This paper focuses on ways of improving reading by developing the intermediate skills and the higher order comprehension skills in reading. The paper consists of four sections: "Intermediate Skills and Context Cues" discusses the use of the cloze procedure for improving comprehension skills and for analyzing words in terms of class membership, comparison or contrast, explanatory addition, and synonym or restatement; "Comprehension Skills and Conceptual Structures" discusses the three comprehension skills of literal comprehension, reorganization, and reading for pleasure in relation to establishing purposes for reading; "Some General Points" suggests how the teacher can conserve time by concentrating on one technique at a time; and "Conclusions" emphasizes that the teacher should develop an increasing understanding of the nature of the student's reading abilities that need to be developed. (WR)
Many teachers seem to take it for granted that there is no need to teach reading in any serious or systematic way once the more elementary skills have been accomplished. Most children seem to make quite steady progress without such help so this attitude is not altogether without foundation. On the other hand, we do not know to what extent it might be possible to improve the general standard of reading if we tried to do so. In this paper I propose to discuss some of the ways in which I believe some general improvement might be accomplished. The various suggestions are put forward tentatively, however, and many teachers may be able to think of better ways of ensuring progress in the skills which I shall refer to and which are lacking in so many of our children. In what follows I shall restrict my attention, rather arbitrarily, to reading per se - the actual eyeball-to-print confrontation. I shall not attempt to cover the no less important range of reading-related activities in what I have described elsewhere as the 'Reading Cycle.' (Merritt, 1973). I shall focus, in particular, on ways of improving reading by developing the intermediate skills and higher order comprehension skills, both of which were briefly introduced by Geof. Roberts in the previous issue of this journal.

Intermediate Skills and Context Cues.

In talking about intermediate skills I refer to the ability to anticipate or predict that certain letters, word classes, word forms, meanings, or actual words are more or less likely in a given context. Thus, in the sentence:
He sat in the driving seat of his c....

we know that the letter after the c is unlikely to be b, c, d, f, etc., but quite likely to be a, e, h, i, etc.

In terms of class, the word is more likely to be a noun than a pronoun. It is likely to be singular in form.

It is likely to mean 'a vehicle of some kind,' and in certain contexts we would anticipate a motor-vehicle rather than a horse-drawn vehicle. Putting all the clues together, we might well anticipate the particular word 'car,' perhaps or 'cab.' This is a highly significant reduction in the total number of possibilities in view of the 20,000 to 100,000 words in the vocabulary of the reader. It is a striking demonstration of the crucial importance of context cues. There is ample evidence from psycholinguistics to show that our ability to make anticipations of this kind, and at all of these levels, is normally quite automatic when we are reading fluently and comprehending what we read. How then might we seek to improve this ability?

One of the most promising methods for helping children to develop these skills is cloze procedure. This simply consists of deleting words from a text so that children can use the context to predict the missing words. There is some evidence that merely handing out such texts as exercises to be completed is of little or no value. On the other hand, there is evidence that the intelligent use of such texts for teaching does help to develop comprehension. Teaching with cloze texts consists of discussing with children the particular cues that might help them to deduce first the possible meanings of the missing words and then the actual words that seem most suitable to fill the particular space. It will be seen, therefore, that this is not to be regarded as an exercise in sloppy guesswork; it must be seen, rather, as a means of developing a more logical response to context cues and sensitivity in responding to nuances of meaning. In order to discourage guessing actual words, instead of deducing meanings, nonsense words
can be used instead of merely deleting selected words, as in the following example:

Oranges, lemons, citron, lime and **pendicups** are all to be found in this kind of climatic zone. **Revidious** fruits in fact, are an important part of the economy of countries in these areas. They provide an important part of the export trade and help to pay for foreign **igdanks**. A great deal of this fruit goes into **trincoboy**s which produce soft drinks. **Basic** costs tend to be rather low in areas that produce **revidious** fruits: the workers are not well paid.

This passage was deliberately constructed to provide examples of particular kinds of context cue and to provide an indication of the kinds of problem that can be discussed with children in seeking to encourage a more constructive approach to their reading in the subject areas. These may be analysed as follows:

**Class membership: pendicups**

Where the problem word is included in a list of some kind attention can be drawn to the nature of the list and the children can be asked to identify any features that all the items in the list have in common. They can then go on to infer the attributes represented by the problem word. In this example, they would quickly identify as important attributes such features as: the kind of skin, juiciness, segmentation, etc. They might then check their hypotheses in a dictionary, an encyclopaedia, or a text book. In the latter case, they would gain useful experience in the use of an index as they might have to think of different concepts, e.g., fruit, agriculture, etc., under which the relevant passages might be indexed.

**Summary: revidious**
It is particularly useful for children to pay close attention to words that summarise or categorise. In this case they could be asked why the problem word was introduced at that point in the sentence. They can be led to realise that relationships between sentences can be established by referring back to something already mentioned in a previous sentence, often through the substitution of another word or phrase.

This is known as anaphora - a linguistic feature which has not yet received sufficient attention from the reading specialist. Much attention has been given to individual signal words and phrases but the linguistic devices for signalling relationships between meanings in sentences and paragraphs tend to be neglected.

Once they have identified the relationship between the summarised word and the items summarised they can reconsider the attributes of the items in the list and try to decide how far the area of meanings that could be covered by the summary word might possibly extend. Once again, they can check their conclusions against the dictionary, or some other reference source.

Comparison or contrast:  

Skill in detecting contrasts and in deciding exactly what is being contrasted with what is particularly important in reading for meaning. To develop this skill, the teacher can ask questions which help the children to identify such contrasts. Subsequent questions can then be asked to ensure that this information is fully used. Without questions of this kind children's responses will often be rather facile. Good, for example, could be
offered as a meaning for igdanks, but questions which elicit a more careful use of context should lead to a recognition of the full meaning of import as a contrast to export.

Explanatory addition: trincobovs

An explanatory addition provides only some of the attributes of the problem word. In this case, a great deal of this fruit goes into suggests a container. This could be anything from a box, perhaps, to a building of some kind; which produce soft drinks indicates that the container is one within which some manufacturing process takes place. A bright pupil will obviously suggest 'factory' fairly quickly. It should be remembered, however, that the object of this exercise is to examine the evidence and not to jump too hastily to conclusions.

Synonym or restatement: basic

Authors often repeat an idea in different words either to emphasise a point or to make a meaning clear. In this case, basic obviously refers to wages, in view of the way the sentence is constructed. It is not likely to have a more general meaning, e.g., production costs, because production costs can be high even when wages are low.

This list is by no means exhaustive but it does provide an introduction to some of the more important kinds of context cue.

From these examples it can also be seen how the teacher can engage pupils in thinking about meanings at a variety of levels, according to the age, ability, and degree of interest of the pupils - and their particular purpose in reading the passage.

For teaching purposes it would be a simple matter to select a range of texts in each subject area, to substitute nonsense words for key concepts, and to use these texts in group or class teaching situations. The object of this could be two-fold. One objective could be that of deepening or enriching the understanding of key concepts; the other objective could be that of helping children to develop their own skill in extracting richer meanings in independent reading in each subject area. What is taught as a class procedure, however, does not necessarily transfer to independent reading. A potentially useful intermediate stage is to get children to work on such texts in pairs in a cooperative reading situation. Each pair of pupils can then compare results with those of other pairs. The more this is done, the more practice pupils get in active rather than passive reading, and the greater the chance that this habit will persist when reading independently.

Some teachers will have understandable reservations about the use of specially prepared material of this kind. It can reasonably be argued that identical procedures can be adopted using a normal text without deleting words, or substituting nonsense words, and that this presents a much more realistic teaching situation. It can be argued that the teacher need simply select those words that call for particular attention and ask children to see how much of the meaning, in each case, can be inferred from context. The reader would be well advised, therefore, to try both methods and decide
for himself whether to choose one, or the other, or both in combination. All that I would urge myself is that the children be taught systematically to use context in order to learn to solve problems for themselves instead of being regularly denied this opportunity through the direct teaching of new words and concepts prior to reading.

Comprehension Skills and Conceptual Structures

Intermediate skills can be thought of as skills which facilitate the recognition of unfamiliar words, fluent reading, and the understanding of word and sentence meanings. Comprehension skills per se can be thought of as skills which a reader uses in dealing with larger units of meaning which are particularly relevant to his own specific purposes. The reader's specific purposes may call for different kinds of comprehension and these may be summarised as follows:

Literal comprehension: At the lowest level of organisation literal comprehension can refer to the identification of specific details of particular relevance to the reader. This may require quite acute perception and is not to be regarded as a low level ability. At a higher level of organisation, literal comprehension can refer to the perception of main ideas, a recognition of their nature, and an understanding of their structure.

Opportunities for developing the ability to select relevant detail are fairly common in project work. Children must be genuinely motivated and have a burning interest in the topic, however, if these practical opportunities are to result in any significant learning. Cooperative reading can be useful in this situation as children can learn a great deal by debating with each other about the relevance or otherwise of particular
details.

At a higher level, the perception of main ideas may call for little more than the understanding of the topic sentence in a paragraph. Often, however, the main idea is not explicitly given and the reader has to work it out for himself. It may be so obvious that a summary of the general impression gained on first reading is adequate. More often, however, children will have difficulty in getting anything more than a rather vague impression of a collection of facts from their reading and may need a great deal of help in sorting out the relationships between different ideas. Many teachers would argue, perhaps, that this is simply a matter of intelligence. In my view, however, we should seek ways of helping children to sort out relationships when reading. One way may be to develop the use of the flow diagram, as in the following example:

The goods brought from the Far East to Venice did not of course remain in Venice. They were taken to all parts of Europe to be sold. Venetian merchants came to England to visit the fairs that were held in the largest towns of the country, once or twice each year. Markets, which were less important than fairs, since they were for local needs, were held weekly in almost every town. (Bareham, 1969)
Goods were brought from the Far East to Venice. They did not remain in Venice. (From Venice) goods were taken all over Europe to be sold. Venetian merchants came to England. Venetian Merchants visited fairs. Fairs were held in largest towns. Fairs were held once or twice each year. Markets were less important than fairs because they were for local needs. (Markets) were held weekly. (Markets) were held in most towns.

(For a detailed rationale concerning the use of flow diagrams in reading see Augstein and Thomas (1973))
It is doubtful, to say the least, if many children would perceive in this paragraph all the patterns that are made clear by the flow diagram. At this level of comprehension some degree of conscious analysis is necessary in order to sort out the various relationships. If this is not done one might well ask what point there is in reading it at all. Yet without direct help of some kind most children would tend to remember only some of the factual detail and fail to structure the material in any significant way.

The flow diagram shows that the material can be sorted out into quite interesting themes. The major theme is concerned with the pattern of distribution of goods from the Far East. The second theme is not concerned with routes but with marketing arrangements. In a third theme, a distinction is drawn between fairs and markets and these are compared in terms of type of location (largest towns versus all towns) and frequency of occurrence (once or twice each year versus weekly).

Reorganization:
This may consist of a restatement by the reader in his own words, or in some symbolic form or diagram. For example, the major theme identified in the above example can be converted into the following diagram:
The second theme can be represented as follows:

![Diagram](image)

The elaboration on the second theme, if this happens to be of interest, might be represented as follows:

**Comparison of Fairs and Markets**

<table>
<thead>
<tr>
<th></th>
<th>Frequency of occurrence</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairs</td>
<td>Once or twice yearly</td>
<td>Largest towns</td>
</tr>
<tr>
<td>Markets</td>
<td>Weekly</td>
<td>Most towns</td>
</tr>
</tbody>
</table>

There are, of course, many other kinds of diagram that can be used. Selection of an appropriate diagram will depend partly on the nature of the material and partly on the particular purpose of the reader. Often, a diagram will be so constructed that details or concepts obtained from a number of sources can be included. Reorganising material into different kinds of diagram in this way can be useful to the child, as a means of deepening comprehension, and to the teacher, as a means of keeping a careful check on the child's comprehension in different aspects of his work.
Inferential comprehension:
We are probably intending to assume that the Venetian merchants brought goods from the Far East to England. But did they? This is an inference on our part and by reading down the first column in the flow diagram we can see quite clearly that there is no explicit statement to this effect. And did they sell goods when they visited fairs, or did they buy, or barter? Again, we are left to make our own inferences. Next, if goods from the Far East were sold in fairs, were they then resold in markets? Here, the line of inference is even more tenuous. Just what does the author intend us to infer? Or is the introduction of the comparison of fair and market an inconsequential addition - a powerful association in the mind of the author rather than an essential link in a unitary chain of ideas? It would, of course, be quite impossible for an author to make everything explicit. If the reader is not to be misled, however, the author must be careful about the construction of his paragraphs.

Unfortunately, the reader can never rely upon this degree of care, on the part of the author. Rather than blindly following the obvious inferences, therefore, the reader must learn to be wary in deciding just how much weight to place upon each inference he makes. Using the flow diagram, the teacher can help children to perceive where inferences are necessary. The columns are arranged in order of importance so this also helps the
children to decide which inferences are most important, and worth discussing. How many children will learn to make legitimate inferences, rather than gather confused associations, if we fail to provide learning experiences of some such kind as this?

Evaluation:
The details presented in any text may be based on observations or judgements that are more or less sound, or more or less well supported. The structures within which these ideas are presented may be more or less coherent, or more or less logical. The impression created by the style or of presentation may be more or less reasonable in terms of the reality perceived by the author - or by others. The material omitted may be more or less important in terms of the needs of the reader. The printed text may therefore be as much a prison to confine the imagination and understanding of the reader as a treasure house of information providing the reader with the means to seek intellectual freedom.

Ways of helping pupils to verify the accuracy or adequacy of material in the text book should be a normal part of the teaching in any subject area. I will not therefore trespass on the preserves of the subject specialists - except, perhaps, to appeal for more attention to evaluation and less to uncritical acceptance in the learning situation. There are, however, two general approaches which I would advocate.
First, I would argue for the increasing use of models as a means of evaluating when reading. Three kinds of model have been presented earlier in this article but there are many other kinds of model which may be useful in different contexts. A Venn diagram, for example, might be particularly useful for examining a set of logical relationships which in written form are difficult to analyse. Or a graph of some kind might be drawn when statistics are presented and this will often lead to a recognition of deficiencies in the data presented. A two-, or three-dimensional model may provide a basis for evaluating some ideas and a decision-tree may be ideal on another occasion. In addition, the actual process of deciding on a relevant model is also a useful part of the evaluation procedure.

Next, it is essential, I believe, to provide children with many opportunities for comparative reading. The history text in a primary school in Quebec gives an account of the history of North America that is very different from that in the typical English textbook. Children need, therefore, to be allowed to make a comparative study of both. Text books in history, geography, English, and even mathematics, are influenced by assumptions which vary enormously from one country to another and comparative studies are essential if we are to help children to see beyond our own limited ideological horizons. Books and other printed material for comparative reading can be obtained easily enough from
other English speaking countries. The exchange of text books with many of the non-English speaking countries, and their translation, should not be beyond the imagination and capability of primary school teachers working in conjunction with colleagues in secondary schools - and 'A' level pupils taking a foreign language.

Appreciation:
This can be regarded as the affective equivalent of evaluation. Pupils should read for enjoyment whether they are engaged in functional reading or recreational reading. As children get older they should be led to an increasing appreciation of the use the author makes of words, of imagery, of well-balanced argument, and of consistency and coherence in presentation. This should form part of all the comprehension processes so far discussed.¹

Some general points
If the teacher had to use all the techniques suggested above in taking children through each paragraph they read his task would of course be quite impossible. On the other hand, if he fails to ensure that children steadily develop each aspect of intermediate skills and comprehension skills then he not only fails his pupils but he makes his own task so much more difficult. The child who is a competent, independent reader requires much less teaching than one who is not, and the child who can cooperate actively with another child, or a

¹ The terms used in describing different kinds of comprehension are those used by Barrett (19--) although the interpretation of these terms differs at one or two points.
group, when reading will also require far less direct help from the teacher than one who can not.

In order to achieve a reasonable economy of time, it is probably best to concentrate most of the teaching on introductory paragraphs. This gives the children a clear understanding of the major concepts that are likely to be used and the themes that are most likely to be elaborated. It also helps to create a mental set for a critical and constructive approach to the reading that follows. Some work on concluding paragraphs and summaries will also be useful, however, with occasional concentration on other paragraphs of particular interest or importance.

It is probably best to concentrate on one technique at a time and, when this is mastered, to go on to the next. The cycle should be constantly repeated, however, so that there can be a steady progress from the simple and elementary to more sophisticated work. As children develop their repertoire of skills and techniques there can then be more discussion about strategies so that they learn to judge when to make an intensive analysis and when to skip quickly through material that is not of central importance to their specific purposes. As they develop their ability to respond sensitively to context and to perceive larger meaning structures their ability to skim and scan will automatically improve at the same time - provided that a selective approach to reading is positively encouraged.
Conclusions

In the opening paragraph I explained the tentative nature of many of the ideas that were to follow. For some of the suggestions the term 'speculative' might be more appropriate. The need for a major advance in the teaching of the reading-thinking process is, however, self-evident in my view, and new methods of teaching must be devised if we are to meet the challenge. I can only hope that if some of the suggestions I have made prove less than satisfactory the committed teacher will not abandon the attempt but draw upon his own professionalism and come up with a variety of alternatives. Fortunately, there is no single ideal truth to be discovered in terms of method. There are many ways of fostering reading development. What is important is that the teacher should develop an increasing understanding of the nature of the abilities that need to be developed. Given this kind of understanding he will find that the discovery of suitable methods is simply a function of his own enthusiasm - and that of his pupils.
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