Reviews

Technology in Schools: developments in craft design and technology departments

Department of Education and Science
HMSO, 1982, £2.25

This volume represents another step in the new more active and interventionist role to be seen in almost all aspects of the work of Her Majesty's Inspectorate. This new publication follows on the successful 1980 initiative entitled *Craft Design and Technology, some successful examples.*

This time the focus is unambiguously on technological studies in the place where they occur most often and all activities that fail to justify such a description fully are rigorously excluded. Based on data obtained by HMI from 90 schools and 170 courses, it gives a comprehensive picture of the range of structure, content and organisation of the subject. The first chapter lists and assesses the quality of major forms of technological study. The second addresses itself to key questions, such as how schools define technology, their perceptions of aims, who teaches and who studies the subject, and the availability of resources. The final chapter analyses the findings and makes recommendations for further development.

A major thrust of the volume is to define and clearly identify technology – and the authors are rightly critical of the lack of definition they found in the schools

> 'Approximately two-thirds of the schools visited had no written definition of technology in schemes of work or syllabuses. Instead it was taken for granted that public examinations defined the subject. In fact, it was rare for a GCE syllabus to contain an explicit definition of "technology". There is nothing remarkable about this. Few syllabuses in any subject given definitions. But in the case of "technology" the ambiguity of the term suggests that some attempt at definition is more than desirable'.

Much of the volume is designed to rectify this situation. The first chapter is devoted to a brisk categorisation of technological activity into designated areas:
Modular courses in technology
Control Technology
Electronics
Applied Science, Engineering Science and Engineering Design
Design-based courses

But even HMI had to concede that not all technology falls into neat categories, indeed the very nature of truly innovative technology ignores and transcends categorisation. So two very interesting assortments of activity appear as 'other secondary courses' and 'work in the middle years'. There is also a very interesting grouping of courses under 'technological awareness'.

The second chapter continues the rigorous identification asking – and answering sharp questions about aims, rationale, location, pupil response and resources. Teachers are likely to award it high marks for clarity and effectiveness – indeed it provides a sound model of communications technology in itself. Not surprisingly the conclusions are sound and welcome. The comments on the relationship between technology and CDT are particularly well argued:

> 'CDT has a particular contribution to make to distinct technology courses. This is because it is uniquely placed to develop skills in designing and making. CDT teachers argue that they have insufficient time to achieve CDT objectives in craft and design, let alone technology. If they do *not* achieve a greater amount of curricular time, two main courses of action are open. They can renounce technology and concentrate upon craft skills and the development of broad-based designing activity – but exclude design of systems. If this happened there would still need to be a distinct curricular slot separate from craft and design. This slot would be filled by a subject which involved designing and making, but concentrated upon technological content. In other words, the creation of a subject, and an associated department, presumably called 'technology'. Alternatively, they can embrace terminology as part of their responsibility and cut the content of craft to suit the curricular time available. This would require a fundamental reconsideration of the content at present taught in the CDT foundation courses of the secondary schools, as well as a pruning of optional courses beyond age 14'.

The advice on resources is of similar quality:

> 'The basic resource for any course is the quality and expertise of teachers. Several times in this document the point has been made that the special contribution of the CDT teacher comes from his training and understanding of the unified activity of designing and making. If this is absent, a contribution might be made to technological awareness in a bookish sense, but pupils would not have the opportunity to understand technology through active involvement'.
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> 'A head of a CDT department who is apprehensive about the financial outlay involved in buying electrical, electronic, mechanical or pneumatic construction kits for a group of 20 pupils, may wish to compare the cost with that of purchasing, running and maintaining a metal or woodwork lathe over, say five years. Kits are not without their disadvantages, as the section on resources indicates, but expense is not one of them. Properly used, constructional kits are highly cost-effective.
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> It is also important to dispel the belief, held by some teachers, that technology courses involve the purchase of sophisticated or highly specialised

equipment. Excessive expenditure has occurred in the past and there are examples of equipment in schools which matches that found in FE or industry, but it is difficult to justify such expenditure in many cases . Where sophistication is required, as in some A-level courses or advanced projects, borrowing, sharing or hiring is often preferable to purchasing, partly because use is not continual.

Such arguments go beyond the enhanced definition of the subject area – they also enhance the definition of the argument for technology and will help many teachers to escape from the unsure and incomplete arguments which support – or fail to support – their present work in technology.

John Eggleston

Design Education: The Foundation Years

Richard Kimbell
Routledge and Kegan Paul, 1982, £6.95

Many books have been published in recent years with the word 'design' in the title that are little more than rehashes of old texts. There has also been much writing on the philosophy of design education. Very few books have even attempted to address themselves to the very reasonable question as to exactly what should be done in order to put into practice the ideas and ideals of design education.

Richard Kimbell boldly sets out to do this; and at the most difficult stage, the 11-13 age range. As he points out no one questions the exploratory work at primary level and most would now accept that senior pupils ought to engage in designing as well as making. Many people still try to promote debate about the need to develop techniques as if this were incompatible with developing skills in discovering ways of meeting needs.

This book, in straightforward logical language, demolishes that and other myths. Kimbell obviously knows school workshops and CDT teachers. He meets them on their own ground and uses arguments that they cannot refute.

Having stated the reasons for involving pupils in design thinking from the start, Kimbell then takes specific examples to show how this can be done while at the same time providing opportunities for them to acquire techniques. As he points out these suggestions are not original but in doing so he makes a very important statement: it is not what the pupils make but the way they approach the making that is the essence of the change demanded by design education. If only all those teachers who are now prescribing to children exactly how to make a monster instead of the previous toilet roll holder would take that to heart!

Of course it is difficult to change rapidly from the role of teacher who knows to teacher who explores ideas with the children but Kimbell does make it seem a lot easier. Hence it is hoped that the book is widely but carefully read. Many teachers, at present bewildered by the demands made on them by the need for change, would be encouraged to make the effort.

The final section on administration is also valuable. It is no good just complaining that conditions are not favourable in one's own school to developing new ideas. Most Heads are willing enough to encourage developments but they are subject to pressure from all their staff. A well thought out scheme that is not over demanding of time, staff and materials has more chance of acceptance than a simplistic demand for more support.

Designers and design teachers are a critical lot. No doubt many of them reading this book will find something on which to disagree but that should not prevent them seeing it as a major contribution to design education which everyone connected with education should read.

Bernard Aylward

Basketry

Didied Carpentier & Jöel Bachelet
EP Publishing Limited, 1982, £2.45

Throughout history various cultures have adapted basketry to their needs and tastes, but, unfortunately, modern packaging has contributed to the decline in demand for basketry products. However, it is to be hoped that this book will revive an interest in this traditional craft.

The book is divided into four sections; three deal with natural materials – rushes, willow and straw – whilst the use of synthetic fibres is explained separately. Each section has a preamble which gives a historic outline of the material together with useful information on harvesting, storage, sorting, drying and preparation.

Although the four sections have matching techniques, each shows need for some specialisation. These specialisms are dealt with in detail and aim to show the reader how to produce a variety of traditional and more 'modern' articles.

The foundation work for this hobby demands a repetitive rhythm and perhaps due to this fact many of the articles illustrated are similar in construction. This could prove rather boring, but on the other hand, as with so many traditional crafts, the finished product could prove just reward for these labours.

John Thompson

Painting on Silk

Pierre Bruanolet
EP Publishing Limited, 1982, £2.45

The introduction to Painting on Silk gives a breakdown of the wide variety of fabric textures that are covered by the word 'silk', and explains that although the book deals exclusively with silk, other materials, particularly wool, are quite suitable for practising the techniques with which this book deals.

The basic principles that are used to introduce batik or tie-dye methods and designs onto fabrics are that parts of the material are protected in some way before being soaked in a dye-bath. Patterns are produced by the contrasting areas of dyed and undyed fabric. The techniques covered here have a very difficult purpose, they are to create a pattern by applying various dyestuffs directly on to the fabric.

Two main sections divide the publication; one deals with fast colours, and the other with colours that run. Each type of dye has advantages and disadvantages which are emphasised on the one hand and exploited on the other.

Generally, the text deals with the different mounting techniques designed to keep the silk taut; the treatment of the surface and the application of colour. The reader is also made aware of the inherent dangers involved when working with chemicals which give off heavy vapours, and of working with toxic dyestuffs.

There are many excellent photographs which illustrate both techniques and finished and partly finished articles such as scarves, cushion covers and lampshades. The articles illustrated show a range of articles which can be restricted regarding size. One reason for this must be a practical one but I feel that another reason is financial as silks and printing dyes can be quite expensive.

Particularly useful sub-sections are those on testing the dyes, fault-finding and the different ways in which these faults can be corrected.

John Thompson

Wooden Toys

Didier Carpentier & Jöel Bachelet
EP Publishing Limited, 1982, £2.45

In introducing each of the three volumes, in essence I have used the author's own words, I make no apology for this, because therein must be contained much of the reason for the publication, none more so than the book on Wooden Toys.

'Everyone has dreamt at one time or another of making one of these splendid wooden toys, endlessly fascinating to a child, from the rocking horse – glorious figure of a golden age – to those little wooden puppets which express the emotions and marvels of childhood . . . Wood had remained the most popular material for making everyday objects because of its irreplaceable qualities of strength, safety, warmth and beauty'. I am sure that encapsulated within this statement are the sentiments of most woodworking enthusiasts.

The book contains sections on tool technology; different kinds of woods and plywoods suitable for the suggested range of toys together with methods of construction and finishing. Each area is dealt with comprehensively under separate headings.

Most toys are articulated and designed to suit all ages. Some are very simple in construction – like the coloured spinning top and the 'yoyo' – others are heavier and more complex in construction – like the combination set of slide, see-saw and climbing frame and the scooter.

It is pleasing to see a transformer in evidence where an electric poker is being used for decorative work and I should like to think that all electrically operated hand tools could be given the same consideration when children are involved in their use.

The 'can't go wrong' purely instructive text is preceded by a cutting list of all the material requirements for completion. Sharp, top quality coloured photographs together with crystal clear diagrams give additional information and will both delight and encourage would-be toy makers.

These three books were originally published in France, and would not seem to have lost any of their continental flavour in translation. They are published in plastic protected card back covers under the general title 'Hobbycraft'. I suggest that they are aimed primarily at the adult hobbyist, however, I am sure that given a basic understanding of technique together with the simple rules of safety to be observed, some exercises could be undertaken by children to further their interests and add to their experiences.

The books are illustrated lavishly throughout with many coloured plates showing the techniques and finished articles. Clear and precise working diagrams appear in the text where they are necessary.

As with many books that are published to enhance or stimulate a hobby, these three volumes are prescriptive, they do not, however, lack exciting creative opportunities.

The final question: 'How do they fit into the classroom/workshop?' There is no suggestion that these volumes are a course of study, but with supplementary knowledge of design and planning all three volumes could provide stimulation for further study.

John Thompson

Contemporary Furniture: An International Review of Modern Furniture, 1950 to the Present

Klaus-Jurgen Sembach (editor)
Design Council, 1982, £18.00

A comprehensive and abundantly illustrated collection of the most outstanding modern furniture designs from around the world, this book is a valuable source of reference for interior designers, architects and furniture manufacturers, as well as an authoritative guide for the interested layman looking for help in selecting pieces of furniture.

Originally published in a series of eleven volumes called 'New Furniture'/'Neue Möbël', only the best examples have been selected for this one-volume edition, and they have been augmented with much new material. The pieces shown – more than 1,000 in all – were chosen from series-produced furniture to document the present state of furniture design and to show new directions of development.

In selecting the items for inclusion in 'Contemporary Furniture', the criteria used were: that the design had made a new and original statement; that it started a new trend in the use of materials and manufacturing processes; and that the design still had as much validity today as when it was first produced.

The examples of furniture shown in the book range from simple wooden chairs to a vaccum-formed ABS bed. They are arranged in several sections providing a review of chairs, tables, sofas, beds, cabinets and shelves, office and nursery furniture. Excellent photographs with clearly-written captions indicate the important features of each design, the materials used and the names of the designer and manufacturer.

In the introduction to 'Contemporary Furniture', Klaus-Jürgen Sembach considers the function of series-produced furniture in modern society and reflects on several aspects of the furniture industry, including the positions of the designer and the consumer, the issue of obsolescence in furniture design, and the question of how changing lifestyles lead to changes in the marketing of furniture. A short introductory text prefacing each section discusses the changing trends in that area and analyses the materials and manufacturing processes used. Finally, there is a detailed index listing designers, manufacturers and photographers.

Sarah Farley

Design Courses in Britain

Design Council, 1982, £3.00

For all students considering a career in design, and for those advising them, the latest edition of The Design Council's handbook Design Courses in Britain 1982-83, offers valuable information.

The new edition contains comprehensive and up-to-date details of:

* Foundation, non-degree, degree and higher-leve courses in all areas of Industrial Deisgn, including Graphic Design, Textile Design, Fashion, 3-D, History and multidisciplinary courses throughout the UK. These are listed by subject for easy reference.
* A wide range of full and part-time postgraduat and post-experience courses in Engineering Design
* Secondary level Teacher Education courses in England and Wales for both Art and Design and Craft, Design and Technology.

In all cases, the handbook gives details of the College providing the course, the course title, its length, the qualification to which it leads, any relevant professional certification and, in many cases, details of special features.

Guidance on choosing a career in design and h to apply for courses is included in the handbook, backed up by a complete list of all relevant colleg and universities.

Jean Chris

A Century of Art Education 1882-1982

Clive Ashwin
Middlesex Polytechnic 1982, £5.95

In the last quarter of the nineteenth century a substantial number of schools of art were established throughout the country under the aegi of the government's Department of Science and A Although few still remain as autonomous institutio these schools rightly cherished their identities and have been proud of their histories. The Art and Design Faculty of Middlesex Polytechnic took the opportunity to celebrate the centenary of its origins, the Hornsey School of Art, with an exhibition and the publication of a small book, bc with the title *A Century of Art Education 1882-1982*. The book, with the text by Clive Ashwin, is the permanent record of a distinguished history o art education provision.

Art education occupies a unique place in the history of education in this country . Schools and colleges of art were established in most towns and cities and have been the only nationally widespre provision of institutions devoted to the teaching o a single discipline. Although the schools of art we to a large degree academically autonomous they have been, nevertheless, continually subject to the

local and national changes in educational needs, ideas, developments and legislation. Hornsey College of Art was no exception but to record the history of the organisation, management and teaching of a single institution has all the potential for very boring reading. This is certainly not the case with Clive Ashwin's illustrated account of Hornsey's hundred years. What clearly comes through is that, quite properly, education is about people; people with ideas, aspirations and determination. Ashwin's account is rich in detail although the book is not claimed to be a documented research report. It is a valuable document because it tells a story which, except for local detail, could be that of many educational developments in this country during the last century.

In essence the story is about a private venture family business which expands and is eventually taken over by a larger organisation only to be transferred to another at a later date. Despite no longer being its own master, business goes on and expands. During this period two world wars cause slight setbacks but are rapidly overcome. Trouble occurs with political shifts at management level but the consequential grass roots uprising is got over and the business becomes more successful. Typical of the times, in terms of big business corporations, the ultimate take-over is made and the single business becomes part of a multi-business complex, loses its name,,and can look back at what happened to it. That Hornsey has come out of this so well can only be due to the many people associated with the college who not only had optimism but also a profound belief in the value, meaning and significance of art and design education.

Clive Ashwin's immensely readable history of Hornsey is really a case study in the history of art education. It is richly anecdotal and it would seem carping to be critical of such a well-written account. There are, however, two points which seem to be worth raising. The Art Teacher Training Department is reported as having moved to Trent Park in 1976 but no mention is made of the big teacher-training shakedown which led to the merging of many colleges of education with polytechnics. The separation of the Art Teacher Training Department from the art ad design departments and its linking with the former Trent Park College of Education would seem to have been worth noting. Secondly, whilst developments in the college and in its long history are presented as being related to their contextual influences, there is a marked shift when the current provision for art and design is described which tends to read like a publicity brochure or prospectus.

The book is well presented and can be warmly recommended to all interested in the development of art and design education.

Brian Allison