any further. In my experience schools have enough of them already.

Ian Holdsworth

Graphical Communication Book 1 & 2 (2nd edition)

A. Yarwood
Nelson. £3.15 each

Mr. Yarwood has clearly avoided the debate of the role of graphicacy parallel with literacy and numeracy. The second edition (Book 1) does include a slight flirtation with the importance of graphicacy and in a brief concise fashion makes this point. All credit must go to Mr. Yarwood for this brief interlope, the explanation clearly highlights the role of graphicacy to most lay persons and hopefully those still not convinced of the development of Graphical Communication from Technical Drawing.

The author's experience as a school teacher and examiner is evident in these two books. He has compiled a course which covers most of the Graphical Communication syllabuses. These two books enable the teacher to follow through the course with the assurance also of completing their syllabus commitment. The second edition has valuable 'extras', namely the inclusion of past examination papers set by numerous boards. The use of colour and its importance is also developed.

Of course there are faults to be found in these books, as one would expect with course books trying to cover the range of syllabuses. However, these are few in number and in the present economic climate it is important to ensure capitation is spent wisely, and an investment of these books will prove to be fruitful to both teache and pupil.

V.K. Oza

Integrated Craft 2

Alan W. Constable
Oliver & Boyd. £5.30

This book contains information on how to construct 40 different simple projects in wood, metal and plastics. Each project is presented in a double page A4 spread. the same clear layout is used for each project, the content of which is sub-divided under the following headings:– 'Suggested Procedure', 'Cutting Lists' and 'Design Construction Notes'. As well as written informatio there are easy to understand, clear technical drawings showing construction details and a black and white drawing of the finished article. The bool also has 16 colour plates of the finished projects, a the beginning of the book, to illustrate clearly wha the projects should look like when they are completed; they are obviously tried and tested designs.

The projects, whilst being suitable for a variety of materials viz; wood, metal and plastics, are not very imaginative nor unusual, for example, tooth brush racks, fruit bowls, stools, chess boards etc. The design construction notes are presented as suggestions rather than giving guidance in developing a design approach. I feel that the design construction notes would present little help to the traditional Craft teacher, who might be wishing to alter to a CDT approach. The language is suitable for CSE and non-exam pupils, providing help is given with technical terms.

This is a traditional craftwork book and as such fulfils its aims. The style is very prescriptive, reflecting traditional craft practice. However, I would suggest that it is not a useful addition for CDT departments in schools and colleges, having little relevance to current practice, although it mig be useful for adult education evening classes.

Paul Shaller

The Easy Way to Airbushing
Pelltch Limited

The art of airbrushing is becoming more popular, not only in the commercial graphics world, but the subject is now being taught in many art schools and colleges as a specialist subject, and also as a general art subject in any increasing number of comprehensive schools.

Pelltech Ltd., have just launched a book in A3 size called *'The Easy Way to Airbrushing'* and it has been written by an experienced airbrush illustrator and teacher on the subject. It caters primarily for students or teachers who are involved in the subject of airbrushing.

One of the important features of *'The Easy Way to Airbrushing'* is the inclusion of 3 sets of 5 exercise sheets which are predrawn on paper which is suitable for most airbrush work. Instructions on how to complete the practice exercises and how to use the book are given in some detail, and there is a wealth of information on the different types of airbrushes; on faults and how to correct them; on masking techniques; airbrushing on various surfaces etc. In fact the book can be used as a useful reference on most aspects of the subject of airbrushing.

'The Easy Way to Airbrushing' is available from many graphic art dealers who sell airbrushes, and it is featured in the 1984 catalogues of several leading educational contractors. It is priced at a recommended retail price of £4.95. Further information may be obtained from Pelltech Ltd., Station Lane, Witney, Oxon, OX8 6YS.

BSI and Hutchinsons
New Book Series

BSI has adopted a new strategy in its long-term campaign to impress upon students the importance and benefits of standardization techniques and services. Breaking with tradition the Institution has joined forces with a well-known publisher – Hutchinsons, – to produce manuals of carefully-chosen British Standards which will be available in bookshops throughout the country. The new publications – *Engineering metrology* and *Engineering drawing and design* – are intended primarily for Business and Technician Education Council (BTEC) students and undergraduates specializing in these subjects. A third title, *Building construction and specification* will be published later this year.

Engineering metrology opens with a summary on the aims and functions of standardization, the role of the British Standards Institution and equivalent international bodies, and a brief introduction to measurement as a whole. Subsequent chapters deal with extracts from standards covering general inspection equipment; linear and angular measurement; screw threads and methods of inspection; gear measurement and basic geometry; machine tool metrology; surface textures and roughness values; air gauging and, finally, plain setting rings.

The second manual, *Engineering drawing and design,* has a similar opening theme and then concentrates on the intricacies of management of design for economic production; engineering drawing practice; introduction to geometrical tolerancing; engineering diagrams; sizes of drawing sheets, preparation of technical drawings and diagrams for microfilming; the precise conversion of inch and metric sizes on engineering drawings; preferred numbers; ISO limits and fits; and the assessment of surface texture. Several appendices include common symbols for welding, fluid power systems, and electrical, electronic and general engineering purposes.

For some years BSI's Education Section has produced specially compiled and priced 'student' editions of standards on such subjects as engineering drawing, geometrical tolerancing and graphical symbols. This policy will continue but on a much wider scale. By joining forces with a leading publishing house, well established in technical education texts, the Institution will have access to extensive marketing strength and experience. In future, titles will appear on booksellers' lists, at bookfairs, in libraries and campus bookshops, and will be promoted overseas as well as in the UK.

Price: Both publications, the *Manual of British Standards in engineering drawing and design* and the *Manual of British Standards in engineering metrology* cost £17.50 each (cased), £9.95 each (paper).