

Primary children's use of information books

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Background

Attainment target 2 in the National Curriculum for English (D.E.S., 1989) includes the aim of the "development of information-retrieval strategies for the purposes of study". Comparatively little, however, is known about just how competent primary children are in this area of information skills. The research reported in this article aimed to explore this by focussing in some detail upon the use of information books by the children in a small sample of primary schools and, on the basis of this to suggest some possible ways forward in enhancing achievement in this area.

Previous research has suggested that in general teaching in this area has not been tackled well, although it has to be said that most of the work done has concerned students at various institutions of further and higher education, and their ability to use information in their studying. Most investigations have found that students, even the most academically gifted, are not generally very proficient at such things as using libraries and books to locate and extract the information they require (Blake, 1956, Irving & Snape, 1979). In the most quoted of these investigations, Perry (1959) managed to find some students at one of the most prestigious universities in the U.S. who, when asked to determine what a particular chapter in a book was roughly about, simply began at the first word and ploughed through a mass of not particularly useful details until they reached the end. When the possibility of reading the chapter in a more circumspect way was pointed out to them their response was, "Lord, how many times have I been told!" It seemed that it was not that they did not know about these reading strategies, but rather that they were not aware of when they should apply them. This is a phenomenon which often occurs in studies of information handling, from primary school up to adult level (Lunzer & Gardner, 1979, Neville & Pugh, 1982). Perry calls the performance of these students "a demonstration of obedient purposelessness".

If we go on to look at the abilities of adults to handle and act on information, we find a similarly bleak picture. The most renowned work here is that done by Murphy (1973) who investigated the abilities of 8000 American adults to respond to tasks based on everyday reading material. Some of his results make alarming reading. He found, for example, that 15% of his sample could not adequately respond to a task based on the reading of a traffic sign. 62% of the sample had trouble with a magazine subscription form, and a staggering 74% were unable to deal correctly with an income tax form. We may feel this last finding tells us more about the design of the form than it does about the abilities of these adults but we must consider, of course, the consequences of getting the task wrong, which in all these cases can be very significant. Every time we are unable to handle information efficiently there is a worst case consequence of this nature. We pay too much money, we miss trains, we fail to order the goods we want, etc. Almost all adults do something like this at least once in their lifetimes.

There is evidence from research in United Kingdom primary schools that children tend not to be taught skills of locating and using information in their reading lessons (Maxwell, 1977; Neville & Pugh, 1975, 1977; Southgate, Arnold & Johnson, 1981). If there is instruction, it tends to be haphazard and ad hoc rather than systematic. Yet it is recognised in both the United Kingdom (D.E.S., 1975) and the United States that, "Teachers must instruct students in strategies for extracting and organising critical information from text", (Anderson, et al., 1985, p.71). Teachers should also become concerned with the problem of how their students can be taught to handle the range of information that will confront them in the world outside school. The issue is not simply one of developing comprehension and teaching study skills. Information skills have a wider importance than simply school-based activities, but include also the ability to handle effectively such tasks as form-filling, following instructions, responding or not responding to publicity materials etc. which have to be dealt with in the outside world.

The present enquiry

Building on this research, and the fact that little is actually known about how primary children approach the use of information books, this enquiry had the following aims. We wanted, first of all, to explore what primary children knew about finding and using information from books and, secondly, to observe what these children actually did when involved in information finding tasks using these books.

In order to examine these things, we worked in three primary schools in the local area. In each of these schools the Year 4 and Year 6 classes were selected and three days spent in each of these. During this time we had two tasks. Firstly, we interviewed a random sample of six or seven children in each of the classes, basing the interview around the framework of questions given in appendix 1. For each of the children we interviewed we also attempted to complete an observation of them as they carried out an information-finding task. For this observation we used the observation sheet shown in appendix 2. It was not possible during the time we had available to observe all the children interviewed. We had asked the teachers in whose classrooms we were working to follow their normal teaching programme. Although some of them did even so make a special effort to include information-finding activities in this, during much of our time in the classrooms the children were, naturally, engaged on other types of tasks.

Overall we interviewed 70 children, 36 from Year 4 and 34 from Year 6. We observed 43 of these in information tasks, 25 from Year 4 and 18 from Year 6. Our findings, therefore, are based on quite a small sample of schools, classrooms and children and must be treated with some caution. All we shall attempt to do in this report is to mention the issues which seemed to arise and some of the implications which seem to us to be important. Research on a much wider scale will be necessary to confirm these initial findings.

Some tentative findings

One thing which stood out from our study is something which sounds very obvious but which, in fact, is one of the most encouraging of our findings: in each of the classrooms in which we worked we found differences in the children's thoughts about and use of information books. This suggests the encouraging possibility that schools and teaching do have an effect in this area. It was, in fact, fairly easy for us to tell when children had had some instruction and explanation of information

finding from books. It also seemed that the organisation of information resources in the school and classroom had an effect on the way children used these. Where there was a clear system of organisation the children tended to be better at using it.

Less encouragingly, there was, however, a large gap between what children said about how they would use information books and what they actually did when using them. This gap between knowledge and performance was especially noticeable in the case of the use of the contents and index pages. It echoes the findings of Perry (1959) and others, as mentioned earlier, and suggests a significant teaching problem. Although we found clear evidence that the efficient use of information books had been explained to many of the children we talked to, hardly ever did it seem that these children had been given systematic guided practice at actually using the books. Without such practice the children had problems transferring their knowledge about information books from the realms of a set of instructions they could repeat at will to a range of usable strategies which they could adapt to changing circumstances.

The children's failure to use such strategies was not always necessarily because of lack of real understanding. In many instances it appeared to be dependent upon the task in which they were involved. The tasks children were given often seemed to be:

- too vague. Many of them seemed to feature versions of 'find out about'. As has been suggested elsewhere (Wray, 1985) such a task is so unspecific as to be unhelpful to children, who cannot tell from it just what they have to find out.
- possible to complete without using written information. Many of the children we observed found a range of ways of avoiding the use of information books in the systematic way their teachers clearly intended. They would rely heavily on pictures, on previous knowledge and first hand experience. They would also, it seemed, often rather ask a friend who, of course, may recently have completed the task they themselves were engaged upon.
- just plain confusing. Quite a few children simply did not understand the task they were asked to carry out, either because they did not have the requisite previous knowledge to make sense of it, or because its wording was difficult. For example, one child was faced with the instruction "identify 3 types of seashell". Not understanding what this meant, she asked a friend who told her, "What do you call them?" After a lot of searching through a book, she eventually 'called' her shells, Tom, Dick and Harry!

One effect of confusing tasks which children could short-circuit was that, overall, information books were actually used less than one would expect and certainly less than the teachers of these children seemed to intend when they set the tasks. As we have admitted above, we were dealing with a small sample of classrooms and looking at a very small proportion of their work, but even so, the extent of the use of information books which we found was rather slight. For some of the classes we worked in, the use of information texts seemed a rarity indeed, even when the schools had made a significant investment in providing a range of suitable resources and storage facilities. In one case, during the whole of our time in one school, the central library, well stocked and well organised, was only partially available to the children due to a delivery of art materials which were stacked in front of the bookshelves!

Linked to this, and possibly accounting for it, was the heavy emphasis in the classrooms we worked in on fiction rather than information texts. When children were given sustained reading time, this almost always involved them in reading fiction. When the teachers read to children,

they inevitably chose fiction. Thus children's knowledge about books tended to be fiction-based. They talked most readily about chapters and seemed to emphasise heavily a linear way of approaching books - in dealing with a book you began at the beginning and worked your way through it. We came across no examples of teachers modelling for children how to use information books effectively, that is, doing more than simply reading sections aloud (although we encountered none of this either), but demonstrating with an accompanying explanation how to use the contents and/or index to track down information on a particular topic. In the light of what we now know about the importance of children being given demonstrations and models of literate behaviour (Cambourne, 1988), it seems that an important strategy is being much underused here.

When children did find information in books the most common strategy used for making a record of it was to 'write it down'. This often meant children copying, a tendency which has been noted in other research (for example, Maxwell, 1977; D.E.S., 1978), but it was not always as simple as this. The children generally seemed to know that they were not supposed to copy from information books. Many of them told us that they had to write down the information they found 'in our own words'. This, unfortunately, often meant nothing more than changing individual words, a strategy which did not seem to push children towards making real sense of information they found and which, occasionally, led to them unwittingly changing the sense of what they wrote. An example of this was found in the work of one boy who read in a book about starfish, "Its colour varies from brownish yellow to purple". He wrote down, "The colour changes from brown to purple", and said "I used different words so I wasn't copying."

Because of the copying phenomenon regularly identified in primary school project work, we were intrigued by the views of the children about copying from information books. They were asked 'why should you not copy?' and it seemed that their replies almost manifested a developmental pattern which might have echoes in other areas of development such as moral development (cf. the development theories of Kohlberg and Piaget).

The pattern seemed to begin with the view, expressed by some of the younger children, that there was no reason why you should not copy. Other children, again tending to be the younger ones, mentioned external reasons for not copying. They would say such things as, 'teacher says' and 'it's cheating'. Some older children also mentioned internal reasons such as 'you learn more if you don't copy' and 'you have to think about it more'. A few of the very oldest children interviewed expressed the view that it was sensible to copy sometimes even though you should not usually do it. This seems a particularly mature attitude to the issue, shared by many adult writers who, on finding that someone else has written an idea in unimprovable words, simply copy it down (they also, if they are honest, use appropriate punctuation marks to indicate it is a quotation).

Some implications

As we mentioned above, this research was done on quite a small scale and hence any implications we draw must be very tentative. Some points do seem to have arisen which bear thinking about and we shall list these briefly here.

1. There does seem to be a need for clear organisation of information books in schools and classrooms and for a system which is clearly explained to children. It is difficult to imagine how children can learn to use information books effectively if these are not present. Such systems of organisation would also seem more likely to be beneficial if they are school-wide. We did find examples of classrooms in which a great deal of effort had clearly been made by the individual teachers to arrange the class stock of information books in an organised way but around which other classrooms either had different organisational systems or none at all. Continuity in this area is an essential.

Some schools are fortunate in having a public library relatively accessible to their children (we found one example of this in the schools we worked in). This allows the lessons which the children are learning in their classroom settings to be developed and extended by guided experience in the more complex organised environment of a library.

2. Children need guided practice in using the system and the books as well as explanations of how to do so. This point has been made elsewhere (Wray, 1985) and is supported by the evidence from this research of a gap between children's verbal knowledge of information retrieval strategies and their actual use of them. An explanation can be memorised and rehearsed as a set of verbal rules but in order for it to be translated into action surely requires more. Yet the evidence from our research suggests that many opportunities for such guided practice are missed, for a variety of reasons of which the pressure on teachers' time is not an insignificant feature. Many children engage in activities which could be based on their location and use of accurate information, for example, producing paintings, drawing and models of objects connected with their topic work, or writing creative accounts based on historical episodes ('the story of a Viking voyage'). Yet in much of this work the children are not shown how useful information books could be in making their artefacts accurate or their stories realistic, and are not guided in the efficient use of such books.

3. Careful thought needs to be given to the tasks children are asked to complete. This sounds a truism but it does have particular relevance with regard to the use of information books. Children are apparently expert at short-circuiting the tasks they are asked to carry out by using alternative strategies for gaining the required information. This is exacerbated by the confusing and vague nature of many of these tasks. One strategy which would surely pay dividends would be for teachers to involve children themselves much more in devising interesting tasks in the course of which information books would be used. Such a negotiation strategy (Wray, 1985) would have the benefit of progressively assisting children to take over the purpose-setting process for themselves.

4. There is much scope for teacher modelling of appropriate ways of handling information books and dealing with information text. A great deal is known about the importance of adult 'scaffolding' of complex cognitive behaviour and this has many applications in the development of all forms of literacy. Yet it seems that, if children do receive demonstrations from the adults who teach them of interactions with books, these tend to be with fiction rather than non-fiction. Littlefair (1991), among many others, has made very clear the problems which children have in coping with non-narrative text and non-linearly arranged books add an extra dimension of difficulty to this. Teachers might usefully include non-fiction texts in the material from which they read aloud to their children. They might also go further than this by giving explicit demonstrations of how to use information books effectively, for example, by using the index, by following up cross

references, by making notes from the information they read, and so on. If these demonstrations are accompanied by a running commentary explaining what the strategy involves and how it is done then it is much more likely that children will pick up usable routines of behaviours which they can operate themselves.

Final note

One of the major values of small scale classroom research is to open up issues and ideas for subsequent, more detailed investigation. The present study has certainly done this because it has led us directly to a much more extensive project aiming to look at the strategies teachers might adopt in developing their children's abilities to use literacy as a medium for learning across the primary curriculum. This project began in September, 1992 and will last for two years. During its course we hope to make contact with as much good teaching practice as we can in this area and also to produce materials which will assist teachers in developing teaching approaches to literacy for learning. We should be delighted to hear from anyone interested in being involved in the project, in however small a way. We can be contacted at the School of Education, University of Exeter.

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