

Reviews

Construction Technology, Volume 1

J.T. Grundy
London: Edward Arnold, 1978. £3.75

This textbook has been written to accompany the level-1 construction technology course outlined by the Technician Education Council. The recommended length of the course is 60 hours, and for such a wide ranging and detailed subject the time is minimal; to attempt to condense the subject into a small paperback book of 200 pages is an almost impossible task, but nevertheless a task worth undertaking. I would suggest that the breadth and depth of the information covered is equivalent to a set of notes produced by a very good student who has followed a good lecturer through the set course. The author acknowledges in the introduction that lectures should enlarge on the contents, and implies that the book is intended to short cut note taking — so this latter aim is achieved.

I have used the book myself to help provide the bones for first year degree level construction technology, and students have found it useful for quick revision. Although it is necessary to refer to more detailed and specialised textbooks, one is frequently made aware that the long lists of books which are issued to students, are often ignored because of the shortage of time, or costs, or that simply the mass of detail is daunting to the beginner. However, an important omission in this book is a follow-up reading list which sooner or later the young professional or technician must cope with, and which he will need to deal properly with individual topics. Some British Standards and other official courses are mentioned, but the only other reference is to the T.E.C. course documents.

The chapters of the book follow closely the T.E.C. programme of work, starting with a very brief description of the built environment and the functions which its various components perform. This leads into sites and sitework, the way the construction industry and the building process itself is organised, and the essentials of communications, that is, contract documentation. After the briefest ever historical review of buildings the book moves on to deal with the key elements of all buildings, namely substructure, structure, external envelope, internal subdivision and services, with specialist sections on doors, windows, stairs and so on.

The author avoids the common pitfall of presenting only a catalogue of the various bits of building by first discussing functions, thus leading the student always to ask the question 'what is this for' rather than simply 'what is it'.

The main criticism of the book is that it is superficial and on its own incomplete, but as an introduction to the subject it is reasonably effective. I would recommend the book to younger students who are considering the construction industry as a career, either as architects or as site operators; we should remember that this particular industry attracts a large section of the working population in its many branches. Few students in my experience

have little idea of the demands and content of the job or career they opt for, and in this case the technical aspects of the subject are a complete mystery. Books like this one should sit alongside the history, geography and art books which relate to the built environment, and which are conventionally considered part of a good general education.

But apart from providing career information there is no reason why building should not, when opportunity and enthusiasm coincide, provide the subject for technical, design and making projects in secondary schools.

Bernard Keay

Construction Technology, Volume 2

J.T. Grundy
Edward Arnold, London, 1979. £3.75 (paper)

Building and Civil Engineering Techniques are required to study Construction Technology at two distinct levels (I and II), contributing two essential units of a 15-unit programme. At Level III there is a separation of interests as the Civil Engineering Studies programme begins to emphasise the topic areas more related to civil engineering.

Units, programmes, levels and topic areas are all part of the vocabulary of a T.E.C. course. The T.E.C. standard unit, Construction Technology III, for which Mr. Grundy's book was written, is now in its third year of operation and it is possible to assess the book's usefulness because the content of each chapter can be matched with the learning objectives of the unit.

Mr. Grundy knows well the sort of work undertaken by both types of technician and he has produced a book which presents the technology of the construction industry very clearly both in its written and diagrammatic descriptions.

The learning objectives are literally those which the student is expected to achieve and on which a series of phase tests is based so the book is essentially one for the student. But reading is not enough — the student must also practice the communication skills necessary to show that he has achieved those objectives — and sketching is an all important skill. The drawings and sketches in the book are set the sort of high standard that a student may do well to emulate.

The author has, in fact, related his content to the comprehensive range of general and specific objective extremely well and has exceeded his brief only where necessary. Clearly, it is an advantage to know precisely what learning outcome is expected of students. Although this is a book with a specific target, it is obvious value to anyone who wishes to know more about construction techniques. It is certainly a prerequisite for further study at Level III and beyond to Levels IV and V of the Higher Technician's Certificate.

One may not agree with the use of specific objectives, and certainly a number of the Construction Technology II objectives need critical appraisal and even re-writing, but as the T.E.C. units are re-validated I am sure that subsequent editions of Mr. Grundy's excellent book will keep pace with developments in the construction industry.

Programme	TEC	– Technician Education Council
Unit		
Level	OTC	– Ordinary Technician Certificate
Topic Area		
Learning outcome	HTC	– Higher Technician Certificate
General objective		
Specific objective		
Essential unit		
Pre-requisite		
Phase test		

The above is part of the vocabulary used in T.E.C. work.

R.S. Rhodes

Workshop Processes, Practices and Materials

Bruce J. Black
London: Edward Arnold, 1979. £3.95

This is an interesting little book, well thought out, and by today's standards, probably something of a bargain at under £4.00.

I believe that this book will succeed quite admirably in achieving the author's stated objective, of allowing Further Education students following TEC courses in engineering, to spend more time under supervision in the workshops whilst learning their theory, or much of it, from this book as part of their course assignment work. However, I think the author is on less safe ground when he suggests that the book is also suitable for an 'O' level course in Workshop Theory and Practice in schools. Certainly there is a great deal in the book which is relevant to an appropriate 'O' level syllabus and much to carry the interest of a keen student beyond the level basically required of him or her. But the book also contains a great deal not strictly called for at 'O' level and deals with theory in too great a depth at this stage. Even so, it is a book well worth having in a school where an engineering approach is made towards craft, design and technology to 'O' level and beyond as a reference book. Indeed, it is as a reference book particularly that I would recommend it to schools.

Chapter 1 is primarily about industrial safety rather than safety in school workshops, but this has an obvious relevance. For school use I would like to see the illustrations Fig. 1.2 to 1.4 and 1.8 to 1.30 somewhat improved. These sketches are a disappointment compared with the very high standard of the other more formal illustrations in the book. Chapter 2, on hand processes is excellently set out, but for schools, of course, reference to air

operated tools is likely to be only of interest value. Marking out is covered very well and most schools will cover this aspect of the work very well anyway. The chapter on sheet metal operations is sound, although how many schools will have a treadle guillotine, fly press and folding machine is doubtful. The chapters on measuring, cutting, drilling, shaping, turning and milling are all very well set out and a worthwhile example in clarity of thought and presentation. Indeed, the remaining chapters on joining, materials and plastics are equally good.

On balance, then, an excellent book that should achieve its purpose in the target area for which it is aimed, further education, but probably not quite so suitable as a primary text book in schools.

Norman Glover

Sew a Sampler

Dorothea Kay
London: Adam and Charles Black, 1979. £7.95

The attractive photographs and clear diagrams of Mrs. Kay's book should be an encouragement to many to Sew a Sampler. However the book is very much more than a book of stitches and Mrs. Kay traces the history of the sampler from the 16th century to the present day. She has researched her subject widely and gives details of where early samplers are available for study. The excellent illustrations show that a true sampler can still be not only decorative but a vital record for the needlewoman of today.

Mrs. Kay points out that in the 16th and early 17th centuries samplers were indeed records of a great variety of stitches and designs. Before the days of pattern books needlewomen took their ideas from their surroundings, such as flowers and animals from the gardens and countryside, but with the introduction of printing books provided new sources of design. However, few houses would have had books and the sampler was still a needlewoman's guide to her trade.

As the education of women became more widespread the sampler was used to help a child to learn her alphabet as well as her stitches. In Victorian times the sampler became a small needlework picture using only a few stitches. Mrs. Kay gives instructions for working the stitches used in all types of samplers and she explains in detail how to plan them. Those who are not familiar with counted thread embroidery would be well advised to study Chapter II carefully, for the modern embroideress has a wide choice of materials and the question of scale becomes very important.

Mrs. Kay's designs are charming. She has worked out her own versions of many historical motifs and the beginner would be well advised to copy a sampler from the book although the more experienced needlewoman will probably want

to make her own arrangement of the motifs and vary the stitches according to the type of material on which she is working. The book is an excellent guide to stitches and designs and the insight it gives to social history will make the reader look with greater interest and knowledge at the Needlework Sampler.

Georgette Johnson

Art-Based Games

Don Pavey
London: Methuen, 1979. £5.50

My first reaction on receiving this book is one of excitement. I was fascinated by what appeared to be quite a different approach to the teaching of art and design. My second reaction was that this approach was not entirely new for I remembered that in my early years as a teacher I had occasionally used games in my own teaching and that teachers in other subjects had also done the same thing to stimulate classroom involvement and response. Then there are teachers in the schools where my own postgraduate art students go for school experience who do likewise. So the idea is not a brilliant innovation.

In concept, however, this book is imaginative and perhaps its main asset is that it should be an encouragement to group activity and involvement in design tasks. The ideas it contains are obviously intended as a way of developing artistic skills in group activities: activities demanding commitment and a considerable degree of creative thinking. This must be good.

The book itself has an inviting feel about it and the reader is attracted by its interesting, warm cover. This made me keen to open it and I was then excited by the carefully considered text: a text that appears to me to have a basically sound, underlying educational philosophy. This is excellent for it will help many teachers to think a little more deeply about the subject. Yes I liked this book and when I re-read it I still found it attractive and interesting. The ideas and suggestions for art games are good and so is the author's intention to stimulate active involvement right from the start.

I must, however, go on to say that the reader must take care in reading the stated instructions. Instead of simply reading the book I chose a couple of the 'games ideas' at random and asked two small groups of my postgraduate art students to play them. I was surprised when they said that they found these instructions a bit difficult to interpret, for they are highly intelligent students with good first class degrees under their belts. They assured me that they had attempted to follow the suggestions but had then gone their own ways, making-up their own art games from their own group instructions. They expressed disappointment with the book and

lost interest in it rapidly. This makes me question my initial reactions. Did it seduce me too easily?

I suggest to the reader that he should think carefully about this book and its intentions. He mustn't be put off by my comments but must obtain and read a copy himself. It deserves a chance and if it leads groups to experiment creatively then it will be a worthwhile teaching aid for numerous art departments. One danger is that it will make lazy teachers even more so, but this danger is always apparent where tips and ideas are handed out so liberally on a plate.

John Lancaster

Pattern Making

Lewis F. Day
London: Batsford, 1979. £4.95

Victorian Designs for Needlepoint

Phyllis Kluger
London: Evans, 1979. £4.25

Revivals are queer things. Here are two publications apparently on closely related aspects of Victorian design which yet display bizarrely opposed attitudes to 19th-century sources. *Pattern Design* is simply a reprint of an eminently sensible workmanlike textbook. Day was a thorough professional – he first heard of Morris & Co. as 'a set of amateurs who are going to teach us our trade' – a working designer first in stained glass, subsequently concentrating on textiles, pottery and small furniture, a founder-member of the Art Workers' Guild and later of the Arts and Crafts Exhibition Society – affiliations which show clearly where he stands. This book – first published in 1903, almost fifty years after Owen Jones's *Grammar of Ornament* but still very much under its influence as all Day's practical and instructional work was – is not itself a pattern book; nor does Day attempt to instruct novices how to invent, contenting himself with the dry advice not to 'scribble about. Wait till design comes to you. In so far design is inspiration'. But only in so far. Day is fundamentally a craftsman, and his emphasis is on workmanship, skill, training, attention to detail, intelligent planning: his book is a manual which shows how patterns come to be built up, their reliance on simple and repeated geometrical underlays (for pattern in Day's sense means 'ornament in repetition'), and stresses over and over again the need to evolve pattern according to basic geometrical principles. ('It will never do to begin with finish.') Some of Day's own designs now seem dated, as almost none of Morris's do – somewhat stiff and showing too much of their scaffolding; though his range of sources is very wide, he worked within a limited vocabulary of ornament and arguably overstressed geometry. That fault, if it

is one, is in the right direction, and since Day had both a shrewd critical eye and, especially important in his trade, the technician's knowledge of fundamentals, his book, with its straightforward account of basic rules of repetitive pattern-making in such matters as turnover and drop repeat, its copious apt illustrations and its clear but unpedantic descriptions of the formulation of complex patterns, remains a really reliable grammar which can be confidently recommended to students of design. Since it has additionally an interest of its own as part of the history of Victorian craftsmanship, and since Day is not now as well known as he should be, some introductory material might with benefit have been added to the reprint.

Phyllis Kruger's book is a different and rather dotty kettle of fish: it isn't about Victorian needlework but contains a collection of patterns taken from Victorian artefacts — railings, buildings, brooches, carpets, advertisements — which Mrs. Kruger has adapted for petitpoint embroidery. The sources (each described in irritatingly naive summary) make a bewildering set, though they reveal an alert and observant eye. As Day warns, 'happy-go-lucky arrangements seldom work out happily. There is no reason why they should'. And some of Mrs. Kruger's ideas — to judge from the colour photographs in which all are shown — come complete croppers. Repoussé decoration on a cash register transfers surprisingly well to a sofa cushion, but an art nouveau filigree brooch loses all its wiry metallic sinuousness. Sharply outlined chintz and the fairly subtly graded tones of Victorian weaving (if you like that sort of thing) can't be conveyed by the relatively coarse embroidery even of 14-point canvas where only a restricted range of tones is available. And though there is a nice irony in the pomp of a vast New York mansion being shrunk into decoration for a belt, one is constantly aware that if Mrs. Kruger starts a school or a craze, the world will fill up faster than ever with the useless objects of an age of 'feckless indulgence' (as the Victorian apparently was). An amalgam design of ornamental bits of carpenters' Gothic is, she herself admits, 'an example of needlepoint virtuosity' and nothing more; and though it may be true that Japanese prints can be 'gracefully adapted' who actually needs a needlework picture?

For those, however, who want to try their hand at some fairly complex but not very difficult imitative embroidery of a moderately novel kind, Mrs. Kruger provides what appear to be excellent graph-diagrams, printed, like the letterpress, in an artistic dark cinnamon. A reviewer of such a book ought ideally to work a design or two himself on Mrs. Kruger's instructions: the present writer has dodged that responsibility but has no reason to doubt that even quite unskilled needleworkers will be able to follow them without difficulty, though some designs call for a lot of patience. The book begins and ends with sensible general advice and has good clear diagrams of all the various stitches involved.

Further Education Today. A Critical Review

L.M. Cantor and I.F. Roberts
London: Routledge and Kegan Paul, 1979.
£7.95 (£4.25 cloth)

Further Education in England and Wales by Cantor and Roberts, in its second edition, is already a standard work. Their new work differs from the former in that it only deals with the changes in the further education sector since 1970.

Anyone who seeks information about the organisation and structure of further education, the problems and controversies surrounding the issues of the education of the sixteen to nineteen years old or, the development of the new technician courses in engineering and business studies will be well advised to purchase this book. There is no equivalent on the market. Because they are concerned with facts as well as opinion there is little doubt that a second edition will be required for such is the pace of change.

The enthusiasm with which they deal with facts sometimes belies their significance. Sometimes answers to mental queries come much later in the text, a problem which arises from the particular framework for the discussion of further education adopted. But this is a small point. Of more substance is the question of their critique. Is their view really critical?

A reader with knowledge of the further education sector will readily admit that their operational critique is excellent. If he searches for something more fundamental, he will search in vain.

There is for example an urgent need for sociological analysis of the structure and function of the system particularly in relation to diversity and flexibility. It needs to be supported by psychological studies of development for much as we pay lip service to late-development we have devised structures in which it is increasingly difficult to be educationally mobile. How does the F.E. system of 1980 compare with the system of 1960 in terms of opportunity-potential?

What has been the role of the Training Boards? Could it be that their emphasis on a sharp stratification between technologists, technicians and craftsmen has diminished mobility and lowered the availability of skills? Is performance in industry positively related to industrial performance or do other factors relating to interest and motivation intervene?

The authors too readily dismiss the ideas for comprehensive structures of higher education on the continent. Neither do they consider the Community college concept so well developed in the United States and espoused at Bradford and Nelson-Colne Colleges. Would not a federal structure with the local University acting as a credit-award organisation for all the Colleges in a region enable both diversity and flexibility. The education of the 16-19 year olds, as the authors see it, the most pressing problem is only a problem within present structure. If it is not discussed within the context

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of lifelong education no allowance can be made for individual development and change. A technological society requires substantial adaptability for though evolutionary the changes which it brings are substantial.

Cantor and Roberts suggest that the Further Education Sector served by so many organisations merits a national consultative forum. The response of the Department of Education and Science to many of the problems seems to be *ad hoc*. There remains a considerable divorce between education and training. The authors see the need for a spring clean. They do not suggest a fundamental re-appraisal of the system of higher education. They claim and with considerable justification that theirs is a realistic approach to development. But is it? The system is in a mess. The old colleges of education – now the new Institutes of Higher Education lack purpose. Minister's continue to waffle. There is an absence of discussion about the aims of further and higher education. Before the creation of a consultative forum surely there is need for a Commission to look at higher and further education as a whole. The need for this is well confirmed by Cantor and Roberts review of practice and problems.

J. Heywood

The general policy of the journal will be to promote an informed many sided discussion of issues related to the curriculum – will have a varied content – some material linked to a theme, some to the conference and others standing in their own right. A section of the journal will be reserved for book reviews, project reports, apparatus reviews and regional news.

Subscriptions rates – £4.50 per year – Volume 1, Number 1 – March 1980.

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(Studies in Education Limited),
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