

Reviews

CDT — Projects and Approaches

David Barlex and Richard Kimbell
MacMillan Education £5.95

Having used Richard Kimbell's 'Design Education' for many years as an essential guide to CDT in foundation courses, I looked forward to reading the sequel, which he co-authored with David Barlex. The ideal of such a book — to cover and give guidance of good practice within the design process via worked examples of projects at both adult and pupil level — is a very welcome one.

This guide of the process is aimed at all CDT pupils who are working towards a 16+ examination, particularly CDT — Design and Realisation. Its content nicely bridges a definite gap in available support material.

The cover and look of the book is appealing with its excellent graphics — however it is a pity that none of the illustrations within the book are in colour. The section on graphical communication skills would have been more usefully developed with interesting use of colour and tone. I like the mix of drawings and photographs to describe the text, and found the many illustrations showing female involvement with the designing and making process particularly refreshing.

The excellent worked examples from industry and school give a very useful resource, especially for those many CDT pupils who need to have their design horizons broadened. The interactive text is an excellent method of ensuring thorough reader participation, with the points raised in each section.

Each step in the design process is taken as a chapter, and very carefully explained with worked examples at a variety of levels. All the sections work well except, in my opinion, the chapter on making skills. The attempt to summarise this element within one section is a difficult task, which doesn't quite work. In using the book, I would certainly supplement this topic with other reference texts. The chapter on 'Solving the Examination Question' is particularly helpful and I would have liked the section to have contained more examples.

Overall, the book makes a useful and positive explanation of how to use the design process, and will, I am sure, become a standard reference and stimulus work on the topic.

M. Patterson

Control Technology (second edition)

Hodder & Stoughton, *Teacher's Handbook* £7.95;
Pupil's Assignments £3.25; *Follow-up Book* £3.45

This is the second revised edition of an important series which first appeared in 1974 and was reprinted many times in its original format. The current edition has been completely reset and bound in limp covers using stitched sections (unlike the original issues with their perfect binding). The contents remain substantially the same in this second edition but several revisions have been made — notably the updating of symbols, removal of the original section on fluidics, and changes to the section entitled *Logic*.

Control Technology, when it first appeared, represented the earliest attempt at a comprehensive teaching resource for technology — combining literature and specific teaching equipment. The latter remains readily available, and information can be obtained from:

NCST, Trent Polytechnic, Burton Street,
Nottingham.

In addition to supporting prescribed courses of two or three years duration, the *Control Technology* series and its associated hardware has found a variety of applications in schools. Many colleagues, for instance, have found the material valuable in part for supplementing CDT programmes, perhaps injecting a technological dimension without taking on board the entire course. The merits of the books and the equipment will be obvious to those who have used them (as will some of the problems). For those unfamiliar with the material, I would *unhesitatingly recommend sending for inspection copies*; the texts are well written, well illustrated and provide excellent guidance for teachers and pupils respectively. Equipment costs are relatively high, but it is worth pointing out that all the books are in part useful as a 'free-standing' resource, especially the *Teacher's Handbook*.

Much of the material in *Control Technology* has endured well over the last twelve years; indeed, it would be surprising if some of the sections — eg., mechanisms — had not. However, there is an obvious danger of an enterprise of this sort becoming fossilised. I thought that some parts of the introductory text smelt a little musty with references to 'craft' and 'craft department'. But, more importantly, I wonder whether after twelve years *Control Technology* is not in need of a more radical revision, especially in relation to electronics and control.

When the first edition was produced, it was inconceivable to many that within a decade cheap microelectronic devices would have taken over so many control functions, would be so affordable and would be so easy to use. Bearing this in mind, I wonder, for example, about the retention of this subsection on uniselector switching (however interesting) and the continued reliance on electromagnetic

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devices in general — accepting, of course, that relays remain very important devices and can be exceedingly useful in teaching a range of principles.

Similarly, I wonder whether by now the section entitled *Logic* should not have been greatly expanded — including material on sequential as well as combinational principles. (One only has to compare recent generations of sewing machines to appreciate the impact of micro-electronics in control applications).

All this is easy enough to say, of course, but a major revision of both the text and its associated equipment would represent a massive investment. The immediate solution is clearly one of being selective and extracting the best and most suitable material from a variety of sources — including, I would suggest, this pioneering series.

John Cave

Graphics Handbook. An Introduction to design and printing for the non-specialist

Richard McCann

Publications Department, National Extensions College, 18 Brooklands Avenue, Cambridge CB2 2HN. £2.95

For people who have not attended a Graphics course or who have not had a design training but find themselves responsible for the presentation of artwork to a good, if not professional, standard this book is their key to the world of print. Written by Richard McCann, a freelance artist, and designed by Information Design Workshop it is presented in an effective A4 Landscape format displaying easily appraisable illustrations and text explaining the following topics: Graphic Design, Typography, Image Making, Photo Design, Exhibitions and Printing Methods. It includes valuable information on the preparation of artwork and good advice on how to work with clients and printers, pointing out every step of the process from the initial meeting to the delivery of the artwork. It also includes a list of useful equipment plus a bibliography for further information and it makes it easy to pick up an understanding of necessary technical jargon which is helpful!

The basic information and ideas stimulate the imagination into more adventurous uses of easily available media and equipment such as photocopying machines and I particularly liked the encouraging remark 'No matter how awkward you might feel about drawing, a freehand sketch will always appear more lively than a traced image'. It also has no copyright problems if it is your own!

Various methods of typesetting are covered in adequate detail but it does not include that which is computer based. Integrated word processing, graphics and page make-up software is now available for a range of micro computers from the BBC

upwards; desk top publishing is developing rapidly. The computer makes the arrangement and justification of text and illustration simple for those with no experience, however this still leaves the all important problem of the design of the page to the operator and this is when the Graphics Handbook will be found to be of great value as the principles are the same even though the medium may be an electronic one.

Teachers of any subject as well as students will find the book an up to date treasure trove of information and it would make an extremely useful addition to Craft and Design Technology and Art and Design resources.

Lesley Lord

Engineering Technology

Liam Hennessy and Lawrence Smyth

The Educational Company of Ireland Ltd., P.O. Box 43A, Ballymount Road, Walkinstown, Dublin 12

The authors have succeeded in their aims of emphasising visual communication in the learning process, using photographs in addition to illustrations to give clear insight into how a range of facilities look and work in the field of engineering technology.

The text is written in easy-to-understand language, with the minimum of words and a wealth of clear illustrative material. It would provide a good, basic reference source for students commencing an engineering course and, complemented by appropriate and relevant practical work, would form a sound basis for more advanced work.

A possible criticism concerns the contents page, where it would have been helpful if the contents of each section could have been listed.

The authors have deliberately not dealt with any Health and Safety aspects of their subject.

Acknowledgement is given to various educational and industrial bodies in Ireland, as well as to individuals, who have contributed either to the development of engineering technology or to the compilation of the text.

Stan Shaw

Join in and Spin

Thames Valley, VHS or Beta, £12.95

This video, which runs for two sides of twenty minutes each, provides a general introduction to the craft of spinning. Starting with the use of a spindle, and progressing to the wheel, it demonstrates by simple example that this is not an intimidating craft to master. Good advice is given about the choice of wheel and the best type of fleece for a beginner to buy, and the various processes of carding, plying

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etc. are demonstrated. Pauline Robinson and her assistant have pleasing personalities, but it is a pity that far too often the camera is focussed on their faces instead of on close-ups of the processes being described. This reduces the video from being a first class teaching aid to a reasonably informative chat. Vital parts of the wheel, such as the orifice are not clearly shown.

In the second part valuable time is wasted in the farmyard, while technical terms are not clearly explained. In the section about dyeing, which takes place in the kitchen using ordinary kitchen utensils no word of warning is given about the dangers of chemicals. The need to keep apart cooking and dyeing utensils cannot be too much stressed for beginners.

The video is accompanied by a booklet which gives some useful information about suppliers, but on the whole it is an amateurish production with captions written in various scripts, and not above the odd spelling mistake.

The colouring of the film is rather crude.

Dorothea Kay

Schooling for the Dole: The New Vocationalism

Inge Bates, John Clark, Philip Cohen, Dan Finn, Robert Moore and Paul Willis
Macmillan, London £20.00, paper £6.95

After half a decade of mass youth unemployment, the Youth Opportunities Programme, the Youth Training Scheme and the Technical and Vocational Educational Initiative, there is an urgent need for a new analysis and Bates, Clark, Cohen, Finn, Moore and Willis have put it together. They have assembled a book that all good radical sociology tutors will reach for thankfully. It is totally compatible with the Michael Young volumes and the Open University course units on which so many of their courses are inextricably based. Nothing need to be wasted with the addition of this easy, updating service. And much of it — though sadly not all — is well written too — particularly that from the pen of Paul Willis. In general the message is coherent and fluent and lacking in tiresome uncertainty and qualification.

The theme of the book is that the freemarket economy does not or cannot accept its responsibility for unemployment any more than it did for any other examples of capitalist exploitation, alienation or whatever. However, it has developed two new explanations — the deficiencies of the young and those of the educational system that fails to process them effectively. Having done so, all that is needed is a simple solution — the Manpower Services Commission. Once the 'Great Debate' had identified the failings of the schools, what could be more reasonable than that an organisation which 'knows better' should step in with advice (and funds) to improve the situation'. Work becomes the new

school subject. 'The "mold" for the model pupil here becomes the "mold" for the model worker — trained, skilled, flexible and above all, disciplined'. Later in the book Dan Finn refers to this process as 'redefining youth'.

The main thrust of the selection of contributions that constitute the book is twofold. One is the detailed exploration of MSC strategies as a new instrument of social control. The other is the delineation of the distinctive consciousness of working class youth during the 'apprenticeship to adulthood' and the irrelevance of the schools even in their new MSC defined role. This familiar Paul Willis theme is developed further in this volume where it becomes defined as the 'material culturalism' of growing up in the working class. 'Their problems concern survival in scarcity and the need to make material adjustments and plans to cope with their real — and future — situations' . . . 'school is often rejected, rebelled against or treated as a comic interlude before 'real' life begins.

Dan Finn attempts to identify some aspects of this material culturalism in a study of the work experience of school leavers in Coventry and Rugby schools. Robert Moore goes on to explore some aspects of the 'new curricula'; the attempts within them to redefine knowledge and the responses of some of the clients. Philip Cohen sets out a short experiential alternative course of work and training experience. Inge Bates contributes a lengthy historical chapter and only reaches the contemporary events that concern the other authors when she nears the end. Not only the period but also the ideological position of the author seems slightly at variance with that of the company she keeps.

As one nears the end of the collection, the question 'so what' becomes ever more demanding. Sociology of education has become increasingly expert at demonstrating alternative constructions of reality but the very process makes the lack of alternative solutions sharply more visible. Paul Willis addresses himself very clearly to this problem in his final chapter and is properly modest in what he offers. His list of seven suggestions is anything but surprising (but well worth saying for that reason alone?). And some of the suggestions have their unmistakable origins in a socialism far removed from the versions espoused by many of the contributors. For example:

The importance of maintaining maximally open tracks, and opening up new ones stretching into adulthood, for return to the academic, traditional and elite streams which will still exist. Though they may serve class and cultural reproduction and the transmission of privilege, they will still offer the best chance of upward mobility to individuals in the working-class.

R.H. Tawney would have been proud to read so close a paraphrase of his proposals of the 1920s!

John Eggleston

Girls into Science and Technology

Judith Whyte
Routledge & Kegan Paul £16.95

This book describes the Girls into Science and Technology Project which was based in ten schools in the Manchester area. It is a project which has been featured in *Studies in Design Education Craft & Technology*, (Vol. 15, No. 1). We now have the definitive report of the project by the Director, Judith Whyte.

The main aims of the project were to explore the causes of girls' relative under achievement in science and technology to find ways of changing the situation. The evidence of under achievement was unambiguous. In the United Kingdom girls are outnumbered in school physics 3 to 1 and in craft 40 to 1. The search for explanations takes us into the classroom and into the minds of the teachers and pupils and shows clearly how differently science and craft teachers still perceive girls and boys and how differently girls and boys still perceive science and technology.

A wide range of strategies were devised by the team to try to change the situation. These included visits to schools by women working in technology, development of teaching material more fully oriented to girls' interests presenting a humanistic view of science, followed up by careers education linked to option choices in school.

In her account of the strategies and their trials Judith Whyte is frankly and unashamedly feminist and offers a range of anecdotal evidence which will reassure teachers that she is writing about the real work of the school. For instance in her chapter on 'CDT a Hard Nut to Crack' she writes of observing a teacher approaching a girl sitting on a bench:

'What's up, luv?' Without waiting for a reply he took the work from her hand and saying, "I'll sort it out for you", picked up a mallet and neatly bent her copper strip around a bar in the vice, forming a smooth curve. With, as John (a fellow researcher) describes it, a "silly grin" on his face he rather patronisingly advised her to take a cloth and finish hand polishing it.

A number of craft teachers have remarked to me that girls seem to like polishing and other less technical activities because they provide a chance for a gossip. But if girls are retreating from the more skilled and technical aspects of craft work, "helpful" teachers who take over the "fiddling" bits are only doing them a disservice, albeit with the best intentions.

Yet in the event there are no ultimate solutions. The variable efficacy of the strategies rested largely on the degree of enthusiasm of the hundred teachers who participated in the project and, no doubt, in part this was heightened by the knowledge that they were working within the project.

Fundamental changes in the attitudes of teachers, children, parents, employers and society in general are needed before a fundamental and effective

change in opportunity and achievement occurs. A research project or even schools alone cannot change society. But one thing is unambiguously demonstrated by the book. It is that the differential opportunities in science and technology experienced by girls are not just a figment of feminist imagination — they are real and substantiated — and all who teach in schools, men and women, need to begin the task of changing the situation. This book offers many suggestions as to how they might begin.

John Eggleston

Notes on Contributors

P. Cole is Lecturer at Trent Polytechnic.

R. Bowen is Lecturer at Thames Polytechnic (Trent Polytechnic from September 1986).

Sandra Morgan is a Craft Design & Technology Inspector I.LEA and a teacher at Warwick Park School, London.

R. Lloyd is Head of Technology at Castell Alun High School, Hope, Clwyd.

Margaret Rogers is Head of Design at Elizabeth Garrett Anderson School, London.

Robert Johnstone is a teacher in CDT at Binley Park School, Coventry.

P.D. Wilcox is Head of CDT at Durham Johnston Comprehensive School, Durham.

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