Information skills in primary schools: an investigation in Coventry schools

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Additional Information:

- A Master's Thesis. Submitted in partial fulfilment of the requirements for the award of the Master of Philosophy at Loughborough University.

Metadata Record: [https://dspace.lboro.ac.uk/2134/27009](https://dspace.lboro.ac.uk/2134/27009)

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INFORMATION SKILLS IN PRIMARY SCHOOLS:
AN INVESTIGATION IN COVENTRY SCHOOLS
BY
PAT AVANN

A M A S T E R ' S T H E S I S

Submitted for the award of Master of Philosophy of the
Loughborough University of Technology
1983

.............

Pat Avann, 1983.
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ACKNOWLEDGEMENTS

My thanks to my supervisor, Ann Irving, Senior Lecturer, Department of Library and Information Studies, University of Loughborough and National Co-ordinator, Information Retrieval, Microelectronics Education Programme, for her unfailing help and encouragement for the duration of this project. To my staff at Westwood Library, University of Warwick, especially the deputy librarian, Lesley Ball for accepting my absences during work in schools and the writing of this thesis. To my husband, Mike, for his support and patience over two and a half years, and lastly to Dorothy Hubbard who typed this work with accuracy, speed and dedication—bringing order from chaos in deciphering the undecipherable.
INTRODUCTION

The project developed from a series of inservice courses organised for primary teachers in Coventry as a result of the recommendation in the Bullock report (Great Britain, D.E.S., 1975) that every school should have a policy for language development. This report and two other influential Schools Council Studies (Lunzer, 1979), (Southgate, 1981) were concerned that reading and language were developed beyond the skills of decoding to include flexible reading strategies and the effective retrieval and processing of information. The quality of assignments in schools based on the theory of resource based learning (an assumption that pupils learn directly from a variety of resources) were causing concern. It appeared that much of this work was little more than copying because pupils had not been taught to acquire and develop skills of information handling and processing in a way that placed them within the framework of the school curriculum.

Where attempts had been made by librarians and others concerned with the organisation of resources, to impart such skills, they were usually in the context of a "library lesson", that appeared to the pupil and sometimes to the class teacher, to be unrelated to the rest of the school curriculum. (Irving and Snape, 1979) (Brake, 1980). Consequently, teachers and librarians have been anxious that the development of "information skills" should be taught across the school curriculum and that assignments should be constructed to support and incorporate the skills (Marland (ed.) 1981).

One of the difficulties in the teaching of information skills has been that teachers are unsure of how to identify and teach them, since their own education may well have lacked instruction in their development (Southgate, 1981). For this reason, it has been proposed that the initial and inservice education of teachers should include ways of developing skills of information handling
and processing (Hounsell, 1983). Because the skills are seen as fundamental to learning to learn, there has also been a recognition that such teaching should begin at primary level. The courses in Coventry were a response to this educational thinking and attempted to reach every primary school head teacher and those with a post for language development in the City.

As a result of experiences on these courses this project was formulated to look for examples of information teaching in primary schools, especially in relation to topic work and the organisation of the schools library resources, and to attempt to teach some of the skills to pupils and teachers.

The development of information skills has been given an impetus by the rapid advances in computer technology, particularly the Government's initiative to encourage the purchase of a microcomputer for every school (Fothergill, 1981). This is seen as enabling pupils to have access to increased sources of information which increases the urgency that they and their teachers should be competent to retrieve, evaluate and process that information in an effective way.
CHAPTER 1  The project: background and methodology

The Bullock Report (Great Britain Committee of Inquiry 1975) had established an important link between information needs:

dealing efficiently with information must be one of the major problems in modern society (p.95)

language skill:

comprehension skills - literal, inferential, evaluative ... flexible reading strategies ... (p.254)

and the adequate provision of book and other learning resources in schools.

The Committee had not included specific guidance on how its recommendations were to be implemented, but its comprehensive and well argued report received wide publicity and stimulated national debate and local initiatives.

Language policy courses

Coventry Local Education Authority's (see Appendix 1) response to Bullock at primary level was a series of courses on various aspects of language. These courses, which extended over three years, were designed for Heads and holders of responsibility posts in every school in the City. At the end of this programme a discussion document would be produced for circulation to every primary school (see Appendix 2).

The intention was that the shared experiences gained from these courses should form the basis of a discussion in schools, from which heads and teachers together would construct their own policy about reading and writing applicable to their own school (Coventry L.E.A., 1981) (Introduction)

Reference skills courses

The last of the series of courses was on 'reference skills' the use and organisation of books, library skills and information retrieval.
Since the publication of the Bullock report there had been a growing emphasis on the need for reading, library and study skills in schools especially at secondary level (Marland, 1977), (Lunzer, 1979), (Irving, 1979), (Brake, 1980). The Primary Survey (Great Britain. D.E.S., 1976) had indicated that more should be done to teach 'higher order skills' once a mastery of basic language skills had been achieved in primary schools.

Advances in information technology such as viewdata, microcomputers, were also adding an impetus to the idea of "Information literacy" for teachers and pupils (Longworth, 1981).

Such developments influenced the content of the reference skills courses and a librarian from the local Institute of Education, was invited to participate. The librarian and adviser had established a working relationship over some years with the librarian organising courses at the teachers' centre on school library management and providing a 'current awareness'service for the adviser. The adviser had always included the librarian in liaison groups dealing with library resources in schools, a part of the adviser's responsibility. (See appendix 1).

The reference skills courses spanned three terms; every primary school was invited to send the Head and teacher with responsibility for language or library (see appendix 3). It's aims were to encourage teachers to examine their own competence as information seekers and to make them aware of new developments in information retrieval, to present ideas for teaching reference skills to children from first year infant upwards and to attempt to define the skills. Library provision and organization was seen as a factor in this. Assessment of the acquisition of skills was to be included only briefly, since general assessment was under discussion elsewhere (Frisby, 1982).
Reference skills courses: the issues raised

The reference skills courses raised a number of interesting issues which were remarkably uniform across the many groups who participated.

1. As personal information seekers the teachers did not turn naturally to books or libraries. Their first strategy was to "ask someone". This "asking" extended to writing to people or organizations they felt might assist them (Hounsell and Martin, 1980). The article in Where (Rogers 1981) suggests this is a strategy often passed on to their pupils.

   Nevertheless, they all reported a high degree of reliance on books as information providers for their pupils' topic work.

2. They accepted the need for some system of organising books within the school, but confused the concepts of classification and indexing with shelf order. Most seemed to use a system of colour coding in their libraries, with a broad classification for the upper age ranges. This led to criticisms of the Dewey Decimal Classification as being too simplistic and lacking in specificity from some, and a feeling of others that it was too complex and colour coding was to be preferred.

   None, as far as could be ascertained, had any system of retrieving books by subjects, other than an outline of Dewey classes displayed in the library area.

3. A large number of teachers expressed dissatisfaction with the quality of topic work. They complained of the high proportion of copying from books that took place. Information books, too, were felt to be unsatisfactory, often poorly produced, badly written with readability levels too high for their intended age range.
4. The idea of a range of skills that are currently described generically as information skills, was not known to many of them. Reference skills were generally defined as identifying parts of a book, so that knowledge of its organization helped the location of facts; the use of dictionaries, directories, encyclopedias and finding a book in the library. Reading strategies (such as skimming, scanning), Cloze procedure, inferential comprehension and notetaking were sometimes mentioned, but the idea that these groups of skills should be linked at this primary stage and integrated into all classroom work was not always appreciated.

5. A demonstration of viewdata systems was intended to lead into a brief discussion of the impact of information technology on society in general and schools in particular. The teachers seemed to lack confidence in their ability to use computer systems effectively and saw few possibilities for computer use in the primary classroom. They also failed to see a connection between the skills used in "reference work" in schools and the role of computer technology in information retrieval.

6. Where teachers had good contacts with the Schools Library Service or local branch librarians they regarded librarians as friendly, helpful and knowledgeable about children's books. A few had taken this contact further and invited a librarian into school to talk to children about books. Many, however, seemed to regard librarians as remote or irrelevant to their needs. The impression was gained that experiences in public libraries were important in shaping attitudes. Few seemed to have been influenced for good or bad by contact with librarians in higher education. This may have been because most course members were trained before libraries in Colleges of Education were highly developed.

1 This was before the M.E.P. initiative to place microcomputers in every primary school.
7. There was a consensus of opinion that initial training should have included guidance on the evaluation of information books, the teaching of reading strategies, library skills and the use of books.

The Task Force

One immediate outcome of these reference skills courses was the formation of a Task Force to explore some of the issues raised, particularly topic work, and share any useful findings with other primary teachers. (See appendix 3).

The research project

Another outcome was the formulation of this research project to investigate information skills in selected primary schools in Coventry by observation of work in the classroom, particularly topic. This would include talking to the Head and teachers in the school and a survey of resource provision and organization.

Terminology

Terminology was something of a problem. The reference skills courses demonstrated that 'information skills' was not a term that conveyed a set of concepts to the teachers. Therefore, it seemed more appropriate to use the term reference skills when talking to teachers in the course of this project. In this local setting at least, it had a common meaning for them all. However, it was explained to the teachers in schools participating in the research that reference skills were defined as including the acquisition and synthesis of information, not confined to book skills or library skills. In writing this report the term information skills has been preferred because of its wider implications. (See glossary).
The role of the librarian

An important aspect of the research was the possibility for the involvement of a librarian with information skills teaching in primary schools. There was no librarian in an advisory capacity in Coventry L.E.A., only three of the twenty-two comprehensive schools had full-time, professionally qualified librarians and the Schools Library Service was fully stretched by its traditional role of supplementing school book resources with loan and project collections.

Therefore, a librarian going into schools concerned not only with an expected interest in book provision and organisation, but with an interest in the teaching of information skills was an innovation. It was intended to see how teachers responded to this, also whether a librarian's skills would be of help to teachers and if so, how that help could be given to the best effect.

Librarians not directly employed in schools probably have little experience of how a primary school day is organized or how children and teachers use information skills in the classroom.

The reference skills courses had demonstrated that teachers needed guidance in their personal capacities as information seekers, but that books and libraries were not their first resort. There were many misconceptions too, about the principles that underlie library organization. If both these attitudes were reflected in school, it might well be an area where a librarian's skills would be useful.

An inservice course

Since the most effective method of disseminating new ideas to serving teachers in Coventry was thought to be through inservice courses, it was decided that one aim of the research would be to formulate a short inservice course. This would incorporate the librarian's experiences in school and would be run initially with a small number of teachers to test its viability.
As the librarian was also a member of the Task Force group the chronicling of their work on reference skills would be included in the project.

**Project aims: a summary**

The project aims can be summarized as follows:-

1. to identify information skills teaching in a primary school day

2. to observe topic work and how children used information skills

3. to establish the school's attitude to information skills

4. to observe any effects of the reference skills courses

5. to examine the organization of libraries in the schools

6. to identify areas where a librarian might make a useful contribution to information skills teaching in schools

7. to suggest guidelines for other librarians based on these findings

8. to chronicle any relevant findings from the Task Force

9. to plan and test an inservice course for teachers based on findings in schools.

**Methodology**

The work in schools did not set out to verify a previously formulated hypothesis. The intention was to observe and identify
information skills teaching and learning in the classroom within
the framework of the L.E.A. initiative, and to suggest ways in
which a librarian might contribute to this innovation. At the
outset, it was also hoped to relate existing information skills
teaching to the rapid development of microcomputer technology
and possibly to contribute to the development of software. However,
this aspect was not explored, since the initial aims occupied the
length of the project.

The interest in the effect of microcomputers remains, but with
a growing feeling that the crucial need is to ensure the acquisition
and practice of information skills to facilitate successful independent
learning whatever the medium used to transmit that information
(Beswick, 1983).

The project was in four stages based on Brake’s interpretative/
interactionist framework (Brake, 1980c).

(i) observation of the school setting and the people
involved
(ii) an attempt to integrate development and evaluation
(iii) research based on the classroom and involving the
teachers
(iv) dissemination of the results to interested
practitioners.

(1) The School Setting

Two schools were chosen at random to observe a typical
school day and to record instances of information skills
teaching and learning. This observation was non-participant,
with the observer taking no part in the action. Observations
were recorded by the use of structured schedules (Lunzer, 1979),
(Southgate, 1981), and a diary of events (see appendix 4).
Practice showed that the ethnographic method of diary recordings
was more successful than the structured schedules in detailing
the variety of events in the classroom.

Interviews were held with the Head and classroom teacher
to establish facts about the school, their attitudes to
information skills teaching and resource provision. These
interviews were semi-structured, with a broad outline of the direction and content of the interview determined in advance, but modified as the interviewee's responses shaped the interview. (Cohen, 1980).

A further visit was made to examine the class and central libraries and other "non-book" materials.

**Topic work**

Observations of topic work in the two schools and later in a third school followed the non-participant observation. A trial in a different school suggested that participant observation was the most suitable method of observing topic work successfully.

... it was found that structured observations would not be appropriate. This is partly because it was found that the most useful and relevant data to information skills will be collected by understanding the project work undertaken by pupils. Independent project work does not lend itself to (structured) observation. (Heather, 1982, p.8).

Consequently, the teacher's views on topic work were recorded before observation took place and discussed briefly after the observation. The children's work was examined over the duration of the topic work and they were asked about their aims and the use of sources. Brief notes were made if possible during the sessions, but it was felt that obvious and copious notetaking might inhibit the children. Full notes were written immediately after the sessions.

This method may be criticized for its anecdotal nature and because the account is filtered through the observer's perception. However, the findings seem in agreement with other studies of topic work, (e.g. Bassey, 1977; Leith, 1981; Southgate, 1981) where data was collected in other ways.
(ii) Development and evaluation

The work of the Task Force was written up in detail during each session, where innovations discussed at one meeting were assessed at the next after teachers had instigated them in the classroom. Some teaching arising out of the Task Force, e.g. "bookwords" were observed and recorded in the classroom. Samples of children's work arising from the group experiments were collected (see appendix) and a tape recording of the teacher's workshop following the Task Force exhibition was made. Unfortunately, part of the recording proved to be faulty and no notes were made at the meeting since it was being recorded, so part of the proceedings have been lost.

Suggestions relating to "library skills" that arose from the Task Force were tried in the classroom in the third phase of the project.

(iii) "Action research"

Innovation suggested by the Task Force discussions was tried in two schools with three groups of children and the results recorded. Such research is changed and developed by the action itself, so that the children's responses to work on subject indexing dictated the direction of the lessons themselves. The observer and class teachers' views on this research were then disseminated to the Task Force teachers. (Nixon, 1981).

The Inservice Course

A final stage of the project aimed to disseminate some of the project's findings to a group of in-service teachers. A course of four two-hour sessions was devised as a "librarian's view" of information skills teaching in schools and an illustration of a librarian's involvement. Fifteen primary school teachers in Coventry were chosen from a list of fifty who had expressed an
interest in attending such a course. A questionnaire was given to each one at the beginning of the course to establish a profile of their school, educational background and their attitude to reference skills and librarians. (See appendix). It was intended to assess their reactions to the course at its end by a general questionnaire and selected interviews. In the event, the project ran out of time and this evaluation was not attempted.

Such a research strategy seems most appropriate to the study of educational innovation, which if it is to be usefully assessed, needs to be examined in its early stages of adoption and continued or modified in the light of evaluation. (Parlett, 1981). This "illuminative or social-anthropology paradigm" is not a standard methodological package but a general research strategy. It aims to be both adaptable and eclectic. The choice of research tactics follows not from research doctrine but from decisions in each case as to the best available techniques: the problem defines the methods used and not vice versa. Equally no method (with its own built in limitations) is used exclusively or in isolation: different techniques are used to throw light on a common problem. (Parlett, 1981, p.17).

The research aimed to take account of the attitudes of the teachers and children involved and the contexts in which these attitudes were set, the schools, and the L.E.A. Attempts to introduce innovation into these settings can only be successful if they take into account the everyday world of teachers, pupils and schools. (Hargreaves, 1978).

This was also the concern of the adviser responsible for the reference skills courses whose support for the research was invaluable.

The Adviser's Support

The adviser is often a key figure in the introduction of innovation within an authority and probably an essential ally in enabling "outsiders" like librarians not employed in schools to participate in the formulation of policies of innovation and inservice education.
In this instance the adviser and librarian shared an opinion that it was essential to begin information skills teaching from an early age. The growth of computer technology was seen as increasing the necessity to ensure that information skills were incorporated into the primary curriculum. Otherwise it was felt there was a danger that microcomputers would be acquired as a seemingly necessary part of a school's equipment, but their potential undeveloped, just as schools had acquired other expensive audiovisual equipment, which the adviser saw as underused in the schools she visited.

To some extent also, the adviser felt that libraries in Coventry schools were underutilized because children were not helped to use them in the most productive ways.

Coventry, of course, was not alone in making a commitment to independent, resource based learning in the 1960's and 1970's, which was now being followed by a period of reassessment, if not disillusionment, as it was realised that provision of resources and hardware were not enough. (Daniels, 1983). Teachers and children, had to be given the necessary skills to utilize such resources effectively and incorporate them into the learning tasks.
CHAPTER 2 The development of independent learning in schools

(1) The growth of knowledge

The nineteen fifties and nineteen sixties saw an accelerating growth in the extent of knowledge and its recording. A recognition that methods of education should change to accommodate this growth followed. The traditional idea of the teacher as the exponent of accepted knowledge and the pupil as the recipient began to change. It was felt that the teacher should become a creator of learning opportunities so that pupils could discover for themselves the ideas and concepts that underpin areas of knowledge and so understand how future changes and developments occur.

The hypothesis I would propose here is that to the degree that one is able to approach learning as a task of discovering something rather than learning about it, to that degree there will be a tendency for the child to carry out his learning activities with the autonomy of self reward or, more properly, by reward that is discovering itself. (Bruner, 1974, p.406).

Since the formulation and articulation of such educational theories do not occur in isolation it is difficult to separate the influence of educational theory and other external pressures on educational change.

Certainly in America, such theories of learning as Bruner's coincided with pressures from Government for a change in the direction of education. The launching of a Russian sputnik in 1957 led to concern that the United States would be beaten in the "Space race" by the Russians. This was seen not merely as a setback to national pride, but also as a danger to America's defenses. One effect was a reassessment of America's educational programme.

Seeing Russia's scientific superiority in the field of space ... raised the question "Is America lagging behind Russia in her educational program as well as her space program. (Davis, 1969, p.5).
This reassessment led to a concentration on "responsible individualism" (Davis, 1989) which encouraged the child to learn at his/her own pace, guided by the teacher and supported by resources for learning which would supersede the traditional "textbook". Science was seen to play an important role in the "race for space" and given a priority. Since existing textbooks were found to be inadequate to encompass either the new knowledge to be imparted or the method in which it was to be assimilated by the learner new curriculum materials were created utilizing audiovisual aids as well written materials.

(ii) Curriculum innovation and resource based learning

The rethinking of American educational practice and consequent curriculum change was influential on British attitudes, and linked with developments already taking place in the country. The structure of the conventional curriculum with its rigid subdivisions, and inclusion or omission of subjects based on past conventions was called into question (Holly, 1974, Bernstein, 1971). Bernstein's thinking was influential in the development of integrated subject teaching where groups of teachers formed subject teams to pool ideas and knowledge across traditional subject boundaries. Such integrated teaching also needed new resources and materials to support it. The role of the teacher as a co-ordinator of learning, implies learning aids structured to give opportunities not only for the discovery of facts, but the discussion of ideas between pupils and teachers.

The Schools Council, formed in 1964, devoted an increasing amount of time and money in sponsoring curriculum materials to support this educational innovation, for example the Humanities Project 1968-71.

These curriculum materials used a variety of media, since apart from the often outmoded nature of textbooks it was felt that books should not be seen as the sole purveyors of recorded information. Developments in "communications technology" were rapid during this period so that it became possible for schools
to use cassettes, tapes and filmstrips as part of classroom teaching (Beswick, 1977).

Many schools developed "library resource centres", but with exceptions of local education authorities such as ILEA and Clwyd and schools such as Codsall and Madeley (Beswick, 1975), they did not match the professional or technical assistance found in American schools.

(iii) Comprehensive education

The development of comprehensive education in British secondary schools also provided a climate for the implementation of individual, resource-based learning. At least for the first two years of secondary schooling teachers were encountering wider ranges of ability than was usual in selective schooling. This called into question the group method of instruction since it was possible to leave the least able children in difficulties and not stretch the most able. Although streaming into groups on the basis of measured intelligence was often a response to this problem, research suggested that the "labelling" of pupils in this way led to them fulfilling the expectations demonstrated by this process. Consequently, particularly in the lower streams this led to underachievement (Lunn, 1970).

"Mixed ability" teaching was introduced in many schools to overcome the disadvantages of streaming. It was felt that pupils could work individually or in groups at their own pace and level of ability, supported by the teacher.

The way in which such individual or group work was carried out was through individual workcards or sheets. These may have been generated by an external source like the Schools Council or, often, produced by the teacher or team of teachers in the schools.

(iv) Primary education

To some extent the developments in secondary education of a school day devoted, in part at least to individual learning using resources, was seen as paralleling the methods used in primary
education in this country.

The idea of "discovery" learning and a "child centred" method of education was proposed for primary education by the Hadow report on Primary Education (Great Britain, Board of Education, 1931).

The schools whose first intention was to teach children how to read have thus been compelled to broaden their aims until it might be said they have now to teach children how to live. (Great Britain, Board of Education, 1931, paragraph 74).

These proposals were based on the theories of psychologists like Piaget, who argued that children learn by continuous interaction with their environment, progressing through a series of intellectual stages which develop from the concrete to the abstract. The progression from one stage to the next would occur when the child was ready.

Montessori, Froebel and Isaacs had been influential in developing methods of primary education based on this child centred approach. The Plowden report (Great Britain, D.E.S., 1967) was seen as an important endorsement of this method of primary education, advocating individual and group work based on a discovery approach rather than whole class teaching.

(v) Topic and project work

An important component of this method of teaching was "topic" work using a variety of sources, and "surrounded by books" (Purton, 1962). It was seen as a way of integrating areas of subject teaching into one interdisciplinary whole and capitalizing on the child's immediate interests, when it was felt he/she would be most motivated to learn.

When a class of seven year olds notice the birds that come to the bird table outside the window, they may decide after discussion with their teacher to make their own aviary ...

Children are not assimilating inert ideas but are wholly involved in thinking and doing ... (Great Britain, 1966, p.199).
The idea of project work as a vehicle for independent learning was also developed at secondary level. Here too, it was hoped, it would aid integration across parts of the curriculum and build on the pupil's motivation to learn. To some extent the examination system, where the syllabus and examination questions were imposed by an external body, mitigated against the adoption of project methods of learning. This resulted in the establishment of a Mode III syllabus which was constructed by the school and the pupil assessed either by an internal examination or continuous assessment, subject to external moderation. Although the General Certificate of Education and the Certificate of Education could be awarded through Mode III in practice it has been used most often for C.S.E. examinations and, therefore, for less able pupils.

We award the highest academic accolade to a student who can see a question, focus it into an enquiry, trace sources, find relevant information in these sources, collate the information, reorganize that information in a way that meets the question posed and write up the reorganized material into a report. To those who achieve this pinnacle of scholarship we award a Phd. This same process is the one we have adopted as the main teaching method for the less academic and less well motivated school pupil. (Marland, 1977, p. 208).

The introduction of independent learning as an educational method was embarked upon with great optimism by many in schools. Although as Galton (1980) has found in a recent survey of primary schools much "traditional" teaching both in content and form still exists despite the apparent influence of Plowden. In secondary schools, too, the attitudes of teachers to external examinations has ensured the continuance of teaching shaped by their perceptions of the syllabuses and with the prime objective of enabling pupils to pass the examinations.

However, there has also been a feeling of disappointment that where "learning to learn" has been promulgated through topics or projects it has resulted in "mindless copying" (Beswick, 1975: I am not denigrating the project system; I am denigrating people like me who have elevated it to the status of a prime teaching method without the concomitant, which is teaching suitable to support it. (Marland, 1977(b), p.103).
Requirements for successful resource based learning

The disappointment with such learning methods can perhaps be attributed to a failure of too many teachers (Cox and Dyson, 1969), (Callaghan, 1976) and others concerned with education to realise that successful resource based learning has to recognize and develop at least some of the following prerequisites.

(i) Within the school

(a) a committed and supportive head and staff so that the philosophy, aims and objectives of the learning are integrated, with understanding, into the curriculum (Martin, 1982);

(b) a recognition of the additional time in teaching and preparation that 'discovery' learning demands (Coulson, 1971);

(c) the provision of suitable and adequate resource materials and equipment, accessible at all times and appropriately organised (Lunzer, 1979);

(d) support from other professions, such as librarianship, and media designers within the school, or at least available for consultation outside it. Such support should not be seen as mere "technical help" but integrated into curriculum decision making within the school (Beswick, 1977), (Marland, 1977 (a)).

(ii) Teachers

(a) an ability to structure learning conditions which motivate pupils to discover information for themselves;

(b) an awareness of current developments in a given body of knowledge;
(c) a critical awareness of published source materials available to the pupils and their availability within the school;

(d) Skill in producing suitable classroom materials for pupils to work on, if there is a need outside what is commercially available (Beswick, 1975). Or the ability to articulate clearly to a production agent what is required and why, and that readability levels are matched to pupils' competence (Lunzer, 1979);

(e) the ability to retrieve information from sources and to locate such sources within the school library resource area or outside. To appreciate that pupils need guidance in doing this for themselves, particularly in a large resources area. (Lunzer, 1979);

(f) an awareness of the skills others have to offer for example, librarians, either within the school or externally. (Beswick, 1977);

(g) the recognition of the range of skills involved in independent learning, to be proficient in them and able to assist pupils to acquire them.

(iii) Pupils

(a) an awareness of the information need that initiates the information search;

(b) proficiency in reading at a "literal" level to decode accurately from the printed page and at an "inferential" level to comprehend the ideas presented. (Great Britain. Committee of Inquiry, 1975), (Lunzer, 1979).
(c) strategies for reading appropriate to the task, for example, skimming the text for an idea of the argument presented; scanning for a particular piece of information. (Stauffer, 1980);

(d) the ability to extract information from various sources, visual, aural, or printed in a way appropriate to the source and information need;

(e) an understanding of the principles of indexing and classification so that sources can be located from an organised collection;

(f) the capacity to interrogate an information source in order to extract information relevant to the search and, if necessary, reorganise it in note form;

(g) the ability to evaluate sources critically and to compare them;

(h) the ability to marshall the facts discovered and organise them appropriately to satisfy the given information need;

(i) the ability to present the information for others in a format suitable to the question posed;

(j) an awareness that such skills can be transferred from one task to another. (Tabberer, 1982);

Many of the skills needed by the pupil are also common to the teacher, except that the teacher is expected to have acquired them and be able to devise conditions and tasks which help pupils to develop them to appropriate levels - as information gatherer, processor, and user.
However, it cannot be assumed that teachers have acquired skills either in their own academic education (Hounsell and Martin, 1980) or in subsequent education for teaching. (Oldfield, 1980).

Growing awareness of information skills teaching

Many of the prerequisites for successful resource based independent learning can be defined as information skills.

For instance, it is one of the assumptions of resource-based learning that a pupil should gain information he needs directly from various kinds of resources, without the mediation of the teacher. I am not questioning this objective; however, I would add that pupils cannot effectively use (a) resource(s) as an information source, or interact with it directly, unless they acquire a certain competence in information handling skills. Tracing sources, gaining 'entry' into sources, 'reading' the source for information (rather than pleasure per se), recording and storing information, reshaping and communicating information and perhaps activities that we leave too much to chance; i.e. we treat them, at best, as a hoped for by-product of pupils and resources interacting. (Brake, 1980 (c), p. 10).

Their absence in teachers and pupils has been defined by Brake as "skill gaps" (Brake, 1980 (c)). Because the skills pervade many areas of education, the need for their development has been recognized by educationalists concerned with different aspects of education, perhaps most importantly in the context of reading and language development and library user education.

1. Language development

(a) The Bullock report

The value of a high level of literacy in a technological and information based society was highlighted by the Bullock report in 1975. This Committee of Inquiry into language and learning was established because of popular disquiet following an N.F.E.R. report, (Start, 1972), that appeared to suggest a fall in the level of reading
improvement. The Committee were able to show that it was the testing that was faulty, rather than a decline in overall reading standards. Nevertheless
dealing effectively with information must now be recognized as one of the major problems in modern society... It becomes increasingly necessary for a person not only to be able to cope with print efficiently, but to organise his own use of it.

(Great Britain Committee of Inquiry 1975, p.95)

The Bullock report deliberately chose to investigate language development rather than reading, arguing that all language skills were indivisible and that since literacy was an essential requisite of an informed society, concern with language development should extend across the whole curriculum. This theme of language across the curriculum was developed by Marland (1977 (a)) who reaffirmed the links made in the Bullock report between study skills, library skills and successful independent learning.

In the same year that the Bullock Committee was set up, two Schools Council projects began research into reading development at secondary and primary levels.

(b) Effective Use of Reading

Lunzer (1979) reported first on his team's findings in secondary schools. Detailed observations of activity in subject teaching revealed that most reading took place in "short bursts" only. In a search for more sustained reading activity, two of the project team looked at project work in a first year class in one of the participating schools.
The lower forms were taught in an integrated studies course that was currently studying "Ancient civilizations". The resource area in the school was well stocked, with a librarian to organise it. Observation of the pupils' work by scheduled recordings and interviews revealed, however, that writing was the dominant activity.

Even when pupils were reading their objective was to find information to write down. Such writing was not exactly copying, but paraphrasing. Despite a well stocked resource area and an apparent (when asked) knowledge of using the library to find sources, the investigators concluded that the pupils were not utilizing the resources available or their known strategies for gaining access to them. When using books, the children tended to ignore contents pages and indexes and were distracted by "arresting illustrations". Yet, in the reporting back session where pupils described what they had discovered to their peers and the teacher, there was evidence that they had learned from the sources they had been using (albeit with a great reliance on the guide compiled for them by the teachers). The project had not been designed to develop reading strategies, or demonstrate their ability to use a school resource area, but to discover and relate facts about "Ancient Civilizations" and to an extent this had been achieved. If the objective had been different, it is possible that the task set would have been different.

We conclude that children need help and guidance in a real context to convert verbal knowledge to behavioural competence. (Lunzer, 1979, p. 191).
(c) **Extending Beginning Reading**

The second study by Southgate (1981) looked at reading development from seven to nine years old in the primary school, and also recorded an absence of sustained reading in the classroom. When investigating topic skills she concluded as Bullock had done, that much of the work produced was copied from books. Although teachers were aware that the next stage in the learning process was for children to summarize the information found in their own words they are generally ill-equipped to teach reading skills which extend beyond the beginning stage. (Southgate, 1981, p. 158).

(d) **H.M.I. Reports**

Two reports by Her Majesty's Inspectorate (Great Britain. D.E.S., 1979; 1982) also drew attention to the lack of reading development.

It is vital that the careful work already being done to ensure that children become literate should continue and be further developed. Future marked improvement in the general level of performance in reading, however, probably depends on developing a more systematic approach to teaching average and more able readers to find the books they require and to use the contents page and index to decide whether to skim or to study a text thoroughly, to follow a line of argument critically, and to look out for the implications of what is written, as well as to note the explicit information the passage contains. For this to be achieved children need to be introduced to a wide range of reading material in connection with many aspects of their work. (Great Britain. D.E.S., 1979)
2. Library User Education

All these reports, although drawing attention to the need for information skills, give little guidance as to how they should be developed. They recognize too, the importance of books and libraries in the development of information skills. However, apart from Bullocks recommendation that a librarian should have a seat at all the head of department meetings and departments should involve him in their own internal planning, (Great Britain, Committee of Inquiry, 1975, p.305), the role of the librarian in information skills teaching is not mentioned.

(a) Educating library users in secondary schools

Librarians have been concerned with "user education" for some years, consolidating in the late nineteen fifties with the appointment of tutor librarians in technical colleges and colleges of education. The growth of higher education and independent learning within it resulted in an active user education movement at this level. A realisation that students embarking on higher education had apparently little early instruction in library skills led to an interest in school based user education. British Library interest in this subject led to sponsorship of research in two Counties which employed full-time librarians in secondary schools to assess the amount and effectiveness of library user education.

This investigation by Irving and Snape (Irving and Snape, 1979) found that library tuition was usually confined to the first
year pupils and was likely to be separate from any classroom teaching. Teachers in a school were often unaware of the content of the library teaching programme, although many felt the acquisition of library skills was important.

A difference in views on library skills revealed a dichotomy in approach that was simple to see. Librarians were keen to ensure the maximum use of library resources, teachers were more concerned with the specific usage of only those resources considered relevant to the subject or the pupil. (Irving, 1976, p. 33).

Perhaps this dichotomy partially reflects the professional education of both groups in isolation from each other. Librarians tend to see themselves as reasonably impartial providers of the vehicles of knowledge, with the skills for its storage and retrieval. If users are given insights into these skills and the range of bibliographical sources available, they will become effective library users and informed citizens. Teachers are educated to impart knowledge to others, to guide them in the acquisition of skills and ensure that learning is paced to the abilities of the pupil. It is not surprising that if both are placed in an environment that is directed to the aims of the teacher, that library lessons divorced from the rest of the curriculum will be unsuccessful.

Brake (1980 (b)) after working with pupils in a London school found that they lacked even the most basic library skills, even though they had been taught how to use the library during two school years. He concluded that pupils make judgements about the purpose of instruction and react accordingly. In this instance, library lessons were seen as peripheral to the purposes of the school and, therefore, were rejected.
(b) **Information skills across the curriculum**

The work of Irving and Brake focused attention on the purpose of school library user education as perceived by teachers, librarians and pupils and it was evident that there was no consensus as to what that purpose was. Since many schools have inadequate library provision and no professional librarian working within them, rethinking of library user education in schools had to involve teachers. This view coincided with the realisation by educators that the acquisition of information handling skills needed to be taught across the school curriculum and consequently there has been collaboration between teachers and librarians. A group has produced guidelines for a whole school policy for the teaching of information skills which uses assignments to incorporate skills into subject teaching (Marland, ed., 1981). Following from this, workshops of teachers and librarians have been set up to discuss ways of structuring assignments in particular schools or L.E.A.'s. The British Library has supported work which investigates the interface between librarians and teachers working in schools. Notably the Information Skills in the Curriculum Unit (INSCRU), which has had as an objective the development of curricular materials and opportunities within subject teaching, for the teaching of information skills. Brake as project director had the opportunity of working with librarians and teachers since the research was based within ILEA and librarians are employed in each school as a matter of policy. Other British Library sponsored research has led to work on libraries and sixth forms (Ruddick and Labbett, 1983) learning profiles of students (Martin, 1983) and with N.F.E.R. the teaching of study skills (Tabberer, 1979).
Until recently most interest was directed at secondary education, but two recent projects, Heather at CRUS (1982) and Webb at C.A.R.E. (1982) have begun investigations into aspects of information skills teaching in primary schools.

Information skills at primary level

In many ways it should be easier to introduce information skills at primary level. Schools are smaller, so whole school policies are more easily communicated, the curriculum is not rigidly divided into subject areas and topic work is well established. Classrooms have resources to hand so they can be integrated into the children's work and continuity of teaching is assured for a year at a time. There are no examination pressures to restrict the curriculum and Primary education has as a stated aim the teaching of skills (Ashton, 1975).

However, as studies like the H.M.I. reports and "Extending Beginning Reading" suggest, acquisition of skills often stops short at a basic level and the development of higher order skills such as information handling is lacking. As Southgate has pointed out, there is also an awareness amongst teachers that they lack expertise in this area.

... junior teachers ... would certainly appreciate an increase in courses of inservice education on methods of training ... pupils ... to use information and reference books effectively. (Southgate, 1981, p. 166)

Southgate's emphasis on the use of information and reference books allows librarians an opportunity to argue for an involvement in such local inservice courses. Teachers are usually ready to acknowledge a librarian's expertise in the organisation of resources and methods of information retrieval, thus giving the librarian an entrée.
However, as research has demonstrated in secondary schools, a concentration by librarians solely on the organizational aspect of information retrieval without placing it in the context of the curriculum is not successful. (Irving, 1979, Brake, 1980 (b)).

Therefore, librarians must understand what takes place in the classroom and be seen by teachers to have that knowledge. This involves a knowledge of how books and other learning resources are used by pupils and teachers, and the skills needed to execute the tasks set. There must be understanding too of the way libraries are organised in schools given the constraints of time and usually lack of training, experienced by the teacher with responsibility for the library. (Ingham, 1980).

Given some insights into the world of the classroom and to perceptions of pupils and teachers it is to be hoped that librarians involved in the development of information skills in schools can contribute to expertise they should have in this area in a relevant way.

Therefore, this project set out to look at work in the primary classroom, at library organization and to devise an inservice course using these experiences.
CHAPTER 3

The work in schools: part 1:

The practice of information skills teaching.

Observation in schools

(1) Non-participant observation

A day was spent in each of two schools, A and B (see appendix 5) in non-participant observation using schedules designed to record the incidence of information skills teaching and learning (see appendix 4).

Since the observations were noted at three minute intervals there was also time for a detailed diary of events to be kept. In retrospect, this diary was far more effective in recording classroom interaction and making possible, at a later date, a detailed reconstruction of the days spent in school, than the rather mechanistic schedules. These schedules, modelled on those used by the Effective Use of Reading project, were drawn up in isolation from the classroom and the items intended to be observed had not been as evident or obvious as was hoped.

The observer had visited both classrooms on previous occasions and had talked to the teacher about the intended project on information skills. It was explained that the purpose of this day's observation was to give the observer an idea of a typical school day as a background to the study. The idea of identifying information skills in that day was not mentioned in order not to influence the teaching.

In both schools the observer was introduced to the children who were told she had come to "visit for the day". The observer sat at the back of the classroom but near enough to a group of children to have some sight of their work and to hear some of their conversation. Distancing was achieved by avoiding eye contact,

most importantly I avoided eye contact: if you do not look you will not be seen.

(King, 1978, p. 4)
After some initial curiosity, the children did appear to forget the observer's presence. There was also no reason to believe that either teacher was influenced or inhibited by the observer.

School A

The morning was divided into Mathematics and English lessons, with the children working on commercially produced, structured workcards. There was a constant queue of children at the teacher's desk to have work checked. If it was satisfactory they progressed to another workcard. Children not queueing for attention worked individually within the groups seated at tables. There was some talking amongst the children, sometimes about the work in hand, sometimes about other things. There was no class teaching during this time.

It was difficult to identify any use of information skills whilst seated away from the children's work, but the impression was gained that the comprehension work in English was not developing any skills beyond those of simple inference. The group under observation began to pool their knowledge in order to guess the appropriate answer to a question from a list of possibilities but did not use any other sources to check their deduction. There was often no need because of the simplicity of the question and there seemed little interest on their part on checking elsewhere if they did not know an answer.

Occasionally, the teacher directed a child to a dictionary to verify an answer. In the group under direct observation the children were slow to locate words seemingly having difficulty with second and third letter order, not utilizing the "header" words to help find a correct page.

During these lessons there was little teacher contact with the class as a whole. It was not possible to hear what passed between teacher and child at the desk, but contact time was brief.
There seemed little evidence of any skills teaching beyond that of reinforcing comprehension techniques.

After lunch there was a brief silent reading period where children appeared to read something of their own choosing. Many used books from their reading schemes or information books from the class collection. One girl selected the "yellow pages" and another was reprimanded for her choice of a "fun book" - puzzles and games. Such books the teacher explained later were "for perks only". While the children were supposedly reading (many, in fact, were gazing round or tidying their personal drawers), the teacher was engaged in cutting up pieces of paper, for, as it emerged, the following lesson.

After about eighteen minutes the children were told to put away their books and the teacher commented on how badly they settled to read.

The class then turned to craft work, Halloween was near so the teacher talked to the whole class, questioning them on what they knew of its customs. Then they began drawing Halloween symbols or making masks. No-one used any sources other than the teacher's descriptions for the work that took place, nor was it suggested that they should.

School B

School B showed more evidence of teacher questioning of the class as a whole than School A. While on the way from assembly the teacher had taken the opportunity to introduce the word "glazier" to the children since a workman was repairing a window pane in the school corridor. A train driver was to talk to the junior school that morning about his work, so schedules had been rearranged and this was carefully explained to the children. In the time before the visit, the class worked on comprehension exercises from workbooks, again queueing for the teacher's attention. There was less group talking than in School A and the teacher frequently sent a child to
check a dictionary or encyclopedia. The most able children were working with sets of encyclopedias answering questions from workcards. As each workcard was completed, the child progressed to another more difficult one.

The train driver was later than expected and the teacher filled in the time with class teaching on straight lines and whether it is always practicable to take the shortest distance between two points. He was skilful in asking questions which drew on the children's existing knowledge and led them to infer from it.

The children were enthused by the train driver's visit and the teacher, back in the classroom for a short time before lunch, talked to the class about the principles of steam power, using a book on trains to illustrate his description. He seemed knowledgeable about steam engines and his interest communicated itself to the children so that several stayed on after the lunchbell to look at the book. He had drawn an analogy between steam engines and a kettle boiling, constantly posing questions which led the children to draw on their own observations to deduce answers.

The first half of the afternoon was devoted to a science lesson, each child being invited to observe the staffroom kettle, borrowed for the occasion, and to remain silent. Then he again drew on their observation to explain how the kettle worked, relating it to an earlier lesson on electric plugs and switches. After the talk the children drew a diagram of the kettle element from the board and queued to have it approved. Those who completed this successfully went on with comprehension exercises, although two girls did take the opportunity to visit the book corner and choose some home reading. The observer was able to overhear their knowledgeable conversation on the merits of C. S. Lewis and Roald Dahl.

Comment

Although a day's observations in two schools by a non-teacher cannot be used to make generalisations about primary teaching, the evidence collected does coincide with more detailed and wide ranging
studies by Galton (1980 (a), (b), and Southgate (1981) and with comments made by the Inspectorate in the Primary Survey (Great Britain, D.E.S., 1976) and Education 5-9 (Great Britain, D.E.S., 1982).

The purpose of this particular observation was to monitor information skills in two classrooms. Overall there was little to suggest that book or library skills were used to any extent beyond a directed use of dictionaries, more efficient in School B than School A, and a book used to illustrate the talk about steam engines in School B.

Observation was used in School B and the teacher did draw out interferences by encouraging them to reflect upon personal experiences. Reading skills were not easy to deduce simply by observation but what reading for information there was appeared to be in "short bursts" before writing (Lunzer, 1979) and mainly the reading of workcards.

The reliance on commercially produced, structured workcards seemed to demonstrate how successfully commercial publishers have responded to teacher demand for this type of material. In these two schools at least teachers obviously had abandoned or not begun the practice of extensive manufacture of their own. Subsequent questioning and observation in other schools suggests this is also true elsewhere. Galton describes these as substitutes for teacher contact ... Many of the observers' descriptive accounts emphasized that the work the pupils were doing often appeared repetitive and that many children seemed to be bored ... The work-cards are graded in difficulty rather like items on an attainment test ... Then the pupil will be back for a new work-card with more difficult examples of the same thing. It is not surprising if, under these circumstances, some pupils prefer to talk to their neighbour about other things rather than getting on with their work. (Galton, 1980 (a), p. 182).

The use of workcards resulted in children working individually for much of the time, although seated in groups. Or rather, emphasis on individualization has led to the acceptance of workcards as a
method of coping with a class of about thirty children.

Individualization expresses itself for the teacher through the marking of the workcard with the child at her side. In practice this leads to a great deal of the child's time spent in waiting for the teacher and little actual contact time (Southgate, 1981). It also deprives the children of intellectual stimulus as Galton found.

higher level cognitive interactions, which average out at 9.3% of teacher-pupil interactions are most likely to occur when the teacher is interacting with the class as a whole and (paradoxically perhaps) least likely to occur when she is interacting with a particular individual child. (Galton, 1980, p. 93, 94).

On reflection it is not surprising that in coping with large numbers of children teachers find the most practical way of posing pertinent and challenging questions is to the class as a whole. Even then

few of the teachers' questions or statements make serious or challenging demands on the reasoning power of the child. (Galton, 1980 (a), p. 98).

This comment is echoed by the Primary Survey (Great Britain, D.E.S., 1978, p.47) and the Schools Council Project on Developing Pupils' Thinking Through Topic Work where between 18% and 19% of classroom questions were defined as "higher order" (Kerry, 1983).

Questioning children to encourage them to observe, formulate and articulate opinions and devise questions in return, is an important means of developing information skills and their low incidence in the primary classroom is a cause for concern. Galton's research found a correlation between higher level interactions and pupils' progress, using open ended questions and encouraging pupils to work towards solutions (Galton, 1980 (b)).

Current research into teaching in primary schools and its effects on pupils' learning underlines the tremendous influence of teaching style. The ORACLE project categorized teaching styles after observation in primary classrooms and attempted to measure their effect on pupil
progress through a series of tests. It concluded that

When the effect of pupil sex, pupil type and teaching style are considered together, only teaching style has an independent effect on progress. (Galton, 1980,(b), p.178).

Study skills were amongst those measured by the project, represented by the ability to reorganise given information in a graphic form and to compare information presented orally and visually in story form and then devise questions which would elicit more information from the person in the story.

The three teaching styles which recorded the highest scores for the study tasks set were:

1. "habitual changers" who spent more time on topic and less on basic skills than the other groups;
2. "individual monitors", those who set children individual assignments which were marked individually, and
3. "class enquirers", those who frequently taught the class as a whole and encouraged "open ended" questions from the children.

Although the tasks measured were restricted in scope, it is interesting to see that the children who were encouraged to question (the "class enquirers" group) were the best at the tasks designed to ask questions. The children taught by "habitual changers" although less successful in other tests to measure basic skills, scored most highly overall on study skills. So it may be deduced that their teachers' emphasis on topic work did result in a competence at the skills tested by the project. "Individual monitors" had less contact with their pupils than some other styles, despite their attempt at a one to one involvement with the children, and their interaction was often of a low level. Nevertheless, they did well in the study skills tests, a finding which past research has suggested is because individual work encourages study skills. Galton suggests, however, that their
success in these tests may have been because they were accustomed to pursuing work without frequent recourse to their teacher and some of the test tasks required this; a factor which may have penalized children used to asking their teacher for advice or clarification.

If the teacher in School A may be described as an "individual monitor" and the teacher in School B as a "class enquirer", the conclusions drawn from subsequent observation of topic work in their classrooms did not accord with Galton's findings on the relationship between study skills (as defined by that Project) and teaching styles. School A's performance was similar to School B's in so far as the work in the two schools could be compared at all. The tests of skills devised by Galton were of a directly measurable kind and not the skills of synthesis needed for effective topic work. This project seemed to indicate they were not being developed in this context even by teachers in classrooms like School B's where pupils were encouraged to observe, reflect and deduce during whole class teaching.

2. Topic Work

Topic work has been defined as extended work on a selected theme, generally taking in a wide variety of subjects in the traditional curriculum, but occasionally confined to one. In topic work the children work individually or in groups under the direction of the teacher, collecting, collating and recording information obtained from first hand observation or by reference books. (Hoare, 1971, p.12).

It might be imagined, therefore, that topic work in primary schools creates opportunities to practice and extend information skills. For this reason it was chosen as an area of investigation for this project, using participant observations and recording the events seen in the form of a diary, written up after the visits.

School A

The week before observations began children had chosen an individual topic on which to work ("football" had been banned after
its selection by too many boys in the class). As homework the children had been asked to compile questions on "what I want to know about this topic". This was presumably an attempt to use one of the ideas from the reference skills course (see section on Task Force topic work) but the children seemed puzzled by the request and had chosen easily answered questions to which they probably knew the answers. Observations during the school day previously suggested that these children were not used to being encouraged to formulate and pose pertinent questions ...


(Four fifths of children observed by the Inspectorete were considered unused to question formulation).

The subjects selected were fairly predictable and too broad to form useful questions - a variety of pets - horses, dogs, cats; animals - hedgehogs, birds, horses; dinosaurs; flight; weapons; the Bible and famous people.

Most children worked from two or three books taken from the classroom collection, the school library or in one or two instances, the public library. The teacher had also contributed a few books of her own. Selection had taken place prior to observations beginning and the sources once chosen were used throughout the project. The classroom collection was sparse and shabby in appearance with a collection of simple Ladybird books and MacDonald's "Starters" series forming the nucleus of it. This was somewhat surprising in a class of eleven to twelve year olds since the reading and interest ages of the collection appeared to be about six to eight years of age. One child did give an unsolicited apology for her "Starter" saying she was using it for the quality of its pictures not the words; either an encouraging example of an awareness that different books may be useful for different purposes or a defence to an adult for using something she felt would be considered too simple by that adult.

Most of the children appeared to use their books uncritically and although they and their teacher said they knew how to use
Moving around the tables discussing their work, the children gave the impression that many were drawing or model-making, not reading or writing. Where there was written work, questions to the child reinforced the impression that the information had been copied, often verbatim and without understanding. One child, whose topic was on "Cats" had written knowledgeably about "furballs" and "seal points" but when asked to explain what these were she was embarrassed and said she did not really know what they meant. This child had also included two drawings, one fairly relevant to the text, of the mechanism of a cat's claw, and one labelled "A cat with its leg in splints". Since this appeared to have no connection with the writing and seemed an unlikely thing to imagine, the observer queried its source. The child then turned to a book called "How to look after your cat when it is ill" and showed the original illustration. This picture had evidently caught the children's imagination for another child on an adjacent table had also used the arresting illustration in her account of cats, again without relating it to anything in the text.

In fact, many children responded to the task by drawing, perhaps because it appeared preferable to writing, perhaps because it lends itself to display on classroom walls. Of course, there is justification for using graphics instead of words as part of a planned activity, but many drawings appeared to have been embarked on spontaneously from the first book that came to hand.

Model-making was also popular as a substitute for writing and some models were impressive. Much of the teacher's time was spent in helping children cut and glue balsa wood for model tanks or aeroplane wings.

One boy who had modelled a tank was an obvious enthusiast eager to relate how the first tank had been constructed from wood.
and going on to describe types used in both world wars. Like many children at this age he was still vague about chronology and could not relate 1500, the year of the first tank either to the World Wars or to the present time.

Three boys spent the five weeks constructing a model of a Brontosaurus. They worked well together as a group and were obviously enjoying themselves. After a visit to the local library, they had collected four or five books on Dinosaurs which remained closed whenever observation took place. Boxes of different sizes and egg cartons had been joined together to construct the reptile but it lacked the long and powerful tail that is a feature of Brontosaurus. When asked about this they said they "didn't know how to make a tail" and so had decided to leave it off. Although they were aware that it should have a tail it "didn't matter". Since the model was unaccompanied by any written explanation of the anatomy of dinosaurs, it seemed a pity to allow children to spend five weeks working on a model that was to lack such a crucial part of its structure.

When discussing the topic work after a lesson, the teacher reaffirmed her belief that the children "knew" how to use contents and index pages and would not copy directly from a text but rephrase the information in their own words. The teacher seemed unaware of the books being used by the children and did not look at them or the work of the majority of the children in the class while the topic work was being observed. One child was using a book which explained how women had evolved from angels and showed a picture of two women with long blonde hair and "off the shoulder" fur costumes outside a cave; presumably a portrayal of Stone Age women. When this was queried with the teacher privately, she replied she would look at it and thought it may have been loaned to the child from the "Jehovah's Witnesses".

The children were responsive to questioning, eager to show their work and often seemed interested in what they were pursuing. Nevertheless, observation suggested that the writing was largely
copied and few of the skills that might be associated with topic work (e.g. using books effectively, collecting and evaluating evidence, notetaking) were being demonstrated. Neither was there evidence of assessment by the teacher of the work in progress. Although the teacher had said that topic work was an opportunity for children to practice previously imparted "book skills" she did not appear to monitor the practice of such skills in the topic work sessions or remind the children to use them. The main aim of the work appeared to be the production of written work, models and drawings which would be seen by the head-teacher and parents, as evidence of what the children achieved in class.

School B

The intended five week observation of topic work at School B was interrupted by a month long strike of school caretakers which kept children out of schools. Work was set for them during this period and the topic work which was observed had been begun at home or in a local library and was being completed in the classroom once schools were reopened.

All the children had been given a drawing of a sailing ship to copy from an illustration as part of their "strike homework". Some spent the topic afternoons when observation took place finishing this. Others moved on to individual topic work chosen from one of four themes,

(i) anything from "Let's Investigate" - a class set, which included topics like wild flowers, British wild animals, rivers, birds, etc. The text presented facts and illustrations on the topics and then set questions or activities;

(ii) geography, but not to include models;

(iii) history;

(iv) transport.
Transport was a popular choice, since it coincided with a visit to the local transport museum where they had been given a worksheet which they had tried to complete during the strike. Most of the children suggested that the worksheet was too hard (and it did appear to be more suited to secondary level). Since they were obliged to finish this sheet, they had decided to combine it with their choice of topic. Many had worked on this in the local library already, and although it was difficult to assess without seeing the sources used, some work looked copied. This was forbidden by the teacher, but when asked to explain their text some of the children were unable to do so.

The "Let's investigate" books set children tasks as they worked on their chosen subject, e.g. compile a graph of pet ownership in the class, or, graphs of the sizes of fish or flowers. Where, as in the latter example this involved using information given in the text the children used it to compile the graph. It was interesting to see how similar the work on say, wild flowers, was when comparing several examples done in this way. No-one was using any books to supplement the set texts although several did say that they had done so at home or in the library, but any independent information gathering was not in evidence from the work.

During the topic sessions the teacher helped those who went to him and marked their work as they progressed, praising or redirecting as he felt necessary. Occasionally, he would share a piece of information with the class or ask a question which someone had raised

"how long does a caterpillar sleep before it emerges as a butterfly"

and discuss an answer with the class.

It was not apparent from being in the classroom and looking at their work that this class spanned 9 to 11 plus. The teacher said later he had not found it a problem and the younger "high flyers" were benefitting.

This class had more direction and supervision from their teacher than observed in the topic work in School A, and major
topics did not seem to be promoted in the same way. Although the strike had obviously affected the way this particular term's topic was organised it still generated the same feeling of disappointment or unease that not much learning was taking place and certainly that information skills were not being developed or reinforced during these sessions.

School C

The children in this class had been working on reference skills using the "Directions" series: reference books and their workcards based on these sources were on display in their classroom. The teacher had allowed them to choose a topic individually and had asked them to write down

what they knew about the subject

what they wanted to know

how they could find out.

She had then vetted this work and the children had begun to try to discover the answers to their questions. The teacher said she was disappointed with their topic work since much of it was copied and unsystematic despite her work on using books. She drew an analogy between this and punctuation which they learned as an exercise and then failed to apply, when doing creative writing.

Looking at the children's topic work individually in the library, it seemed that the three questions strategy had not helped the children. They had done it because they were asked, but did not understand why and so had forgotten it when they began to write about their topics.

Two girls had chosen the sea, but had been told to be more specific, consequently they had decided to write about underwater animals (sic), tides and vessels under the sea. Having found information on Submarines they could not think of any other submersible vessels, so the librarian suggested bathyscaphes and diving bells but without any great knowledge of them the girls were told to check these
for themselves but later had produced a drawing of a bathyscaphe from the description they had been given; although a subsequent search by the librarian found an accurate illustration. The children were obviously used to accepting the teacher figure as an authority whose word they were prepared to accept and it is easy to see why teachers should be wary of this trust being undermined. It would be interesting to know if the teacher marking the topic work gave the girls credit for knowing about bathyscaphes and if her knowledge was sufficient to detect the inaccuracies in the drawings which the girls did not correct.

Animals were popular choices as usual, but all the pupils' work seemed to lack direction and were full of illustrations which added nothing to the text. One girl was seen to open a book and begin drawing an otter. When questioned she said her project was on rodents but she did not know if the otter was a rodent. She was also unsure about hedgehogs, but had drawn a picture of one too and said foxes ate hedgehogs, but when asked how, in view of the hedgehog's prickles, she did not know and did not attempt to check the information.

Some children were in difficulty finding appropriate resources. There was nothing in the library (apparently) on the World Cup, but the boy studying this had borrowed a 1972-3 edition of the "Football Yearbook" from his local branch library. This gave a good, concise history of the Cup and its winners to that date. He was having some difficulty with the language, but was sufficiently interested to persevere; he did not know where Uruguay was and had not thought of looking it up in one of the four sets of encyclopedias on the shelves behind him.

Several boys were working on car or aeroplane related topics, but the books they were using were outdated. One about cars was published in 1967 and was not very helpful for its user's topic of "Cars of the future", showing as it did a futuristic projection of a large multifinned car. The librarian felt disappointed that it was the same morning when she had been discussing dates of publication.
with them in this context and they had apparently understood but the lesson seemed unheeded in practice. The point was remade to the children working on aeroplanes, cars and the World Cup using the books from the library shelves and looking carefully at dates to see why it mattered to their topic work that e.g. the "Football Yearbook" was dated 1972. They were asked to guess how cars of the future might look now that a major consideration in design was fuel economy and, therefore, they could be expected to be small and aerodynamically shaped. It was also quite likely they would run on fuel other than petrol. The boy who had chosen aeroplanes then checked his 1967 "Ladybird Book of Flight" and discovered Concorde shown as the plane of the future when he considered it "pretty old". Another child, who appeared less able than most of the class, had chosen to write about mysteries, in which he included the Bermuda Triangle, Dracula and the Loch Ness Monster. His local branch librarian had found him something suitable on the Bermuda Triangle, which he appeared to have copied faithfully, but he was "stuck" on the Loch Ness Monster. Because of the broad classification and lack of any subject indexing, it was difficult to ascertain whether there was something of help to him on the shelves and the encyclopedias only gave sparse information. It was obvious that this child and others using the encyclopedias had little idea how to search through them using the indexes.

One girl had taken costume as her topic and had an excellent drawing of a 1920's "flapper" in her book with other good drawings of sixteenth century costume. Asked why she thought women of the 1920's dressed in that way she said she did not know, although the page of the book opposite the illustration she had reproduced, explained clearly that women sought and obtained greater freedom after World War I, etc. One of the questions she had posed on topic asked what were the prices of clothes in the 1920's. She said she had no idea how to find out, but when questioned about asking people alive at that time she did think her grandmother might remember and promised to ask her. The idea of asking people to help by drawing on their own experiences had not occurred to her before.
It was useful and instructive to work in the library with the children while they were finding and using sources and to discuss their topic work in this setting. Most said they liked "doing topic" (Assessment of Performance Unit, 1981) and would work on their topic during the week in school and at home, many seemed prepared to go to the local library for help and some had already done so. The school library's arrangement made finding books difficult; all history and geography was labelled 900 and given one colour code, all technology was treated in the same way, although the 500's class had been broken down into three figure subject divisions. As a consequence of this the children were having to search through several shelves of books to find anything relevant and often gave up. The class teacher said she did not like to interfere with the organisation of the library, but also gave the impression of being unaware that anything was wrong with it. On the whole the topic work looked like that seen in Schools A and B.

The last two weeks at the school were used to follow up a suggestion of the teacher. The six most able readers were asked to choose a topic and go into the library with the librarian to find six books on that subject from the shelves. These books could include appropriate pages in the encyclopedias. They were then to evaluate the information in the different sources, before passing the cards on to another six able children. These would look at the sources recommended and make notes from them on the given topic. It was hoped that this exercise would demonstrate skills of information retrieval, evaluation of sources and for the second group of children, an ability to identify main ideas and notemaking. The topics were intended to be specific, so that neither group would become too involved in the books, and some choices had to be narrowed down further after examining the bookstock, e.g. British wild flowers to yellow British wild flowers, bridges to bridges in the middle ages. The lack of specificity on the shelves also proved a handicap because it took the children some time to find six books. They were also in difficulties with the concept of evaluating their sources, preferring instead to write notes on the topics from the texts. It was probably
expecting too much of them to begin evaluation when they had not been asked to consider a book's merits or demerits in this way before and more groundwork was perhaps necessary before they could be competent to do so.

The following group of six had great difficulty in relocating specific books listed on the cards compiled by the first group because of the lack of shelf order. When they did locate a book they immediately began to copy out facts from this and did not, as intended compare the sources and then make notes from them. The exercise was not a successful one, probably for a variety of reasons. The lack of specificity in the classification made location of specific topic difficult and the children did not appreciate what was expected of them. Given an insufficient idea of the purpose of the assignment, they completed it in a way they knew best, making notes of facts found in each of the sources identified.

Comment

(i) Assessment

A great deal of time in school is devoted to topic work. Tomas (1982) quotes some inspectors as recording 30 per cent of the school week spent in thematic or topic work. Galton (1980) recorded 15 per cent of the time available to the pupil devoted to topic work and the Primary Survey found that 49 per cent of the schools questioned spent 10 - 25 per cent of the timetabled time on topic, the other 51 per cent spent more time than this.

Given this commitment in time, it seems puzzling that the work is apparently so undirected by the teacher or adequately assessed when it is completed. In the schools observed the work seen as marked was done so in a superficial manner and apparently accepted at its face value. The child in School C who was writing on fashion in the 1920's had obviously not considered using people as sources, and other contemporary evidence like newspapers would also have been fairly accessible to her.
An opportunity to use historical sources which, as the Primary Survey pointed out, could have been built into this topic. None of the schools had any systematic way of assessing progress in any skills through topic work. This bears out work carried out by Clift (1981) on record keeping in primary schools and Leith and Kerry on topic work.

Clift found that where records were kept they related to the process of topic:— length of time, content, with perhaps a comment on the quality of the pupil's work. Very few schools attempted an assessment of the skills involved or the pupil's attainment of them and where they did they were limited to

an extension of the reading record

The Schools Council Project on Developing Children's Thinking Through Topic Work found a higher response in that 52 per cent of teachers in the sample said they did keep records, although only 9 per cent marked off a proforma of skills (Kerry, 1983).

Leith (1981) describes how thirty teachers in nine schools were given an assessment sheet with eight categories for assessing the nature and objectives of topic work. At the end of the time allotted none of the teachers had used the checklist provided, despite having volunteered for this task, claiming they had been "too busy" or "had lost interest". She describes this situation as an "enigma" where teachers seemingly accord a high priority to topic work and devote much time to it and yet do not assess it in a formal way to see what pupils gain from it.

Clift, too, concludes pessimistically that teachers appear to accord a low priority to the development of study skills, but assume their use in 'project' work. (Clift, 1981).
(ii) **Copying**

Much of the work appeared to be copied without understanding since the children could not explain what their texts meant. In School A, this copying was further copied from their "rough" books to their "topic" books which would be shown to the Head and displayed for parents' nights.

The prevalence of copying has been a common complaint against topic both by teachers and reports such as Bullock

the experience of our visits was that much of the writing done in the name of topic amounts to no more than copying.

(Great Britain, Committee of Inquiry, 1975, p.393)

The Primary Survey (Great Britain, D.E.S.) too, comments

There was copied writing from reference books in about two-thirds of 9 year old classes and in four out of five 11 year old classes; this was generally felt to be excessive.

(Great Britain, D.E.S., 1976, p. 49).

Southgate agrees that her findings showed copying from reference works, but she qualifies this by pointing out that finding a relevant passage and copying it does demonstrate literal comprehension at least (Southgate, 1981). The problem is, however, that many children fail to progress beyond this stage even at secondary level (Lunzer, 1979). The task of collecting facts from different sources, collating them and presenting them as a coherent argument is not easy for young children, but there was no demonstration that practice in such skills were given to the children, even at top junior level (Great Britain, D.E.S., 1976).

(iii) **Illustrations**

Illustrations, too, were copied indiscriminately as Lunzer found (1979). The 'cat in splints' was the most amusing example
in this writer's study, but children were frequently observed to open a book and begin to copy the drawings immediately. Looking at their topic books it seemed that drawings were often favourably commented on by the teachers. Presumably, the children felt they were less likely to be rebuked for copying a drawing as opposed to copying text, so they chose to draw. Drawings and pictures cut out from magazines, etc. also fill up pages quickly. Such illustrations were mainly decorative additions to the text rather than an integral part of the presentation.

(iv) **Choice of topic**

Topics selected were often very wide with little attempt in School A to break them down in a systematic way. Schools B and C were better in this respect since their topics were closely directed. In School C a contents page was mandatory and this did seem to help in grouping items successfully under appropriate headings.

(v) **Using books**

Despite the teachers' affirmations in Schools A and C that the children had been taught to use indexes, page numbers, etc., there was no evidence that they did so when using books for topic work, as Harrison found in the "Effective Use of Reading" (Lunzer, 1979). In School C the children were required to produce a bibliography at the end of their topic book, but the impression was gained that this was done because the teacher had asked for a list of books and not because they saw its relevance to their work.

The bookstocks in the central library collection of all three schools was reasonable (see appendix 5); the class collection in School A was poor and School C did not have a class collection. In both schools the children had made use of the central library stock. Ironically in School B the class collection was better than the others, but children here were
working in the main from the "Let's Investigate" set which was little more than a detailed comprehension exercise and, therefore, did not require the children to use either classroom or central library collections. However, where children in this class claimed to have used books for other topic work examined, they had done so in the public library during the school strike and so no monitoring of the way they used them was possible.

The impression was gained that none of the three teachers were very familiar with the books the children were using, or the quality of the school bookstock in a particular subject area. Selection in all three schools was done by the teacher with responsibility for the library and the Head, and the three class teachers did not display any enthusiasm for, or knowledge of children's literature. (Ingham, 1981 (a)).

All the children had succeeded in locating books for their particular topic, which does show an ability to retrieve relevant information from a book collection, but this skill was not being developed beyond the basic stage of knowing where on the library shelves books on a particular subject could be found. This, of course, was all that was required by the tasks set them, but as the attempt at evaluation in School C showed, any assignment that made more sophisticated demands on the retrieval system failed because the system did not underpin the learning task (see also Libraries organisation, Chapter 4).

There seemed to be a great reliance on books as sources of information. There was no evidence in the three schools that the children had been given any idea of comparing different books on a particular subject; the attempt to do this in School C was a failure. Even the children who would have been most capable of this seemed programmed to open books and begin writing. Working with School C's children it was apparent that they had not been told to look even at the dates of books or the significance of this. Perhaps part of the problem goes
back to the teacher's own inadequacies as book users which was demonstrated on the reference skills courses. As Hounsell found teachers are not well equipped to use information sources and often unaware of the need to do so. (Hounsell and Martin, 1980). They cannot, therefore, be expected to perceive a need to pass such skills on to their pupils, despite their assumption of pupils' needs to employ them.

(vi) Use of "non book" materials

No other sources except books were used in the topic work, despite the existence of resource areas in all three schools. Audio-visual materials were not available for the children's use, and because the work was individualized, this may have meant the teachers did not use such resources as they might have done in a class lesson. However, it seemed a missed opportunity not to allow children access to these materials since many children are probably familiar with cassettes and slides through home use and should be encouraged to accept that information is conveyed in many different forms.

(vii) Subject teaching

There was little evidence that subjects outside the basic ones of language, mathematics and science were included in the curriculum of two of the classes. They did not appear on the timetables and were felt to be covered in topic work. Because School C was a Roman Catholic one, religious studies were timetabled and history and geography were included in this context (the children were studying Poland at the time of the observations). The children's knowledge of chronological time was vague and although this concept is acknowledged by teachers as being slow to develop, it was disturbingly absent in many of these eleven to twelve year olds. The Primary Survey also found that history work was superficial, often merely
copying from books on a given topic with no sense of chronological sequence, historical change or use of historical evidence. Although the concept of time develops slowly in young children (Piaget, 1969), it was not helped by this approach. (Great Britain, D.E.S., 1978).

Science too, is seen by the Surveys as a good vehicle for observation, evidence, deduction and the use of books for the identification of specimens. However, these opportunities are missed in many schools either because a series of topics is studied which are unrelated to each other or the children's interest and lacked basic planning of content or continuity. (Great Britain, D.E.S., 1982).

Geography offers opportunities for mapping, observation and deduction, but the Surveys found that geography books were more often used than maps. As in history it was often taught through topics which were repetitive and underestimated the children's capabilities. (Great Britain, D.E.S., 1976).

It is regrettable that although the basic skills of reading and mathematics are generally recognized as well taught, the opportunity that exists in primary schools for the development of information skills through subject teaching is not being taken. One would imagine that the subject areas offered interesting possibilities for various skills which would capture the pupils' interest rather more than copying undigested facts from a reference book into a topic book.

(viii) Accuracy

There seemed to be a disturbing lack of attention to accuracy amongst the children, e.g. Brontosaurus topic work and the otter being treated as a rodent. It is possible that such inaccuracies were later corrected by the teachers, but the topic books examined did suggest that much of the content of the children's work was accepted uncritically. The emphasis of the teachers' comment seemed concerned with the
standard of presentation, with special praise for good
drawings or the inclusion of material from magazines
or publicity handouts.

(ix) Teachers' and pupils' perception

Perhaps also as Brake suggests (1980 (b)) teachers
perceive a risk in developing critical faculties in their
pupils. If books are undermined as sources of information,
this could also be seen as undermining the teacher's
position as reliable conveyors of information. For the
pupil there is also a risk, it is easier and safer to
accept the authority of a teacher or book than be told to
compare different sources, assess their worth and form a
value judgement. The incident in School C with the
bathyscaphe perhaps illustrates this: the two children
were content to accept the knowledge of the teacher figure
and act upon it, even though they were told that knowledge
was possibly inaccurate and there were other sources available
against which it could be checked.

Students of whatever age will execute a given task in the
light of how they perceive the taskmaster's requirement and if
copying will do they will take that easiest path, becoming
in Margaret Meek's words

busy copyists (Meek, 1977).

(x) Individualization in the classroom

This is the major drawback to individual topic work.
It is impossible for the busy teacher to take up
individual points when coping with a whole class of
about thirty pupils. Working with individual children
or in small groups in the library in School C, it was
possible to develop points as they arose with particular children and this "tutorial" method underlies the Plowden philosophy of individualism. However, it is not practical in today's primary classes and so conceptual or innovative teaching tends to take place with the class as a whole, not in small groups or with individuals (Galton, 1980) because of the constraints on the teacher's time. This, apparently simple point about practical classroom management is probably one of the most important factors in influencing how children are taught and any suggestions for the improvement of teaching has to take this into account.

**Topic Work in the Task Force**

The Task Force work on topics did have this question of organisation in the classroom in mind, and consequently the ideas tried out were with the class as a whole, and then dividing the children into groups. The teacher "directed" the topic rather more than many had been used to in the past, and the strategy was based on

"What do I know already"

"What do I want to know"

"How do I find out"

This had been a technique suggested by the reference skills course and was seen in use by the observer in Schools A and C, but there it had been "grafted on" without, it seemed, a proper explanation to the children, or a proper understanding on the part of the teacher. Consequently, it did not work, and the children (after a superficial attempt at composing questions) had forgotten it during their writing. The teachers had not, apparently, pursued the idea further either, a danger when teaching methods are adopted without a real understanding of their purpose, or preparation for the innovation beforehand.
The Task Force experiment was more successful, and it was decided to include an explanation of the technique, illustrated with examples of the children's work in an exhibition and workshop to explain the work of the Task Force to other Coventry teachers (see appendix 3). A variety of topics were chosen by the teachers including:

"Clothes which keep us warm" (top infant)

"Cows and sheep" (third year juniors)

"The E.E.C." (top juniors)

"The body" (top juniors).

The infant teachers found this three questions approach difficult even with the brightest children, who were reluctant to name any topic and when they did, their questions, e.g.

"Why do cats' eyes shine in the dark"?

"What happens when you turn the key in a car and why do its wheels go round"?

"How can I do a three point turn in skating"?

were unanswerable from the infant books available in the school and quite possibly unanswerable from books in any case. These children opted for asking Aunty "who knew about cats"; the "man at the garage", watching Dad service the car or a skating teacher. A strategy which disappointed the teachers who seemed anxious that the information the children sought should be found in books.

The infant school working on "clothes" had a spinning and weaving demonstration; this did spark off questions which were answered by the demonstrator while she was present and later from
the collections of books in the school and borrowed from the school library service. The infant teachers concluded that this approach was not suitable for children of this age group; the children found it difficult to form questions when asked to do so, and needed the stimulus of something like a visit or demonstration to focus their thinking. There was also the problem of the inadequacy of information books for infants; many had no page numbers, indexes or contents pages and gave only the most basic information on a topic.

The junior teacher who chose "The Body" divided her class into groups, each dealing with a particular aspect of the body. Lists of questions were drawn up by the group and attempts were made to find the answers from books in the school library. Despite a well-organised and good book stock supplemented by material from the school library service project collection, the class failed to find many answers to their questions. These too were very specific:

"why do people go bald"

"why do I have warts on my feet" [see appendix 6]

The teacher decided to group the questions into broad subject categories and then formulated more general questions, hoping this might help to answer the specific questions, which did prove to be the case in many instances. The baldness question was partially answered by looking at a book about hair and using the question "why do people have hair?", demonstrating to some extent that the formulation of the question is important in relation to the source being interrogated and it is necessary to recognise the answer even if it is not presented in precisely the way the question was asked, i.e. a description of hair and how it grows, not why it falls out.

Some questions could not be answered from the books available partly because suitable texts on complex medical matters are not
available for this age level and partly because they were best answered in other ways such as observation and deduction

"why do I have lines on my palms"

could be demonstrated to the children's satisfaction by asking them to bend their hands to see where the creases came.

The work the children presented at the end of the project was interesting and seemed to demonstrate evidence of learning having taken place through discovery (see samples in appendix 6).

Another junior teacher took "Cows and Sheep" as her topic and the children divided into groups to pool their knowledge of cows or sheep and to pose questions. It was interesting that these third year juniors collectively, at least, knew as much about sheep or cows as the average information book suitable for their age range was likely to tell them. Some of their questions would be more difficult to answer from such sources

"how fast do sheep move"

"how much do they (lambs) weigh when they are born".

Again, the teacher grouped the questions together into more general ones and the children tried to find the answers from the schools collections of books (see appendix 6). At that time this particular school did not have a central library; book collections were kept outside classrooms and each shared between two classes. They were colour coded into broad subject divisions. These children had just moved into their third year and had not previously been taught any reference skills. The teacher, who had been the junior "good practice" example on the reference skills courses, found that the children were unable to find books efficiently or cope with contents and indexes pages, skills she would have hoped to teach them during the year separate from topic work. Now, she found it necessary to interrupt the project work in order to teach these skills and also how to write
letters, since the class had decided to enlist the help of a local butcher in answering their questions. This experience convinced her that she had been guilty of teaching the reference skills in isolation. However, she still felt she had not the right balance because now she was halting the children's enthusiasm for the topic by stopping to teach the skills. This would perhaps have been avoided in subsequent topic work, since the teacher, building on this experience, was now in a position to anticipate the skills needed for topic and ensure that their teaching was included in the topic scheme.

The other fourth year junior teacher selected eight of her pupils whose reading ages were advanced by two or more years to do a topic on the E.E.C. After sorting out some amusing misconceptions of the Community, each child chose a particular country and applied the "three questions technique". Because the children were intelligent they "asked all the right questions" and did not pose any that would be difficult to answer. This observation that the brightest children "knew the form" had been commented on earlier by the adviser when she had tried this technique with another class. The more able children at this age seemed to appreciate the types of questions that were readily answered by information books at their disposal, possibly, from long practice with topic work through their schooling, e.g.

"How many countries are there in the Common Market?"

Less able children tended to ask more difficult or less clearly thought out questions, e.g.

"What shades are colour?"

more akin to the ones asked by the infants. The work from these children showed many of the characteristics for which topic has been criticised, it was not well organised and showed evidence that parts of it had been copied from books without understanding (see appendix 6). This teacher felt least satisfied with her group's work and it reinforced her feeling that there was an over-emphasis on children producing written work for a project, because that was what was expected by the Head, parents and probably other teachers.
Comment

(i) Infant work

This strategy did not work at infant level. The children appeared to be too young to articulate information needs without a stimulus. Much of the information they sought was not available in books and certainly not at their level of comprehension. However, it did perhaps help them to see that not all information was in books and their instinct to ask people was often a good one. Correctly handled, it could give them a practice in formulating questions, a talent which appears in very young children, but which Galton and the Primary Survey found was sometimes not developed in primary schools.

The infant topic on "clothes" was more successful once the children had the stimulus of a live demonstration of spinning and weaving which caught their interest. Perhaps an indication that a planned topic in which care is taken to provide a stimulus produces a high quality of work from the children and can stretch their abilities.

(ii) Junior work

Interesting work also came from the juniors working on the Body (see appendix 6). Their "guesses" on the structure of the body and subsequent modification in the light of their information search show evidence of genuine learning having taken place. Much was learned also on the strategy of asking questions and regrouping or rephrasing them so that it was possible to locate or deduce the answer from an information source. Observation was brought in as a technique for gaining information when books seemed inappropriate or failed to give an answer. Although this may seem an obvious point, it is not always used as a strategy in schools.

In this particular topic, it was evident that the teacher was also learning alongside the children. She did not know all the answers to the questions raised and children and teacher learnt
search strategies together. This was a good example of independent learning taking place in a class situation with the teacher "leading from behind". (Galton, 1960 (b)) and children working in groups within the class in possibly the manner envisaged by Plowden.

The Cows and Sheep topic (see Appendix 6), showed how much knowledge children, again working in groups on a class project, could bring to a subject which would normally have been set as the topic without first investigating what the children knew. With hindsight, it seemed an obvious way to begin any topic, but in practice was not a technique usually used by the teachers. Cows and sheep are, of course, a reasonably straightforward and commonplace subject and it was not surprising perhaps that children of about ten years old would have acquired some knowledge of them. Nevertheless, the teachers who used this technique were surprised at what the children knew and embarrassed by the complexity of the questions they wanted answered.

This has implications for teacher education, the ability of teachers as information seekers and for the quality of resources found in school. The school stock of information books on this subject repeated many of the facts the children already knew and left many interesting questions unanswered. The teacher’s suggestion of writing to a local butcher presupposed such knowledge on his part and time and willingness to answer. A visit to a local farm was also suggested as a solution, but many teachers shrank from the problems of frequent primary school visits outside school.

The question of how one resolved this dilemma was not answered. Teachers felt approaches to publishers for better quality information books, given this evidence of the high level of children’s knowledge and curiosity, were one possibility. This could, of course, be extended to audio-visual aids, which had also been searched at the school without success. This solution was not only likely to be in the long term, but also encouraged the feeling amongst teachers that "books have the answers" and if this proves not to be true of the school library then it is the library or publishers who are at fault. Improved
educational resources would be welcome and useful, but it avoided the issue of how children might be encouraged to "find out" rather than simply reprocess found facts from a limited collection of school books. This has implications for analysis of assignments in the way suggested by the School Council Curriculum Bulletin (Marland (ed.), 1981).

It also called into question the topics observed in Schools A, B, C. How much of what was being patiently copied into topic books was already known to the children? In schools B and C there was no co-ordination of individual topic work from year to year and this seems to accord with the findings of Leith (1981), Bassey (1977) and Kerry (1983). It was entirely possible that children, given freedom of choice, chose a topic about which they already knew the basic facts, either as an easy option, or an attempt to increase their knowledge, and failing both, because they had inadequate sources and lacked the strategies for effective information retrieval, had resorted to copying facts they already knew and thought teacher would want.

Subject Indexing

This work grew out of conversations within the Task Force. One teacher had begun a topic on 'Crime and Punishment' by asking her children to go to the library and look for "relevant material". Her usual method had been to collect it all from the library in advance for them. She discovered that they had little idea of how the library was organised (by Dewey classes). She held back the project to teach the children some basic library skills (how many other teachers assume children can use the library because they never give children a reason to search for something, but collect material in advance). After this instruction, they did find appropriate books on crime or police, but did not think to broaden the search to related areas such as books on history which may have contained relevant chapters. Although the class was a fourth year junior one it had not progressed in library skills beyond the basic ability to
recognise a book by its cover or title as a useful one which was being demonstrated effectively by infant classes represented in the group. The notion of related terms/concepts and, therefore, related locations was not appreciated. The teacher assumed that people "picked this up" without being taught. The fact that the infant classes in the group were able to acquire this ability demonstrated both the need for some specific teaching/learning of it, and that it could be applied successfully.

The result of this work was a subject index of useful books and pages by subject (see Appendix 6): a "subject index" by the discovery method. The Librarian had explained the principles of subject indexes before, but the lesson was obviously best learnt from the teacher's own experiences. The Librarian was eager to build on this and, consequently, was invited to Schools C and D to pursue the subject in the latter school with two classes, the third and fourth year juniors.

1. School D

The Librarian worked with a group of eight able children while the rest of the class and teacher explored "book words". The group began by sorting piles of books, newly bought for the school library, into subject categories. Their first attempts were into broad groups (e.g. Animals or Science) despite the specificity of the library shelves. After being questioned as to how they thought they would find books on particular animals, they suggested that these categories could usefully be divided further, and at a second attempt did so sensibly and effectively. The next step was to ask the children to write onto cards the subject of the books in the pile they were given. Although the choice of books was a random one, they proved quite suitable and the children suggested that books on more than one subject, e.g. coffee, cocoa and tea could have three cards to represent each subject.
At first they had problems (e.g. with books such as, "From Newgate to Tyburn" as a cover title), but after questioning remembered their "bookwords" and used the blurb and title page to help discover the context. Other titles, such as "Indians of the Plain" or "Highland Clans" raised the question of which index word to use, as one child pointed out "Indians" was ambiguous, so they discussed the problem and decided to use "red indians". The terms "highlands" and "clans" were not known to them and the book's preliminaries did not assist them with a definition. This time they settled for Scotland, giving an opportunity for 'see' and 'see also' references to be introduced. A 'see also' reference for "red indians" was made from "indians". It was interesting to see how the children identified these points themselves when analysing a book's subject matter in order to locate it again from an index and appreciated that a controlled language for retrieval was necessary.

The next week they tried to find classification numbers for the books by taking their index cards to the shelves and matching up subjects. They quickly discovered the inadequacy of the printed subject guide on the wall, both in terms of its coverage of the subjects and remoteness of its language, e.g.

"Public utilities, communications" 380

"Technology 600.

This was not successful as an exercise in that they found difficulty in tracing books on particular subjects on the shelves, even "easy" ones like flowers (582), aircraft (389). If they failed to find the subject they asked the Librarian, who experimented with checking the school edition of Dewey (Winslade, 1977) which was in the library. Again the language and layout were not helpful, so in many cases the children were given a number and asked to check it on the shelves to see if there were other books there on the same subject. This was then added to the card.
The cards were sorted into alphabetical order by the children, forming a satisfactory bundle to which the top juniors' work was added. These lessons seemed very popular with the children and they were obviously pleased with their "index" which was to be left in the library.

The classification numbers from the index cards were pencilled into the new books and put into a numerical sequence and this had the effect of bringing three books on power, solar, steam and water, together and also a series of nature study books on life under the apple tree, in a hedgerow, etc. One child saw this and it led to a discussion of numbers as codes for subjects or objects. The connection with bar codes was made, so it was easy to ask them to imagine an index like the one they had just completed being put into a computer as an idea for a future school library index.

Work with the fourth year group took up the rest of the afternoon in the library. They had been given the choice of working on an individual topic (not a normal practice for this class) or compiling large subject index cards. Each child who had chosen to do this had selected a letter of the alphabet. In a previous lesson the class had been asked to name subjects in which they were interested and these alphabetical lists were the result. They were trying to find the appropriate Dewey number from the Schools Dewey and the teacher wrote down the classification numbers as they were called out. This was not proving successful because the index is not easy to use and neither teacher nor children were making the connections between the broad subject headings and narrower subject divisions. Since they seemed to have no initial understanding of the principles of classification this exercise seemed to be jumping too many stages ahead.

After expressing this opinion to the teacher, the Librarian talked to the whole class about the "Dewey tree" the following week. The "tree" was on the library wall so its "branches" and "twigs" were illustrated with a drawing of one main class, 500,
as a branch; its smaller "branches" 510, 520, etc. and one "branch", 590 with "twigs", 591, 592, 593, etc. Then other uses of numbers as codes were asked for and pupils thought of car registration numbers, postcodes and the now inevitable barcode labels! Returning to books and their linear arrangement, the "tree" and its "branches" was related to their library shelves and the way books were arranged.

After this the class was divided into five groups of five and the children tried making subject cards for books on the shelves after seeing what the third years had accomplished previously with the new books. Each group worked in a different area of the library. This was only partially successful, since some areas were not suitable, history and poetry proved to be lacking in specificity and the area on religions seemed to have a high proportion of titles that confused the children, e.g. "houses of the Bible". But other areas - 380, 700 and 500 suited the exercise better and the groups working in these areas grasped the idea reasonably well. The teacher was keen to pursue this, so the children spent another two sessions occupied in this way and finally put their cards into alphabetical order, interfiling them with those of the third year group. Again, seeing the results of their efforts and knowing the index would be kept in the library for others to use, pleased them.

Less time was spent with this class, since the teacher was ill for one week. It was also less satisfactory working with the whole group at once; it was more difficult to draw out and develop points that arose and also the less able children, who were working in a group, found it more difficult to grasp the concepts. The whole class suffered from tackling the work at this level without the principles of classification being adequately explained to them beforehand. These principles, it seemed, were more self evident when, like the third years, one began with a small selection of books and demonstrated how they can be organised by subjects.
In some ways work in School D developed into a "library lesson", with its emphasis on classification and indexing but it did attempt to show the children (and their teachers) why their library was arranged in the way it was, and how much more useful it could be with an index to the subjects. The teachers felt that they and the children had learnt from the experience and were pleased with the work that resulted from it, although no other evaluation was attempted.

2. School C

Subject Indexing (see Appendix 6)

Two lessons were used to look at arranging books in subject categories and making subject indexes for information retrieval. A fairly random collection of new children's books was brought into the class from the University. The librarian worked with one group of six children at a time while the other groups worked on mathematics, workcards, rotating around the class at roughly thirty minute intervals. The children were asked to say what they thought was the subject of the book, at first from the cover, and then by looking inside it. There were some 'trick' questions, such as a book of poetry called "Horses", a book of prose called "Sliding". The children usually fell into the trap of judging the book by its cover, until they discovered their mistake by looking at the 'blurb' or the title page. The first session was a success, the children suggested a subject and the librarian wrote it on a 5" x 3" card; this brought out differences of terminology, a book on cows and calves, bikes or bicycles, so that the point of 'see' references could be explained. The next week the librarian came with the books and cards labelled with simple Dewey numbers and the children guessed why this was done. When the books were rearranged into their number order they were able to see how similar topics, e.g. books on different types of pollution were brought...
together by having the same numbers. They then put the subject cards in alphabetical order and were able to see, using this same example, that air pollution, land pollution and pollution could be looked up under their specific headings and related back to the numbered sequence of books. Some groups grasped this more quickly than others and where time permitted other examples of finding things by using codes were discussed. Someone made the connection with the local branch library's issue system and this led to other computer coded information (e.g. the barcode labels they had noticed on goods and the use of these at the new, local supermarket checkouts, where light pens were in use).

Comment

The "broad" order of the library at School C prevented any follow-up work from the school library shelves, but experiences at School D had not demonstrated that it was an entirely appropriate strategy. However, there was a need for a more closely defined classification scheme at School C, both to reinforce the concept of subject indexing and because topic work there had demonstrated that children of this age do need to be able to locate specific subjects. The work in both schools was opportunistic and in isolation from their other classroom work. It also suffered from a lack of knowledge of the library's stock. Nevertheless, within these limitations, it was successful in demonstrating that children did readily understand the concept of indexing by subjects and tackled the problems of terminology and their solutions through 'see' and 'see also' references with understanding. The intention of the sessions was to demonstrate a way of organising a body of knowledge by subjects and suggest a way - index cards and code numbers that this might be done. Although in essence a "library lesson" it did not begin with an explanation of the classification scheme, in fact "Dewey" was not mentioned in School C, since the rudimentary organisation of the library shelves seemed to make it irrelevant. The approach was to
present the children with an organisational problem, give them a framework of ideas, for solving it and then guide their suggestions. It is interesting to see that computer software has recently been produced which uses this idea by allowing children to construct their own databases of information on particular subjects, e.g. SIR, Factfile, Ceefax, Edfax).

However, if these techniques are to be used in the classroom then teachers have to appreciate the principles first. Librarians, perhaps, tend to forget or do not realise that teachers may not understand the principles of indexing and classification. When teachers ask for assistance they may be discouraged by what the librarian feels is a reasonable explanation of a classification system, when what is needed is a rationale of why libraries are organised in the way they are. This may have lain behind the enthusiastic adoption of the OCCI system in some schools, which some librarians dismissed as impracticable or already possible with conventional subject indexing.

... they have perhaps succeeded primarily in re-stating the original problem which had led a world wide profession to invent the retrieval equivalent of the wheel. At least they noticed. (Beswick, 1975, p.26).

An example of this and of the failure of librarians to make any real impression on teacher education was demonstrated by a teacher in a school which the observer visited at her request. The teacher having heard the librarian's opinion on indexing in schools during the Task Force workshop, invited her to look at a scheme she had devised. This teacher was under the impression that "Dewey was too simple" having seen a schedule which placed "animals at S90". Since she wished to identify particular animals she invented a complex scheme of letters, numbers and colours which enabled her to isolate individual subjects. Because of its complexity she had made a subject index to the scheme which she said the junior school children used with ease, and was now "reinventing" a classified catalogue
for teachers' use. Having listened to the workshop discussion she regretted not knowing more about Dewey since her scheme had taken a year of hard work to devise.

Paradoxically, having to invent a classification scheme because of a lack of knowledge about existing ones, forced this teacher to appreciate a need for subject indexes, although she was predisposed to specificity in the first instance. Other teachers with libraries already organised by a broad Dewey classification do not seem to see a need for a subject index to their collections (see appendix 5), an enigma code with no ultra machine to break it.

(Cole, 1979, p.29).

School D's library was "closely" classified using Dewey, but its complexity was "lost" on teachers and children; location was done by knowing on which shelf books on a particular subject were to be found. This demonstrates a certain locational skill but is not based on an understanding of the reason for order.

"Bookwords"

The idea for work on "bookwords" came from the reference skills courses where the adviser had asked teachers to try to define a list of book-related terms compiled by the librarian, and also to add words not included in the librarian's list (see appendix 3). She hoped to establish a common vocabulary for teachers to use when they discussed the organisation of a book with children as part of reference skills teaching.

Some of the teachers in the task force wished to try this work with pupils and bring the results back to discuss. The original basic list had been modified by the teachers and children were asked to add their own to it. The teachers were surprised how many words the children contributed, although some seemed imprecise to the librarian.
Bookwords at School C

On the morning of the first visit to School C, the pupils were calling out bookwords beginning with the letters A to E which the teacher wrote on the blackboard. The teacher also contributed words when the class seemed to have exhausted all the possibilities they knew for a given letter. The words were not defined by the contributor and written up uncritically. One which caught the librarian's attention because of its "specialist" library meaning was "abstract" but on being questioned the child could not define it. After prompting by the teacher she consulted her dictionary and confirmed that its definition as "excerpt" was the word she had been thinking of. The words were copied from the board into the children's vocabulary books but without definitions. The teacher expressed her satisfaction at the number known to her class, but since many were not defined within the lesson it was difficult to know if all the class understood the meanings of all the words.

The librarian was invited to talk to the class about her work and books in general. A question on the age of books led to an explanation of how books usually carry their dates inside them and as books were produced from desks, the children looked for the dates. One child's paperback copy of an Enid Blyton story dating from the nineteen forties with a subsequent list of impressions and editions gave a good illustration of how to assess the date of a book, and how it might be quite old despite its outward, modern appearance. The class seemed genuinely interested in this fortuitous example and began to look at the dates of their school texts and dictionaries. Although the librarian had not intended to become involved in the bookwords lesson (having some doubts as to its usefulness) the question had given an opportunity to discuss an aspect of book evaluation in what seemed a fruitful way. "Edition" had been one of the words written on the blackboard that day and entered into the vocabulary books, but
when the word appeared on the title pages of books the children were using it seemed obvious that no-one in the class understood its precise meaning. Later in the Staffroom, the teacher confessed she had not known what edition meant and had been wrong to write it on the board without seeking an explanation.

Bookwords at School D

School D had also decided to introduce bookwords to the third year juniors whilst working in the library. The children had suggested a list of words to the teacher and were working in groups of four or five with eight to ten words each. They had been asked to find definitions in the dictionary, write down the given meaning in their books and then find an example from the library shelves. The class did not seem greatly enthused by the task; one group had volunteered the definition of "chapter" as a "section of a book". This was taken from their class dictionary and since it was the only dictionary available to them they were dismayed when told by the teacher that she was not satisfied by the definition and asked them to "think of a better one". The librarian subsequently checked the word in several reputable dictionaries and failed to find a different definition in any of them.

The work on bookwords continued for the five weeks the librarian visited the school. During this time she worked with a group of the most able children on subject indexing, while the rest of the class searched for examples of their bookwords. The librarian asked the teacher in the staffroom for a list of the words the children had found, since the compilation of a "class list" was part of the exercise. Some seemed, for example, "manufacturer" and others like "bibliography" were not included; at this stage the librarian amended the list at the teacher's request to exclude "non-bookwords" and insert common bookwords missed by the children.
The whole exercise seemed to have had time devoted to it out of proportion to its importance, or at least, to have been done in a way that was inappropriate. Unlike School C there was no evidence that the children did not understand the meanings of the words they wrote down, since they had checked them in their dictionaries and presumably understood at least some of the definitions. The instruction to find examples from the shelves was designed to test their understanding, but some of the examples would not be easy to find in a school library whilst searching at random. Perhaps part of the purpose was that in not finding them, the children would reflect on the deficiencies of the average information book. However, the Librarian felt great sympathy with a harassed child who came to ask assistance in finding a book with "an appendicitis".

Comment

Although these lessons were rooted in a desire to teach aspects of reference skills, they were taught in isolation from any explanation of why a book is organised into chapters, contents page, index, etc. and why such devices might aid the reader. A parallel might be made with some library lessons which begin with a list of the numbers used on the shelves, not why they are there, and if they were not there why it might be necessary to invent them.

The lessons may well have been counterproductive to teaching an appreciation of books, since the frustration factor in searching fruitlessly for an example of a preface or glossary was making some children impatient with working with books in the library. It also seemed highly dubious that the children would apply any of this "knowledge" of bookwords to actual book use in their next topic work. This appears to have been bourne out when in School C later in the morning when the apparently successful demonstration of dating books had taken place, the children working in the library on their topic work were using
books published in the late nineteen sixties for subjects such as "cars of the future" (see Chapter 3). Although the lessons about dating books repeated in the school library was apparently more successful, since the teacher reported later, that while reading to the children from a book about Poland they had surprised her by demanding to know what date it was.

The bookwords exercises in School D seemed to demonstrate how easy it appears to be to allow a well intentioned idea to develop into a bookword exercise. Although the class teacher was concerned to teach the children skills for independent learning and effective book use, in the end the method used resembled the activity of working through a series of worksheets, using a dictionary and library shelves to find the required answers with the purpose of the exercise not being clear to the children.

The recent spate of published material on information skills from publishers (e.g. Directions series; Reading 360 activity books; Findafact; Study Science) suggests that the now "fashionable" interest in these skills is in danger of being translated into yet another series of structured exercises. Whilst some of this material, notably "Directions" can be used to give teachers a starting point for some of the skills, it is likely that they will be used as "recipe" books for classwork in library and study skills, without the purpose of the acquisition of such skills being adequately explained to the children and possibly not understood by the teacher.

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Cooper, John. Directions 1, 2, Pointer. More Directions 1, 2. Oliver and Boyd, 1977-1983.


The libraries in the Coventry primary schools visited, and probably in many other school libraries within and outside the City, seemed to demonstrate an adoption of a form of library organisation without a clear idea of its purpose. Libraries in the four schools were all in superficially attractive accommodation, had a teacher with responsibility for their development and were arranged in a way that it was hoped helped the children to find books on a particular topic (see Appendix 5). However, closer inspection revealed a bookstock that was not regularly updated and little attempt to help teachers or pupils to use the library effectively by the provision of clear shelf guiding, subject indexes, or any explanation of the principles that underpin the convention of classification in libraries.

The demands made on the libraries by topic work or any other observed classroom work were obviously insufficient to highlight the deficiencies in library organisation. Independent resource based learning should involve the use of information retrieval skills that if practiced would have dictated the need for more effective libraries both in terms of stock selection and organisation. This, rather than what may be seen by others as a librarian's preoccupation with indexes and classification, has to be the spur to a better appreciation of why resources need to be ordered in a way that allows specific items to be retrieved.

The movement towards "discovery" learning in primary schools over the last thirty years, Hadow (Great Britain Board of Education 1937), the Dalton Plan (Parkhurst, 1937), Plowden (Great Britain D.E.S., 1967), has resulted in the growth of collections of books within the primary school. They have been seen as one of the way in which the child can elicit information on subjects in which his/her interest has been aroused. The increase in the provision of book and other resources in schools has perhaps been greatest between the late nineteen fifties and later nineteen sixties. In 1959 a Ministry of Education pamphlet
"Libraries in Schools" (Great Britain, Ministry of Education, 1959) encouraged schools to establish libraries, but, by the second edition the pamphlet (Great Britain, Ministry of Education, 1964) had changed its emphasis from the need for library provision to a concern with ways in which children might be taught to use the books provided (Heeks, 1965), a concern which is still being expressed (Southgate, 1981).

Numbers of books in schools

In terms of numerical provision the schools of the nineteen eighties in Coventry had not progressed far beyond the numbers given by the Plowden Report as an average of 1,800 books per school, although this figure was supplemented in Coventry by the Schools Library Service. Southgate's average of fifteen books per pupil in the eight schools whose reading environment she surveyed appears high by comparison, but it is not clear from the report whether the Schools Library Service loans are included in these figures.

In Coventry an estimate of the numbers of books which belonged to the Schools was made by a shelf count of titles in the central and classroom collections. None of the heads or teachers had a clear idea of the number of books actually in the school, nor did most of the teachers replying to the inservice questionnaire (see Appendix 7).

Classroom Collections

Bullock stated that 95 per cent of primary schools had classroom libraries and 90 per cent central collections. Southgate found that all eight of the schools in her survey had classroom and central collections. Two of the four Coventry schools surveyed did not have classroom collections, but this seems untypical of most schools in the City. (See also questionnaire analysis, Appendix 7).

The discussions on the deployment of book resources in a primary school, e.g. (Kamm and Taylor, 1968), (Purton, 1970) and the relative merits of a central or classroom collection seem to be resolving
themselves in most primary schools in Coventry, as elsewhere, by having both. As rolls have fallen many City schools have used the opportunity to create a central library collection in a new, unused classroom or cloakroom space.

In the two classroom collections examined, the one in School A was under-resourced and not organised in any way that was obvious, beyond that of grouping series of books together. It did not appear much used by the children who were free to visit the central collection whenever they wished. Selection for the class collections was done by each class teacher. School B, however, made more use of their collection for class and topic work and seemed reluctant to use the central collection. The books in this classroom were chosen by the Head or teacher with library responsibility, not the class teacher, although he seemed satisfied with the selection. School B also had a collection of paperback fiction from the "bookbus" in the classroom which also seemed well used. Neither school exchanged books between the central and classroom collections.

The bookstock

Statistics on the numbers of books in school are, of course, no guide to the quality of the collection or the use made of them. The report Education 5 - 9 (Great Britain, D.E.S., 1982) considered that about one third of the schools visited had unsatisfactory provision in the numbers and quality of books and

In rather less than half the schools visited there was a satisfactory provision of books for different areas of the curriculum. (Great Britain, D.E.S., 1982, para. 2:10).

1 An L.E.A. service with a collection of paperback fiction for primary schools. Schools can request a visit once a term and children and teachers choose books for their classroom and central library collections. The service supplements the Schools Library Service operated by the City's Library Department.
The report also stated that reference books were frequently underused (Great Britain, D.E.S., 1982, para. 1, 2:5).

The schools observed appeared to use books in the topic work sessions, but not in other lessons. During the lunch-hours none of the libraries were seen to be extensively used by children, although all were free to do so and to take books home.

Southgate noted the poor physical condition of some books in use. However, Coventry schools' bookstock was on the whole in a reasonable physical condition, School A's being the most dilapidated, particularly the classroom collection.

Much of the stock in two schools had been purchased five to ten years previously with seemingly little added very recently. School B had "benefitted" from compensatory money after a school fire, although because of the interest in books by the school Head, new titles would almost certainly have been acquired in any case. School D had recently invested heavily in new books and much of the older stock had been discarded.

As in Southgate's survey there was a higher proportion of non-fiction books to fiction books in three of the four schools. These fiction stocks were largely provided by the Schools Library Service and appeared to be little used by the children. This was perhaps a reflection of their teachers' lack of enthusiasm for, or knowledge of children's imaginative literature (Ingham, 1981). In contrast, in School B, the Head's enthusiasm for books was communicated to her pupils at every opportunity.

Finance

Only in School A did the Head wish to reply to a direct enquiry as to the amount of money spent on library books; £200 in the current year, with £20 to each teacher for replenishing the classroom collections. In the writer's experience headteachers are often
reluctant to reveal the exact amount they devote to book purchase within the school and staff usually have little idea of its level.

The financial cuts in education over the past years have eroded the already small proportion of capitation allowances spent on books (E.P.C. e.g. 1980). Coventry has not been one of the high spending authorities in the past, although its expenditure on primary books has not declined as drastically, proportionately, as some local authority areas. Because of this consistently fairly low level of book expenditure, the bookstocks in the schools are not good enough to absorb further decline, even in the short term.

Since the cost of books has risen as local government spending has fallen, the numbers of books purchased between 1978 and 1982 appeared, from random shelf checks, to be few. Consequently, the age of most of the stocks was between five and ten years old. Of course, new books are not necessarily good books, but the collections were showing signs of wear and tear and books on some subjects were becoming outdated. The recent years have seen some improvements in the quality of information books for infant and junior levels, not least a noticeable increase in the provision of contents pages and indexes so it was regrettable that the school stocks were not being replenished with some of these improved titles. Also, children's interest in books can be stimulated by seeing new books come into the school, particularly if they can be involved in their indexing (Chapter 3).

**Physical organisation**

All the schools visited were built in the nineteen sixties and three had open plan library areas which housed information books in the foyer areas. Paradoxically, the open plan school was the only one to have a library in a closed room. In all four schools fiction was shelved in the corridors and classrooms. This may have been because of constraints on space, since all the library areas had little room for any expansion of the bookstock. However, it seemed
a pity to separate the books in this way, as the books in the corridors seemed less well used than the central library collection; busy corridors are not conducive to browsing.

The library areas in the foyers looked attractive, with posters, potted plants and small library tables and chairs. Their position and appearance gave a favourable impression to the visitor entering the school, especially if children were using the library at the time. Working in the areas with the children and observing activity in the lunch-hour highlighted the noisy and busy nature of the areas, which because of their location, were on the traffic routes for the school. Such a central location can encourage children to be aware of the library and make it less likely that the non-reader will be intimidated by having to enter a library room. However, it also makes concentrated and prolonged reading for the child who needs a quiet environment in which to do so, extremely difficult. Even during classroom periods, work in the open area library was not free from distractions from passers-by (surprisingly numerous in a primary school) or competition from the games activities in the adjacent school halls.

As Irving (1983) suggests, little attention has been paid to the importance of the library environment in reading, some children, at least, do need a quiet area for private reading and would welcome an opportunity for more time to be created for them to do so (Ingham, 1981 (b)). Lunzer's study found that reading in school classrooms is confined to "short bursts", usually of instructions on a worksheet, or in the library area, to scanning for information to reproduce in written form for project work (Lunzer, 1979).

Responsibility for the library

In Coventry it is usual for a teacher to be appointed to a scale post which includes responsibility for the library. Designations may vary from school to school and such a responsibility may be allied to language development, topic work or audio-visual aids. All four schools surveyed had a library responsibility post (allied in School A
with language developments). The inservice questionnaire analysis also showed a high proportion of library responsibility posts (see Appendix 7). This accords with the figures of 75 per cent quoted in the Primary Survey and c. 70 per cent given in Education 5 - 9 (Great Britain, D.E.S., 1979, 1981). None of the teachers in the schools, or on the inservice course, had had any initial or inservice training in library organisation or book selection.

The survey of library provision in secondary schools (Great Britain, D.E.S., 1979) found that few schools employed chartered librarians while three quarters of them had a teacher designated as a school librarian without any professional library qualifications and little time allocated for library duties. Since this situation still prevails at secondary level, despite the efforts of the School Library Association (1980) and the Library Association (1977) one cannot be sanguine that the primary schools will have librarians either professionally qualified or dually qualified as teachers and librarians in the foreseeable future.

Yet, until teachers have some insight into the selection, evaluation and organisation of resources for information retrieval it is difficult to see how libraries in schools can be more than the collections of books, rather than effective, multimedia libraries. Interest in, and knowledge of the library has to be communicated to the teachers and children in the school. This task requires a commitment by the school to integrate library use and classroom teaching and can only be achieved by a person able to devote his/her full time to the task, (Beswick, 1977), (Library Association, 1977). In the project schools the teacher with responsibility for the library had little time to devote to the task and for this reason at least, the library had not made an impact on the class teachers or the children.

Audio-visual materials

Little mention has been made of audio-visual materials in this study. Resource areas were included in the examination of library areas (see Appendix 5) but there was no instance of any audio-visual aids being employed in the classrooms during observation. The resources rooms, which included the school hardware, were kept locked
...and the key retrieved from the person responsible for the collection. Individual topic work was book-based and children did not even use illustrations or maps which do not involve any equipment.

Book selection

Book selection in the four schools was mainly from publishers' catalogues and in School B's case occasional visits to bookshops. The West Midlands area does not have a bookshop with a comprehensive range of children's books, although one large distributor of children's fiction in paperback is based at Leamington Spa and encourages visits from schools. The nearby University's Faculty and Institute of Education library has a large library of children's books and local teachers are encouraged to become library borrowers. The school library service has a large collection of children's books at its headquarters which can be visited by teachers and children to select books for loan and an exhibition of books maintained at the teachers' centre, which does not have a library collection of its own. There is no purchasing or processing scheme for school books as in e.g. Leicestershire's School Library Service. Both the School Library Service, local School Library Association branch and the L.E.A. produce annotated booklists on children's books on a regular basis. Despite the activities in this area, none of these aids to selection were mentioned by the teachers as aid to choosing books to purchase. They did, of course, select books for loan from the Schools Library Service. With the exception of School B, none of the teachers in the schools or on the inservice course were aware of the "Times Educational Supplement" information book awards and the annual review of the year's publishing that accompanies it. The "School Librarian" was also unknown to the teachers in three schools and only three teachers mentioned it on the inservice course. As Vincent (1980) reported teachers seem unaware of, or bewildered by, the sources available for book selection and felt the need for inservice courses in this area (Ingham, 1981 (a)). They also lack criteria by which to assess books for readability (Lunzer, 1979)(Hill, 1981)
and evaluate their content.

The current interest in information skills in Coventry did at least focus teachers' attention on the organisation of a book's content, indexes, page numbers, contents pages, which are necessary to teach children how to approach a book correctly. These teachers wished to put pressure on publishers to produce information books with these attributes, particularly for infant use. 'Recently published books at primary level are showing an increasing tendency to include indexes, etc. so it is possible that this feeling is a national one which has communicated itself to the publishers.

The freedom of British schools to purchase books as they wish (Kamm, 1966) and the increase during the 1960's of school libraries and resource-based learning, led to large numbers of information books being produced. Although many books have been commendable, there have been too many superficial topic books written to a publisher's formula. The content has often been too simplistic to answer the primary school child's questions when the children themselves are left to pose the questions (Chapter 3) (Meek, 1977). The same basic facts on a subject have been reproduced in too many information books so that a child with any knowledge of a subject is already aware of them. Many too, fail to capture the attention of the reader by stimulating interest with arresting facts that might induce him/her to read more, e.g. the opening to Ralph Whitlock's award winning book on spiders,

The weight of insects eaten by spiders in the world each year is more than the weight of all the people living. (Whitlock, 1974, p.7).

Coupled with this tendency not to explore a subject in any depth for the primary level, has been a lack of attention to the readability level of the text. Consequently, many children at infant level particularly have been discouraged from reading information books by the unsuitable language. It has been found that children reading books
for themselves need a readability level below that of their measured reading age (Lunzer, 1979) but that books used for independent, informational reading are often above the average reading age for that group (Hill, 1981).

Both teachers and librarians must take responsibility for encouraging others by buying from publishers' catalogues and then failing to evaluate their content and use by children adequately.

Experiences in schools and with the Task Force showed that few teachers have a detailed knowledge of the books children use in the classroom and that their training does not equip them to judge the quality or suitability of books (Vincent, 1980). Despite the emphasis on teaching and developing reading in the primary schools, there seems a contradictory neglect of evaluation, selection and exploitation of books (the vehicles of literacy) in many schools.

Classification of the bookstock

The organization of the bookstock in primary schools is often by colour coding or a simplified version of the Dewey Decimal Classification. Because of the constraints of time and training the teacher/librarian may find it difficult to explain the principles of the library's organisation to the rest of the staff (Southgate, 1981) and consequently to the children.

Schools A, B and C employed simplified versions of Dewey for their central library collections. (This practice is gaining popularity in the junior schools perhaps because of the Adviser's advocacy of it). Generally, in the City, infant schools tended to use colour coding only, and where infant and junior schools were merged the difficulty teachers saw in infants having to cope with a numerical classification scheme was often overcome by separating the infant and junior libraries.

In School A the class teacher had (temporary) responsibility for the library and, therefore, was familiar with the library's
classification. Children explained to the observer how they found particular subjects by relating them to the alphabetical index pinned to the library wall. This index, and the classification scheme, were confined to the broad subjects specified in the ten main classes of Dewey. There was a classified catalogue which appeared unused. When the teacher was asked what its purpose was, she replied that she thought all libraries had such catalogues, but appeared not to appreciate the need for a subject index to accompany, or if time is limited, replace it.

School B's central collection was efficiently organised by fairly specific numbers and had both a subject index and classified catalogue. The shelves were clearly labelled and broad subject guides were pinned on the walls.

During observation in the library at lunchtime, there was no evidence that children used the indexes, although they found and replaced books with apparent ease.

The classroom collection was organised alphabetically by subject and then colour coded, with a key pinned to the wall, e.g.

B red/green Bible; H red Homes.

There were twenty five categories and the doubling up of colours suggested that the subjects represented had exceeded the number of colours available (see Appendix 5). To an observer the system appeared difficult to follow, with overlapping categories, e.g.

C Creatures; N nature

However, the children appeared to find books with ease and one boy explained to the observer how the system worked. In response to a question about the central collection he explained that

"it wasn't in any order"!
This was despite the Head's claim that all the children were introduced to the central library collection and its organisation and were familiar with it.

School C was similar to School A, with very broad subject divisions that made some topic work in the library difficult (see Chapter 3). There were no catalogues only a broad subject index pinned to the wall.

School D used more specific Dewey numbers than the other schools, with up to three places after the decimal point; classification and processing was done by the school secretary who had attended a short in-service course on library organisation. The initial classification of the bookstock had been carried out voluntarily by local librarians some years previously.

However, the only guide to the classification was a commercially produced list of the ten main Dewey classes and main sub-divisions which included phrases such as "Public Utilities" and "Applied Sciences". There was no guiding on the shelves which, allied to the unusual shape of the room, made orientation difficult (see Appendix 5). As work in the library demonstrated, the children had no appreciation of the reason for, or meaning, of the complex numbers on the books and so ignored them. The two teachers felt that children should appreciate the classification scheme. However, work with one teacher using the Dewey schedules suggested that she also lacked an understanding of the purpose of the scheme, so it was not surprising that she found it difficult to help the children to appreciate it. (see Chapter 3). If the collection had been used effectively, the need for a subject index at least, would have become obvious.

This was an interesting illustration of the intervention of librarians in a school; they had classified a collection in an orthodox way but not followed it through with an index nor any explanation to the teaching staff of why it was done, or how to maintain it. If a librarian had remained in the school it is possible this would
not have happened since the scheme could have been explained to staff and children. Such an explanation might begin with the concepts of organising for information retrieval not, as so many library lessons do, with an explanation of the structure of the Dewey Decimal Classification.

It has been suggested that

Children appreciate a logical collection of books from an early age ... at the infant stage they can begin to group information books together according to their subject content. This can be done simply by colour coding, so that for instance all books on trees have green labels on their spines ... there has to be a clear consistent progress from colours only for infants to colour - plus numbers for juniors. Juniors accustomed to this labelling can easily make the transition to Dewey numbers only.

(Gordon, 1978, p.70).

This sensible planned progression was advocated by the adviser for Coventry schools (see Appendix 3), especially since adoption of Gordon's colour codes would ensure uniformity and continuity between infant and junior schools. However, work with infants in the Task Force (see Chapter 5) suggests that single numbers at least could be appreciated at infant level (Herring, 1978). The key to understanding the classification scheme is the child's understanding of the purpose of the arrangement and the role of numbers as a device to illustrate the relationships on which that arrangement is based.

Such an understanding is only possible if appreciated by the teacher also so that it can be communicated to the child. In none of the schools, and only in a few instances on the inservice course, did the teachers show any appreciation of why the bookstock needed a subject index to provide a key to a subject arrangement. In three schools this may have been partly explained by the lack of specificity of the subject arrangement, but this was not true in the fourth school where specificity existed and was not noticed by the children until the subject indexing sessions were introduced (see Chapter 3).
Provision for reading

In common with Lunzer, Ingham and Southgate this investigation found little opportunity for silent reading, either for pleasure or information. When reading occurred it appeared to be mainly limited to workcards and scanning information books for facts to transcribe into notebooks. Since observations were confined either to a single day in a particular school, or shorter visits to observe topic work, this cannot be said with the authority of the Lunzer or Southgate studies. Nevertheless, provision for reading periods did not appear on the classroom timetables and in the days spent in schools, the children turned to workcards to occupy themselves while waiting for the teacher's attention.

Only in School A was there a specific time devoted to reading (see Chapter 3) and the teacher used this time to organise craft materials for the next lesson, not to read silently with the children as an encouragement and an example. (Pearsall, 1980). The majority of the books the children selected seemed, as far as could be observed, to be readers from their reading schemes and in one case the 'Yellow Pages'. The idea of reading for pleasure was also apparently discouraged by reserving "funbooks" for "perks" (see Chapter 3).

Children's ability to develop into enthusiastic readers often has to be fostered, particularly in a deprived area, as this one was, where children may not encounter the reading habit at home. This encouragement includes the provision of interesting and appealing books and, importantly, the teacher's knowledge of, and interest in, them. As Ingham's study showed it is not enough simply to provide books, teachers must support their use. In this classroom (on that day at least), there was no evidence that either of those conditions prevailed.

Although imaginative literature and the reading habit are not within the scope of this study, flexible or effective reading strategies are necessary for information skills and their acquisition must be closely linked with practice in reading, one of the best
and most enjoyable ways of which is by "reading for pleasure", which in itself is indivisible from "reading for information" (Irving, 1980 (a)).

The work in schools. Part 3. The Inservice Course

The work in schools on topic work and library organisation demonstrated the need for inservice training for the teachers in identifying and teaching information skills. The reference skills courses had aroused some interest, but had reached only the Head and teacher with library responsibility. The Task Force had reached more teachers through the exhibition but no sustained follow-up courses were instigated. It was hoped to second a teacher for a year to work in this area and disseminate information, but the proposal was a victim of further education cuts.

The four week, two hour session inservice course was intended to examine whether a librarian who had done some observation work and action research in schools, could usefully transmit some of the initial findings to a group of teachers. It was hoped also that the experiences of the course would form a basis for longer inservice courses organised either by the Institute or the L.E.A.

Fifty class teachers were selected at random from those who had been on the reference skills courses and asked if they would be interested in attending a short course on reference skills organised by the librarian. The first fifteen who replied expressing an interest were sent an outline of the course, its dates and times and asked if they would become course members. All fifteen replied in the affirmative and a total of thirty-seven teachers responded positively to the initial enquiry.

The course outline (see Appendix 7)

The course aimed to define skills associated with the term "reference skills", and examine the need for teaching them. Since many schools appeared to teach the skills through workcards isolated
from other classroom teaching it was hoped to explore the advantages (if any) and disadvantages of this and how the skills teaching might be integrated into the teaching of subjects and topic work. After this examination of the definition and possible integration of skills into the curriculum their assessment was to be looked at briefly, since this seemed an area neglected by many teachers. Finally, if as it was believed, information skills can and should be taught from infant level upwards, the possibility of whole school policies for the development and reinforcement of skills throughout the primary years would be proposed as being essential to accomplish this successfully.

The second week was to be devoted to work from the task force and the librarian's work in schools. Teachers from Schools C and D were asked to participate in this. In the event, it proved impossible to find a date within the weeks of the course when all three teachers were able to attend, so only the teacher from School C took part. This sharing of experience from the classroom fitted in with the philosophy of the L.E.A. and it was felt that the librarian should establish evidence of having worked in schools in liaison with class teachers to give authority to suggestions for ways of teaching the skills.

The third week was designed to concentrate on library organisation and most importantly the concepts of classification, and why it was felt necessary in primary school libraries. The development of information retrieval by computers, and their proliferation in schools, would be mentioned alongside the teaching of book and library skills.

The fourth week aimed to study some of the commercially produced material which claimed to develop reference skills and to evaluate its use. This was to link with the planning of topic work to include information skills and how their development through topic work might be evaluated. It was planned to end the session by examining the document "Information Skills in the Curriculum" (Marland, ed. 1981) which examines secondary school assignments and seeks to place them
within a framework of information skills development. It was felt that such a framework could be adapted by teachers for use in primary school topic work.

The syllabus was a crowded one, but it was hoped that by mentioning each of the topics briefly, teachers might be stimulated into thinking about information skills in their teaching and its relevance to library organisation and topic work. It was intended to follow the course with a questionnaire to all the participating teachers and "in depth" interviews with three or four to assess their reactions to the course and which areas they felt most important and would have liked to have seen explored in greater detail. Also, whether they would be interested in a longer inservice course based on the one attended. Unfortunately, it did not prove possible to do this in the time available to the project. The University of Warwick is to incorporate some of this teaching in a two year Diploma in Children's Literature to begin in October, 1983. This will enable some impressions of the course, at least, to be reflected in the new course's content.

The questionnaire

The teachers were asked to complete a questionnaire at the beginning of the first session, so that their answers were spontaneous. Fourteen teachers attended the first session, the fifteenth being prevented through illness. The questionnaire sought to establish

(i) a profile of their school;

(ii) a profile of the teacher (age, qualifications, responsibility in the school;

(iii) the size and organisation of the school book collection;

(iv) a definition of reference skills and how they were taught in the classroom and the school;
(v) teachers' attitude to a librarian's involvement in this area,

(vi) their attitude to the reference skills courses,

(vii) the extent of their "educational" reading.

(See Appendix 7 for an analysis of replies).

Although such a small sample cannot be assumed to be a reliable indicator of the attitudes of Coventry primary teachers, the answers which could be compared with data from larger national surveys were broadly similar. The age, length of experience and pattern of qualifications seem to accord with the profile of teachers in the Primary Survey (Great Britain, D.E.S., 1978), as did the numbers with responsibility for the library or language development.

The "social settings" of the schools did not seem untypical of the social mix of schools in the Coventry area.

The replies to the questions on library organisation bore out the impression gained from school visits that teachers find it difficult to estimate the numbers of books in a school or the proportions of fiction to non-fiction. Their organisation into class and/or central collections reflected the percentages recorded in the Bullock report (Great Britain, D.E.S., 1975) and the Southgate Study (1981).

The replies to the question on library catalogues seemed typical of Coventry schools, where in the writer's experience an acquisitions register is maintained because the local authority requires it. An attempt was made to define a classified catalogue without using the term, which it was felt might not be familiar to the teachers. However, there may have been confusion between a classified catalogue (question 3 (iii)) and what was intended to indicate a dictionary catalogue (question 3 (iv)) and a subject index (question 3 (v)). After the questionnaire was completed, some teachers said they felt unsure of the distinction and had ticked what they hoped was correct.
Reference skills had been taught by eleven of the fourteen teachers that year and their perception of "reference skills" seemed encouragingly comprehensive, but they were, of course, being asked to choose from a list presented and not to suggest possible skills for themselves. Only one teacher had included computer skills, so it would be interesting to ask this question again after the M.E.P. initiative to place microcomputers in primary schools is completed. Most of the teachers felt that children had benefitted from reference skills lessons which were taught either in isolation (7) separately as well as integrated into class teaching (4) and only through class teaching (3). Some of the comments included in response to the question "what had children learnt from these lessons"

were:

more confident use of dictionaries, encyclopedias, atlases, etc. in research work

readiness to attempt to find information on their own

more aware of what a book has to offer, better use of information book.

Only one was completely negative

not a lot!

When asked to name commercially produced materials used in the classrooms, all six respondents teaching nine to eleven year old children cited the S.R.A. research laboratory (S.R.A., 1974). This had been included as an example of teaching information skills through worksheets, later in the course, and these answers seemed to justify that choice of example.

Topic work was obviously popular in schools, but with less reliance solely on the school library's resources claimed then the impression gained from observation in the project schools.
The effect of the L.E.A. reference skills courses seemed disappointing, with two teachers claiming they had not attended (despite the method of their selection for this course - signed attendance sheets!). Eight others did not answer the question which asked what they felt they had gained from the courses. Two who replied said

how to learn, not what to learn; early teaching; selectivity with books

that I must do something about them.

The librarian's contribution to reference skills was seen as a knowledge of information retrieval and classification. Of the three who had recently asked a librarian for advice the areas cited were library organisation, book selection and reading strategies.

One of the last questions sought to measure the teachers' familiarity with recent research into language development and reference skills. The replies to this question seemed to accord with Hounsell and Martin's survey (1980) into teachers' information needs that many teachers were not well informed of recent educational trends. The Bullock report had been read and heard of by the largest number, but Southgate's book which was then recently published (six months previously) and widely reviewed in the educational press, had been read by only one teacher and heard of by only two.

Six teachers claimed to be regular readers of the "Times Educational Supplement" but of these three appeared not to have heard of Vera Southgate's work, despite the publicity given to it by the newspaper and two thirds of the group later claimed not to have heard of it's annual Information Book Awards.

When the results of the questionnaire were shared with the teachers at the next session, one remarked that although she did see the "Times Educational Supplement", she only read the job advertisements and several commented that they did not have time to read either
reports of research or the published material. The work of Irving and Brake had not been heard of by any teachers. Perhaps this is because it is concerned with secondary schools, but more probably because the dissemination of British Library publications does not reach a wide audience of educators. The adviser had been given both reports by the librarian and had expressed interest in their conclusions, but apparently this had not manifested itself in any direct communication to teachers.

Week one: reference skills

The first session was intended to introduce the various information skills and discuss approaches to teaching them.

The skills

(i) Observation

All agreed that this should be encouraged in children, but some teachers admitted that they were not observant and had had their powers of observation sharpened when thinking of developing this skill in their pupils. The librarian asked them if they knew where the nearest postbox or bus stop was in relation to their home, school and teachers' centre and what was in the middle of the ring road roundabout nearby (a statue, seemingly unobserved by most people).

Ways of deducting from observation were discussed with the teachers contributing anecdotes from their own class teaching, particularly in environmental studies, for example, looking at manhole covers and guessing then verifying, where possible, what the information on them meant. Several books on environmental studies had been brought along by the librarian as examples of using observations. The example from the task force of deduction by observation of the reasons for lines on the palms of hands was also cited.
(ii) **Listening skills**

Most teachers said they attempted to develop listening skills, mainly by the use of the S.R.A. Listening Laboratories (S.R.A. 1974). They did not apparently think of story telling as an extension of this teaching activity, until it was suggested to them this was a good way to develop listening and also could encourage children's reading.

(iii) **Reading strategies**

Reading strategies had been the subject of inservice courses within the L.E.A. recently, and attended by many teachers on this course. Perhaps for this reason the teachers said these were skills they regularly practiced in the classroom, although there was some confusion between "skimming" and "scanning" which the librarian was asked to clarify. The practice of these skills seemed to be mainly through the use of structured packages particularly the S.R.A. Research Laboratory which the teachers who used it held in high regard. "Reading for meaning" was interpreted as comprehension and this was taught through collections of worksheets designed for this purpose. The development of these strategies was seen as something that could be taught through exercises in the "English" period. The librarian argued for incorporating these skills into subject teaching and topic work as an integral part of everyday work in the classroom rather than as exercises, citing, e.g. Bullock, Lunzer and the Primary Survey as "authorities".

One of the S.R.A. Research Laboratory cards chosen at random, had been taken by the librarian as an example of the deficiencies of relying on a printed source to develop information skills. The package consists of a
series of workcards on different topics and poses questions set at three levels of difficulty. The child selects a subject of interest at the level suitable to his/her ability, indicated by a previously completed checkcard and probably his/her teacher also. He/she then answers the questions either entirely from the printed text, or at the third level of difficulty, from "research" in the school library. The card selected randomly for this demonstration was on "swimming and diving" and an attempt was made to answer the questions posed at the third level in the sources suggested.

Article on encyclopedias on diving

Despite the resources of an excellent library it proved extremely difficult to do so, using children's encyclopedias and information books.

Use the sources you select to find out about the jackknife, the swan dive, the half gainer, and the backward dive.

It would be doubtful if the schools libraries visited, or others in primary schools in the City, would have books of sufficient subject "depth" to make this exercise possible. This card seems typical of the standard presented. The teachers who used the kit said they had not tried to follow through any examples and concentrated on work with the first two levels which could be answered solely by reference to the workcard.
(iv) **Library Skills**

Many of the teachers "confessed" to having difficulty in using public or academic libraries. The most common strategy was to establish where the books required were located by a patient search or asking a member of staff. Once this was achieved, the "problem" of using that library was solved because the location was remembered. The teachers felt children should be made familiar with the school library by lessons set aside for the purpose and many endeavoured to do so. They felt that children should be taught how to use common reference works like telephone directories, maps and newspapers and again many set aside time to do so. The question of evaluating books aroused a spontaneous response that they were unsure what to look for and would be grateful for advice and examples of "good information books". Since the demand was so strong and obviously deeply felt, the librarian promised to fit this in at the end of the course, if necessary at the expense of another topic.

(v) **Notetaking**

All agreed this was most difficult for children of primary age. The librarian gave the teachers a photocopy of a short article in the Times Educational Supplement (Friend, 1981) which seemed to encapsulate a sensible strategy for introducing this skill.

(vi) **Communication Skills**

This area was only mentioned briefly as needing consideration in relation to information skills. The L.E.A. had organised courses on this subject and several teachers had attended them. The librarian felt it
important to mention them as relevant but not particularly competent to comment on their teaching.

(vii) **Computer Skills**

These were mentioned only briefly as a future development which would affect the way in which information was presented and obtained. It was pointed out that the skills of information retrieval would be very similar using this new medium, so the need for teaching these skills would not diminish in the future.

(viii) **Problem solving**

This had been tried in a few Coventry schools and seemed to the librarian a more challenging exercise than much that was done as topic work. It set out to pose a problem based on everyday life, for example, should a suburb of the City have its own park, gather relevant data and process it to find an answer. In doing so it utilized a battery of information skills - formulating a problem, posing questions, retrieving information from a variety of sources, assessing the facts and impressions obtained, and compiling conclusions and recommendations. It crossed curriculum boundaries in a way that topic work should do, but it seemed did not and placed information skills at the centre of the assignment. (See also Chapter 5).

Whole School Policies

If information skills are to be developed successfully, they need to be introduced into each year of primary schooling. Therefore, it was important to establish a school policy, so that each class teacher knew that her teaching had the support of colleagues in the
school. The teachers felt that establishing such policies was hard to achieve in practice because of communication difficulties in some schools and the different perceptions of what was important held by different people.

Although several of them claimed in the questionnaire that they did have such whole school policies in operation at their school.

Assessment

Assessment was touched on briefly as being desirable, but difficult. The feeling of the group was that they did not have time to assess yet another set of skills in a crowded school life.

Methods of communication

Finally the various ways in which information is conveyed was discussed and how the medium can affect the "message". Some examples were given, e.g. an eyewitness account of the Coventry blitz and an official account; a tape describing a reading scheme with the reading scheme itself to see how accurately the spoken description described the actuality. Although "looking" was obviously more effective in this case (the point being made) one teacher pointed out she would listen to the tape in the car or working in the house. A brief extract from a story was played as an example of the power of the spoken word in storytelling. Each source was discussed briefly for the strengths and weaknesses the medium presented. One teacher commented on the difficulty of children learning from television in school, because it was "wallpaper" at home and they did not regard it as "work" when seen in school. Although all the teachers agreed that television was, in fact, a powerful influence on their pupils.

The session lasted half an hour longer than planned, partly because the questionnaire had taken longer than expected to fill in and partly because of the teachers' willingness to participate in discussion. However, they all expressed a desire to stay and
several commented on how interesting they had found the session, particularly looking at the different media which they said had not occurred to them before.

A handout was given to the teachers following the session, since because of the inadequacy of the furniture provided they were unable to take notes easily. (See over).
1. **REFERENCE SKILLS**

   may be broken down into:-

   (i) observation

   (ii) listening

   (iii) reading strategies

      skimming

      scanning

      main ideas

      "reading for meaning"

      using parts of a book, e.g. cover, chapters, index, contents page.

   (iv) library skills

      finding the right book or information source

      evaluating sources

      using reference books

   (v) notetaking

   (vi) communication

      speech

      writing

      graphically

   (vii) computer skills

   (viii) problem solving (an approach to topic?)

      posing a problem

      breaking down into areas of investigation

      asking questions

      assembling/assessing data

      reporting/recommending

this is a 'personal' list. There are other ways of defining or interpreting such skills. These are not mutually exclusive and not all will be used to tackle each information need.

2. **INTEGRATION NOT ISOLATION**

   The skills should be related to a need and a purpose, not taught in isolation. Their use should be built in to and reinforced through the curriculum.
3. **WHOLE SCHOOL POLICY**

Ideally there should be a school policy for the teaching of reference skills from infant to top juniors, with skills introduced or reinforced and developed throughout primary education. A school policy ensures co-operation between those responsible for e.g. the library, the resource centre, language and reading development.

4. **ASSESSMENT AND RECORD KEEPING**

Can be difficult to do and very time consuming. Suggestions for ways may be found in:

- Dean, Joan. The Literacy Schedule. University of Reading, Centre for the Teaching of Reading, 1980.

**THE INDIVIDUAL SKILLS**

- **Observation** being aware of one's surroundings; looking for directional signs; looking at illustrations; observing behaviour to make deductions. The literature on environmental education has some useful ideas.

- **Listening** receiving information by listening; following instructions; stories to develop the power of the imagination, e.g. S.R.A. Listening Laboratories.

- **Reading Strategies** "extended reading" builds on proficiency in reading. "Directions" and S.R.A. Research Lab. give practice in development but they can be too prescriptive. Not all writing is neatly set out with the main idea readily identifiable, not all information books (especially at infant level) are equipped with page numbers, indexes, etc. These skills should be practiced as part of curriculum work not as an exercise in themselves. They should aim to develop critical information seekers.

- **Library skills.** Libraries at primary level should reflect the principles of information retrieval. Children should expect to find precise locations for particular subjects. The foundations should be laid for more complex use in secondary, further and higher education and for adult life. Such organisation is time-consuming and needs the co-operation and understanding of the whole school.

- **Notetaking.** A difficult art especially at primary level. Most information presented to the young child is already condensed and predigested so further precis is difficult. Needs practice using more than one information source, see T.E.S. cutting for useful ideas.

- **Computer skills.** We are seeing the beginning of home data bases, CEEFAX, ORACLE, PRESTEL. They will undoubtedly supersede many reference books. Needs the techniques of information retrieval used in library skills. Micros. in school need to be used imaginatively not asrote machine. Papert's "Mindstorms" - the child should program the computer not the computer the child.

- **Problem solving** - a way to approach topic (what do I need to know, already know can I find out) or of tackling a problem set by school or children. Demonstrates skills of questioning and assessing one's own knowledge, assembling and analysing data, reporting, drawing conclusions, making
decisions. Illustrates the difficulty in teaching or defining reference skills, since in the end they spill over to become "lifeskills".

**SOURCES**

Information is drawn from many sources. Sometimes one is sufficient, sometimes a number may be used. However, information is collected and from whatever source, the enquirer should be aware of bias, the strengths and weakness of each medium and his or her own prejudices.

(i) **people** often the first resort. Easiest, quickest if the person asked knows. The vividness of eyewitness accounts can be powerful but

- how reliable is their information?
- how good a recall have they?
- how well do they express themselves?
- are they speaking from a certain viewpoint?

(ii) **audio** absence of pictures - can be an advantage in encouraging concentration and developing the imagination. The speaker's voice or mannerisms can be distracting.

(iii) **visual** (audio visual) powerful medium. Good at starting off topic work. Danger of "visual wallpaper" effect from overexposure to television. Limited amount of information is transmitted for time it takes to present it. Not usually an "in depth" medium. Camera's eyeview can be deceiving.

(iv) **written** still the most important source for transmitting 'hard' information. Compact, portable, needs no equipment to extract information.
In this session the librarian described her impressions of topic work in schools, being frank at her feelings of disappointment at the amount of copying that seemed to dominate the work, and the apparent lack of teacher supervision. This criticism included the work in School C, and the class teacher then expressed her point of view, which was essentially in agreement with the librarian. This teacher was disturbed by the quality of topic work, but was unsure what to do about it, the one reason why she had joined the task force. She felt that the pressures on her, notably the need to produce work to show head and parents led her to condone the superficially impressive topic books produced in her class. Surprisingly, most teachers agreed with this, they too felt dissatisfaction with the work presented by many children.

The librarian expressed the opinion that good topic work needs forward planning, the provision of adequate and appropriate resources and a clear idea of the skills likely to be involved. Indeed, the practice of such skills was the prime reason for topic work, rather than the gathering of information. At this point the librarian introduced "Information skills in the school curriculum" (Marland ed.), 1981, as a good example of how a framework of skills should shape topic work. None of the teachers had seen or heard of the pamphlet and several expressed an intention of purchasing a copy for their school.

Some teachers felt that lengthy advance planning, although desirable, was not possible for them because of insufficient time to spare in the school day.

Despite this pessimistic conclusion the session was judged as successful by the teachers, who again stayed for two hours and said they had enjoyed the discussion. Teacher C is a most lively and witty speaker and she and the librarian had developed a good relationship while working together, which helped the acceptance of the critical stance adopted by the librarian.
Week Three: Library organisation

The intention for this session was to explain to the teachers why the classification and indexing of information was important to successful independent learning and how experiences in Coventry schools suggested that this was not always appreciated. The example of history was given where all the books on that subject often seemed to have one classification number, 900, and the children had to search through many shelves to find a book on a particular historical event. A series of index cards with specific numbers for historical topics was shown to the teachers with the suggestion that this made retrieval easy for the children while developing a useful skill in locating precise information and, importantly, expecting that it was possible to obtain precision in information retrieval. One teacher commented that shelves arranged chronologically by the Dewey classification might also help in establishing the concept of historical time.

The work on subject indexing in Schools C and D was explained to the group, and they were given the same exercise to do working in pairs. New children's books from the Institute were chosen at random for this exercise. Interestingly, the teachers did not do so well at this as had the children, although, possibly the librarian would have done better by taking the whole group through the conceptual process, as she had with the children. Left to complete the cards without comment, the teachers generalized and used descriptors like "public communications" which appear in the Dewey schedules. In the discussion afterwards, some expressed surprise that a direct term such as "police" or "crime" should be used to index a book on the crime squad, when they had used terms like "jobs of work". No-one had used any 'see' or 'see also' references, although several books would have needed these links (see Appendix 7 and compare Appendix 6). Generally, they had the common misconception often found amongst teachers that indexing has to mirror shelf order ("Crime squad" as "jobs of work"), instead of providing an alternative means of access to the collection. (Beswick, 1977).
At the end of this session, the librarian did not feel that she had established the connection between subject indexing, shelf order, information retrieval and information skills sufficiently well. There was a suggestion amongst the teachers that this was really for librarians and they did not need to be concerned. To an extent, of course, they are right, and given a national will and sufficient resources librarians or trained teacher/librarians should be in schools to organise libraries and, by example, demonstrate the need for these methods by relating them to curriculum work. The government initiative for the introduction of microcomputers in school indicates what is possible when there is a belief by government that an innovation is desirable. It is a pity that school libraries did not benefit in the same way. However, the session did have an effect on one teacher, who had appeared particularly sceptical; some time later she came to the librarian to say that she had been thinking over what was said and had decided to reorganise the school library to make retrieval more efficient and would be grateful for the librarian’s help.

Week four: Evaluation of Materials

The course outline was amended to include further work on evaluation as the teachers had requested. This session was not held at the teachers’ centre, but at the Institute library, where the librarian could draw on examples of materials more easily. This also had the effect of introducing the collection of children’s books to the teachers and as a result several became “external borrowers”.

A display of commercially published material on reference skills was on display for the teachers and comments were made on each by the librarian. The teachers had an opportunity to look at them for themselves at this point and also at the end of the session. The librarian admitted her personal bias against “workcard” material, except as a source for ideas but many of the teachers defended its use as being essential to class management.
The discussion on evaluation was centred around a collection of books on two themes which happened to be well represented on the library shelves that week "Frogs" and "Shops". A collection of award winning information books were assembled to use as "pegs" when discussing points to look for in a book from binding, print and illustrations to the inclusion of indexes, contents pages and bibliographies. Most importantly it was pointed out that good information books should be "written with poetry" in Ralph Lavender's phrase; a genuine interest and enthusiasm in the subject that communicates itself to the children and is not simply fulfilling a publisher's commission. The importance of providing a good range of reading levels within one class library to cater for all abilities was stressed, and the inclusion of good, adult reference works if children's books on a particular subject were deficient.

The information books represented a typical selection of those published on a popular topic. The librarian had done a comparative analysis of the content to demonstrate the need for a selection of books to be used in topic work. As well as differences in the style of presentation (narrative, factual) there were differences in the comprehensiveness of subject coverage and quality of the writing.

Children are naturally discerning and given an opportunity and some guidance will evaluate the quality of information books for themselves provided they have enough to make comparisons and are freed from the apparent pressure simply to write down facts that seem to be required by most topic work.

The session ran on long after the two hours allocated to it and the teachers, all of whom had attended regularly, again expressed appreciation and enjoyment.
Some reflections on the Reference Skills Course

All the teachers on the course were obviously interested in reference skills and most had included them in their teaching in the past year. Their attendance on the course presumably signified that they felt they could learn more about them and that a librarian could contribute to this. Since the responses to the question on the effect of the previous course on reference skills (see Appendix 7) were disappointing, with eight teachers giving no reply and two claiming non-attendance, it is not possible to say with certainty whether the course encouraged them to begin teaching the skills, or whether they were aware of the need for them through their classroom experiences. The group discussions indicated that most felt reasonably satisfied that the skills which they considered could be taught through exercises or workcards, e.g. listening skills, reading strategies, were being done satisfactorily, presumably because they could "mark" such skills through the workcards. Where they were less satisfied was with the apparent lack of skills such as notetaking and being able to critically appraise texts. These, of course, did not lend themselves to the workcard approach and required a certain competence in the skills on the part of the teachers which some of them did not feel they possessed or at least found it difficult to impart to the children. It was interesting that they seemed to see the skills as separate, failing it appeared to see that, for example, listening or identifying "main ideas" were, in fact, part of successful notetaking and if these skills were taught not as separate exercises, but integrated into workbooks for topic work they would probably be more successful; the children would appreciate the purpose of them and would, therefore, be more likely to utilize them as a strategy for notetaking.

Library skills were not seen as anything more than enabling a child to find a book within a broad subject area, that is a simple locational skill, and their approach to the subject indexing exercise showed how they were thinking in this unspecific way (see Appendix 7). This seemed to bear out the previous experiences in school, where children were allowed to work on broad subjects.
without any teacher's directed attempt to break these subjects into more specific areas, which would have helped them to structure the work and ensure that, in seeking this specificity, the need for more effective classification of the stock and subject indexes were necessary for the library. The ability to locate information more precisely would help children to appreciate the concept of "order", which can be transferred to the presentation of information in written or verbal reports, by marshalling facts and deductions in a logical sequence to present a coherent argument. It could also encourage pupils to discover that information required is often present in the school's resources and the public library if they know where to look. It develops the expectation that information can be found for oneself given a knowledge of the way in which it is organised.

Despite the assertion by half the teachers in the questionnaire that there was a reference skills policy in their school, in the group discussions the feeling emerged that although they felt this to be desirable they felt it difficult to achieve in practice. Some of the difficulties mentioned were the lack of time for adequate communication in the school and the lack of commitment to the idea of fostering reference skills encountered in their colleagues. One teacher had been given a year free from other teaching duties in her school by the Head to devote time to organising the library and developing programmes of reference skills teaching throughout the school. The result had been that she was seen as having this responsibility for all the classes, even though she had returned to class teaching. Her hope that her year initiating the programme and developing a library to support it would have resulted in her colleagues incorporating this into their own teaching, had not been fulfilled.

1 This lack of planning for topic work which teachers on the inservice course admitted to, and pleaded lack of time as a reason, seems at odds with the findings reported by Kerry (1983 (b)) from the School Council project Developing Pupils' Thinking Through Topic Work. Teachers replying to a questionnaire had clear ideas of the purpose of topic work and planned strategies for its execution.
There are obviously many difficulties in introducing innovation into schools and if it is to succeed in any measure it needs a framework of support and understanding from the teachers and pupils and has implications for the initial and inservice training of teachers.
CHAPTER 5  

A framework for information skills teaching

The need to encourage competence in the handling and processing of information has developed from the realisation that independent learning needs requisite skills to support it beyond those of functional literacy. This realisation has been given impetus by the advent of the "information age" where the advances in microchip technology have made a computer in every classroom and home a possibility.

However, as the inservice course and work in schools indicated changes at "grass roots" level can be slow to occur in comparison with the developments in educational theories, and often happen in a piecemeal fashion with, perhaps only one or two committed teachers in a school. Or, the innovation is partially adopted, (e.g. teaching reference skills with workcards) because of a lack of appreciation of the theory that underlines it.

Education innovation is constantly challenging teachers to take on the burdens of incompetence (Stenhouse, 1975, p. 169)

and the challenge of information skills teaching is twofold. Firstly, the pervasiveness and complexity of the skills and secondly that teachers have probably not been trained to define, practice or develop such skills during their own education (Southgate, 1981). This was certainly the feeling of teachers on the reference skills courses and Task Force. They demonstrated and admitted to unfamiliarity with information sources and a lack of knowledge of how to approach finding information (Hounsell, 1980).

1. The education of teachers and teacher educators

Educating teachers to develop information skills in their pupils has to be undertaken both in initial and inservice education (Hounsell, 1983). This presupposes
a recognition of that need on the part of teacher educators and their ability to appreciate and teach the skills to students. Bateman (1970) and Herring (1982) suggest that this is where librarians in institutions of teacher education can play a part in ensuring this area is included in the curriculum, although as in schools, it will have to compete with existing, and other new demands on teaching time. Although, since computer education is now to be included in many teacher education courses this could be a way of seeing that computer skills are placed within the context of information skills, not as is likely and regrettable, separate from them.

Advisers have an important role to play in educating teachers on inservice courses, not only in planning and running them within the schools and teachers' centres but also influencing the colleges and institutes of education to organise such courses. Advisers, in their turn are persuaded of the need for innovations like information skills teaching by national trends reflected in reports of research disseminated through the educational journals, conferences and the Inspectorate. The inservice courses on information skills teaching in Coventry arose from such catalytic action, where the advisers, influenced by Bullock, Lunzer and the Primary Survey did plan and execute a series of courses on language development.

The Microelectronics Education Programme's regional inservice courses and centres perhaps demonstrate a new realisation by the central administration that the importance of a network of educational support and trainees at local level is essential to the success of innovation.
2. **Support within the School**

   However effective a programme of teacher education may be, a successful programme for the development of information handling should be implemented throughout a school, however, a whole school philosophy cannot be developed effectively without the active support and encouragement of the Head. Such support will allow opportunities for staff to discuss co-operative policies for skills teaching across the age ranges, introducing and developing skills through each stage of the child's intellectual maturation. Evidence from one infant school teacher participating in the Task Force suggests that many skills can be taught from an early age (see below). If this is not appreciated, except by the perceptive and innovative teacher, there is a danger that children will not be given an opportunity to develop skills early and so not progress as far as they might during their time in the primary school. There is also a need for co-operation on transfer from infant to junior and secondary schools, so that skills acquired at one level continue to be fostered and practiced at a higher level.

   A whole school policy for information skills should also ensure a library/resource area where the selection of material and its organisation was seen to be the concern of the whole school with staff and pupils participating in selection, cataloguing and classification. This would make the task of the teacher responsible for the library less onerous administratively and more important academically than is often the case at present.

3. **Sequential development of skills**

   Education does not begin at five years of age or indeed on entry to school. While there is a great deal of discussion on children who come to school unready there is perhaps not enough interest in, or even awareness of, the skills that the child brings to the school situation whether he be reading or not. (Clark, 1976, p.56).
Since the infant school lays the foundation for all the basic skills it seems entirely appropriate that information skills are developed at this level.

One school had devised a whole school policy for a skills programme, beginning in the reception class with initial sounds, the order of letters and the compilation by each child of a word book. The children were introduced to the library and encouraged to find books in the library or classroom 'corner' identifying the subject from the cover illustration. The teacher talked to the children about books and the good readers were encouraged to use their indexes (where the books contained them).

The second year of schooling developed the use of their word books and the good readers began to use dictionaries. Practice on the alphabet continued.

The library work developed abilities to find books on a particular subject and to use indexes and contents pages with the teacher's guidance. Classification was introduced by asking the children to sort books into sets.

In the third year use of word books and dictionaries continued and dictionary exercises were introduced. Practice on the alphabet progressed to third letter order.

In the library the more able children constructed workcards posing questions from books they had read for the less able children to answer. They were encouraged to evaluate books and commented on the lack of indexes, page numbers and the date of publication. These exercises were considered a great success; they encouraged the children to browse in the library and to formulate questions.
The children proved unable to present the information they had found in their own words when asked to give a written account so it was concluded this was probably too difficult for them at this age. There was no doubt, however, that they had understood what they had read.

For comprehension work the class turned to workcards made by the teacher using television programmes, 'Yellow Pages' and the school lunch menu. She felt this might be too difficult (especially with the telephone directories' use of small print and abbreviations). However, although this did present some children with difficulties they coped well with the other exercises and enjoyed doing something "grown up".

This comprehension work was being used by another Task Force teacher with third year juniors so it was impressive to see that the infants (from a racially mixed inner city area) could also cope with this work.

Working with the children in the library, the observer noted that they were also as competent at locating books as some of the third year juniors in other schools visited. They did seem to understand the significance of indexes and dates of books, although they had not yet developed the skills of associating related topics, e.g. when asked for a book on fishes, they did not think of using books on the sea, until prompted by questioning about the fishes' habitat and then some children began to make the connection.

The library was colour coded into very broad subject areas but this teacher was convinced that given practice the children would cope with and appreciate the use of the Dewey Decimal Classification.
(This, and identifying how much else children of this age range would be capable of in this area, would make an interesting research project).

The infant experiences encouraged teachers to speculate on a developmental information skills programme for five to eleven year olds. The librarian prepared a check list [see over] which it was hoped could be used in schools to see what was possible at a given age. This was not explored further since the Task Force disbanded, and despite hopes that the inservice course would experiment with it or offer ideas, they pleaded "lack of time" at the end of the course (e.g. Leith, 1981).
REFERENCE SKILLS

Needs

(i) awareness of information need and ability to assess own knowledge, formulate questions, seek appropriate sources;
(ii) knowledge of alphabetisation sufficient to cope with information sources needed;
(iii) reading ability sufficient to cope with information sources needed;
(iv) ability to recognise a book (or other sources) relevant to a particular subject;
(v) ability to recognise information relevant to information need;
(vi) ability to find information from (a) observation and deduction
    (b) people and institutions
    (c) written sources - using contents, pages, indexes, skimming, scanning, etc.
(vii) understanding of the way a book is organised - contents, index, chapters, etc.
(viii) understanding of the way a library is organised - classification, subject indexes, etc.
(ix) ability to use reference books (encyclopedias, directories, dictionaries);
(x) ability to interpret maps, plan, illustrations;
(xi) ability to understand oral or written instructions;
(xii) ability to evaluate information sources (compare with own knowledge, other sources, author's authority, publisher's reputation, date of publication);
(xiii) ability to extract information relevant to needs, recognise main ideas;
(xiv) ability to synthesise information collected and to organise it in a way that answers the information need;
(xv) ability to communicate that information orally or in writing.
One of the factors that seemed to emerge from this study was how teachers tended to underestimate what children could cope with. Many of the Task Force members were surprised by the abilities of these infants and also with the progress of their own classes when stretched by tasks that previously would have been considered "too difficult", e.g. the subject indexing work. One factor in this stretching seemed to be the use of questioning to encourage children to deduce for themselves - a problem solving technique in fact, and one which could explain why infant and junior children are apparently surprising teachers by their abilities to cope with the "new technology" (Garland (e.) 1982 (a)). Perhaps this is also because the perimeters of what children should be expected to know have not yet been drawn for microcomputer use, as they had not been for reference skills work in Coventry.

The pupils too, did not have any preconceptions about the task in hand or teacher expectations.

4. The pupils' perception of the task

Research into learning process suggests that a pupil's perception of a task will determine how that task is fulfilled, and what is learned from it. (Hounsell, 1981).

This relationship between perception of purpose, level of execution and quality of learning has been observed at all stages of education. Galton (1980) describes how children can choose to work slowly through a worksheet knowing that the reward for its speedy completion will be another worksheet! Lunzer's study
of first year secondary school pupils engaged on project work suggests that they did not see the purpose of their assignment as demonstrating skills of information retrieval, but rather as presenting facts to the teacher on the "Ancient Egyptians". They were satisfied with the first book that came to hand and the teacher's notes that were provided. Perry (1959) records that freshman college students demonstrated on "obedient purposelessness" when they were prepared to read anything assigned to them from beginning to end.

Hounsell (1981) records how Perry went on to analyse the intellectual development of undergraduates progressing from

dualistic thinking [in which the world is seen in simple opposites good/bad, black/white, right/wrong] towards a recognition that all knowledge and values are relative and contextual.


This led students to describe their reading as having changed from reading for meaning to reading "beyond the information given".

It seems a reflection on the absence of information skills that students had to wait to this stage in their education before apparently discovering reading strategies and a questioning of the text.

It is a teacher's responsibility to ensure that there is a purpose in tasks set for the pupils, which implies planning and thinking through the task in advance. The purpose must also be communicated to the pupils.

the student needs to feel a sense of inner purpose in reading ... and when that sense of purpose is present, what students achieve in their reading may be striking ... when ... drive is entirely from the teacher's purpose ... it is not enough for the students to have been taught the skills.

(Torre, 1981, p. 126)
Such a sense of "inner purpose" often motivates "non-readers" or young readers to read with enthusiasm and understanding books which would have been considered too difficult for them. They also can demonstrate in this situation locational skills and flexible reading strategies as a mature response to their need. When such incidents occur there may be an opportunity to ask the pupils to articulate their reading strategies and then demonstrate to them how these methods can be used in other learning tasks where their motivation is lower.

Children spend only part of their time in school and often develop outside interests which encourage the practice of skills which are not transferred to the classroom. Such interests and the skills which even five year olds bring to school may be insufficiently regarded by some teachers (Clark, 1976).

The observations of topic work in Coventry schools suggested that many pupils had deduced that the appropriate strategy for the task was to copy or slightly paraphrase words from information books, with drawings helping to fill the space.

Since the task appeared unplanned by the teachers and without expectations of anything but a modified account from any information books the children found, the children's strategies were perceptive.

It appears, however, a missed opportunity for creating interesting learning tasks that engage the child's imagination, and by identifying the skills required for the tasks, to develop information skills within the framework of that task.
5. **Identifying the skills**

An important and obvious prerequisite of information skills teaching is identifying the skills which are component parts. Such an analysis would form a part of a whole school strategy for information skills teaching. A number of writers have presented lists of the skills at all levels of education, Pearsall (1980) at primary level, Hamblin (1981) for secondary level, Further Education Unit (1982) for the tertiary level. There seems a consensus of opinion on the composition of the skills, but a disturbing assumption at secondary and tertiary level that the pupils reach that stage of education without any previous knowledge and experience of such skills.

They may be summarized as:

1. identifying the purpose for the information sought. In the school context usually an assignment;
2. locating appropriate information sources;
3. interrogating sources;
4. evaluation of sources and if possible, comparison between a number of different sources;
5. comprehension, literal and inferential;
6. organising the information received;
7. presenting the information;
8. evaluating the results.
These activities draw on the abilities to observe, listen, retrieve information, interact with people, employ a variety of reading strategies, take notes, and practice logical thinking. They imply resource provision and organisation, and supportive, informed teaching.

Because of the fundamental nature of such skills they cannot be neglected at primary level, nor assumed to develop naturally as the pupil progresses through school. As Irving has suggested (Irving, 1980 (b)), since the main thrust of school learning is through the assignment the teaching of such skills is best directed through assignments, which have been constructed in order to develop skills as well as impart subject knowledge.

6. Topic work and problem solving

In the primary schools, the topic is often seen as the assignment which gives opportunities to fulfil the aims of developing information skills and subject knowledge. In practice, it often fails to achieve either satisfactorily, because it is unplanned and undirected. One of its failings has seemed to be the inability to structure work in advance to ensure that skills of, e.g. retrieval and inference are built into the work, and that provision of a wide variety of resources is ensured to develop skills and add breadth to the information available. It often fails too, to relate to any other topics previously studied or develop concepts and thinking strategies so that knowledge acquired about one set of circumstances can be transferred to another. Topic work on for example Red Indians, can be used to illustrate the idea of nomadic peoples, a concept which can aid understanding of the problems and way of life of other nomadic peoples, such as Bedouin Arabs (Wilson and Gunning, 1980).
Kerry has defined three sets of skills in topic work as being of fundamental value ... the processing of information, problem solving and decision making, and communication.

(Kerry, 1983 (b) p.6).

Perhaps it is because topic work as practiced in many schools has become discredited that new attempts to develop these skills are being practised through "problem solving" which seems in examples in Coventry and the West Midlands to have developed from groups of primary mathematics teachers constructing problem solving exercises. (Dean (1977) and Brake (1980 (d)) have observed that the mathematics curriculum is a good foundation for the development of information skills. It requires classification into sets, retrieval of information and its presentation in graphic form. One group of Midland school teachers developed such a problem solving exercise after an inservice course.

Real situations, e.g. justifying the school tuck shop, involved children in posing questions, defining areas of investigation, devising questions, finding data, looking for solutions and making recommendations. Throughout the exercises the children counted, measured, drew plans and devised questionnaires. Problem solving seems a useful way of tackling information skills teaching since it gives practice in coping with realistic solutions that demonstrate not all information is found in books, nor is all "information in the form of "words". In this particular case, however, there was a suggestion that this method was developed instead of using books rather seeing them as a part of the information process since
a child was quoted with approval for his comment:

I enjoy using my head instead of a book
(Hargrave, 1982)

suggesting faults in his teaching rather than in books!

A similar project on a local park was carried out in Coventry (see Appendix 7) which produced interesting and impressive work. Kerry, too, has developed teaching materials for the Schools Council Curriculum Enrichment Project for the Gifted (Schools Council, 1980) which concentrate on particular areas of the curriculum, e.g. Geography, History, Mathematics.

This move towards basing assignments within subject areas may be seen as mitigating against what has been seen as one of the strengths of topic work, its multidisciplinary nature. However, in practice, topic work has often failed to identify or integrate subject areas because of the stereotyped nature of many of the subjects studied (Chapter 3 (Bassey, 1977)).

It may be that the development of computer use in schools will help to focus skills which should have been developed through topic work but apparently are not.

I discovered that many of the children didn't know what a mammal was or how to ask questions ... They have now not only mastered the technique of questioning but are, with the use of some good large animal books able to invent more specific questions, e.g. "Is your animal an ungulate?"

(Lusty, 1983, p. 46)

(a teacher's description of using the "Animal program on a microcomputer with a class of nine year old children).
7. Computer skills

The advances in computer technology, particularly the development of the microchip, have given rise to the idea of a new "information age". The government have taken this innovation seriously enough to subsidize the purchase of microcomputers for every school (two in secondary schools and one in primary schools). Importantly, this investment in "hardware" is supplemented by inservice training programmes for teachers and information centres on a regional basis under the direction of the Microelectronics Education Programme (M.E.P.), (Fothergill, 1981).

(i) Parallels with resource based learning

There are parallels between the present proliferation of computers in schools and the introduction of school library resource centres in the nineteen sixties and seventies. Both have been introduced with enthusiasm by the committed and regarded with some suspicion by the uncommitted. Both imply a change in teaching from teacher based to pupil or task based.

The computer has educational potential in three areas, as

(a) a rote machine to facilitate learning of lower order skills in the way that programmed learning was attempted in the nineteen sixties;

(b) as an information store immediately of school produced data, or ultimately, a means of access to any large, nationally available data bases, with the provision to manipulate the information stored.
(c) as an interactive device to develop thinking skills. Whether it is successful in the last and most important of these functions will depend to some extent on the quality of software produced.

Educational software has developed more slowly than the hardware and interested teachers have been engaged in producing suitable software for themselves; sometimes this has been successful, sometimes a large commitment in time has not resulted in good innovative programs. Again this parallels the development of resource based learning materials where reprographic facilities in school enabled teachers to provide resources tailored to their course requirements; it also resulted in many "cobbled worksheets". Recently the amount of commercially available software has increased, and much of it seems concerned with the same rote learning as that which forms the content of many printed workcards. It would be a pity if the potential of the computer is subsumed to the ubiquitous workcard syndrome, as has much that now passes for information skills teaching. On the other hand, of course, the microcomputer used in this way for some of the school day, could free the teacher to concentrate on individual children's need in a way that is not always possible at the moment, where the queue of children at her desk to have workcards checked takes up much of her time (Fiddy, 1980). Since the microcomputer can interact with a particular child perhaps some of the tedium children experience in their progression through workcards will be eliminated.
The computer as information store has some of the same potential as the development of school libraries in the nineteen fifties and library resource centres in the nineteen sixties and seventies. The provision of information will in theory, provide the pupil with an opportunity to pursue independent learning. However, as the underuse and poor organization of many print or audio-visual collection have demonstrated, opportunities for such learning needs to be placed in the curriculum in a meaningful way or they will be ignored. (Daniels, 1983).

While, in theory, it will be possible to have access to many information banks, in practice there may well be considerations of paying for the information received and also learning the appropriate approach through a controlled language that may differ from data base to data base. As in school libraries, unless the provision and use of indexes is understood some information may remain inaccessible.

These are not insurmountable difficulties, of course, the costs may be waived for some data bases for educational use, or the school may find any expenditure justified because pupils feel motivated to use them (Thompson, 1982). Data base construction may become more "user friendly" as access to them is increased. There seems no reason why children should not be taught to use thesaurus based terminology, just as they could cope with effective subject indexes in a library if the concepts were explained.
(ii) **Constructing data bases**

Computer programs developed recently are designed to give children opportunities to construct their own data files (e.g. Factfile, SIR). This practice in information gathering, manipulation and retrieval will give them valuable experience as information handlers (Irving, 1982), and ultimately, for some at least, an opportunity in later life to influence data base design. Garland (1982) has described how he worked with a group of nine year old children in a primary classroom asking them to construct a data base of personal information from their classmates. In addition to being practice in information handling this raised for them the questions of privacy of information also, (who should be able to access the file?) and responsibility for the information presented (is it accurate?) who will correct mistakes (could incorrect information harm anyone?). There are, however, a few cautionary notes in Garland's account; he was working with a group of student teachers who with him were able to devote a good deal of time to programming and data input, which may not be available to the classroom teacher. There are also questions of class management while some children are using the computer. Again, not insurmountable difficulties, but the type of problems which, together with machine maintenance have mitigated against the widespread use of non-book media in classrooms. One other caution needs to be applied, that such data base construction does not degenerate into classes of children laboriously inputting facts into their computer from the school's collection of information books.
Daines records how

Oundle school students are hard at work putting a number of standard reference books into their computer system - no more dog-eared copies for them. This is an indicator for the future. I would guess that standard works will in a few years be available on disk thus slashing their price.


It is probably that the writer's prediction is correct, it is a pity Oundle school felt unable to wait!

(iii) Developing information skills

The most important potential for the computer in schools is in the development of thinking skills, and the problem solving approach to topic work has great possibilities here. Data collected by the children, or perhaps already on disk, e.g. census statistics, could be analysed and possible decisions and outcomes simulated by the computer. This involvement of children in active programming has been forcefully argued by Papert who believes that conventional educational approaches could result in

the computer ... being used to program the child. In my vision the child programs the computer.

(Papert, 1980, p.5)

and the potential children have as

innately gifted learners ...

(Papert, 1980, p.7)

will remain unemployed. The results of some topic work in schools makes this seem an unfortunate possibility.
(iv) **Librarians and computer technology**

The introduction of computers in schools has added urgency to the call for "information skills across the curriculum" but it must be recognized that computer skills are part of information use and pose the same problems that still appear unsolved in the use of libraries and books. Because

Educating the information generation has become an interest shared by many previously disparate groups ... Two hundred people from industry, government, education and elsewhere attended a conference in July, 1982, which aimed to "explore the impact" of micro-electronics innovation and "consider the "implications" for young people entering an "information society"


There is a danger, that as many aspects of resource based learning were discussed without reference to the expertise already existing amongst librarians (Beswick, 1975, 19-7), so those concerned to develop computer education will not take cognizance of the expertise amongst librarians in information processing in many formats. It is interesting to note that Davies gives an account of establishing a school data base on metals after some topic work in a section headed "Information retrieval and processing through DATA" (Davies, 1982, p.97) and in a separate section lists other possible functions for a computer as "School Administration" - "library" appears under this heading listed between staffing and meals.

There should be an opportunity for librarians to demonstrate their expertise in this area, on the "coat-tails" of the growth in the interest in "information" generated by the new technology.
Guidelines for librarians

These guidelines are intended for librarians who may find themselves with an opportunity to influence information skills teaching in primary schools. Librarians in secondary schools will be aware of the need to ensure that library skills are integrated into an information skills curriculum and advice already exists in that area.

These suggestions also exclude provision for the preschool child although this is recognised as an important area. Examples of constructive advice in this field can be found in Clark (1976) and Griffiths (1983).

Librarians with potential involvement in the primary sector may be public librarians responsible for work with children, or in the schools library service; secondary school librarians who may be asked for advice by their "feeder" primary schools and librarians in institutions concerned with the education of teachers. There appears to be a great deal of interest in information skills in primary schools at the moment, whether they are referred to as "reference skills", "higher order skills", "library skills", "reading extension" or "study skills". This appears, therefore, to be an opportune time for librarians to make a contribution to their definition and teaching.

1. Read some of the important texts (see Appendix 8) that are influencing current thinking in primary education. Librarians are often aware of current literature, but sometimes fail to read it. Teachers, too, are often unaware of current trends (see Appendix 7) and are grateful - and sometimes surprised - to be referred to a relevant text by a librarian.

2. Make books and periodicals available to teachers. Teachers' Centre provision is variable; discover what facilities there are at local centres and supplement them if necessary with access to your bookstock.
3. Establish contacts with key personnel at Teachers' Centres; offer any help you can, e.g. would it help them to pass on a previous month's issue of "British Books in Print" on microfiche, or copy of the holdings of your library if one exists in a portable form? If no-one at the Centre is fulfilling the role operate a current awareness service for the warden and advisers tailored to their particular needs. Many education libraries compile current awareness lists of one type or another; if you do not have time to compile one, ask someone who does to include you on their mailing list. Be prepared to supplement this information by providing photocopies of relevant articles on request.

4. Know the advisers responsible for resources, books, primary education, however the responsibilities are divided in your area. They will probably be aware of the current interest in information skills; if not, inform them. If they have not made the connection between librarians and information, remind them that librarians are experts in exploiting books and other media, and that libraries are data banks for information retrieval. (Beswick, 1983).

5. Be knowledgeable about children's books; be able to recommend worthwhile ones to teachers and the advisers. Teachers are usually grateful for an "expert" opinion.

6. Join the local School Library Association Branch and try to become a Committee member. If there are any other interest groups in existence ask (if not invited) to become a member, e.g. N.A.T.E., computer discussion groups, any groups concerned with books or reference skills in schools.
7. Visit schools to look at (ostensibly) library organisation; again, most teachers are grateful for advice, or just to talk to someone who is interested in the problems of organising the school library.

8. Use all these links to initiate or participate in inservice courses at the Teachers' Centre, in your library, or as part of the curriculum in higher education, on books, library organisation, information skills.

9. If possible go into schools for as long a period of time as can be arranged. When teachers develop confidence in you, suggest you talk to the children about books, topic work and information retrieval not just once, but to develop a theme over as long a period as can be managed. Teachers are usually pleased to allow someone they trust to talk to their children. Try to do this by circulating amongst small groups while the rest of the class work with the teacher. The children are usually pleased to have someone different to talk to; primary school children are almost invariably friendly and approachable to visitors in the classroom. Plan your programme with the teacher beforehand, so that problems of class management can be sorted out. Also, make time to talk to her after each session about what you have done and the children's reactions. Suggestions for interesting topics will be welcomed and a librarian's access to and knowledge of a broad spectrum of resources is useful.

10. When talking to teachers and children about information retrieval remember that why we classify and index is the important thing not how. Explaining the ten main classes of Dewey and their subdivisions is possibly incomprehensible and probably boring, unless rooted in purpose. Begin by presenting the organisation of books as a problem that needs
solving and with judicious guidance let the teachers and children see why linear order needs supplementing by subject indexes. Similarly, when explaining the parts of a book or the imprint, relate it to why it matters that a book is divided into cognitive parts, why an index is necessary and why it may matter if the book is out of date.

11. Remember teachers lead hectic lives and the teacher in charge of the library probably gives up lunch hours or stays after school to organise it. It is not helpful to suggest an author and classified catalogue with subject index if a subject index is all there is time to construct. If the teacher is using another type of record, persuade her that a subject index is essential. If the children are not involved in the library's organisation, suggest they should be and use them to develop subject indexes. This is a good way to involve other teachers also, if their class becomes involved. Suggest a whole school library policy for book selection and a programme of teaching of library use, if necessary draw one up in consultation with the teacher.

12. Develop some expertise with a microcomputer; many teachers are nervous of the technology and will be pleased to have help. There are many applications of micros in a primary school which can be library based. Follow the professional and computing literature for ideas and be prepared to try them out.

What this list of suggestions really says is be involved in any way you can, and as in an informed way as possible. Teachers and advisers may not be sure what a librarian can offer them; it is a librarian's task to make sure they find out.
CHAPTER 6  Conclusions

The aims of this project could be summarized as a search for evidence of information skills teaching in a school day, and in topic work, assessing library organization in four Coventry schools and looking at ways in which a librarian might contribute to the teaching of information skills in local primary schools.

The search for evidence of information skills teaching has been disappointing. The overall impression gained by observation in schools was that the acquisition and manipulation of information through independent learning is not impressive. Much of topic work is undirected copying from books and although some teachers seemed aware of this, they are unsure how the situation might be improved. Where reference skills were being taught it appeared to be through the medium of workcard type material (e.g. see list in Appendix 7 and questionnaire analysis) in a "mechanical" way often unrelated to any other aspect of the curriculum.

Libraries in the schools were not organised in a way that suggested information retrieval is understood or practiced effectively by children or teachers, the stock reflected cuts in educational expenditure and the collections were often poorly sited with no provision for silent reading.

This somewhat depressing picture is not unlike that found by the two H.M.I. surveys, Southgate’s four year study in fourteen local authorities in the North of England and the ORACLE project directed by Galton and based at Nottingham University.

Leicester

It seems that primary education has adopted the Plowden precept of individualization, but in doing so has largely interpreted it as allowing the child to progress through series of workcards which test only literal comprehension. The basic skills are carefully
taught, but not developed

In considering reading extension, I think two things become evident. In the first place it is clear that teachers in primary schools have a responsibility to help children to begin to acquire the higher order skills; secondly, it becomes apparent that the skills involved are closely interrelated. They cannot be taught in isolation and, by the same token, the whole group of skills cannot be taught as an isolated aspect of the curriculum. These skills should, whenever possible, be taught as part of the child's general experience and in situations which are meaningful to him.


Many teachers although anxious to develop such "high order" skills in their children feel unsure how to do so, or indeed, precisely what the skills are. Teachers in Coventry participating in the various inservice courses proved willing to experiment in identifying the skills and considering how they might be developed. But, even in a compact Local Authority Area such as Coventry, with its supportive inservice programme, this educative process is a slow one and can only aim to establish "bridgeheads" in schools with one committed teacher charged with informing her colleagues.

The work in schools with the children on subject indexing was encouraging evidence that children could appreciate the concepts involved, and given a purpose for the task accomplished it with thoughtful competence. This was also experienced by Garland (1983) when he experimented with primary children to construct a computer program. It is, of course, in some part at least, a tribute to contemporary education that the children encountered are able to participate in this extension of classroom activity and both experiments had the advantage of working with small groups of the most able children. Nevertheless, it must be cause for concern, that evidence suggests that during most of the school day children are not being "stretched" or stimulated sufficiently.
The observer completed the project by testing an inservice course for teachers on reference skills. The teachers' response was not evaluated, but reactions at the end of each session were favourable although unsolicited. However, the course content was too ambitious for the time available, so that issues could not be properly explored. Teachers welcome an opportunity to discuss classroom experiences and valuable insights can be gained from them, so time needs to be allowed for this. It is to be hoped that this course experience can be built upon, both within the L.E.A. and in other neighbouring education authorities through the Institute course.

At the time this project began, microcomputers had not been introduced in local schools, except by one or two enthusiasts. Teachers on the inservice courses appeared to be apathetic to the possibility of computers in the classroom, but it is possible that this attitude may change over the next few years. It is also possible, unfortunately, that this educational innovation will not be exploited to the full in our schools and H.M.I. reports in the future may deplore the lack of "higher order" computer skills also.

It is to be hoped that Maurice Line's pessimistic view of education

The importance of information handling skills is fundamental. We cannot have a democratic society without wide availability of knowledge, and widespread ability to obtain access to it and handle it critically. When people cannot find out information for themselves, and do not or will not read for themselves, they are liable to become victims of television and radio and the one newspaper they may happen to read. This is extremely dangerous. Many people today have been conditioned in a certain mode of thinking from which they cannot escape, so that they merely absorb all that happens to be fed to them.

(Line [1976, p. 12])

will be revised by changes in education within the next few years that will finally recognise

it may be less important for today's children to receive a set of factual statements for committing to memory than to know how to access the sources of the information if they need to have it ... Throughout time better teachers have sought to give children the mental tools for learning ...
GLOSSARY

COMPREHENSION - literal
  to understand information received
  - inferential to progress “beyond the information given”
  (Bruner)

CLOZE PROCEDURE
  a test of comprehension, filling in missing words, by inference, in a prose passage.

COMPUTER SKILLS
  being able to manipulate the computer as an information source, to interrogate and construct data bases.

EVALUATION
  the ability to judge the quality, reliability and balance of information received or an information source.

INDEPENDENT LEARNING
  learning at an individual pace from information sources which are usually self selected; in an educational context this often implies working on topic or project work. Linked with Resource based learning (q.v.).

INFORMATION SKILLS
  the ability to define needs for, locate, retrieve, select, organise, evaluate and communicate information. This term embraces study skills, library skills, reference skills, computer skills and is seen as a “lifeskil” not constrained within an academic setting.

LEARNING TO LEARN
  the ability to understand how to learn rather than the acquisition of facts themselves.
LIBRARY SKILLS
the ability to use a library effectively, to use catalogues and indexes and have a basic understanding of the principles of classification. To locate books and other sources of information and understand their arrangement to retrieve information.

LISTENING SKILLS
the ability to receive and understand information given verbally.

MAIN IDEAS
identifying the central issue in an item of information, usually a paragraph in a piece of prose. One of the areas 'developed' by workcard material.

READING DEVELOPMENT
extending basic reading skills of decoding and literal comprehension to include "higher order" skills which include inferential comprehension, study skills using library skills and reading strategies.

READING EXTENSION (see READING DEVELOPMENT)

READING STRATEGIES
techniques for effective reading, includes skimming, scanning, identifying main ideas.

REFERENCE SKILLS
sometimes used to refer to study skills especially at primary level. This term was used in Coventry to include library skills, study skills.

RESOURCE BASED LEARNING
acquiring information from a variety of information sources. In school, usually provided by a library/resources centre. Such learning is usually self paced and individualized or in small groups. Linked with independent learning. (g.v.).
SCANNING
a rapid survey of a particular piece of information to locate a particular idea.

SKIMMING
surveying an item of information to identify content, locate a particular item.

STUDY SKILLS
the ability to locate and select information, to use libraries and other sources effectively for an academic purpose. To use reading strategies like skimming and scanning and notetaking. To be able to synthesise information received and to apply it relevantly to the task in hand.

USER EDUCATION
in this context, a term employed by librarians to describe educating "clients" in effective use of the library and information sources.
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APPENDIX 1

Coventry L.E.A.

Coventry has a population of 338,200 (mid 1980 estimate). It was an area of industrial affluence in the 1960's and 1970's. However, it has suffered recently from the decline in the British car and machine tool industries on which it was heavily dependent. The current unemployment rate is around 10%.

The L.E.A. has a record of educational innovation, having been a pioneer of comprehensive education, community schools and mixed ability teaching. It is L.E.A. policy to introduce educational innovation only after teacher discussions and feedback from in-service courses led by the appropriate adviser.

The City has an excellent teachers' centre, Elmbank, situated near to a town centre which is roughly equidistant from all its suburbs. Suburban development has taken place in a roughly circular pattern from the centre, within approximately a three mile radius.

The L.E.A. advisers have a subject, e.g. English, or an area responsibility, e.g. Resources (book and audiovisual). In addition, they divide responsibility for the City's schools geographically across the primary/secondary sectors.

Most of the 22 secondary schools have a library/Resource collection with a teacher in charge of resources, and usually some clerical help. The three largest community schools have professionally qualified librarians, responsible in two cases to the teacher in charge of resources on a day to day basis. They are, however, in the employment of the City Libraries Department.

The City Library also maintains a School Library Service, which has an exhibition collection from which teachers may choose books for their school library. It also organises multi-media project collections on demand. The service has two full-time professionally qualified librarians with clerical assistance. The service is understaffed, underfinanced and overstretched.
There are other services to education financed in various ways, e.g. an archives school information officer, museums school information officer. This group known as Education Liaison Officers meet on a termly basis with the adviser responsible for Resources and the Librarian from the Institute of Educational Studies, University of Warwick.¹

There is also a Heads of Resources Group which is attended by the school librarians as well as teachers with responsibility for resources, the adviser and Librarian from the Institute.

Every school has a teacher responsible for resource liaison with the Education Liaison Group. These teachers meet the E.L.G. once a term.

¹ Coventry College of Education on the outskirts of the City merged with the University of Warwick in 1978 to form the Faculty and Institute of Educational Studies. The Librarian-in-Charge continues to participate in the L.E.A. activities. It has an excellent children's library of some 30,000 books.
APPENDIX 2

The language policy document

This discussion document was published for circulation to Coventry teachers in 1981, and will be published commercially in the near future. It covers all aspects of reading and language, from parental involvement in beginning reading, through assessment of progress to reference and study skills.

The introduction and Chapter 8: Reference and Study Skills, are reproduced overleaf. The content does not reflect that of the Reference Skills Courses.
INTRODUCTION

The Bullock Committee's request for 'a language policy' was originally met in various ways. Some local authorities very quickly published definitive documents whose apparent intention was to be implemented equally quickly. The assumption was that a 'language policy' was something external which exists and can be taken into a school. But our belief is that language policy is the internal construct of a school. Such a policy is constructed through dialogue about the teaching of all aspects of language. It is through such dialogue that a school can

"devise a systematic policy for the development of reading competence in pupils of all ages and ability levels",

which was one of the Bullock Committee's principal recommendations.

This discussion document began by identifying issues about the teaching of reading, and then asking questions which would help schools to begin that dialogue. They are questions without final, once-for-all answers: the answers will change as circumstances, staff, children and resources change. Therefore, to operate a school's policy, a staff should recognise that they will need to conduct a constant dialogue about the issues that the questions raise. To be a 'policy', the answers must be made explicit rather than remain unspoken.

The eight sections of this document offer one pattern for approaching the systematic construction of a school policy. It is intended to help schools build on the experience of in service education and training over the last three years, in which teachers have had the chance to attend courses on various aspects of language. The courses offered have been 'Writing in the Primary School', 'Reading Processes', 'Children Reading', 'Literature', 'Choice of Materials', and 'Reference Skills'.

The intention was that the shared experience gained from the courses should form the basis of discussion in school, from which head and teachers together would construct their own policy about reading and writing applicable to their own school.

The detailed notes in this document are drawn from discussions with heads and teachers, and from observation of good practice. The paper is meant primarily to enable heads and staffs to synthesise their experience into their own set of beliefs and classroom practice, appropriate to their own school: that is, to construct their language policy.
8 REFERENCE AND STUDY SKILLS

8.1 “Since reading is a major strategy for learning in virtually every aspect of education it is the responsibility of every teacher to develop it. It is difficult for most teachers to be fully aware of the complexity of these skills. This explicit awareness is necessary, for left to their own devices many pupils develop poor reading habits and others do not achieve the efficiency of which they are capable.”

_A Language for life: The Bullock Report_ para. 8.9

“Pupils should learn how to organise their reading. firstly by being able to locate, evaluate and select the material they need, and secondly by applying organised study methods to the material itself.”

para. 8.13

HOW DO YOU HELP CHILDREN ACQUIRE:

a. KNOWLEDGE OF AVAILABLE RESOURCES (BOOK AND NON-BOOK), THEIR LOCATION, AND THE WAY THEY ARE ORGANISED?

b. ABILITY TO DEFINE AN AREA OF SEARCH BY USING REFERENCE BOOKS?

c. ABILITY TO USE SUBJECT INDEX AND CLASSIFIED CATALOGUES?

d. ABILITY TO SURVEY SOURCE MATERIAL, MAKING AN ASSESSMENT OF AUTHOR, CONTENT, AND DATE OF PUBLICATION?

HOW DO YOU KNOW WHEN INDIVIDUAL CHILDREN HAVE MASTERED THESE SKILLS?

8.2 “Very often the reader is concerned only to find a particular fact, or to locate a section of the text which he does want to examine carefully. This may demand of him the ability to scan the text to look for certain kinds of detail, or for some cue which will tell him whether what he is looking for is to be found in that section.”

para. 8.18

WHAT SKIMMING AND SCANNING SKILLS DO YOU TEACH?

WHAT OPPORTUNITIES DO YOU GIVE THE CHILDREN TO PRACTISE THEM IN THE COURSE OF THEIR NORMAL WORK?

HOW DO YOU ASSESS THE INDIVIDUAL CHILD'S COMPETENCE?
8.1a HOW DO YOU HELP CHILDREN TO ACQUIRE KNOWLEDGE OF
AVAILABLE RESOURCES (BOOK AND NON-BOOK), THEIR LOCATION,
AND THE WAY THEY ARE ORGANISED?

Some things can be learnt once and for all, so that when pupils have learnt to use
indexes, or to survey source material, and so on, they will know how to do it. But
the ability to make use of available resources depends on the way these particular
resources are organised, so pupils will have to become familiar with each new system
encountered.

If resources are collaboratively organised by the whole school, then it is the school’s
responsibility to help children to acquire knowledge of what and where the resour-
ces are, and how they are organised.

If individual teachers make their own arrangements in their own classroom, then
each teacher will have to take on that responsibility individually.

Available resources
All schools have a wide variety of available resources, which include:

- printed materials
- audiovisual and electronic equipment
- software for the above: tapes, records, slides etc.
- what librarians and archivists call ‘realia’ (that is, artefacts and natural objects)
- essential equipment that must be stored but be accessible – rulers, papers,
  scissors, etc.

To be able to explain to children how the resource system works, the school or
individual teacher must be clear about the basic principles by which the resources
are classified and organised.

The main point is that the system should be efficient – that is, users should be able
to find out what they want without difficulty.

A system may be so personal that although the teacher who devised it is clear about
its structure, children or other teachers may find it hard to use.

Designing a system

The conceptual framework of a resource system is the set of basic principles
which controls where items are entered and how they are described.

This framework is best sorted out by the staff together so there is some kind of con-
tinuity in the school. Once the basic principles have been thought out, the system
can be tested by checking how a pupil would locate typical information, for instance:

- how to feed a hedgehog
- the identification of a fossil
- a book by Arthur Ransome
- something about dustmen

If everyone can successfully agree how the resources to answer those questions
would be found, then it’s safe to assume that the system can be explained to pupils.
If the system is devised by one teacher, then it is important that all the staff should be involved in trying it out: everyone will have to use the system, so everyone should be able to use it.

*The system should be devised as much from children's questions as from staff questions. A staff that is beginning the process of devising a system can collect the kinds of question their pupils have recently asked, and use them as the starting point.*

**Storage**

Physical storage is a practical problem that depends on the space and storage facilities available in an individual school.

*As long as pupils know where to find things, these problems can be solved.*

Central storage is not essential as long as the cataloguing system indicates clearly where things can be found, and as long as the movement of pupils to the resources does not interfere with normal school activity.

**Defining resources**

A school's resources can be described and listed under these headings:

- Books, fiction and non-fiction
- Pamphlets, leaflets, brochures, timetables, etc.
- Pictures, maps, archive documents
- Tapes, slides, records
- Electronic data-bank and microprocessors
- Calculators and electronic games
- Natural and industrial objects (e.g. fossils, car engines)
- Maths and science apparatus
- Commercially produced materials, kits, 'laboratories' etc.
- Different types of reference books (decisions need to be made about which ones to make available)
  - dictionaries
  - atlases and street directories
  - encyclopaedia
  - thesaurus (either Roget or others)
  - *AA Book*, telephone directories
  - *Evening Telegraph Who's Who*

The other major location of resources is external to the school, libraries and museum and the community in general.

Information on these can be kept in the central catalogue.
Teaching the system

The following is an outline of a general approach designed to help children to acquire the necessary knowledge of available resources.

- Know what's there yourself.
- At the beginning of the year, spend time explaining the organisation to the children. Some points may need stressing:
  - where a/v equipment is stored and how it can be borrowed
  - where essential implements and apparatus are normally stored, and the system for using and returning them.
  - what is stored centrally and what is available in the classroom.
- Make available something on paper which summarises location, retrieval and withdrawal — that is, where things are, how to find them, and how to borrow them to take away.
- Provide some exercises designed to ensure that the children understand and can operate the basic system. For instance:
  - find me a book by Joan Aiken
  - find me two books that have pictures of bulls
Exercises like this should be organised for small groups rather than the whole class, and the assignments should be different so that only a few children want each resource.
Exercises like these should not need to be continued for very long.

It is important to move away quickly from exercises, and to introduce work that will necessarily require children to use the resources. The resources should not be previously chosen by the teacher and presented to the children: the search for them is an important part of learning what's available and how to use it.

- Monitor constantly the way children are using the system. This can be done by:
  - watching how they use the resources
  - asking what difficulties they have had
  - noting which questions they could not find answers to
If they could not find answers to the questions, was it because —
  - the system is not efficient enough?
  - the resources are not there?
  - the pupils are not proficient enough in using the system?
  - it was the wrong question?
The monitoring can probably only be done generally; but at the end of a topic, or the end of a term, a teacher can valuably discuss these points with a group or a class.
- Introduce junior pupils to the systems being used in public libraries and museums: discuss the differences between the categorisations used by these outside places and by the school.

School Libraries offer a modified Dewey system which will be valuable to schools.
HOW DO YOU HELP CHILDREN TO ACQUIRE THE ABILITY TO DEFINE AN AREA OF SEARCH BY USING REFERENCE BOOKS?

In primary schools, children use reference materials to 'define an area of search' mainly in topic work.

Some topics operate by children formulating their own questions, to which they want answers.

Sometimes, a teacher will suggest topics to the children individually, or children select one, because topic work is required of them.

Sometimes a topic for a year group or for the whole school will be planned by the staff.

Asking Questions
When pupils formulate their own questions, the questions are likely to be highly specific, for instance,

- what sort of fossil is this?
- how does a car engine work?
- is it true that if you eat raisins, you get appendicitis?
- how do these electronic television games work?

Here, they begin with the specific, but will move out towards the general as they begin to find answers to their questions.

When a topic is organised by the school or the teacher, there are not likely to be such specific questions: instead, the theme is very general, and it is sometimes difficult for pupils to cope with such generalisations as 'communications', 'transport', and so on.

'Defining an area of search', therefore, means that a pupil begins with a general field of enquiry and finds a way of identifying specific areas that can be usefully handled by a primary school child.
HOW DO YOU HELP CHILDREN TO ACQUIRE THE ABILITY TO USE SUBJECT INDEX AND CLASSIFIED CATALOGUES?

A subject index tells the searcher where to look in general in a resource system: A classified catalogue lists individual items.

Subject indexes for libraries need not be based on formal systems like Dewey, but may be organised in any way a school chooses, and be coded not by numbers but by letters or symbols. They may get more complex as the children get older.

Colour-coding is sometimes used, but there can be many more categories than colours available, and colour-blind children find it difficult to use such a system.

Both subject indexes and classified catalogues are normal in public libraries, and are sometimes used in secondary schools, and occasionally occur in primary schools.

The subject index

A subject index contains simply the names of topics in the library or system in alphabetical order, and indicates where in general to look for it.

Thus, an entry may read Mammals: Shelf A3.

This indicates that all books on mammals are in that place. The index may also refer the searcher to the classified catalogue which gives more detailed information.

Defining the area in a self-chosen topic

When the topic is one that children have devised for themselves, then one way of beginning the process of defining the area of search is for the child to answer these questions:

What do I know already about this topic?
What do I want, or need, to know?
How can I find out?

The teacher will need to help or advise with the last question.

Questions like these help a child to narrow down the possibilities. A question that begins by being unanswerable, like 'Why are the leaves different on different trees?' can be reduced to one that is answerable: questions that want to know why are much harder to find answers to than questions that want to know about.

Defining the area in a teacher-chosen topic

When teachers make the decision about what topics should be, the topics tend to begin in very general ways, and pupils will have to define their area of search in these ways:

- Read a general book to make a survey of basic facts and background, and to study pictures, diagrams, etc.
- Move from that to specific books, depending on the previous general reading. This second-phase reading will locate and isolate possible areas that will need further research, and will increasingly refine the questions that are asked.
The use of bibliographies and footnote references in these books will help in the search for more specific areas.

*It should be noted that topic books that lack bibliographies, indexes and the normal apparatus of information books, are unhelpful.*

When a school wants to spend money on books the presence or absence of these things can be useful indicators of the quality of an information book.

— Detailed questions can now be asked, and the answers can be searched for in appropriate places:
  - using other books in the same classification
  - turning to catalogues to locate more specialised resources
  - using indexes, chapter headings, content pages, to search for special information.

See also 8.2 on skimming and scanning
8.1d HOW DO YOU HELP CHILDREN TO ACQUIRE THE ABILITY TO SURVEY SOURCE MATERIAL?

Once a child has located the general area of books or resources, the importance of selecting the right material is obvious.

A child should not just pick up any book on the chosen topic: the question is, is this the book I really want?

Before a reader operates the kind of skimming and scanning activities mentioned in 8.2, he or she should survey the material and consider the author, following a few simple procedures. This, or a simplified version of it, can be displayed on a poster, in the classroom, library, corridor or hall.

What are the author’s credentials for writing on this topic?

Are there initials after the name?
(For example, FRZS for books on animals?)

Has he or she practical experience in this field?
(For example Chris Bonington on climbing and mountains.)

Is there a biography of the author? What can we learn from it?

What is the date of publication?

Teachers will need to show children how to read the printing history of a book (usually printed on the reverse title-page). If it was written some time ago, has it been revised?

Different books on the same topic may have very different dates -- for example, a book on dinosaurs written in 1960 will probably be very different from a good book on them written in 1979.

In some topics, the date is crucial - world geography, space exploration, sport, electronics and computers.

What books or sources has the author used in producing this book?

Children are not always aware that many children’s information books are derived from other books, and are not first-hand work; and that errors or misinformation can be perpetuated.

Children should learn to be suspicious of any book that does not have a bibliography or acknowledgements, unless it is clearly based on actual experience, like Jane Goodall’s book on chimpanzees.

Does it look as though the book is likely to be helpful and interesting?

A quick skim through, looking at points like chapter headings, illustrations, diagrams and, above all, the index, should become basic practice for all book users.

If children are to be able to survey source material, teachers will need to explain bibliographies to them, and help them to assess the date and authors of the books they have chosen.

The classified catalogue

The classified catalogue lists individual items in the collection, arranged in the order of the classification system, so that the searcher can relate the order in the catalogue to the order of storage.
So, under 599 in the Dewey system, for example, the searcher will find in the catalogue all the books about mammals

- 599.2 *Animals of Australia and New Zealand*, Sadlier (Hamlyn)
- 599.34 *Beavers*, M. Koenig (Chambers)
- 599.5 *Dolphins and Whales*, Bevington (Ginn)

Using the system

The only efficient way for pupils to develop an understanding of subject indexes is to use them in the same basic ways outlined above in 8.1c, p.77.

- introduction to the system
- exercises to help children become familiar with it
- real use as soon as possible

For the exercises, one might try things like:

- *how many books have we got about birds?*
- *who wrote our copy of British Wild Flowers?*
- *where would you look for a book on pirates?*

See also *Resource Organisation in Primary Schools*, Cecilia Gordon, CET 1978
8.2 WHAT SKIMMING AND SCANNING SKILLS DO YOU TEACH?

Finding the right book

The process of finding the right book for their purposes involves pupils in knowing clearly what their purposes are (see 7.1) and then testing the books by skimming through them.

'Skimming' is defined as

"a rapid style used mainly to establish what the text is about before deciding whether and where to read"

_The Effective Use of Reading_, Lunzer and Gardner, Heinemann 1979

and also as reading where

"the eye travels quickly down the page, almost as if hunting for the salient points of the passage"

_'Reading to Learn'_ Patricia Wright, in _Reading Today and Tomorrow_, ed. Melnick and Merritt, ULP 1972

Finding the right place

_When pupils have found the right book, they have to locate the information they need._

Some pupils who have not been shown how to skim and scan, find it laborious to locate specific information, because they do not tackle the job systematically: there are still children at the age of fourteen or fifteen, who start at page one and try to read through the whole book to find what they are looking for, rather than skimming or scanning quickly to find the place they need.

Hunting for the right place is usually called 'scanning'. What happens is that

"when information of apparent importance is found, the pace slows, and the reader attends a little more closely to the immediate context."

_'Reading to Learn'_ Patricia Wright, _ibid_

_Scanning, then, is reading quickly to see if a point is present in the text, or to locate it so that one can read it with attention._

Teaching skimming and scanning

Children should be shown how to locate the required section of text without having to read through the whole book. To do this, they will need firstly to be clear about what they are trying to find (see 7, 8.1). Then they can be introduced to the following procedure.

- Use the contents page or list of chapter headings.
  Does it contain the appropriate points you are looking for?
- Use the index to see if the topic is represented in the book.
  Children often need training in the use of indexes. For instance, a pupil who wants information about the eye of a dragonfly from a general book on insects will need to appreciate that it should be looked for under 'dragonfly' rather than 'eye'. At first, pupils may not be aware that indexes move from the general to the particular.
  They will also need to learn how to recognise the relative importance of index entries.
  Faced with the entry:

  **Stagecoaches** ........................................... 7, 11n. 24-31, 71

  pupils need to know that they should look at pages 24-31 first, and that page 11 is probably not important, because stagecoaches are only mentioned in a footnote.
— Use all the cues available.
Children will need to have their attention drawn to what these cues are.

In skimming:
- pictures, illustrations and diagrams demonstrate something about the general topic and its treatment.
- chapter titles, page headings, subtitles, head-words (in dictionaries and encyclopaedias) all offer rapid ways of assessing topics.

In scanning:
- words in bold or italic, or capital letters
- subheadings in the text
- first sentences in paragraphs, and sometimes the last sentence
- the occurrence of key-words, that is the appearance of a relevant word or group of words: for instance, in a search for information about a dragonfly's eye, words like 'vision', 'sight', or 'lens', will lead us to dwell on this part of the text.

WHAT OPPORTUNITIES DO YOU GIVE THE CHILDREN TO PRACTISE THESE SKILLS IN THE COURSE OF THEIR NORMAL WORK?

Children will use their skimming and scanning skills in the course of a normal school day, if the teacher has designed assignments which necessarily involve reading for real purposes: for example, to discover the diet of mice, in order to feed new pets.

[See Reading, Writing and Relevance, Mary Hoffman, Hodder 1976.]

The best practice is for pupils to select their own materials, with the teacher's help and encouragements when they are needed; and the pupils can develop their understanding of the whole process if they are encouraged to talk through their search for the right material. For instance, pupils can be asked, individually or collectively:
- how they found the right books
- how they knew the book contained suitable material
- if books were rejected as unsuitable, and why?
- how specific passages were found, or how they intend to find them.

Although it is easier, and apparently saves time, if children are told which pages of which book to turn to, it will, in fact, prevent them from practising their skills of skimming and scanning.

HOW DO YOU ASSESS THE INDIVIDUAL CHILD'S COMPETENCE?

The best way of assessing a child's competence to cope with these reference and study skills is through the kind of discussion described above.

Observations could be made and noted of each child's strengths and weaknesses, and the weaknesses should become the areas on which further experience should be given.

It is less useful to assess this area by test or assignment card: what matters is whether children use skimming and scanning in actual research work.
SUMMARY

Establish purpose
Children should know what they are looking for, and why they are looking for it.

Use skimming
To discover by rapidly flicking through a book whether this is the kind of book needed.

Use scanning
To locate the part of the text to be read with attention.

Use for real purposes, not exercises.

Assess by observation of children’s success in finding what they want.
The Reference Skills Course

The reference skills courses consisted of two, three hour sessions on a weekday morning. Each primary headteacher in the City was invited to attend together with the teacher responsible for language or the library. The courses continued for three terms with groups of about twenty attending each one. Almost all of the City’s one hundred and forty schools sent one or more representatives.

The courses aimed

(i) to look briefly at proposals for assessing the development of reference skills;

(ii) to ask teachers to assess their own abilities as information searchers;

(iii) to look at library organization within primary schools;

(iv) to show examples of good practice by inviting two teachers who were teaching reference skills in their classrooms to talk about the methods they used and show examples of children’s work;

(v) to incorporate the ideas and experiences of teachers participating in the courses into a draft document on language development (see Appendix 2).

As with all groups, each course developed a corporate identity so that emphasis and reactions varied from fortnight to fortnight. The librarian attended each session for the first two terms, but
other commitments made regular attendance at the third impossible.

(i) Assessing the development of reference skills

Very few teachers had made any attempt to assess the development of reference skills in the classroom. Therefore, there was little discussion on the document RR1 (see over) and the adviser moved quickly to the other areas under discussion.

(ii) Ability as information seekers

The adviser asked the librarian's help for this session, but the course content was devised by the adviser. The teachers were asked to analyse how they organised information in their personal lives: the filing of personal documents, arrangement of books, which if any reference books they purchased for home use, how they found answers to questions raised in daily living (see document RP2 over). They were divided into small groups for this session, with one member acting as a notetaker. This session usually ended in mirth, most teachers would not admit to organising their personal resources in a systematic way and only a few suggested using any method of finding the answer to a query other than "asking someone". This asking might have taken the form of writing to a supposed authority, but few suggested the local library as a source worth exploring.

A demonstration of teletext followed and an opportunity to use British Books in Print on microfiche¹. The intention was to demonstrate some of the ways in which information technology is developing. Most teachers appeared impressed by what they saw and were usually unaware of the existence of such information tools. Then the adviser posed some

¹ Both were available to teachers at the teachers' centre. The superseded fiche for British Books in Print were donated by the Institute of Education library each month.
questions, e.g. "Who wrote Appalachian Spring" and asked the teachers to suggest ways of finding an answer. The librarian had provided some standard reference books e.g. Whitaker's Almanac, Roget's Thesaurus, Good Food Guide, which were intended to underline the points the adviser made about sources. Again, most teachers seemed unaware of the existence of the majority of these books or the sorts of questions one might ask in beginning an information search. "Appalachian Spring" is, of course, a piece of music and the group assumption was usually that it was a book or a poem. The librarian had also prepared a list of "library" and "bookwords" because the adviser was anxious to establish a common vocabulary on the courses. The cards were shared out amongst the teachers and they worked in small groups to guess or explain the meaning of the words which were then compared with a set of cards which included the definitions (see over). They did rather better at this usually having an idea of the words in most common use, but the differences between edition and impression and catalogue and index were examples where confusion existed.

This part of the session was usually greatly enjoyed and served as a way of enabling the group to relax and talk to one another. Its intention was to make the teachers aware of their own inadequacies as information gatherers before they began to teach information skills to their pupils. Whether this intention was achieved was difficult to judge since there was no immediate feedback from participants. However, it may well have had the same effect as library lessons and not been carried through into classroom teaching.

(iii) Library organisation in primary schools

The adviser was anxious that schools should use the Dewey Decimal classification to arrange books in their
libraries and maintain simple catalogues for the children to use. At that time the majority of primary schools used the main classes of Dewey and/or colour coding as a means of organising their collections. There was no standardization of colours between the different schools so teachers moving from one school to another had to familiarize themselves with a new set of colour codes. Teachers were given a copy of the "Dewey tree" (see over) and Gordon's chart for colour coding accompanied by Dewey numbers (see over) (Gordon, 1978). The adviser was hopeful that teachers would adopt these in their own schools.

At this point the teachers tended to divide into those who considered the Dewey classification scheme too difficult for primary school children and those who thought it was too simple because it did not allow for a sufficient number of subjects to be identified. Those with the latter opinion seemed to have been working only with the ten major divisions. Very few schools appeared to have a subject index other than a simple wall chart outlining the main classes. There was confusion between a catalogue, a subject index and accessions register which was insisted on by the Local Authority. Many teachers failed to appreciate that the Dewey Decimal Classification is a device for

a one-dimensional array (of) books and non-books and needs supplementing by indexing if information retrieval is to be achieved (Beswick, 1972, p. 42).

As the groups were composed of the headteacher and many teachers with responsibility for the library these basic misunderstandings were salutary, but not surprising since most of the teachers had not been introduced to the principles of organised information retrieval during their schooling or professional education.

Time prevented an adequate exploration of the problems raised in this session, most importantly, the relationship between the effective organisation of resources and information skills.
(iv) Examples of good practice

Two teachers, selected by the adviser after her visits to schools, talked to the groups about their experiences of teaching reference skills to their pupils, with examples of the materials they used and the children's work.

(a) Infant level

The first teacher was a deputy head in an infant school with a high proportion of Asian children, but no social problems. She was currently teaching the top infant year. A school policy for teaching library and study skills had been implemented after a staffroom discussion a term and a half previously. Teaching began in the reception year with alphabet skills and visits to the school's "central library", with development and reinforcement through the middle and final years in the infant school (see Chapter 4). There was no collaboration between the school and the nearby junior school so it was not certain that the careful teaching of reference skills was built on or reinforced during the junior years.

(b) Junior level

The second teacher taught a class of third year junior pupils in a school without a co-ordinated policy for reference skills, nor a central library collection. She had concentrated on teaching the children how to find books on specific topics from the classroom collections,
using encyclopedias and finding information from materials such as advertisements, television programme schedules and telephone directories. Most of the work was done through a series of worksheets which the children worked on individually. Some use was made of the "Pointers" book in the "Directions" series.

Children's work was on display from both the classes together with the teaching materials devised and used by the teachers.

The course members appeared interested and impressed with the work in these two schools; teachers always seem to appreciate any opportunity to hear other teachers describe classroom experiences with examples of the materials used and children's work. However, many of the group appeared to underestimate the capabilities of children in their schools, doubting for example, that "their" children could be taught the order of letters in a reception class, or to use the "yellow pages" as third year juniors, despite the evidence from the "good practice" teachers.

(v) **The course members' experiences**

This final session was intended as a forum where ideas already in use in schools could be shared and commented upon. It is difficult to encapsulate such discussions into a few dominant themes, but it emerged that although teachers were aware of a need to teach reference skills they were unsure of their definition or how best to teach them. Different teachers seemed to wish to concentrate on different areas of reference skills, some to look again
at library organisation, some to begin to use books more positively with infants, others to develop workcard materials for use with their junior school pupils in practicing skills with reference books. Many took the opportunity to express dissatisfaction with topic work, often seen as the most tangible product of successful work on reference skills.

The courses had been too short to allow an adequate exploration of the issues raised, but it was hoped that at least, discussion would be stimulated in the schools and the supporting language policy document (see Appendix 2), would encourage schools to formulate policies for the development of reference skills.

The Task Force described below was also formed from teachers participating in the reference skills courses.
REFERENCE SKILLS COURSE

Library skills documents presented to the teachers. These were compiled by the adviser based on the Open University's course P.E. 231 Reading Development.
DEVELOPMENT AND EXTENSION OF THE READING PROGRAMME.  OPTION R.P.2

Reading Purposes

How important is reading in adult life and how do we prepare children to recognise reading as a tool for various aspects of living. This unit is designed to give you an opportunity to examine these purposes at your own level but also to consider how you can adapt these methods for children.

ACTIVITY 1

Study Table 1 on the next page. An example has been provided to start you off. Now write down in column 1 a list of all the different things you have read in the last few days (from street signs to dictionaries). This activity should help you to summarise and categorise your reading activities in a systematic way.

Explanations of columns 1-8

Column 1 & 2 self explanatory.

" 3 Enter the likely or actual consequences of failing to read at the necessary level of competence.

" 4 Indicate problems presented by the use of jargon, misrepresentation, inadequacy of information, etc.

" 5 Indicate problems that rise from your lack of previous knowledge, failure to read between the lines or failure to read the small print.

" 6 A cross in the A column would mean that you would think every one needs to read the information, in the E column only a few people would need it.

" 7 'A' indicates daily, 'B' weekly, 'C' monthly, 'D' once in 6-12 months, 'E' scarcely ever.

" 8 This refers to the consequences of misreading. 'A' -- very important -------- 'E' so trivial, not worth considering
<table>
<thead>
<tr>
<th>Item</th>
<th>2 Purpose</th>
<th>3 Consequences of not reading adequately</th>
<th>4 Difficulties to be found in the text</th>
<th>5 Problems peculiar to the reader</th>
<th>6 Would the material be used by a wide population?</th>
<th>7 Would it be used frequently?</th>
<th>8 Importance of results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 tax form</td>
<td>Required for H.M. Inspector of taxes</td>
<td>May have to pay more tax.</td>
<td>Official jargon</td>
<td>Averse to filling in forms.</td>
<td>ABCDE</td>
<td>X</td>
<td>ABCDE</td>
</tr>
</tbody>
</table>
Study your entries in column 1 of table 1.

Try and categorise your entries and enter them in the appropriate column in table 2. Some examples have been provided. There may be an overlap of purposes.

This activity is just to indicate what items adults read to satisfy their various information needs.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Home &amp; Family roles</th>
<th>Employment roles</th>
<th>Leisure roles</th>
<th>Consumer roles</th>
<th>Community roles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income Tax form</td>
<td>Income Tax form</td>
<td>Agatha Christie</td>
<td>WHICH</td>
<td>Coventry Evening Telegraph</td>
</tr>
<tr>
<td></td>
<td>Cookery book</td>
<td>Times Educ. Supplement</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Items</th>
<th>Home &amp; Family roles</th>
<th>Employment roles</th>
<th>Leisure roles</th>
<th>Consumer roles</th>
<th>Community roles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Having now analysed the type of material which you read and the purpose for which you read it, consider the material which the children in your class read and draw up 2 tables similar to 1 & 2 which would indicate the purpose for which they read.

When you return to school it may be useful to devise a table similar to the one below to give to the children before you complete the other two. This activity could extend to other media - e.g. radio/television/films.

<table>
<thead>
<tr>
<th>HOME READING</th>
<th>HOME</th>
<th>SCHOOL</th>
<th>ELSEWHERE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHAT?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WHERE?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WHEN?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Once the child has mastered the basic word attack skills and becomes more fluent in reading, records tend to be limited. The teacher or child may indicate the books read in school and perhaps the date. This in itself gives a good guide to the children's ability and progress. There are, however, reading skills which are taught incidentally or when the need arises which are often taken for granted and it is possible that some children can fail to grasp many of these skills throughout their school lives.

The attached sheets give examples of a reading record showing some aspects of comprehension skills. The aim has been to identify the skills that will be needed for children to be able to locate information and use it intelligently. Alongside the analysis are suggested task cards or screening cards (two sample cards attached) which if completed satisfactorily at the pre-test state indicates that the child has a good grasp of the skill and should be able to cope with that situation in everyday life. If the child fails to complete the card satisfactorily then the skill must be taught. The teacher can build up a profile of a child and teach the missing links accordingly. The work can be organised alongside group work and a bank of resources such as this, could provide meaningful work while the teacher is involved in direct discussion with other children.

**Activity**

Structure a card or cards for one or more of the areas 9 - 12. Keep within the A5 or A4 format so that the sheet can be reproduced if required.
### Reading Record

**Name ..................................................**

**Date of Birth .........................................**

<table>
<thead>
<tr>
<th>Is and Objectives</th>
<th>Suggested Tests</th>
<th>Date Tested or observed</th>
<th>Teachers Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PREHENSION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Word recognition skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can the child find keys to unlock new words through</td>
<td>Task Cards</td>
<td>Pre Post</td>
<td></td>
</tr>
<tr>
<td>(1) dictionaries</td>
<td>10a 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) derivations</td>
<td>10a 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) word structure</td>
<td>10a 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) word meaning</td>
<td>10a 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Organisational Skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can the child</td>
<td>Task Cards</td>
<td>Pre Post</td>
<td></td>
</tr>
<tr>
<td>(1) sequence</td>
<td>11a 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) classify</td>
<td>11a 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) summarise</td>
<td>11a 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) take notes</td>
<td>11a 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interpretive thinking skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can the child</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sort and identify facts, opinions, ideas. Infer, conclude, compare newspapers evaluate advertisements</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Access Skills** locating information

- a) Can the child use an index
  - 9b 1
- b) Can the child identify end use
  - (1) reference books
  - (2) dictionaries
  - (3) catalogues
  - (4) encyclopedias
  - (5) directories

- c) Can the child
  - (1) read maps
  - (2) draw graphs
  - (3) solve arithmetic problems
  - (4) use library filing cards
You will need the ordnance survey map, sheet 132.

Sheet 132 is the one-inch map of the Coventry and Rugby area.

Locate the village of Hellidon by finding the grid lines 58 lat. 52 long.

1. How many churches are there in the village ________________

2. Do they have a tower or spire or neither? ________________

3. Name three other buildings which you can identify ________________

4. Give the approximate distance by road from:
   (i) Priors Marston ________________
   (ii) Daventry ________________

Is there any other indication on the map which tells you where to find further information on the National Grid? If so give details:

SMITH TASK CARD

Task 9b 5.

You will need the Coventry Telephone Directory.

Write down the following telephone numbers:

<table>
<thead>
<tr>
<th>Name of Business</th>
<th>Telephone No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>W.H. Smith &amp; Son Ltd., Bookseller, Bridge St., Nuneaton</td>
<td>________________</td>
</tr>
<tr>
<td>The number of your school</td>
<td>________________</td>
</tr>
</tbody>
</table>

Look in the yellow pages and write down the name and telephone numbers of three (3) Plumbers who live in Coventry.

1. ________________
2. ________________
3. ________________

Ask a friend to check the numbers with you.
The main system of classifying information books is the Dewey Decimal System which groups books according to the main group subjects, each main group is then sub-divided into smaller branches as shown below:
These smaller branches divide into even smaller branches as can be seen with the History section:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>940</td>
<td>HISTORY OF EUROPE</td>
</tr>
<tr>
<td>941</td>
<td>Scotland and Ireland</td>
</tr>
<tr>
<td>942</td>
<td>England and Wales</td>
</tr>
<tr>
<td>943</td>
<td>Germany and Central Europe</td>
</tr>
<tr>
<td>944</td>
<td>France</td>
</tr>
<tr>
<td>945</td>
<td>Italy</td>
</tr>
<tr>
<td>946</td>
<td>Spain and Portugal</td>
</tr>
<tr>
<td>947</td>
<td>U.S.S.R. and adjacent areas</td>
</tr>
<tr>
<td>948</td>
<td>Scandinavia</td>
</tr>
<tr>
<td>949</td>
<td>Other areas of Europe (too scattered to be shown on the map opposite).</td>
</tr>
</tbody>
</table>

Choice of Book

We can read about the history of Europe in a single book (940), or country by country (941 to 949). In a library, we can read about many subjects in a similar way. The illustrations opposite show another example:

ANCIENT HISTORY

One of the old civilisations is described in each chapter of *The Ancient World*. This kind of book is very useful when a short account is required.

Each of the other books shown is about one of the ancient civilisations. The majority of library books are of this one subject type. They provide more information on a subject than the first type, which they follow on the shelves.

Activity 1

Classification

How is the Dewey classification system applicable to a Junior School?

Using the main divisions can you suggest an alternative classification system more applicable to the children’s needs?

Would you use a Dewey classification for a Staff Library or resources centre?

How is your Staff Library/Resources Centre classified?

How is your children’s library or classroom library classified?

Examine the colour-coded groupings – can you suggest any improvements?
<table>
<thead>
<tr>
<th>Color</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLUE</td>
<td>Famous People</td>
</tr>
<tr>
<td></td>
<td>Ancient Times</td>
</tr>
<tr>
<td></td>
<td>Houses and Buildings</td>
</tr>
<tr>
<td></td>
<td>Clothes and Furniture</td>
</tr>
<tr>
<td></td>
<td>Transport (see Geography also)</td>
</tr>
<tr>
<td>GREEN</td>
<td>Transport (see History also)</td>
</tr>
<tr>
<td>GEOGRAPHY</td>
<td>Jobs People Do</td>
</tr>
<tr>
<td></td>
<td>Products</td>
</tr>
<tr>
<td></td>
<td>Foreign Countries</td>
</tr>
<tr>
<td></td>
<td>Atlases and Maps</td>
</tr>
<tr>
<td></td>
<td>Flags</td>
</tr>
<tr>
<td></td>
<td>Farming</td>
</tr>
<tr>
<td>YELLOW</td>
<td>Plants, Flowers, Trees and Shrubs</td>
</tr>
<tr>
<td>NATURE</td>
<td>Pond Life</td>
</tr>
<tr>
<td></td>
<td>Sea and Seashore</td>
</tr>
<tr>
<td></td>
<td>Birds</td>
</tr>
<tr>
<td></td>
<td>Insects</td>
</tr>
<tr>
<td></td>
<td>Animals</td>
</tr>
<tr>
<td></td>
<td>Conservation</td>
</tr>
<tr>
<td>BLACK</td>
<td>Musical Instruments</td>
</tr>
<tr>
<td>ART, MUSIC,</td>
<td>Famous Artists and Composers</td>
</tr>
<tr>
<td>SPORT,</td>
<td>Games and Hobbies</td>
</tr>
<tr>
<td>ENCYCLOPAEDIAS</td>
<td></td>
</tr>
<tr>
<td>RED</td>
<td>Space, Famous Scientists</td>
</tr>
<tr>
<td>SCIENCE</td>
<td>Power and Energy</td>
</tr>
<tr>
<td></td>
<td>Inventions</td>
</tr>
<tr>
<td></td>
<td>Building, Geology.</td>
</tr>
<tr>
<td></td>
<td>Medicine</td>
</tr>
</tbody>
</table>
How would you explain to the children you teach the need for and the use of a classification system?

Could you classify literature in any way?

How are books chosen for your school or class library?

Do the children have any say in the matter? Do you have any say?

Where are the weaknesses and strengths in your class library, school library, staff library/resources centre?

Are you in a position to do anything about this?

Would you include media other than books in a children's library?

Do you use the children's own booklets to add to your class or school library?
Activity Two

Catalogue

Most libraries provide catalogues of their books, both novels and information books. Catalogues will help you find: books by a certain author, a particular book title, or a subject.

Novels are usually catalogued by authors in alphabetical order.

Informative books are usually catalogued by subject and Dewey number as shown (Classified Subject Catalogue).

Knowing the subject number you can find out what books the library has available within that subject section.

Are subject-catalogues of use at the Junior School level?

How do you 'stock-take' your library?

Are subject-catalogues of use for a Staff Library/Resources Centre?

How is your Staff Library/Resources Centre catalogued?

Examine the Card Index for a Staff Library/Resources Centre which is on show; would you find it useful?
REFERENCE SKILLS COURSE

Taken from Gordon (1978) and distributed widely throughout the City.
<table>
<thead>
<tr>
<th>Adult Terms</th>
<th>Childrens Terms</th>
<th>Colour</th>
<th>Dewey Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Books</td>
<td>Encyclopaedias</td>
<td>White</td>
<td>000</td>
</tr>
<tr>
<td>Bible Stories</td>
<td>God's other lands</td>
<td>Pink</td>
<td>220 240</td>
</tr>
<tr>
<td>People who help us Jobs</td>
<td></td>
<td>Yellow</td>
<td>360</td>
</tr>
<tr>
<td>Cars, ships, trains, Aircraft.</td>
<td></td>
<td></td>
<td>930</td>
</tr>
<tr>
<td>ABC Words Dictionaries</td>
<td></td>
<td>White</td>
<td>420</td>
</tr>
<tr>
<td>Our world Numbers Plants Animals</td>
<td></td>
<td>Green</td>
<td>500 510</td>
</tr>
<tr>
<td>Green</td>
<td></td>
<td></td>
<td>580 590</td>
</tr>
<tr>
<td>Machines Building</td>
<td></td>
<td>Purple</td>
<td>620 690</td>
</tr>
<tr>
<td>Handicraft Music Sports</td>
<td></td>
<td>Pale Blue</td>
<td>700 780 790</td>
</tr>
<tr>
<td>Nursery Rhymes Poetry Plays</td>
<td></td>
<td>Orange</td>
<td>821 822</td>
</tr>
<tr>
<td>People in other countries</td>
<td></td>
<td>Brown</td>
<td>910 912 940-99</td>
</tr>
<tr>
<td>People before us</td>
<td></td>
<td>Red</td>
<td>920-930</td>
</tr>
</tbody>
</table>
APPENDIX 3

Reference Skills Course

"Bookwords" "Library words" "Reference skills words"

Listed of words, some with definitions, were prepared for the Adviser by the Librarian. During the course the Adviser distributed the cards, without their definitions, to the teachers who worked in groups to explain or guess at meanings. Then the areas with definitions were checked for the "answers", with each group reading out to the other, words they did not know or had guessed incorrectly. A high proportion of "bookwords" and "library words" were not known or incorrectly defined.

(1) "Library words"

Some examples of those given to the teachers.

ACCESSIONS REGISTER
a stock list of items in a library usually arranged chronologically by consecutive numbers assigned to each item as added.

ARCHIVE
original documents, illustrations, etc. and the place in which they are kept.

ANNUAL
cf Yearbook.
a publication that comes out each year.

AUDIOVISUAL MATERIAL
items other than that in paper format, e.g. tapes, slides, filmstrips.

BIBLIOGRAPHY
a list of books published at a particular time or on a particular subject. Can be a separate volume(s) or a list of recommended reading/sources or included in a book or journal article.
CATALOGUE

a list of items in a predetermined order. In a library context a list of the items in the library in author, subject or classified order (q.v.).

CLASSIFIED CATALOGUE (INDEX)

a list of items in a library arranged in the order of the classification scheme, e.g. Dewey. This arrangement will be the same as the order of books on the shelves.

DEWEY DECIMAL CLASSIFICATION

an example of a classification scheme (q.v.)

a method of arranging items by subjects by assigning numbers to those subjects.

EPHEMERA

items in many forms, e.g. pamphlets, playbills, of contemporary interest. Valuable as source material for social historians.

FILING

to place in a predetermined order, e.g. alphabetical, numerical.

NEWSPAPER CUTTINGS

items of interest taken from newspapers and kept in a predetermined order (cf ephemera).

ORAL HISTORY

history passed from person to person without being written down. Recently recognized as important and collected on tape by historians and transcribed.

PERIODICAL

an item appearing at regular intervals, e.g. magazines, annuals, directories.
PRESTEL
the Post Office's viewdata (q.v.) service
a database of (mainly) current information
utilizing the telephone lines, and a
specially converted T.V. receiver. Input
is by subscription from organisations
concerned with the dissemination of
information or particular products/services,
e.g. British Rail, C.E.T.
"Interactive" e.g. can be used to order
goods.

PUBLISHERS' CATALOGUE
lists of items available from publishers.
Usually in alphabetical or subject order
with a brief description.

REALIA
objects other than books and audio-visual
materials (q.v.) which can be used in
information searching, e.g. rocks,
skeletons, coins.

REFERENCES (SEE/SEE ALSO)
a guide to synonymous or related terms
see references refer to synonymous terms,
e.g. Philately see Stamp Collecting,
see also refers to related terms, e.g.
MAMMALS see also ANIMALS.

SECONDARY SOURCE
commentaries "after the event" "with
hindsight", probably utilizing primary
sources (q.v.).
SUBJECT CATALOGUE

c.f. Classified catalogue

Subject index

an alternative to the classified catalogue with a subject index. Items are arranged in alphabetical subject order with see and see also references (see References) and their locations.

SUBJECT INDEX

an alphabetical list of subjects with locations, in library terms usually accompanies a classified catalogue (q.v.) or provides a key to a classification system.

THESAURUS

a collection of words with their synonyms and antonyms.

VIEWDATA

a genetic term for services like Prestel and Teletext (q.v.) conveying information via a T.V. screen.

(ii) "Bookwords"

Some examples of those given to the teachers.

APPENDIX

additional information not essential to the text and collected together at the end of the book.

BLURB

a publisher's description (usually couched in complimentary terms) of a book's content. Found in publishers' catalogue (q.v.) and on the book jacket.
CONTENTS PAGE
a list of the subject matter of a book, usually in Chapter (q.v.) order.

EDITION
a whole number of copies of a book from a publisher produced from one setting of the type. A new edition signifies a breaking up of the type and a resetting to incorporate new information. cf. REVISION.

GLOSSARY
a list of technical words appearing in a text with an explanation of their meaning.

IMPRINT
information about the publisher, place and date of publication and printing history of a book (edition, reprint, etc. q.v.). Usually found at the bottom of and reverse of the title page.

INDEX
an alphabetical list of subjects. In a book, those subjects mentioned in the text with the page numbers(s) where the reference(s) will be found.

PREFACE
an introduction to a book stating its aims, scope, subject, etc. May be by the author or other authority.

SPINE
the back of a book. The bottom of the spine is the conventional place for labelling with a shelf mark (q.v.).
TITLE

a distinguishing caption for a book or
chapter heading. The title page is the
one that gives the title, author and
imprint. (q.v.).

(iii) "Reference Skills" words

Some examples of those given to the teachers.

These were not defined; it was hoped that creating
definitions would form a discussion point in the groups.
In practice, there was rarely time to do this at any
length during the session.

COMPREHENSION SKILLS

EVALUATE

INDEPENDENT STUDY

INFORMATION SKILLS

LOCATE

LOCATION SKILLS

MEANING SKILLS (COMPREHENSION)

ORGANISE

PREVIEWING

PRONUNCIATION SKILLS

QUESTIONING

RESEARCH
APPENDIX 3 (b)

The Task Force

A task force is a strategy often used within Coventry L.E.A. A group of teachers meet together and develop an expertise in a particular area by sharing ideas and implementing them in their classrooms. Then, they become a contact group to advise and support other teachers. This particular task force had as its members the "Resources Adviser", the two "good practice" teachers from the reference skills courses, the Institute Librarian and ten other primary teachers, all of who had expressed a strong interest in reference skills teaching. Two secondary school teachers were also invited to attend. The group met once every three weeks for two terms.

Two initial documentary tasks suggested by the adviser were

(i) a list of commercially produced material used by members of the group for reference skills teaching.

Since this was a rapidly growing area, the librarian contributed newly published material not yet in use in the schools.

The task force felt such works should not be used uncritically, but adapted where necessary or used to stimulate ideas.

(ii) a list of book, library and information skills words arising out of the work in the reference skills courses.

The adviser felt that the vocabulary of books and reference skills should be understood by all the teachers, so that they could impart it with confidence to the children.

Other strategies discussed and tried in the classroom were dictionary skills, topic work using the "three questions" approach and work on indexing skills. (See Chapter 3).
The exhibition

The adviser wanted the group to share its work with other teachers in the City before it progressed too far, so she suggested that an exhibition of the ideas and resulting work should be organised at the Teachers' Centre, with two evenings of discussions based on the displays. This gave the group a focus and a goal to work towards, but may also have led to its eventual dispersal, because this activity masked the lack of a clear set of aims for the group, and its lack of a theoretical base for its activities.

The exhibition coincided with a strike of school caretakers in the City which closed schools to children for a month. This made it possible to hold a daytime meeting in conjunction with the exhibition, where each of the primary teachers in the task force described their work on reference skills in the classroom, as a result of their participation in the task force. The librarian spoke about organising a library, including the use of subject indexes for information retrieval.

During the weeks of the strike, many teachers took the opportunity to visit the exhibition and to talk to the adviser about reference skills. Many, too, took the opportunity to begin to reorganise their libraries using the Dewey decimal classification, inviting the librarian to visit their schools to advise them, or to talk to the staff about such an innovation and its desirability. For the librarian, involvement in the task force and the exhibition, meant the establishing of many contacts with teachers who probably would not have considered inviting a librarian into school to discuss changes in library organization in the context of a reference skills teaching programme.

The actual display at the Teachers' Centre consisted of project work from four schools, examples of dictionary work, subject indexing work and a display of commercially produced materials on reference skills with annotations.

After the exhibition the task force seemed to lose impetus, the strike had been an unsettling experience for teachers and children; it took time to re-establish normal classroom conditions so the teachers
seemed less ready to experiment. Several members were leaving or changing schools and the adviser's early retirement was imminent. It was proposed that the group continue with another adviser as its convenor, but it was losing its cohesion and met for the last time in the Spring of 1982.  

The group felt the experience had been valuable and some useful ideas had been exchanged. The teachers had enjoyed testing new ideas and bringing experiences back to the group to discuss. It is easy to forget how isolated teachers can become when contact with school colleagues is limited to coffee or lunch breaks and often extra curricular or personal commitments infringe upon this time. Contact with teachers from other schools can be even more limited, unless the Local Education Authority is supportive of participating inservice courses such as the task force.

However, the group had lacked a clearly stated set of objectives at its formation and had failed to find time to reflect on what had been achieved in the classroom and use these experiences to work towards a structured programme of reference skills development. This probably made it more difficult for the group to reconvene once the immediate objective of the exhibition had been fulfilled.

---

1 It has since been reformed with a core of original members, and other interested primary teachers.
TASK FORCE

A strategy for topic work produced by the adviser for the Task Force.
### Table: Information Recording and Question Formation

<table>
<thead>
<tr>
<th>WHAT DO I KNOW ALREADY?</th>
<th>WHAT DO I WANT TO KNOW?</th>
<th>HOW CAN I FIND OUT?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>Number of Children</td>
<td>Age Range</td>
</tr>
<tr>
<td>Time of Year: Autumn, Spring, Summer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### How introduced?
- e.g. School Topic to all classes
- Class teacher " " " "
- Individual child's topic to all classes.
- Children's own topics
- School Topic to groups (how many?) " to individual children
- Other (specify)

#### How was information recorded?
- e.g. Teacher noting all information on blackboard (from all offers)
- Groups recording on paper
- Pairs " " "
- Individuals " "
- Individuals telling teacher who notes info.
- Groups " " " " "
- Individuals speaking into tape recorder
- Groups " " "
- Other (specify)

#### What happened to information?
- e.g. Children noted required words for blackboard
- Class book prepared " " "
- Individual " "
- Individual informed rest of class
- Other (specify)

#### Did the information highlight any conceptual difficulties?
- YES
- NO

#### How did children formulate their own questions?
- e.g. They just wrote them down
- They read out their information and other children asked
- (if child didn't know, " that was a question"
- Teacher asked questions and child used them

#### Did the questions highlight any skill difficulties?
- YES/NO

#### Did the questions need simplifying?
- YES/NO
<table>
<thead>
<tr>
<th>How did the children find out?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asked someone else (who?)</td>
<td></td>
</tr>
<tr>
<td>Observed</td>
<td></td>
</tr>
<tr>
<td>Experimented</td>
<td></td>
</tr>
<tr>
<td>Looked in a book</td>
<td></td>
</tr>
<tr>
<td>(How did they find the book?)</td>
<td></td>
</tr>
<tr>
<td>Other media (specify)</td>
<td></td>
</tr>
<tr>
<td>(How were they directed to it?)</td>
<td></td>
</tr>
</tbody>
</table>
TASK FORCE

List of commercially available materials provided by the Librarian for the Task Force.
INFORMATION SKILLS

TASKFORCE

1. COMMERCIALLY AVAILABLE MATERIALS

(a) COOPER, J. Directions. 1. 1977 005 0024167
    2. 1980 005 0030914
Directions
Pointer 1980 005 003155 Oliver and Boyd.

Reading strategies: using reference books, etc.

(b) JORDAN, R. R. Looking for information: a practice book in
    reading skills. Longman, 1980. £1.45 0 582 74902 6.
    Primarily intended for foreign students at F.E. level, but
    has ideas that could be adapted. Covers directories, maps,
    libraries, etc.

(c) MANLEY, Deborah. Finding out: a young reader's guide to facts
    and where to find them ... Piccolo Books, 1978. £0.75 0 330 25327 4.
    Using sources, books, libraries for information.

(d) NIVEN, C. Study skills 3: reading for information. Collins, 1980
    £0.40. 0 00 314221 3.
    (Study skills 1 - not published).
    Reading strategies, similar in scope to "Directions".

    £1.70 + £0.80. 0 05 003321 2 and 0 05 003322 0.
    Cloze procedure.

    0 050030981.

    0:050033204,
    remedial. Lower secondary. Coping with "public print", i.e. advertising,
    forms, posters. Possibly useful for ideas.

(g) SHAW, W. H. Think it out. Nelson, 1972. 017 433008X middle years
    Balance and bias, assessing facts. Useful for ideas in this area.

(h) L.D.A. Sorting and classifying kit. L.D.A., 1974. £18.25.
    Packs of cards for sorting by like characteristics.

(i) DEAN, Joan. Literacy schedule. Reading, Centre for Teaching of Reading.
    Checklist of "literacy skills" including reference skills.

(j) S.R.A. Reading Laboratories.

(k) S.R.A. Research lab.

(l) S.R.A. Newslab.
TASK FORCE

Commercially available materials - the teachers' list.
Commercial Materials

- developing general skills.

Collins  Let's look it up  Bk. 1 Finding information  
          Bk. 2 Reading for information
Oliver & Boyd  Directions  Pointer  Bk. 1 + Bk. 2.
Collins  English 7-12  Bks. 1 - 4
Collins  Study Skills
BBC  Listening and Reading
Oliver & Boyd  Passwords
Oliver & Boyd  Reading Clues
Piccolo  Finding Out
Homes McDougal  Read to Think
Nelson  Reading with Purpose  Bks. 1 - 2
S.R.A.  Reading lab.  
        Power builders.  
        Research lab.
Nelson  Think Ahead
Ward Lock  Reading Workshop
Peter Deffon Associates  How to Use a Library  
                       Doris Rushton
Commercial Materials
- developing specific skills.

Children's Britannica Work Cards.

Collins 1st Colour Dictionary and exercises.

Choose your words - thesaurus and exercises.

First encyclopaedia - Nisbet ) Focus 1 & 2
also Beginner's Encyclopaedia ) Search
Playing with words

Look at your atlas - Cassell Bk.1 & Bk.2


Off the shelf.


A simplified dictionary and exercises - Schofield & Sims.

Word hunters' companion - a First Thesaurus.
A list of terms compiled by the adviser from suggestions from teachers on the reference skills courses and top junior children taught by the adviser in various schools. (Compare the list compiled by the Librarian for the Reference Skills courses).
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>phabetical order</td>
<td>copyright</td>
</tr>
<tr>
<td>author</td>
<td>code</td>
</tr>
<tr>
<td>thor - index</td>
<td>classification</td>
</tr>
<tr>
<td>autobiography</td>
<td>communications</td>
</tr>
<tr>
<td>breviation</td>
<td>charts</td>
</tr>
<tr>
<td>ridged</td>
<td>checklists</td>
</tr>
<tr>
<td>pendix</td>
<td>column</td>
</tr>
<tr>
<td>knowledgements</td>
<td>computer</td>
</tr>
<tr>
<td>analogy</td>
<td>colour coding</td>
</tr>
<tr>
<td>enda</td>
<td>concordance</td>
</tr>
<tr>
<td>denda</td>
<td>children's corner</td>
</tr>
<tr>
<td>manac</td>
<td>fly-leaf</td>
</tr>
<tr>
<td>chives</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>date of publication</td>
</tr>
<tr>
<td></td>
<td>dustcover</td>
</tr>
<tr>
<td>urb.</td>
<td>Dewey system - Decimal system</td>
</tr>
<tr>
<td>bibliography</td>
<td>diagrams</td>
</tr>
<tr>
<td>ok</td>
<td>dictionaries</td>
</tr>
<tr>
<td>schures</td>
<td>display</td>
</tr>
<tr>
<td></td>
<td>data</td>
</tr>
<tr>
<td></td>
<td>date-stamp</td>
</tr>
<tr>
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facts - interpreting/
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G
graphs - interpreting/
   compiling

I
illustration - reaction
to/interpretation
irrelevance - deciding
inferring

L
listing
locating - informative
   main ideas
   sources
   resources
library - use of
library terms - use of
   logical argument

M
map - interpretation
   and compiling
modelling
magazines - use of
magazines - identification

N
note taking
network analysis
newspapers - use of

O
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   information
purposes for reading
predicting
planning reading strategies
propaganda
pronunciation

Q
questionnaire - compiling/
   answering/collating

R
relevance - checking facts
research
review
reading small print

S
scanning
searching
surveying
sequencing
selecting
statistics - interpreting
silent reading
sorting
skimming
summarising
### Observation Schedules for Schools A and B

#### Teacher

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1 = individual child
0 = part of class
0 = whole class
## Observation schedules for Schools A and B

### TEACHER

|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
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| 10. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

1. Encourages use of book (etc.) as means of finding information.
2. Explores what children already know on given topic.
3. Helps children formulate questions.
5. Directs use of book using indexes etc.
6. Directs finding appropriate passage (chapter heads, scanning, etc.)
7. Directs evaluation of books.
8. Sets task involving use of reference books.
9. Directs taking of notes from written sources.
10. Develops listening skills.
11. Develops talking skills (group) (singly).
12. Develops use of diagrammatic forms.
13. Other teaching activity.
14. Using books (silent reading - SR) (topic work - TW) (workcards - WC)

### CHILD

|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
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| 12. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

1. Using library skills.
2. Using reference books for fact finding (dictionaries, etc.).
3. Using information books to locate information.
4. Skimming/scaning.
5. Summarizing content (copying).
6. Asking questions (AQ).
7. Listening for meaning.
8. Talking for meaning.
10. Other activities.
11. Listening to teacher (T) Feers (F).
12. Reading story book, workcard, etc.

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1 = individual child
0 = part of class
0 = whole class
### Observation Schedules for Schools A and B

#### TEACHER

1. Encourages use of book (etc.) as means of finding information.
2. Explores what child(ren) already know on given topic.
3. Helps child(ren) formulate questions.
5. Directs use of book using indexes etc.
6. Directs finding appropriate passage (chapter heads, scanning, etc.)
7. Directs evaluation of books.
8. Sets task involving use of reference books.
9. Directs taking of notes from written sources.
10. Develops listening skills.
11. Develops talking skills (Group) (Singly).
12. Develops use of diagrammatic forms.
13. Other teaching activity.
14. Using books: silent reading - SR (topic work - TW) (workcards - WC)

#### CHILD

1. Using library skills.
2. Using reference books for fact finding (dictionaries, etc.).
3. Using information books to locate information.
4. Skimming/scanning.
5. Summarizing content (copying).
6. Asking questions (AQ).
7. Listening for meaning.
8. Talking for meaning.
10. Other activities.
11. Listening to teacher (T) Peers (P).
12. Reading story book, workcard, etc.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

1 = individual child
0 = part of class
O = whole class
## Observation schedules for Schools A and B

### TEACHER

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 | Encourages use of book (etc.) as means of finding information. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 | Explores what child(ren) already knew on given topic. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3 | Helps child(ren) formulate questions. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4 | Directs use of library skills (finding right book). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 | Directs use of book using indexes etc. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6 | Directs finding appropriate passage (chapter heads, scanning, etc.) |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7 | Directs evaluation of books. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8 | Sets task involving use of reference books. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9 | Directs taking of notes from written sources. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 10 | Develops listening skills. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 11 | Develops talking skills (Group) (Singly). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 12 | Develops use of diagrammatic forms. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 13 | Other teaching activity. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 14 | Using books (silent reading - SR) (topic work - TW) (workcards - WC) |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### CHILD

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
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| 1 | Using library skills. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 | Using reference books for fact finding (dictionaries, etc.). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3 | Using information books to locate information. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4 | Skimming/scanning. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 | Summarizing content (copying). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6 | Asking questions (AQ). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7 | Listening for meaning. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8 | Talking for meaning. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9 | Drawing/Modelling. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 10 | Other activities. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 11 | Listening to teacher (T) Peers (P). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 12 | Reading story book, workcard, etc. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

1 = individual child  
0 = part of class  
- = whole class
### Observation Schedules for Schools A and B

#### TEACHER

1. Encourages use of book (etc.) as means of finding information.  
2. Explores what children already know on given topic.  
3. Helps children formulate questions.  
5. Directs use of book using indexes etc.  
6. Directs finding appropriate passage (chapter heads, scanning, etc.).  
7. Directs evaluation of books.  
8. Sets task involving use of reference books.  
9. Directs taking of notes from written sources.  
10. Develops listening skills.  
11. Develops talking skills (Group) (Singly).  
12. Develops use of diagrammatic forms.  
13. Other teaching activity.  
14. Using books (silent reading - SR) (topic work - TW) (workcards - WC)

#### CHILD

1. Using library skills.  
2. Using reference books for fact finding (dictionaries, etc.).  
3. Using information books to locate information.  
4. Skimming/scanning.  
5. Summarizing content (copying).  
6. Asking questions (AQ).  
7. Listening for meaning.  
8. Talking for meaning.  
10. Other activities.  
11. Listening to teacher (T) Peers (P).  
12. Reading story book, workcard, etc.

The table includes check marks for observation days, with symbols indicating the type of observation:
- **1**: individual child
- **0**: part of class
- **00**: whole class
### Observation Schedules for Schools A and B

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<td>14. Using books (silent reading - SR) (topic work - TW) (workcards - WC)</td>
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**Notes:**
- 1 = individual child
- 0 = part of class
- 0 = whole class
### APPENDIX 4

#### Observation schedules for Schools A and B

|       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|-------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| **TEACHER** |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 1. Encourages use of book (etc.) as means of finding information. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 2. Explores what child(ren) already know on given topic. | | | | | | | | | | | | | | | | | |   | | | | | | | | | | | | | | | | |
| 3. Helps child(ren) formulate questions. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 5. Directs use of book using indexes etc. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 6. Directs finding appropriate passage (chapter heads., scanning, etc.) |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 7. Directs evaluation of books. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 8. Sets task involving use of reference books. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 9. Directs taking of notes from written sources. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 10. Develops listening skills. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 11. Develops talking skills (Group) (Singly). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 12. Develops use of diagrammatic forms. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| 13. Other teaching activity. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |

| **CHILD** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. Using library skills. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2. Using reference books for fact finding (dictionaries, etc.). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3. Using information books to locate information. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4. Skimming/scanning. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5. Summarizing content (copying). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6. Asking questions (AQ). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7. Listening for meaning. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8. Talking for meaning. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 10. Other activities. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 11. Listening to teacher (T) Peers (P). |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 12. Reading story book, workcard, etc. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

1 = whole class
0 = part of class
N = whole class
APPENDIX 5

The schools surveyed


(a) The environment

School A was in an outer suburb of the City, but with many problems associated with inner cities. The housing was mainly Council owned and a mixture of houses and flats built in the late nineteen fifties and early nineteen sixties. Much of it had deteriorated over the years and presented a shabby and poor appearance.

The area had a high incidence of one parent families with nearly one in three of the junior school pupils being in this situation. There were problems from vandalism; before visits began, the infant school had been set on fire by two twelve year olds from the junior school. A high proportion of the local population was in the five to fifteen age group.

(b) The buildings

Infant and junior schools were in separate buildings on the same site. Both were built in the late nineteen fifties. The junior school was on two storeys. The eight classrooms, four on each floor, were grouped around open spaces, lined with bookshelves. The head's study, staff room and resources room formed a separate area to the right of the entrance.

(c) The pupils

Like most City schools the school population was falling. There had been 280 children on the roll in 1977, but the
(c) The pupils (continued)

number had dropped to 220 in 1981, although the rate of decline was slowing down. Most of the children were white, but the few ethnic minority children had additional tuition from the Minority Group Support Service (a Government funded, peripatetic group of teachers).

The majority of the children went on to the community school in the area. There was contact between the community school and its "feeder" primary schools.

The school seemed happy and reasonably well ordered, with friendly children prepared to welcome a visitor and question her about the reason for her presence.

(d) The staff

There were eight full-time staff and one part-time remedial teacher. Language and library was a Scale III post, with a Scale II post for topic work and resources. The head said he believed in a democratic school and held frequent staff meetings to formulate policy and discuss problems. Several teachers in the school, including the head had been involved in the language courses organised by the L.E.A., and they were attempting to put a language policy, including reference skills into operation.

The head did not have a private room, sharing the office with his secretary. When she was absent as was the case on the afternoon the interview took place there were constant interruptions. These ranged from requests for a pencil, or admiring a piece of work, to admonishing those sent for a misdemeanour.

He was hoping to convert an area on the upper floor into a study to provide a more peaceful environment.

The impression was created of a kind and caring head, having good relationships with the children.
(e) Library and resources

The library was in the foyer area directly in front of the entrance and on the routes to the hall, head's study and the four downstairs classrooms. Consequently, an attempt to provide a quieter reading area had been made on the upper floor. However, it was only quiet when classes were in progress, since it too, was on the thoroughfare between the four upper classrooms and the stairs. These two areas housed 'library books', information books on the lower floor, fiction from the school library service and the school's own collection on the upper floor. The information books were arranged numerically in broad Dewey classes. All the books could be taken home, including reading books from the schemes used. There were about 2,000 books in the library areas.

Guidance to the classification numbers was provided by a table of Dewey numbers and subjects pinned to the wall. There was no subject index, but a classified catalogue on cards and an accessions register was also maintained.

About £200 was allowed for library books each year, with about £20 given to each teacher to replenish the classroom collections, including class sets. The bookstock was shabby and not up-to-date. The school's stock of fiction was particularly dilapidated, looking as though it had been acquired second-hand or as gifts from parents. It's shabby appearance was not apparently caused to its popularity, since bookcards and issue trays revealed little evidence of it having been borrowed. Much of it was too difficult for junior school pupils to tackle.

The information books were rather better, showing more evidence of recent purchase and having been borrowed by the children. However, little appeared to have been added in recent years, probably reflecting the decreasing
(e) Library and resources (continued)

amount of money to spend on books that has affected all Coventry's schools recently (E.P.C. 1980 ).

The resource room had been converted from a classroom freed by falling rolls. It was used only by the teachers and in process of development. "Topic boxes" were being created with illustrations from books and magazines being their main contents. These were arranged in Dewey number order and colourcoded. Filmstrips, cassettes and slides were colourcoded also. Since the room was still being organised it was apparently little used, but it was hoped that when it was finished, use would increase. The teacher responsible for topic was also responsible for the room's organization and utilization and at that time she was also assuming charge of the library. Any work done in either area was after school or in the holidays.

2. School B - junior school, 180 children on the roll.

(a) The environment

School B was situated in an area of mixed Council and private housing in a "good" suburb of the City. The majority of householders had been employed in three large factories nearby, two car factories and one large tractor firm. The area had reflected the high level of working class affluence typical of much of Coventry. During the last eighteen months there had been sudden and widespread redundancies in the factories. Consequently, many families had left to seek employment elsewhere.

(b) The buildings

Infant and junior schools were in close proximity in the middle of the housing development which they served. Both schools had been built in the early sixties on one storey in an L-shape with classrooms leading off long corridors.
(c) **The pupils**

The school had been affected by falling rolls and junior and infant schools had merged under the junior school head. From the next school year pupils were to be vertically grouped. The head was "strict" in a way that is perhaps not fashionable now, so that the children gave an immediate impression of being well-disciplined and well-mannered to visitors.

(d) **The staff**

The junior school had a staff of four. The head was a good communicator and all the teachers were fully briefed on the librarian's visits and their purpose. Head and staff had attended language policy courses, with the Head and teacher with responsibility for the library attending those on reference skills.

A language and reference skills policy was being implemented in the school.

(e) **Library and resources**

The central library collection was placed near the entrance with bookshelves grouped around a working area and extending into a nearby corridor.

On the whole the foyer area housed the fiction collection, including books from the school library service, and information books were in the corridor. Books were selected by the teacher with responsibility for the library and the head. Book use and promotion was an interest of the Head's and she often read stories to the children. She had just registered for a Master's degree at the University and was hoping to investigate the content of science topic books.
A recent fire had damaged much of the bookstock of about 3,000 volumes and the collection was being rebuilt with a compensatory grant from the L.E.A. Consequently, much of the stock was new. The library was classified fairly closely by Dewey and had author and subject catalogues. Class teachers were expected to show children how to use the library effectively. However, later impressions suggested that some teachers had, although each class was timetabled each week for topic work, Children were allowed to take books home and encouraged to work or read in the library area in their free time and during topic work if it was appropriate. The Head felt imaginative literature was important and frequently read to the children, and was acknowledged to be an excellent storyteller. She had an interest in the content of information books and was hoping to do an M.A. at the University the following year on this subject.

Each classroom also had a collection of books, both fiction and non-fiction and a selection of stories in paperback from the authority's "bookbus", a service set up by an adviser to supply paperback fiction to schools as a supplement to the school library service.

There did not seem to be much emphasis on other resources in the school; they had the usual equipment, tape recorders, television, projectors, but there was no separate resources area and resource materials and equipment were kept in a room leading from the Head's study and supervised by the school secretary.
3. **School C** - Roman Catholic junior school; 200 children on the roll.

(a) **The environment**

School C was in a pleasant outer suburb with a high proportion of owner occupation. The population was less dependent on the local car industry as the main source of employment, but there were enough residents concerned with the industry or in related occupations for its contraction to have caused some unemployment in the area. The school was part of a complex that included the local Roman Catholic Church, social hall and priest's house.

(b) **The buildings**

The school was built in the late sixties on two floors. The headmaster's study, secretary's office and staffroom formed an administrative 'suite' on one side of the entrance and the library occupied the large foyer space leading to this area. The school hall was immediately behind the library and both had to be crossed to reach other areas in the school. Since the classrooms were situated along a corridor that led to the upper floor and on the upper floor itself, they were some distance from the library.

(c) **The pupils**

The pupils were all of the Roman Catholic faith and many were of Irish descent. There is a large and settled Anglo-Irish community in Coventry and this was one of twenty-four Roman Catholic primary schools in the City. The top junior class had thirty-six pupils.

(d) **The staff**

There were eight teachers, all Roman Catholics. There was no reference skills policy in the school, although attendance at the language policy courses had led to an awareness of a need for such a policy, although the impression
was gained that there were no immediate plans to formulate a policy. Neither the headmaster or teacher with responsibility attended the reference skills courses; the top junior class teacher had asked to attend because of her interest in this area and she was also a member of the task force. The teacher with responsibility for the library was not interviewed.

(e) Library and resources

The library area in the foyer suffered from the usual lack of a quiet reading space. It was also used for viewing school broadcasts and so was inaccessible to other children during that time. This central collection was composed of information books, with attractively made posters illustrating the subjects of main Dewey classes. The books were arranged in broad subject groups corresponding to the ten main classes of Dewey and were also colour coded. There were about 2,500 titles in a reasonable condition but not many books had been added to the collection within the last three or four years.

The school's collection of fiction, almost 700 titles, many from the Schools Library Service, were shelved along the corridors away from the library area. These could be taken home, but a random check of date labels seemed to indicate that this was not done often, with even popular titles apparently never borrowed. There were no classroom collections.

A room leading from the hall housed audiovisual equipment and resources, but the top junior teacher said little use was made of them, apart from the viewing of television programmes.

4. School D - Roman Catholic junior school; 180 children on the roll.

(a) The environment

This school was coincidentally a Roman Catholic one, although less devout than School C. It drew its school population from an area of mixed Council and private housing in an area dependent on the nearby car factories.
(b) The buildings

The octagonal building dating from the late sixties was the most architecturally 'avant garde' of the four schools. It was open plan and arranged around a grass courtyard. In order to travel from one area of the school to another it was necessary to walk past each class in progress in each section of the octagon.

(c) The children.

The children were predominately, but not exclusively, of the Roman Catholic faith.

(d) The staff

There were seven teachers in the school. The Head had been appointed three months before; for the preceding six months the deputy head had been acting head teacher. Consequently, the new Head was still learning about the school's staff and pupils and having come from another authority, had not participated in the Coventry language policy courses. He did, however, express an intention of involving himself in the library organization and reference skills teaching. The deputy head who taught the fourth year juniors also had responsibility for the library. She and the third year junior teacher had attended the reference skills courses and were members of the task force.

(e) Library and resources

Despite the open plan of the rest of the school, the library had been purpose built as a separate closed room. The bookshelves were constructed as an integral part of the original structure, which enhanced the appearance of the room, but proved impracticable in use, since the fixed top shelf was too small to accommodate the average size information book standing upright and the bottom shelf was
so large that a good deal of space was wasted. The shelves were also too deep so that books slid to the back of them. The walls followed the angles of the octagonal shape of the building, again wasting shelf space and making a numbered progression of books around the room difficult.

The library was well cared for, with potted plants and attractive wall displays, including the "Dewey tree". The stock of about 1,500 volumes was more up-to-date than the other three schools, with evidence of money being spent on books during the deputy head's period of control.

The library was closely classified using the Decimal Classification, with some books having six number notations. This had been done by the staff of the Schools Library Service and students from the then College of Education at the request of the former Headmaster. The classification was now done by the School Secretary using the school's edition of Dewey (Winslade, 1977) and following the principles already established. She had also attended a course on library organization at the Teachers' Centre.

A copy of the School's Dewey (Winslade, 1977), was available in the library for the children to use if they wished. There was a classified catalogue, compiled by the Schools library service, but no subject or author indexes.

The school's collection of fiction was housed in the 'corridor' areas outside the teaching areas. Most were on loan from the Schools Library Service and like the information books, could be taken home.

The audiovisual equipment and resources were also in a separate room near to the library and reserved for the teachers' use.
### Categories used in the classroom collection in School B

<table>
<thead>
<tr>
<th>Category</th>
<th>Color Combination</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>red/green</td>
<td>Bible</td>
</tr>
<tr>
<td>B</td>
<td>blue/yellow</td>
<td>Body</td>
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<tr>
<td>BB</td>
<td>brown/grey</td>
<td>Building</td>
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<td>British Isles</td>
</tr>
<tr>
<td>C</td>
<td>green/yellow</td>
<td>Creatures</td>
</tr>
<tr>
<td>C</td>
<td>red/white/blue</td>
<td>Craft</td>
</tr>
<tr>
<td>E</td>
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<td>English</td>
</tr>
<tr>
<td>F</td>
<td>yellow/red</td>
<td>Furniture</td>
</tr>
<tr>
<td>F</td>
<td>brown/red</td>
<td>Food</td>
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<tr>
<td>G</td>
<td>red</td>
<td>Geography</td>
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<tr>
<td>H</td>
<td>red</td>
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<tr>
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<tr>
<td>PP</td>
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<tr>
<td>So</td>
<td>purple/yellow</td>
<td>Sport</td>
</tr>
<tr>
<td>Sp</td>
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</tr>
<tr>
<td>T</td>
<td>yellow</td>
<td>Transport</td>
</tr>
<tr>
<td>W</td>
<td>blue/green</td>
<td>Weather</td>
</tr>
</tbody>
</table>
APPENDIX 6

Work from Schools

(1) Dictionary Skills

The task force did some work on evaluating dictionaries. The page overleaf was the preliminary worksheet which looked at the number of words between "language" and "log" in three dictionaries in common use in schools. Later the children in a class working in groups listed the number of words between other letters of the alphabet in dictionaries in their school (see over).

This effectively demonstrated the differences in comprehensiveness to the children and resulted in children asking to use the "best" dictionary, in this case the teacher's Oxford paperback dictionary. An encouraging example of children's discernment when allowed to compare and evaluate books for themselves (McKenzie and Warlow, 1977).

The teachers too, found the exercise interesting and something they had not thought of doing for themselves. All felt they should provide the children with access to a range of dictionaries, not as was the case in some schools, e.g. School D, of one title given as a set for the class.

This work with dictionaries could also be extended to include synonyms which would be useful for subject indexing sessions.
Dictionary Skills

Dictionary 1.

lock a strong fastening for a door to stop people getting in

log a thick round piece of wood

long going on and on from one end to the other

look to watch or see

lose not to be able to find something

loud noisy

love to like someone or something very, very much

lovely nice, pretty

machine something, usually made of metal, which does some kind of work like a sewing machine or a washing machine

Here is a page from a simple dictionary. Find the word log. The next word is long.

On the other side of this page you will find pages from two more dictionaries. Look at both pages and find log and long. Do they follow each other? If not make lists and write the words that come between.

<table>
<thead>
<tr>
<th>Dictionary 1</th>
<th>Dictionary 2</th>
<th>Dictionary 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>log</td>
<td>log</td>
<td>log</td>
</tr>
<tr>
<td>long</td>
<td></td>
<td>long</td>
</tr>
</tbody>
</table>

Find log and long in your class dictionary and write down a list in the same way. Is your class dictionary a simple dictionary or a comprehensive one? Find out from a dictionary what those two words mean.
Dictionary 2

lodger  someone who pays to live in someone else's house

loft  space under the roof which can be used as a store room

log  a thick round piece of wood. The same word also means a ship's diary.

loiter to linger; to dawdle

loft to sit or be about in a lazy way

lollipop a large sweet on the end of a stick

lone the only one

lone feeling sad because you are alone

long a big distance from one end to the other

look to watch or try to see

looking-glass another word for mirror

loom a machine for weaving thread into cloth

loop a ring of wire, string or ribbon

loose the opposite of tight; not properly fastened

loosen to make something less tight

lord an important nobleman

lorry an open motor vehicle used to carry heavy loads from place to place

lose not to be able to find something

lost a large number; a great many

lotion a soothing liquid medicine that you put on sore places on your skin

Dictionary 3

looping an eager desire

longbow a large bow drawn by hand

longhand the ordinary way of writing (as, from shorthand or typewriting)

long-playing of a gramophone record playing for a long time because of an extremely fine groove

long-range able to reach a long distance (as, a long-range gun), covering a relatively long future time (as, a long-range forecast)

long-sighted able to see distant things very well, but not those which are close; having foreseen long-suffering putting up with troubles patiently for a long time, long-winded able to run far without rest; speaking or writing at tiresome length

longevity (say longevity) great length of life

longitude (say longitudes) the distance of a place east or west of the Greenwich meridian (measured in degrees on a map; see also latitude)

look to direct the eyes so as to see someone or something; to seem (as, She looks nervous; to face (as, a room looking towards the sea); the act of looking (as, The office had an untidy look); a facial expression (as, an angry look)

looking-glass a mirror

lookout a careful watch: an observation post or the person posted there as watchman (as, the lookout in a ship's crow's nest)

Look out! Be careful!

loom 1 a machine for weaving thread into cloth

loom 2 to appear dimly; to be seen (as, a ship looming through the fog)

loop a piece of string, ribbon, wire, etc. twisted into a ring, a circle, or nearly closed; bend or curve

loophole a hole or slit in a wall; a means of escape

to loop the loop (as, an acrobat
Publisher: Chambers
Title: Dictionary Two
Author: Amy L. Brown
John Downing
John Scates

Publisher: A & C Black
Title: Junior Writing
Set dictionary
Author: T.J. Hulme
T.F. Carmody
J.A. Hulme

acrobat
across
actor
actress
add
APPENDIX 6

Work from Schools

(ii) **Subject index cards from School C: some examples**

<table>
<thead>
<tr>
<th>Category</th>
<th>Classification Number</th>
</tr>
</thead>
<tbody>
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<td>Air Pollution</td>
<td>628</td>
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<tr>
<td>Bicycles</td>
<td>796</td>
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<tr>
<td>Bikes</td>
<td>see Bicycles 796</td>
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<tr>
<td>Calves</td>
<td>see Cows 636</td>
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<td>Cows</td>
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<tr>
<td>Dark ages</td>
<td>see Middle Ages 628</td>
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<tr>
<td>Dictionaries</td>
<td>030</td>
</tr>
<tr>
<td>Hobbies</td>
<td>see Bicycles</td>
</tr>
<tr>
<td>Hobbies</td>
<td>see Handicrafts</td>
</tr>
<tr>
<td>Hobbies</td>
<td>see Bicycles</td>
</tr>
</tbody>
</table>

This was included at the children’s request. They argued that having bike (see cards above) was a hobby and they wanted this card to show all hobby books available.

<table>
<thead>
<tr>
<th>Category</th>
<th>Classification Number</th>
</tr>
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<tbody>
<tr>
<td>Horses: Poetry</td>
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<tr>
<td>Land Pollution</td>
<td>628</td>
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<td>Middle Ages</td>
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<td>Middle East</td>
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<td>Poetry</td>
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<td>Skulls</td>
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<td>Tower of London</td>
<td>725</td>
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<td>Victorians</td>
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</tbody>
</table>

The classification numbers were added by the Librarian after the books were labelled. The children were then able to see how Air Pollution, Land Pollution were brought together in the linear sequence.
APPENDIX 6

Work from Schools

(iii) Topic work, School C: E.E.C.

An example of work from School C, where a group of the most "ab readers" were asked to apply the "three questions" to the E.E.C. The teacher commented that the children "knew the form" and, therefore, asked the right questions that could be fairly easily answered.

The topic work that resulted was typical of topic work seen in schools, unplanned in presentation, but superficially attractive with travel brochures and coins included. The children had obviously worked hard at collecting materials from travel agents and magazines. Much of the text appeared copied from information books. These examples are done in a large format for the exhibition and are not reproduced here.

How can I find out what I need to know? I can find out by looking in a library. I can find lots of books about the Common Market. I can go and ask a farmer...
APPENDIX 6

Work from Schools

(iv) Topic work, School D: the body - "What do I want to know?"

This is a list of the initial questions from the group concerned with "the head". After failing to find answers to these specific questions in the indexes of books, the questions were grouped into more general ones, in the case of the hair questions into "why do people have hair". The answers were on sheets too large to reproduce here, but discovered that hair protects the head and keeps it warm. The children reproduced a drawing of a hair follicle and described how hair stands on end. From this drawing they deduced that hair can fall from the follicle and result in baldness, but not why this happened.

THE GENERAL QUESTIONS WE MADE

1. What are the parts of the head?
2. What is the tongue?
3. What job do our teeth do?
4. What are the different parts of your eyes?
5. Where does your hair grow from?
6. Where abouts is your brain in your head?
APPENDIX 6

Work from Schools

(iv) Topic Work, School D: The books - "How I find out"

Task Force Project Work: an example of "How do I find out" from the "three questions" strategy, School D.
We are at home. We got our information from our school and library. Ask the teacher.
APPENDIX 6

Work from Schools

(v) **Task Force "subject indexing"**

An example of the work on subject indexing "stumbled upon" by one of the Task Force teachers (Chapter 3). It was this work that led to the Librarian going into schools to work with children on indexes.
4. Animals of house and garden  
9. Animals and How They Live  
9. Mammals, Cat Family  
10. Vanishing Animals, Macdonald First library  
1. Circus Macdonald, Big Cats in the Ring  
How The Leopard Got his Spots, Rudyard Kipling  
My Favourite Animal Stories, Gerald Durrell

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**QUEENS**

37. Looking at History 4, R.J. Unstead  
Children's Britannica Volume 8  
Children's Britannica Volume 10  
Children's Britannica Volume 6  
Children's Britannica Volume 9  
Kings and Queens of England, Lady Bird book, Book 1  
The Elizabethan Court, R.J. Unstead

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**SPACE**

1. Into Space  
2. Stars and space, Patrick Moore  
3. Earth and space  
4. At space station  
New Junior Encyclopedia of Science  
The Planets, vol. 1, pg. 69  
The Planets, vol. 8
APPENDIX 7

REFERENCE SKILLS COURSE - AN OUTLINE

4 sessions of 1½ hours each.

(i) Reference Skills - definition and need for teaching
   - can they be taught at primary level
   - teaching as isolated skills and integration into the curriculum
   - can they be assessed
   - whole school policies

(ii) Some strategies employed in Coventry schools - examples from the Reference Skills Group and my work in local schools
    - where does a librarian fit in.

(iii) Resource provision and organisation - concepts underlying library organisation
    - classification by subject
    - information retrieval
    - selection and evaluation of resource
    - reference works
    - computers

(iv) Workshop
    - looking at commercially produced reference skill materials
    - topic work, planning and evaluating
    - "nine steps" from "Information skills in the curriculum".

PA/VDH
APPENDIX 7

Inservice course questionnaire
REFERENCE AND LIBRARY SKILLS COURSE

QUESTIONNAIRE

1. School. 
   (i) infant  
   (ii) junior  
   (iii) junior/infant mixed

2. Number of pupils on roll

3. Describe in a few words the "social mix" in your school.

4. Which age range do you teach?

5. Does this represent more than one academic year group (vertical grouping)?

6. Have you taught any other age ranges within the previous two years?

7. Do you divide the class into groups for particular purposes
   (i) by ability  
   (ii) age  
   (iii) sex  
   (iv) friendships  
   (v) other (specify)

8. Position in school  
   (i) head  
   (ii) deputy head  
   (iii) class teacher with special responsibility (specify):  
   (iv) class teacher

9. Is there a teacher responsible for any of the following in your school:
   (i) language  
   (ii) reading  
   (iii) library  
   (iv) resource centre

or a combination of these (specify)
10. Does your school have a reference skills policy? Yes/No

11. How many years teaching experience have you had? 

12. How many years at your present school? 

13. Do you qualify by (i) T.Cert. (ii) B.Ed. (iii) B.Ed. (Hons.). (iv) P.G.C.E.

14. Have you undertaken any inservice training:
   (i) B.Ed. part-time
   (ii) M.Ed. full-time part-time
   (iii) Phd. full-time part-time
   (iv) Other award bearing course (specify)

15. Have you participated in any Elmbank courses extending over two or more sessions within the past year (specify).

16. Approximately how many library books are there in your school? 

17. Approximate ratio of fiction to non-fiction 

18. Are the books organised (i) in one central collection
    (ii) a central and classroom collection
    (iii) upper and lower school central collections
    (iv) upper and lower school central collections with classroom collections
    (v) classroom collections only

19. If you have a classroom collection is it (i) fiction books
    (ii) information books
    (iii) both

20. Do you have materials from the Education Liaison School Library Service
    (i) block collection
    (ii) project loans

21. Do you have a separate resources centre? Yes/No

22. Does it contain any of the following (give approximate numbers if you can)?
   (i) tapes
   (ii) cassettes
   (iii) filmstrips/loops
   (iv) video cassettes/tapes/discs
   (v) newspaper/magazine cuttings
   (vi) records
   (vii) pictures/illustrations
   (viii) charts

23. How are your information books arranged?
   (i) colour coding
   (ii) Dewey numbers (specify edition if you can)
   (iii) other (specify briefly)
   (iv) don't know
24. Do you keep any one of the following (if you don't know, please answer O/K):

(i) accession register (list of books in running number order as they are added to the library);
(ii) author list of information books, fiction books;
(iii) catalogue of information books in the order they appear on the shelves;
(iv) catalogue of information books by subject;
(v) alphabetical list of subjects with shelf locations.

25. Did you teach reference skills to your class this year? Yes/No

26. Tick any of the following that you included in such teaching:

(i) observation skills
(ii) listening skills
(iii) reading strategies (skimming, scanning, main ideas) etc.
(iv) using parts of a book (chapters, contents, etc.).
(v) using reference books (dictionary, encyclopedias, etc.).
(vi) reading newspapers.
(vii) looking at advertisements
(viii) notetaking
(ix) Cloze procedures
(x) computer skills

27. Do you usually teach such skills to

(i) the whole class
(ii) groups
(iii) individuals through workcards/books

28. If you use commercially published material, (e.g. Directions, S.R.A. Research Lab.) specify:

29. Is it your policy to teach reference skills separate from subject teaching? Yes/No

30. Do you think children have learnt from these lessons. Yes/No
   If 'yes' can you give reasons to support this belief (briefly)

31. Name up to three topics your class have worked on this year.
32. Is topic work usually done
   (i) in groups
   (ii) individually

33. Are topics usually initiated by
   (i) School
   (ii) you as class teacher
   (iii) the class
   (iv) individual children

34. When doing topic work is most of the work done from the school's information books? Yes/No
   If no, what are the main sources of information?

35. What (if anything) do you think you learnt from the first reference skills course?

36. What do you think a librarian can contribute to a reference skills course?

37. Have you asked a librarian recently for advice on
   (i) organising a library;
   (ii) book selection;
   (iii) using reference books;
   (iv) reading strategies;
   (v) other (specify)

38. Have you read [R] heard of [H] any of the following:
   (i) Terence Brake's "Need to Know" "INSCRU" projects
   (ii) Irving and Snape "Educating library users in secondary schools"
   (iii) Southgate's "Extending beginning reading"
   (iv) Eric Lunzer's "The Effective Use of Reading"
   (v) H.M.I's "Primary education in England (The Primary Survey)
   (vi) The Bullock report.
39. Do you read any of the following regularly:

(i) T.E.S.
(ii) Education Guardian
(iii) Junior Education
(iv) Pictorial Education
(v) School Librarian
ANALYSIS OF THE TEACHERS' REPLIES TO THE INSERVICE QUESTIONNAIRE

1. School
   (i) junior 6
   (ii) junior/infant mixed 8

2. Number of pupils on roll
   (i) 150 - 200 4
   (ii) 200 - 250 3
   (iii) 250 - 300 4
   (iv) 300 - 350 3

3. Social mix
   (i) multicultural 4
   (ii) E.P.A. 2
   (iii) mainly Council Estate 3
   (iv) mixed private/Council housing 4
   (v) mainly private housing 1

4. Age range taught
   (i) 5 - 7 3
   (ii) 7 - 9 5
   (iii) 9 - 11 6

5. Vertically grouped
   (i) No 6
   (ii) Yes 8

6. Other age ranges taught with previous two years
   (i) No 3
   (ii) Yes 10
   (iii) No reply 1
7. Class groupings

(i) by ability 9
(ii) by age 1
(iii) friendships 4

8. Position in school

(i) deputy head 1
(ii) responsibility posts:
   (a) Language/communication skills 5
   (b) topic/science/resources 1
   (c) library 3
   (d) reading development 2
   (e) resources 1
   (f) remedial/reference skills 1
   (g) supply teacher 1

9. Responsibilities within the school

(i) language 9
(ii) reading 2
(iii) library 10
(iv) resource centre 11

(combined)

10. Reference skills policy

(i) yes 7
(ii) no 6
(iii) no reply 1

11. Number of years teaching experience

(i) 0 - 5 1
(ii) 5 - 10 3
(iii) 10 - 15 5
(iv) 15 - 20+ 5
12. **Number of years in present school**

| (i) | 0 - 5       | 7 |
| (ii) | 5 - 10     | 2 |
| (iii) | 10 - 15 | 4 |
| (iv) | 15 - 20+ | 1 |

13. **Qualifications**

| (i) | T. Cert. | 11 |
| (ii) | B.Ed. | 2 |
| (iii) | P.G.C.E. | 1 |
| (iv) | Open University degree | 1 |

14. **Inservice training**

| (i) | M.Ed. (part-time) | 1 |
| (ii) | Dip.Ed. (full-time) | 1 |
| (iii) | City and Guilds: Teaching the handicapped | 1 |
| (iv) | ESL course (no other details given) | 1 |

15. **Teachers' Centre Courses attended over the last two years**

| (i) | one course | 14 |
| (ii) | two or more | 6 |

16. **Approximate number of library books in the school**

| (i) | not known | 9 |
| (ii) | c. 1,500 | 1 |
| (iii) | 2,000 | 4 |

17. **Approximate ratio of fiction to non-fiction**

| (i) | no reply | 5 |
| (ii) | 40:60 | 1 |
| (iii) | 50:50 | 1 |
| (iv) | 20:80 | 1 |
| (v) | not known | 6 |
18. **Organisation of the bookstock**

   (i) central and classroom collection  
       10
   (ii) upper and lower school central  
        collections and classroom  
        collections.  
        2
   (iii) classroom collection only  
       1
   (iv) no reply  
       1

19. **Books in the classroom collection**

   (i) fiction  
       1
   (ii) information books  
       1
   (iii) both  
       12

20. **Loans from the Schools Library Service**

   (i) block collections  
       10
   (ii) project loans  
       13

21. **Separate resources area**

   (i) yes  
       11
   (ii) no  
       2
   (iii) no reply  
       1

22. **Contents of the resources area**

   (i) tapes  
       7
   (ii) cassettes  
       10
   (iii) filmstrips  
       10
   (iv) video cassettes/tapes/discs  
       10
   (v) newspaper/magazine cuttings  
       5
   (vi) records  
       10
   (vii) pictures/illustrations  
       11
   (viii) charts  
       13
23. **Arrangement of information books**

   (i) colour coding  
   (ii) Dewey numbers  
   (iii) other  
   (iv) not known  
   (v) subject divisions  
   (vi) no reply

24. **Library records**

   (i) accessions register  
   (ii) author list  
   (iii) classified catalogues  
   (iv) subject catalogue  
   (v) subject index  
   (vi) no  
   (vii) not known

25. **Reference skills taught this year**

   (i) yes  
   (ii) no reply

26. **Skills taught**

   (i) observation  
   (ii) listening  
   (iii) reading strategies  
   (iv) parts of a book  
   (v) using reference books  
   (vi) reading newspapers  
   (vii) looking at advertisements  
   (viii) notetaking  
   (ix) Cloze procedures  
   (x) Computer skills
27. **Class teaching of the skills**

(i) whole class 3  
(ii) groups 3  
(iii) individuals (workcards/books) 0  
(iv) all three as necessary 4  
(v) (ii) and (iii) 2  
(vi) (i) and (ii) 1  
(vii) (i) and (iii) 1

28. **Commercially published materials**

(i) S.R.A. Research Lab. 8  
(ii) Directions 3  
(iii) Reading routes 2  
(iv) Reading Workshop 3  
(v) Finding information skills 1

29. **Skills taught separately or as part of subject teaching**

(i) separate 7  
(ii) together 3  
(iii) both 4

30. **Have children learnt from the lessons**

(i) yes 9  
(ii) no reply 5

31. **Topic work that year**

(i) water 4  
(ii) Moses in Egypt 3  
(iii) Local area 3  
(iv) Farming 2  
(v) Captain Cook 2  
(vi) Rubbish 1  
(vii) Time and Change 2  
(viii) Road Safety 1  
(ix) Seashore 1
31. **Topic work that year (continued)**

| (x)    | Road Transport | 1 |
| (xi)   | Springtime     | 1 |
| (xii)  | Materials      | 1 |
| (xiii) | Steam trains   | 1 |
| (xiv)  | Newspapers    | 1 |
| (xv)   | History 1936-53| 1 |
| (xvi)  | Egyptians      | 1 |
| (xvii) | Flight         | 1 |
| (xviii)| First life on earth | 1 |
| (xix)  | Baking         | 1 |
| (xx)   | Middle Ages    | 1 |
| (xxi)  | Plants and seeds | 1 |
| (xxii) | Food for health | 1 |
| (xxiii)| Earth beneath  | 1 |
| (xxiv) | No reply       | 2 |

32. **Topic work groupings**

| (i)    | in groups | 4 |
| (ii)   | individually | 2 |
| (iii)  | both       | 6 |
| (iv)   | no reply   | 3 |

33. **Topic work origins**

| (i)    | school | 3 |
| (ii)   | class teacher | 1 |
| (iii)  | class | 6 |
| (iv)   | individual children | 2 |
| (v)    | no reply | 2 |

34. **Is topic work done from the school's information books?**

| (i)    | yes | 5 |
| (ii)   | no | 8 |
| (iii)  | no reply | 1 |
34. **Other sources for topic**

(i) Project loans 4
(ii) Film 3
(iii) T.V. 4

35. **What was learnt from the first reference skills course**

(i) no reply 8
(ii) did not attend 2
(iii) finding information for themselves ... 1
(iv) the need for skills to be taught early and ideas on ways 1
(v) Quite useful. Selective with books 1
(vi) That I must do something about them. 1

36. **What can a librarian contribute to a reference skills course**

(i) no reply 3
(ii) Experience of information retrieval 7
(iii) Organising books for retrieval 4

37. **Whether a librarian had been asked for advice recently**

(i) no 8
(ii) no reply 3
(iii) yes 3

(a) organising a library 1
(b) book selection 3
(c) reading strategies 1
37. Books and research heard (H) of or read (R)

(i) Brake. "Need to Know" "INSCRU"
No reply 14

(ii) Irving and Snape. "Educating users in secondary schools."
No reply 14

(iii) Southgate. "Extending beginning reading"
H3 R1 No reply 10

(iv) Lunzer's "Effective use of reading"
H2 R1 No reply 11

(v) The Primary Survey
H4 R0 No reply 10

(vi) The Bullock Report
H2 R (excerpts) 10
R1 No reply 1

38. Periodicals read regularly

(i) T.E.S. 6
(ii) Education Guardian 2
(iii) Junior Education 7
(iv) Pictorial Education 3
(v) School Librarian 3
(vi) Child Education 3 (written in)
(vii) Teacher 1 (written in)
(viii) No reply 2
APPENDIX 7

Inservice course

Some examples of the teachers' subject indexing.

Compare the terms favoured by the children (Appendix 6).

<table>
<thead>
<tr>
<th>Book titles</th>
<th>Subject index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keith, Gordon</td>
<td>Story of a river. MacDonald, 1980</td>
</tr>
<tr>
<td>Bowler, Jane E.</td>
<td>A day with an M.P. Wayfield, 1981.</td>
</tr>
</tbody>
</table>

The teachers worked in pairs with the books on tables before them. Some
were quicker than others and, therefore, some books had more cards completed than others. "Captain Cook" for example, seemed a popular choice. There appears to be a comparison between subject indexing and allocating classification categories to the titles.
APPENDIX 6

Guidelines for librarians: suggestions for a reading list.


Great Britain. Committee of Inquiry into Reading and the Use of Language (1975). A language for life ... H.M.S.O.


Meek, Margaret (1977). What is a horse? School Librarian, 25, 1, 5-12.


PERIODICALS

Education 3-13 (2 issues p.a.).

Greater Manchester Primary Contact (Didsbury School of Education) (3 issues p.a.).

Primary Education Review (N.U.T.) (3 issues p.a.).

Education Abstracts, Clwyd County Council.

Cambridge Institute of Education Library.

Hull Institute of Education Library.

CURRENT AWARENESS LISTS

Members of L.I.S.E. (Libraries, Institutes and Schools of Education) may produce current awareness lists and lists of recent additions.
which could be available to other libraries on application.

The current secretary is:

Roy Kirk,
School of Education,
University of Leicester,

who will supply a list of member libraries. Alternatively, contact a local School or Institute of Education library.