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TEACHING LANGUAGE CLUES
TO READING COMPREHENSION

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Reading Comprehension is an illusive entity. It is difficult to define, measure and teach. Researchers attempting to construct a theoretical model of the comprehension process for empirical examination are often confronted with a maze of confusing studies. The untangled maze is perhaps more discouraging. Confusion generally gives way to contradiction. Measurement problems are also prevalent in the area of comprehension. Naturally, any quality which is difficult to isolate and describe is equally difficult to measure. Finally, teachers must face the ominous responsibility of helping students obtain a quality which is vaguely defined and measured. It is the most difficult of these dilemmas with which this discussion deals: teaching students to gain meaning from the printed page.

The teacher of reading often becomes a teacher of decoding skills. The notions of phonics, structural analysis and dictionary skills are more precise and comfortable than the notion of teaching students to “think.” A consonant blend or a compound word has a greater reality than does inferential or critical thinking. It would seem that it is far easier to teach something that can be underlined, printed, cutout of a magazine, or put on a cassette, than something which is more abstract. In short, word recognition has been treated as a more tangible commodity than comprehension. It is more readily definable, measurable and teachable. However, comprehension is far closer to the ultimate goal of mature reading than is single word decoding.

The primary purpose of this article is to propose a different teaching viewpoint on comprehension, one which removes some of the abstraction. The final product is a teaching sequence for comprehension skills that is parallel in form to the teaching sequences commonly used for word recognition.

What is Comprehension?

If teachers are to aid students in acquiring a set of behaviors or thought processes, it is helpful to be able to identify, isolate, and define the desired process and product. Teachers developing strategies for teaching comprehension may turn to the “experts” for definitional advice. They may also find little tangible help.

Comprehension is sometimes defined from a teaching point of view as a hierarchy or taxonomy of skills (Spache, 1961; Cleland, 1965; Barrett, 1968). Unfortunately, while a taxonomy appears to add authenticity to a teaching scheme the authenticity may be more implied than real. In other words one author may identify and sequence five comprehension skills while
another may identify and sequence five hundred. These appear to be different ways to slice the same ill-defined pie.

Another way the teacher may try to add reality to the definitional problem in teaching comprehension is by examining background research. Factor analytic techniques have been a common methodology for examining comprehension. (Davis, 1968; Homes and Singer, 1966; Vernon, 1962; Spearri, 1972.) These studies, when collectively examined, tend to support a three-factor definition of reading comprehension previously cited by Spache (1962). The three basic factors include:

1. Word Meanings
2. Idea Relationships
3. Reasoning

Unfortunately this approach does not establish what mental skills are to be taught to improve comprehension.

No definition of comprehension is an absolute. Teachers will not find an answer that is global as well as explicit. Knowledgeable and informed teachers must turn within for answers rather than searching for absolutes. The definition of comprehension must be one that the individual teacher believes in and can teach from with confidence. In short, a teacher who has taught about comprehension and arrived at a working conceptualization, will be more effective with his or her students than will the teacher who blindly accepts a sequence prepared by an “expert” without fully understanding the conceptualization.

**How is Comprehension Presently Taught?**

In examining the ways that comprehension is taught the teacher need not be exceptionally observant to note that one approach prevails. That is, teaching comprehension through the use of questioning techniques. Further, these questions which are generated often require only literal recall and recognition ability (Guszak, 1967). Questioning as a method of teaching is a very workable technique for some children in some situations, but it is heavily dependent on one major premise: the desired information must reside within the learner. The question may serve to help the learner organize or reorganize his or her thought processes, that (s)he must “contain” the desired response. In effect the questioning technique is often used to teach the learner what (s)he already knows. However, what happens when the learner does not contain the information? What happens when the skillfully designed inferential question falls flat because the learner has not made the inference?

At this point teachers of comprehension must have a working conceptualization of the comprehension process they are trying to teach, and this process must have some concrete reality directly observable for both the teacher and the student. It is felt that this reality is present in the form of language clues in the reading material that is to be comprehended. The teaching of comprehension can focus on the development of a reader who is searching for meaning, armed with a specific set of strategies. The use of
these strategies can be triggered by the occurrence of certain observable language clues.

At this point an example may serve to clarify the focus of the presentation. Read the following story:

Jimmy ran home from school as fast as he could go. Today was the day of the big baseball game between the B Street Bombers and the Park Hill Nine. He raced into the house and grabbed his baseball glove. As he started to run out the door his mother caught him and said, "If you do your homework, then you can play baseball." Jimmy knew he didn't have time to do his homework and get to the game on time.

Later in the afternoon as Jimmy hit his second homerun he wondered what would happen when he returned home.

Inferential comprehension may be dealt with superficially in this story through asking the question, "Did Jimmy take out the garbage?" This alone may be enough to "teach" many children about inference. However, another approach, one dealing with thought processes and language clues, may be more appropriate.

Many basic inferences are made using a structure known as an If . . . , then . . . clause. Children may first be introduced to the logical sequence of simple if . . . , then . . . implication. Then they can be made aware of the key words (If . . . , then . . . ). Armed with this strategy the child could read the passage looking for the language clue to trigger his thinking process.

The Teacher's Thought Process

In Developing a Strategy

For the purpose of conceptualization, comprehension will be defined here as four levels of thinking: literal, inferential, critical, and creative. There are no more absolutes in this definition than were cited in the previous definitional approaches, but the teacher must begin somewhere. Literal comprehension entails reading to recognize or recall information which is explicitly stated. Inferential comprehension entails taking literal level understandings and combining them to make interpretations beyond what is explicitly stated. Critical comprehension entails the combination of literal and inferential thinking to make more subjective judgments. Creative comprehension entails using thinking at all three previous levels to evoke emotional or affective responses.

This four-level breakdown is utilized to provide a common basis for conceptualization. If this format presents difficulty, view the breakdown as fluid and add or subtract levels as needed. The important requirement in teaching comprehension is that the teacher conceptualizes the process in comfortable and understandable manner.

Given the four levels of comprehension a framework needs to be established for the searching out of language clues. A simple analogy may help to clarify this need. If children are searching for San Diego on a map,
they might use a world map, a United States map, a California map, or a southern California map. The best strategy might be to use the southern California map first, and after locating San Diego to use increasingly larger maps to gain relative perspective. In the same way children searching for a specific language clue might begin their search with single words and then expand to sentences, paragraphs, stories, and finally, synthesize their thoughts through multiple stories.

For example, large meaning changes can emanate from single words. Consider three sentences:

- President Carter confronted the group.
- President Carter confronted the throng.
- President Carter confronted the mob.

Three single words, group-throng-mob, seriously change the meaning of the sentence.

Meaning can also be gained from sentences. The if . . . , then . . . , example previously cited demonstrates inferential thinking within a sentence. These same concepts can also be extended beyond words and sentences to paragraphs and story passages.

The multiple story level is often neglected in the teaching of comprehension. In asking children to comprehend, teachers are often asking them to analyze or break down thoughts. It should not be forgotten that children need to be taught to see relationships across different stories and they need to be given a logical strategy for comparison and contrast synthesis.

The two variables presented, levels of comprehension and length of passages at which comprehension may operate, can be organized to form a matrix.
Figure One: A conceptualization of comprehension

<table>
<thead>
<tr>
<th>length of passage</th>
<th>levels of thinking</th>
<th>1. literal</th>
<th>2. inferential</th>
<th>3. critical</th>
<th>4. creative</th>
</tr>
</thead>
<tbody>
<tr>
<td>word</td>
<td></td>
<td>1.1</td>
<td>2.1</td>
<td>3.1</td>
<td>4.1</td>
</tr>
<tr>
<td>Sentence</td>
<td></td>
<td>1.2</td>
<td>2.2</td>
<td>3.2</td>
<td>4.2</td>
</tr>
<tr>
<td>paragraph or story</td>
<td></td>
<td>1.3</td>
<td>2.3</td>
<td>3.3</td>
<td>4.3</td>
</tr>
<tr>
<td>multiple story</td>
<td></td>
<td>1.4</td>
<td>2.4</td>
<td>3.4</td>
<td>4.4</td>
</tr>
</tbody>
</table>

In examining this matrix it should be noted that sixteen cells have been constructed. Four different levels of comprehension are represented and each of these levels divided by the length of passage which is used as the framework to organize the search for language clues. There is nothing absolute about this conceptualization, but it does have utility for the teacher.

**What are the Language Clues?**

It is impossible for any one person to fully establish all the clues that relate to any given cell in the matrix. The insightful teacher will constantly be adding strategies and clues to the framework. The following brief examination of specific language clues will be undertaken mindful of three factors:

1. The matrix is a skeleton outline to structure teacher thinking. The insightful teacher must add workable ideas at the applied level.
2. Most clues can be traced back to the single word or sentence level. Organization of these specific clues is what takes place at longer passage levels.
3. Inferential comprehension builds from literal, critical from literal and inferential, etc., in a hierarchical fashion.

For these reasons the discussion of specific language clues will center on four cells: literal comprehension of single words (1.1) sentences (1.2) inferential comprehension of single words (2.1) and sentences (2.2).
1.1 Literal comprehension of single words. Single words are the most obvious and apparent components of a written message. The reader should learn that certain thought processes are keyed with individual words. After the concepts have been presented at a concrete level the reader should be apprised of the key or clue words that indicate the process. For example, recognition and recall of a time sequence is an area that receives considerable attention under the area of literal comprehension. After readers have been assessed as needing development in this area, they begin to work on a concrete activity such as sequencing picture frames from a comic strip which have been cut apart. This is typically done to establish a concrete or low abstraction level understanding of time relationships.

Another concrete level activity to develop temporal ordering is enacting a story with figures on a story board or with puppets and then re-enacting the story. The creative teacher can find numerous ways to develop thought processes at the concrete level. As the child’s ability to “think about” temporal order is developed the teacher should begin introducing the words that are the language clues to sequencing. In this instance the key words might be before, during, and after if the objective was of a low difficulty; or the key words might be subsequently and retrospectively at a higher difficulty level. Either way, the teaching strategy is to prepare the reader with some concrete clues for the search for meaning.

A brief example of two more types of single words that are clues to literal comprehension are appositives and pronoun referents. Words that are used in conjunction with appositive structures may help the student in recalling significant details. Appositives are an easily recognizable clue to single word meanings and usually appear with identifying punctuation, e.g., John, my brother.

Sequence words, pronoun referents, and appositives are three examples of language clues to single word comprehension at the literal level of thinking. They relate directly to the skills of recognizing and recalling sequence and recognizing significant details.

1.2 Literal comprehension of sentences. Within the framework of the sentence most of the grammatical restrictions of the English language operate. In sentence length passages children can bring to bear their oral language knowledge on the comprehension task. The most obvious language clues to literal comprehension here are word order and punctuation. For example, consider the following three sentences:

Tony played first base!
Tony played first base.
Tony played first base?

The simple punctuation differences change the entire literal topic or main idea of these sentences.

Additionally, the relationship between literal comprehension of significant details and main ideas may often be uncovered in subordinate clauses. Consider the following sentences:

While the refinery exploded, the freighters waited at the dock.
While the freighters waited at the dock, the refinery exploded. The shift in word order from main to subordinate clause indicates a similar shift of the pieces of information from main ideas to significant details. Children need to be familiarized with subordinate conjunctions as language clues to this process. Teaching children to carefully dig through sentences for important punctuation and word order language clues can help them to develop strategies for recalling the main idea or recalling significant details.

2.1 Inferential comprehension of words. Inferential thinking is a series of thought processes or operations. These processes are cued by certain specific words. Some of the thought processes of inference involve classification. Piaget (1957) has described some of the logical strategies involved as negation, conjunction and disjunction. Negation is signaled by clue words such as not, nor, and neither; conjunction by and, also, and both; and disjunction by or, either, and not both. Consider the following sentence:

and

Jim or Bill pulled the bank robbery.

not

Obviously precise use of the clue words is all important in gaining the meaning of this passage. These basic operations are the core of inferential understanding. They relate directly to using class inclusive and exclusive inference. Children need to be made aware of the precise meanings of these words, and they need to search them out in their reading.

Another example of single word clues to inferential thinking is the if . . . then . . . structure. This example has been previously cited, but also needs consideration here as it expands well into the sentence length passage. The words if and then are the clues to trigger the thought process of implication but they gain full meaning in complete sentence expansion.

2.2 Inferential comprehension of sentences. Determining fact from fiction is a comprehension skill that is often considered under the heading of inference. Once again there are certain clues in the written message that can help children to trigger their inferential thinking. One common clue is that fantasy, legend, fairy tales, etc. often include many context violations between the subject nouns and main verbs. Consider these sentences:

The wolf said “I’ll huff and I’ll puff . . .” (wolf/said)
The dish ran away with the spoon (dish/ran)
. . . along came a spider and sat down beside her and said . . . (spider/said)
Stuart Little drove his car onto . . . (mouse/drove)

Each sentence is from a fictional piece. The subject of the sentence is doing something that in reality can not be done by the subject. Children need to be made aware of the restrictions between nouns and verbs and to look for violations of these restrictions as concrete clues that a story is fictionalized.

Other examples of logical relationships such as class inclusion and exclusion are often clued at the sequence level. Materials such as attribute blocks, people pieces, and color cubes published by Webster Divisions of
McGraw Hill are excellent concrete teaching materials for developing inferential thinking.

Implementing the Concepts Presented as a Teaching Style

To this point the discussion has been centered on the teacher’s conceptualization of comprehension process, and on identifying some potential language clues. It is now necessary to set up an actual sequence of teaching that can be implemented. This sequence is designed to point up relationships in the teaching of word recognition skills to the teaching of thought processes or comprehension.

1. Introduce the Concept or Thought Process at a Concrete Level. The initial consonant b may be taught as sound at the beginning of words like those that can be shown in pictures, (ball, baby) or those that can be cut out of a mail-order catalogue (bicycle, baseball), or things that can be brought from home (banana, bow). Likewise, many comprehension processes can be demonstrated at concrete level. Attribute games and problems are one form of materials that science and math teachers often use to develop thinking skills. These materials are readily adaptable to any content area. The important point is to remember to help the child learn to think not merely to answer questions.

2. Introduce the Language Clues that are Signals for the Thought Process the Student is Trying to Develop. If children were being taught to syllabicate between identical consonants appearing side by side in a word, they would undoubtedly be presented with a number of words conforming to the generalization before they were asked to be able to select words to which the generalization applied. In the same way, children learning to differentiate appropriate and inappropriate if . . ., then . . . implications need to be made fully aware that they are reading to find a sentence in which the if and then both appear. These are their language clues to trigger the process they have been developing in step one.

3. Provide Practice with the Process in Limited Context. If the child had been introduced to the hard sound of c, it would be wise to provide reading selections including words such as cake, cap, candle, cone and cup. The wise teacher would not follow the lesson with a selection including the words city, center, cell, and ceiling. Therefore, after introducing if . . ., then . . . implication at the concrete level and carefully introducing the clue words, the teacher should find or write short selections which conform directly to the generalizations. After the child has had practice in using the cues, slight irregularities may be introduced such as a sentence with a stated if and an understood then.

4. Provide Extended Practice with the Process in Context Where The Cues Are Not Present. If the student has been taught to use context and the regular “ed” past tense marker as a word recognition aid it is hoped that some of this learning will transfer to decoding of irregular verbs which do not use the “ed” marker (eg. ran). Likewise once a comprehension process has been learned at the concrete level and the reader has ample practice in triggering the process through appearance of the language clues, it is hoped
that the thought processes will continue to function in the absence of the literal level clues.

Summary

A conceptual framework of reading comprehension including two variables, level of comprehension and length of passage has been presented. Four of the sixteen cells formed in this framework have been briefly explored to determine examples of specific language clues. Such traditional comprehension skills as finding the main idea, recalling significant details, detecting fact from fiction, drawing inferences, and recalling sequence of events have been fit into this framework. Further, some specific language clues have been cited as signals to each one of these thought processes. Finally, a four-step teaching sequence was introduced. The steps were:

1. Introduce the thought process at a concrete level.
2. Introduce the language clues that are signals of the process.
3. Provide practice in limited context.
4. Provide extended practice in a context where the clues are not present.

It has not been the contention that this article is a complete methodology for teaching reading comprehension. It is hoped that the information presented will provide a conceptualization and a few sample strategies to which the innovative teacher can move from the questioning technique toward teaching children to think.

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