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Review of recent literature concerning techniques of teaching comprehension to secondary school students

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REVIEW OF RECENT LITERATURE
CONCERNING TECHNIQUES OF TEACHING
COMPREHENSION TO SECONDARY SCHOOL STUDENTS

by

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A RESEARCH PAPER
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CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

Reading currently underlies almost all academic activities and is the single most important skill taught in schools.

One of the ultimate goals of reading is to respond in an intellectual fashion to what is read. Comprehension in any real sense involves the ability to recognize words and attach meanings to them in relation to other words. Consequently, the reader must comprehend what the author is saying, must extend and refine his/her concepts and understandings and must apply what is learned through reading in daily living. A basic concept of reading which should underlie instruction at all levels is that reading is a thought-getting process and as a thought-getting process, reading involves comprehension.

Definition of Terms

There are a variety of opinions as to what comprehension is and how it should be taught. One point that most researchers do agree on is the fact that comprehension is

the ultimate goal of the learning-to-read process. Comprehension is a complex process, not easily understood. However, it does include some things which can be listed and stressed by teachers. Comprehension is some form of meaning related to experience and to the items in question: the ability to paraphrase, to abstract from content, to answer questions, to deal critically with material and to discover new meanings.

Page and Pinnell (1979) maintain "decoding skills can enhance the reader's ability to work with print and to pass many conventional tests labeled 'reading' but comprehension is the true goal" (p. 40). Comprehension should be the true and final goal for all instruction in reading.

Comprehension has three dictionary definitions:

1. The art of action grasping with the intellect;
2. Knowledge gained by comprehending;
3. The capacity for understanding.

Singer (1978) says these definitions imply that the term "comprehension" can refer to a process, a product, or a potential. These different conceptions of comprehension intermingle whether the focus is on teaching, or on a theory of comprehension. (p. 901)

Pearson and Johnson (1978) believe the essence of comprehension is captured in a single principle: Comprehension is building bridges between the new and the known. Beneath this simple metaphor lies a rich and complex set of implications about the process itself and about the process of teaching comprehension. (p. 25)

The growing variety of education experiences in which the student is expected to use reading as a tool has made teachers more than ever aware of the importance of developing comprehension skills. Systematic instruction in comprehension skills not only gives the reader competence in those skills, but more important, brings about greater accuracy and deeper understanding in all his reading.

Durkin (1978) defines comprehension instruction as the teacher "doing/saying something to help children understand or work out the meaning of more than a single, isolated word" (p. 9). Instruction concerned with such things as whole word identification, word meanings, and phonic and structural analysis belong under the umbrella called "comprehension instruction." Ideally, Durkin says, comprehension instruction has transfer value and thus will help children cope with the meaning of connected texts not used in the instruction. Comprehension application is defined as the "teacher doing/saying something in order to

learn whether previous instruction enables students to understand the meaning of a connected text not used in that instruction" (Durkin, 1978, p. 10). The teacher must provide the motivation, the background, the decoding skills, and finally, the proper type of questions and activities for comprehension.

Singer (1978) states that the main strategy for teaching comprehension is to ask students questions before, during, and after reading. Preposed questions direct and focus students' thinking on the information in the text that will answer the questions, but other information in the text is not attended to as well. Hence, recall of the selection will be as narrow as the preposed questions have been unless students have been highly motivated to remember all that they have read. But the value of preposed questions for comprehension is that they maintain a searching attitude on the part of the reader.

Postposed questions which come at the end of a reading selection, lead students to have a broader focus in reading. Thinking that all information is equally relevant, they try to store all information and recall it at the end. Hence, their process of reading is slower and their recall is better when preposed questions are asked.

When a student enters junior high school, he/she finds that he/she is expected to be able to use reading as a major tool for learning. Good readers can do so,

but many poor readers now reach seventh grade who formerly would have been held back in the elementary school. Hence, both teachers and poor readers feel disappointed and frustrated when the latter fail to get meaning in reading their English, science, or social studies texts. The practice of teaching secondary students to read for general meaning, which had been so common in the past, made no provision for teaching them to read for study purposes, and did not provide them with the basic comprehension skills required in learning activities. Even in earliest reading, the child's attention should be directed to a vigorous search for meaning.

Teachers, peers, home, and classroom environment all influence the reading comprehension of students. These influences can be positive or negative.

Purpose and Limitations of the Investigation

This paper will summarize ways teachers can affect comprehension of material presented to their students. For the purpose of this paper, it was determined to survey the literature over the last five years as it pertained to techniques of teaching reading comprehension to students from seventh grade on through high school.

CHAPTER II

LITERAL COMPREHENSION

Introduction

That there are serious deficiencies in basic reading skills that block learning, especially at the middle grade and high school levels, is widely recognized. How to cope with these deficiencies is, to a large extent, an unsolved and very debatable problem. At the root of the difficulty lies some uncertainty about what are basic reading skills and what are the special skills required to read materials of different kinds in an effort to master the facts, principles, and generalizations that constitute the content of reading matter which is intended to inform rather than to entertain.

The teacher should be on guard against assuming that poor comprehension always calls for remedial teaching. A student may fail to comprehend because the books he is asked to read are too hard for him in general. This is, of course, very common. It cannot be stressed too strongly that students must be supplied with materials they are able to read. When materials are too difficult, students abandon the effort to get meaning. This is true not only in reading activities but also in content subjects.

A reading teacher at the secondary level has two goals for students:

Increasing their word knowledge and improving their reading comprehension. To achieve these goals, the reading teacher must first select appropriate materials for a particular situation. (Morrison, 1979, p. 34)

Knowledge of a specific set of stories is only part of what the reading teacher wishes to accomplish. The teacher is concerned about increasing word knowledge and improving reading comprehension in all the students' reading.

Literal comprehension involves a number of skills:

1. Ability to recognize main ideas;
2. Ability to recognize important details;
3. Ability to predict a sequence or pattern.

While each component skill may be useful by itself in certain reading activities, the main purpose in giving training in the specific items is to bring about more alert reading and generally better comprehension in all skills.

Literal level comprehension questions are the "how, what, who, when, where" type of questions. They aim at memory or direct recall of information. The literal comprehension area reflects a reader's ability to decode words, use syntax and semantic skills to recognize and remember explicitly stated information. In other words,

the reader has a single understanding of what the author clearly states. Literal comprehension questions require the student to recall details and stated main ideas in sentences and paragraphs as well as to recognize correct sequence.

Doake (1977) maintains that if literal type questions are used, then the

effective position for them is in the post-reading position. The important skills for teachers to develop lie in the area of question construction and the placement of these in specific adjunct positions throughout the material to be read. (p. 137)

Cloze Technique

In the last few years, Virgie McIntyre (1977) says the cloze technique has been advocated as a way to test for and/or practice comprehension of materials read. It gives some indication of whether or not students can use context to help in understanding. McIntyre suggests this cloze activity to be used with affixes. Tell the students to read the paragraph for context clues. Then have them look at the base words at the end of the paragraph. Have one student read the base words to the class. Ask students if they can decide which words belong in which blank space and figure out what form of affix will make the meaning

clear to someone else who reads the material. Fill in the blank spaces. Then check orally with the students at the end of the activity.

Carl B. Smith (1978) says students using the cloze procedure are forced to read actively, paying attention to context clues which are crucial to filling in the missing words. Cloze activities could be first derived from the reader's own dictated stories, then from materials of interest, and eventually from content material. As students become more adept at handling the cloze task, they can design their own cloze exercises and administer them to each other. Discussion about this activity can help students understand what the reader must do to grasp the author's intended meaning, focusing especially on the importance of the whole context in understanding the message.

Recognizing and Naming the Main Idea

Locating directly stated main ideas is a very important aspect of literal comprehension. Although this is a very important reading skill, many students do not master it, and subsequently have trouble in locating the more difficult implied main ideas. The skill of recognizing and/or formulating a main idea is related to the skill of recognizing and/or formulating the central thought of a unit,

such as the sentence, a collection of discrete, but related items, or the theme of an essay, chapter, or story.

Jane Catterson (1979) maintains that

"reading for main events and reading for main topics both require the reader to cluster small ideas into larger ideas. However, following a sequence of minor events leading into a main event does not require exactly the same kind of thinking as summarizing details to make a main idea. (p. 5)

Pearson and Johnson (1978) say that

finding the main idea requires the reader to recognize that some of the propositions are examples of the most general proposition intended to serve as the main idea. An example will help. In paragraph (7), propositions (a), (b), and (c) serve as examples of proposition (d), in much the same way as collies, dobermans, and spaniels serve as examples of dogs. (p. 90)

(7) (a) Robins build nests in trees. (b) Pheasants build nests in bushes. (c) Eagles build nests in rocks. (d) Birds build nests in a variety of places.

Pearson and Johnson (1978) believe that it is wise to use examples of word categorization as an introduction to main idea activities. They believe main idea instruction can be facilitated if these three factors are combined to generate the following sequence:

- Stage 1: Explicit main ideas are stated at the beginning of a paragraph for label-list relations.
- Stage 2: Same as Stage 1, except that the main idea comes at the end of the paragraph.
- Stage 3: Explicit main ideas are stated at the beginning of a paragraph for rule-example relations.
- Stage 4: Same as Stage 3, except that the main idea comes at the end of the paragraph.
- Stage 5: Implicit main ideas for label-list relations.
- Stage 6: Implicit main ideas for rule-example relations.
- (p. 93)

Within each stage, the task can be made easier by giving the students a set of choices from which to choose. Obviously, then, it can be made more difficult by asking the students to find (or, in Stages 5 and 6, create) the main idea. Pearson and Johnson encourage teachers to use these four factors (explicitness, position of main idea, type of relation, and item format) as an aid in building their main idea programs or as selection criteria in choosing materials for the students.

Dolores Durkin (1978) suggests using a paragraph that contains a main idea embellished with supporting details. The teacher then asks students to read it in order to be able to state in a very few words what the paragraph is about.

Responses are compared and discussed in order to select the best, which is written on the board. The students are then asked to reread the paragraph, this time to find all the details that have to do with the main idea. These are written below the main idea in outline form. Once a number of paragraphs are analyzed in this way, the teacher discusses the meaning of "main ideas" and "supporting details."

A good exercise according to the Guinness World Book Teachers' Edition (1978) is to read a paragraph to the students, then ask them to give the main idea and point out the details. Students who have difficulty with this exercise need additional work with categorizing sentences, using key words, and sentence construction. Many exercises for teaching the main idea are constructed to present and reinforce specific major skills in understanding the main idea. Students read a short paragraph or selection and then choose from three alternatives the sentence from the paragraph that states the main idea. Students choose from three alternatives the sentence that sums up the main idea, or, students choose from three alternatives the title that best expresses the main idea.

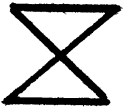
Students should be taught that the "main idea" or central thought of a paragraph can be found anywhere within the paragraph. Burmeister (1978) suggests using the following symbols to exemplify this. The dark horizontal line in each symbol indicates the place of the main idea.



Main idea at the beginning of a paragraph.



Main idea at the end of a paragraph.



Main idea at the beginning and end of a paragraph.



Main idea not stated. (p. 208)

Give students experience with all of these types of paragraphs. Select paragraphs from reading materials available to your students. Ask students to underline the main idea and to draw the symbol that illustrates the location of the main idea.

Recognizing and Remembering Details

An essential comprehension skill is the ability to recognize and remember details. This usually focuses on the recall of details after reading sentences. These types of exercises emphasize the recognition of key words (those which are central to the meaning), the ability to answer questions based on details, and the ability to distinguish between accurate and inaccurate re-statements of details. Exercises of this type are designed to direct the students' attention first on the elements within a sentence that are meaning bearing (key words), secondly on recognizing details based on who, when, where, and what type questions, and finally, on recognizing accurate re-statements of details.

Lou Burmeister (1978) says that recalling details such as specific facts, names, and dates can be important for several reasons.

First, there are certain details that every educated person should know, and not knowing them marks a person as uneducated. He also says details can serve as building blocks for forming concepts, and some facts are important principally as basic information from which it is possible to make inductions. (p. 201)

Dillner and Olson (1977) claim the ability to identify appropriate details is basic to all other skills in reading. It is impossible to formulate a main idea if the supporting facts cannot be found. For example, locating a cause-effect relationship requires finding the detail that shows cause and the one that shows effect.

Various techniques can be used to help students learn to select and recall those details that are appropriate to their purpose for reading. Primary among these according to Dillner and Olson is telling students WHY they are being asked to look for particulars. For example, the teacher may ask students to read a paragraph about some of the things that make a president powerful. Students might pick up key details, such as "head of a political party" or "ability to appeal to public opinion" that would help them to make generalizations about the president's power. This technique

is very helpful to students who feel that they have to know all the facts and have not yet learned to distinguish which ones are relevant to which purposes. Having a purpose for obtaining the details provides the reader with a format for putting all the details into an integrated whole.

The ability to recognize and remember details from a paragraph is more difficult than from a sentence. A paragraph, by definition, has one central focus and each sentence is related to it in some fashion. Guinness World Records Teachers' Edition (1978) suggests a review of key words and phrases as an excellent introduction to getting details from paragraphs. For students who have difficulty with this, the teacher could provide a line reference for each statement or question so students can refer to it.

Noting Correct Sequence

The ability to logically follow a sequence of events is an important comprehension skill that few readers possess.

Identifying sequence involves aspects of both time and space. Time of chronological sequence involves the students' locating and recalling the order of incidents or actions explicitly stated in a selection. In reading done in history and English, a chronological sequence often

prevails. Spatial sequence involves the students' locating details as they occur from space to space, or area to area.

McIntyre (1977) suggests beginning with comics, such as "Charlie Brown," "Doonsbury," etc.,

cut them apart, and let students reassemble into sensible stories. Next step, take the words off the pictures and let students fill the balloon spaces with words of their choice. Third, let them write and draw their own comics. (p. 242)

McIntyre also says teaching students the purpose of transition words such as therefore, so then, next, while, in the meantime, and later, can sometimes help the student discover the sequence more easily.

Exercises that content teachers could use to enhance their students' understanding of sequence (Dillner & Olson, 1977) include

giving them or asking them to locate a series of facts and then to place these facts in the chronological or spatial order in which they occurred. For example, rearrange the names of five United States presidents in the chronological order in which they were elected. Describe the route taken by Lewis and Clark. Name the major mountain ranges of the United States in their order from east to west. (p. 47)

Pinpoint Critical Reading Skill Series (1980) suggests these language experiences as guides for teaching sequencing. Give students a story with scrambled events and have them order the events. Read a story while students order the events on paper. Sometime later, read the story and have the students order the events again. Have them compare their two orderings. Use pictures to show a process or a development. Then have the students put the pictures in order.

Literal comprehension is always emphasized from the beginning stages of reading instruction when the teacher asks children to answer questions about what they have read. Although the emphasis should be decreased as the student progresses through the elementary school, this often does not happen. Since literal comprehension questions are very easy to formulate and to evaluate, they are often stressed at the expense of higher level comprehension questions.

However, literal comprehension questions are important in content areas such as science, home economics, industrial technology, and physical education.

CHAPTER III

INFERENCE/INTERPRETIVE COMPREHENSION

Introduction

This skill area represents the reader's ability to use related information to arrive at the author's intended meanings which are implied in the reading material. In other words, the reader understands the author's intended meaning even though it was not explicitly stated.

Mangrum II and Forgan (1979) identify inference as one of the seven major comprehension skills. It requires the reader to combine verified facts from experience to form a final statement or answer a question. Interpretive comprehension consists of being able to interpret what is read, infer from what is read, draw conclusions and generalizations, predict the outcome, summarize, sense the author's mood and purpose, and read between the lines. It also includes the difficult skill of locating the implied idea in a paragraph. Since students do not automatically read more thoughtfully just because the teacher thunders "Think," it is valuable to provide them with guidance and specific opportunities.

Miller (1977) believes interpretive comprehension should be stressed as much as possible from the beginning stages of reading instruction. "Students will not learn to respond at the interpretive level if they do not have the opportunity to answer interpretive questions" (p. 201). Intermediate grade students should be asked mostly interpretive questions. Although students in the middle schools can answer many interpretive questions from basal reader stories and tradebooks, materials from the content areas of English and social studies are especially valuable for this purpose.

For students to work at the interpretation level, Burmeister (1978) says,

they must be aware of relationships that exist between the ideas expressed in the materials at hand and something within their own bank of ideas, the ideas they have stored in their memories from past reading and experiences. (p. 236)

Predicting Outcomes

One major objective of reading instruction is to have the students question and evaluate reading material as they read, rather than to read passively. The ability to predict the intended meaning of partially completed sentences and paragraphs reflects the students' interaction with the

reading matter. The competent reader develops the habit of anticipating content. He is often fully conscious of this process only when he reads stories of high suspense like adventure or detective fiction, but the habit persists with other materials too. The effect of thinking ahead is to intensify a critical and interpretational approach to the printed page, a continuous process of inferring and judging. Success in anticipating or predicting events or outcome of what is read is dependent on other skills such as noting important details, following a sequence of events, and understanding cause and effect relationships. Instruction may be given in various ways.

Mangrum II and Forgan (1979) suggest having students read to a designated point in a story and then have several students tell how they think the story goes on. The class then evaluates the suggested endings, backing up their approval or disapproval by references to what they have already read. Before reading tasks, students are asked to guess from the title and illustrations or from the first paragraph what the story will be about. Exercises can be prepared in which short unfinished narratives are used. Students are asked to choose what happened next from a group of several suggestions. The choices given should be those which will lead to a conclusion based on clues given in the story.

Somewhat in the same mode of instruction, Stauffer (1969) advocates a type of lesson plan which he calls a "directed reading-thinking activity." In this, pupils preview a selection to identify purposes for reading it, are encouraged at several points to conjecture about how the story will develop, and verify their anticipations by reading. (Harris, 1975, p. 475)

Barnes, Peak and Burgdorf (1980) claim the skill of predicting outcomes or judging probability is essential to orderly development of plans. They suggest these activities among others to help students better understand this skill. Give students a story without an ending. Provide several possible endings and have students judge the most likely ending, giving their reasons. Have students predict conditions of an assignment such as: (1) How long will it take? (2) What percent of the class will complete it? (3) What is the probability of everybody doing it all correctly? and (4) What is the probability of half of the class missing more than five items in the lesson? After the assignment is completed, have the students check their predictions. Discussing events (such as accidents, strange events, objects out of place, and things that have disappeared) in the light of what most likely caused the event is another technique.

Pearson and Johnson (1978) suggest using question formats such as the following: (1) What will probably happen when the car runs out of gas? (2) Why did John have to go downtown? and (3) Why might Timothy bake a cake for Helen?

Predicting outcomes is a type of future causality, based upon your stored knowledge about what kind of effect the explicitly stated cause usually elicits. Computer scientists call this kind of reasoning forward inferencing. We like the term because it creates a clear image of what a reader must do when he or she is asked to predict an outcome. (Pearson & Johnson, 1978, p. 112)

Summarizing

An essential part of interpretive comprehension is the ability to accurately summarize material that has been read. It is a very difficult skill for poor readers, who tend to neglect the main idea and always want to say more than they have to about the details. Students tend to "summarize" by reading a selection and copying verbatim the sentences which they consider important. They usually show poor discrimination, quoting unimportant details, omitting essential facts or missing the author's ideas completely. The ability to summarize intelligently, either mentally or in writing, depends upon other numerous reading

skills such as recognizing key thoughts, signal words, relevant and irrelevant details.

Pearson and Johnson (1978) view summarizing or retelling as an extension of paraphrasing. Sometimes used as an assessment technique, asking a student to retell or summarize a selection in his or her own words is a reasonable practice activity. Invoking the new to known principle, retelling provides an overt measure of what a student has done with the information presented in a selection.

In the Guinness World Records Teachers' Manual (1978) it is pointed out that a way to prepare students for the exercise is to ask them to summarize such things as a TV show or a vacation trip in one or two sentences. The need for summaries to be short is emphasized, as many students will tend to write too much. They also have exercises that call for reading a short paragraph about some record breaker and then have the students write a one or two sentence summary.

H. Alan Robinson (1975) breaks the skill of summarizing into four components or procedures as aids toward its development:

- A. Practice in Expressing a Single Idea in Briefer Form
 1. Using the italicized or underlined key words to compose a summary sentence.
 2. Selecting the key words and using them in a summary sentence.

- B. Practice in Summarizing a Single Idea in the Reader's Own Words instead of the Author's.
- C. Practice in Summarizing a Long Sentence and in the Reader's Own Words.
1. Find the key words which indicate the main idea, then write a brief sentence in your own words to express it.
- D. Practice in Summarizing a Paragraph.
1. Summarizing the paragraph which lists or enumerates.
 2. Summarizing a paragraph which emphasizes a time sequence.
 3. Summarizing a paragraph in which the arrangement shows a comparison of ideas. Your guide here will probably be two topic sentences. Your summary should also contain two main ideas to show the comparison.
 4. Summarizing a paragraph in which the author's aim is to give a reason or explanation of his main idea.

Robinson (1975) also mentions these supplementary exercises:

1. Anticipate from key sentences whether your summary would list details, show a comparison, show sequence of events, or give a reason.
2. Skill in using a newspaper will be helpful in learning how to summarize. Their summaries appear in the lead

paragraph, telling the "why," "who," "what," and "where" of the news story. Give students practice writing a first paragraph for a news story.

Drawing Conclusions

If pupils have difficulty drawing conclusions and making judgments, they first need practice in answering cause and effect questions to which the answer is directly stated in the text. However, as soon as possible, they should be asked to make inferences from the information given there. Drawing or reaching conclusions is a skill requiring the reader to form a first statement or answer a question using two or more verifiable facts contained in a selection.

Pearson and Johnson (1978) call drawing conclusions "backward inferencing"--a process about the probable and often unstated causes of events. They give these instructional guidelines: Use question formats. There are a number of question formats one can use to probe students' understanding after they have read a text segment.

1. Why: Why did John have to go downtown?
2. Supply a reason: John had to go downtown because _____.
3. Under what condition: Under what condition will Susan's mother give her a piece of cake?
4. Under what circumstances: Under what circumstances will Susan's mother give her a piece of cake?

5. Using when as a paraphrase: When will Susan's mother give her a piece of cake?
6. What will happen: What will happen if Susan cleans her room?
7. Supply a condition: If Susan cleans her room, _____ . (Pearson & Johnson, 1978, p. 114)

Specific Skills Series (Richard Boning, 1977) has a special unit called "Drawing Conclusions" from lower levels up. The author recommends short but frequent practice sessions to help students look beyond the mere words of the author. In this series, the correct conclusion is the most logical one for the reader to draw with just the information that is presented to him. The questions in the "Drawing Conclusions" series do not contain direct references, thus the answers do not use the same words as the questions. As the books advance in challenge, there are fewer indirect and easy references. There are more difficult inferences, involving more obscure relationships. The inferences are also more dependent upon qualifying words such as "mostly," "all," "some," "only," etc. In "Drawing Conclusions" the reader is asked to find an example or illustration, to note a contrast, to generalize, to see cause and effect relationships, to identify a time or place relationship.

Boning (1977) recommends that the teacher ask students to find the specific information in the paragraph that is relevant to the tentative conclusion. Then the conclusion must be tested against the information provided. A discussion of the responses has considerable value. The reader must be aware of the reasons why his answers are correct or incorrect.

Dillner and Olson (1977) maintain that students must be encouraged to establish connections and relationships among seemingly unrelated pieces of specific information. Making generalizations or drawing conclusions requires the reader to conceptualize a relationship between facts that are both directly stated and inferred. For example, if the students were given the following passage, they would be able to fill in the blank with the correct answer (omnivores) if they generalized:

Omnivores eat meat and plants. (Directly stated fact)

Dogs eat meat and cereal. (Inferred fact that cereal equates with plants.)

Dogs are _____ . (Generalization of directly stated and inferred facts.)

(Dillner & Olson, 1977, p. 50)

Dillner and Olson (1977) also suggest using the following sequence of questions taken from Frankel (1973) for helping students to make generalizations and conclusions.

The teacher should ask students to study similar aspects of previously unrelated content and then should ask identical questions about content.

1. Describe the situation presented in each reading.
2. What differences do you note?
3. How do you account for these differences?
4. What does this suggest to you about the situation in general?
5. Do you know of any other situations in which differing conditions exist? (p. 51)

This type of questioning strategy helps the student generalize and conclude. Each of the generalizations could be subjected to known facts. Hence the generalizations that could be supported by factual evidence would become the conclusion.

Reading effectively requires more than understanding stated facts. The reader must also be able to draw conclusions from these facts and to "read between the lines," to fully understand the author's meaning. In Guinness World Records Teachers' Manual (1978) reading comprehension exercises, students first read about a world record, then choose the correct conclusion from among three alternatives. A few drawing conclusion activities are recommended to introduce the exercises. For example, you can ask students to draw some conclusions about the weather of the day, based on the temperature and the clouds in the sky. Also,

you can read a passage from the Guinness Book, then ask students to draw some conclusion about such things as how the record setter felt before and after setting the record, or what kind of activities might lead to the setting of a world record.

Hafner (1974) suggests presenting students with a conclusion drawn from the assignment and asking them to find justifications. After practice in this way, a false generalization may be presented and students can be asked to evaluate it in terms of information given in a chapter of the text. Present students with a paragraph and several conclusions and ask them to determine which conclusions appear justified. Give students a paragraph, and offer them a series of statements. Ask them to indicate which statements are consistent with the information provided in the paragraph.

Singer (1978) says the objective of teaching comprehension

is to have students learn to ask their own questions and guide their own thinking so that they can become independent in the process of reading and learning from text. This process involves reacting to the printed page with questions or hypotheses that are answered or confirmed by the text as the student reads and interacts with it. (p. 904)

CHAPTER IV

STUDY/COMPREHENSION SKILLS

Introduction

Whenever the comprehension skills of reading are utilized for study purposes, they may be considered study skills. Classroom and subject-area teachers on all levels have always guided students in such study skills as using the dictionary, drawing conclusions, finding main ideas, outlining, and judging relevancy. On the other hand, teachers have not always been systematic in teaching study skills.

At the junior high level, one major source of concern to educators should be the reading study skills. Subject matter teachers are concerned with the content of the material students read, developing concepts and skills related to that subject, and developing skills which allow students to obtain knowledge independently. An effective way to accomplish these goals is to develop the reading study skills, not in isolation but by using the text and supplementary materials of that content area. Study skills are described and classified in many ways by numerous authors and researchers.

Various subject matter textbooks revealed that certain basic skills were named over and over again in all subject fields. Whether students are working with materials in literature, social studies, science or mathematics, they need to:

1. Follow Directions
2. Select and Evaluate--or pick out important parts of the text
3. Organize
4. Retain or recall of ideas
5. Locate information
6. Be flexible in reading.

Study skills are best taught using content-area materials where their use is meaningful and functional. H. Alan Robinson (1977) says in planning a content-area unit of study, attention should be given to those clusters of study skills which will need to be employed for successful completion of the unit. As a unit is planned in terms of content and materials, the cluster of study skills essential to the unit should be considered.

If a student needs to solve a specific problem through reading, he might employ several clusters. For example, he might want to find out about the number and nature of Chalres Lindbergh's flights in the "Spirit of St. Louis." In addition to general comprehension of the material read, the study skills needed to find and organize this information might include an evaluation cluster, a notemaking

cluster, an outlining cluster, and a summarizing cluster. A summarizing cluster, for instance, might start from the outline form, emphasize the skills of differentiating between important and unimportant subtopics or details and verifying accuracy, then proceed to the synthesizing of telegraphic information into a meaningful whole or summary. Consequent instruction should depend on need, and needs will exist among the able learners as well as the slow.

Following Directions

Reading to follow directions is a fundamental skill needed in studying the content of all subjects. In mathematics, students must follow detailed and intricate directions for working with figures and diagrams, discovering principles, performing new processes, and checking answers. In science, they must read and carry out experiments and observations with a high degree of accuracy. In social studies, they are given directions for finding locations, tracing routes on maps, preparing time lines, reading graphs and so on. In addition, most assignments in all subjects are given in the form of directions, most of which are printed in the students' textbook.

Directions become more prevalent, detailed, and complicated as students pass through the intermediate grades, high school and college.

Some techniques recommended by Dillner and Olson (1977) are sound knowledge of vocabulary present in specific content subjects such as math, industrial arts, business education. A helpful method is to provide a written form with spaces for the student to fill in (with the help of his teacher) answers to such questions as the following:

1. What is the objective of the project?
2. What are we trying to do?
3. What is the object of the project?
4. What materials are needed?
5. How much?
6. Where may it be obtained?
7. What do you do first? Why?
8. What are the directions? The student should list them step by step in his own words, and number the steps.
9. Did the manual provide all the necessary information?
10. What words gave trouble?
11. What part or parts were not clear? Why? (pp. 265-266)

Following directions calls for memory and ability to visualize. The directions are necessarily given in words, only some of which (if any) will be accompanied by visuals. The reader must visualize as necessary and make a mental storage of the sequence. If he has poor reading ability,

poor ability to visualize, or poor memory, he will have difficulty comprehending or following the directions. The solution depends upon the ability of the classroom teacher to provide instruction in following directions. Robinson (1975) says the best procedure is to have the students reword the directions, taking each step of the procedure separately. Unless the directions can be reworded, they have not been understood; the student has only been pronouncing words. Being able to restate the directions in one's own words is proof of understanding.

Students should be given practice in following both written and oral directions. The teacher should begin with simple one-step directions and progress to more complex directions for which a number of steps are not stated explicitly.

Burmeister (1978) suggests discussing and performing examples of instructions that occur frequently in your subject area. For example, discuss terms such as list, name, classify, compare and contrast. Then give examples from your subject textbook and supplementary materials.

Selecting and Evaluating Ideas

This involves identifying the main ideas and details. Students should be led to find the key words, then the topic sentences and finally to determine the basic ideas in a group of paragraphs. The students' ability to paraphrase, or restate the author's main idea is a good check on this

skill. Also encompassed in this area is the students' ability to perceive relationships among sentences and ideas, to make inferences, and to determine cause and effect, make generalizations, evaluate and make judgments.

These suggestions and techniques are presented in PIN-POINT CRITICAL READING SKILLS SERIES (1980) to help students select and evaluate content.

1. Checking for sentences that present basically the same idea.
2. Looking for words in a presentation that relate to the same idea.
3. Checking how titles, pictures and words in the presentation relate to the same idea.
4. Noting words, phrases, or sentences that are repeated to emphasize main ideas.
5. Having students read a story and then write several statements that are relevant to the main thrust of the story.
6. Having students read news stories and select from them the relevant and nonrelevant statements.
7. Selecting topic and have students use an annotated bibliography to select those books most relevant to the investigation of that topic.
8. Comparing types of sources from which information needed to reach a conclusion may be found.

Organization

Another study situation frequently encountered calls for organization of information gained through reading; that is putting together systematically those things that belong to a whole. Grouping or listing items that belong to one classification or that occur in a certain order, outlining, and summarizing are the procedures most often used in making organization responses. In addition to its aid to comprehension, organization of information reinforces retention of that material. In most study situations, the reader is involved first with noting the organization of the reading material and then forming his own organization of ideas. Awareness of sentence and paragraph structure is basic to the application of the organizational study skills.

McIntyre (1977) uses this approach in the social studies area for teaching organization and relationships:

Directions:

Below are sentences on four different subjects which we have studied in Social Studies. They are all mixed up. As we've already talked about each sentence in a paragraph is related to every other sentence, and they follow a sensible order. Read the sentences and decide under which each belongs.

Inland Valley Farmer

Food to Market

Ocean Waters

Along the Coast

1. He catches fishes to sell.
2. Because of the tide, his fishing shack is built on poles.
3. So people living inland are affected by the ocean currents and travel.
4. Some of these harbors are deep and large. (p. 243)

McIntyre goes on to list fourteen sentences that the students with help of their teacher would place under a heading. McIntyre also gives further directions for the student and teacher.

- a. After you have decided under which heading each sentence goes, re-read them. Now organize them in a sensible paragraph. Find the sentence which you think gives the most logical beginning and which other sentences (details) should be listed. Write the paragraph. (p. 245)

If students do fairly well with the last exercise, they can go on to another, more difficult one taken from the field of science: Seed, Fish, Insects, and Platypus. Twenty-four sentences are listed which the students should have to classify and make into separate paragraphs.

Dillner and Olson (1977) recommend another technique for helping the student to organize information in a variety of ways, namely, outlining, taking notes, summarizing, and classifying.

Discuss with students the role of outlining. Stress that this technique should be used when students need to note main ideas and details in relation to a specific purpose. Show students a completed outline. Discuss the placement of headings and details. Then give students a partial outline and have students complete it with the teacher. Using an overhead projector or blackboard helps students to understand the concept.

Note-taking skills can be introduced as a technique to be used when the more structured outline is not needed. The teacher can show students various types of notes including single-word notes, incomplete sentence (phrase) notes, and complete sentences notes. Then the teacher might ask students to take notes on a paragraph and follow this activity with a discussion. The student's notes could be evaluated considering the following:

1. Is information appropriate to purpose?
2. Are author's points restated in student's words?
3. Are all important points recorded?
4. Would the notes be readable at a later date?

(Dillner & Olson, 1977, p. 316)

Summarizing can be taught as an outgrowth of instruction in note taking, outlining, and classifying. The teacher might ask a specific question and have students

read material concerning its answer. They could take notes or outline the material and summarize the information they recorded. The summaries could then be evaluated by discussing the following criteria:

1. Are all the necessary points included?
2. Are all extraneous excluded?
3. Is the material in the student's own words?
4. Is the material written in complete sentences?
5. Does the summary consist of a complete and organized paragraph? (Dillner & Olson, 1977, p. 317)

Retention

Recalling what is read, fixing content in mind so that it can be brought back when wanted, is a very important study skill and one commonly needed in all subject fields. Since this is the case, more attention should be given to this study skill in the lower grades and in high school. This study skill area is firmly linked to all the others, for each specific approach to the study of material read will enhance retention. The organization skills, by their very nature, all aid retention through the establishing of a structure of one kind or another. Interpretation skills play an important part. For example, the skill of visualizing helps the reader more vividly what he has read. The evaluation skill of judging relevance forms retention by the discarding of the irrelevant and the retaining of the

relevant. Students may also, on occasion, use the particular study skills of memorization and association to help in the retention of certain materials for definite purposes.

Smith (1978) mentions how a teacher can teach her students how to search and select details from a passage. When asked to recall major details, they should mentally divide the article into three parts, and pick out from each part what seemed important to them. When a number of students are studying a common factor or have engaged in a common experience, a field trip, a play, an experiment, they can summarize it, list its highlights, give brief reactions, or outline its conceptual framework. After a trip to the museum to view the art and artifacts from King Tut's tomb, for example, the teacher might ask the students to summarize what they saw by categorizing the objects.

A class of students can be divided into groups of three or four. As the groups begin to offer suggestions and come up with the categories the teacher lists them on the board. Under each of the categories, the students then recall and describe those items which fit. The students must think and organize their ideas and then express them in language that communicates.

Charts, outlines, summaries and dictation can all be used as a means for using recall and helping retention.

McIntyre (1977) claims recall is mostly literal comprehension. Some techniques that may aid recall are:

1. Alert students beforehand on what to listen to or to read for.
2. Give materials on the maturity level of the students.
3. Let students talk and think about what they hear or read.
4. Remember about attention spans, long drawn-out lectures, discussions, and so on.
5. Practice good listening habits.
6. Remember that what works for one student may not work for another.
7. If students can learn to recognize the pattern of organization of material, it will be easier to understand and remember. (p. 274)

Locating Information

The constellation of location skills embraces many items. Among these items are such composite skills as using a table of contents, using an index, dictionary techniques, using an encyclopedia, and library skills. Competence in the use of the reference skills can give students a tremendous amount of power and independence in study. When students

are skilled in locating material independently, the teacher can spend more time on discussing the "whys" and "hows" than on the imparting of information.

Dillner and Olson (1977) suggest these techniques for using locational aids in the library: Locate a topic that students might be required to study as part of your course. The first lesson of this topic may be carried out in the classroom. Using an overhead projector, show students facsimiles of title, subject, and author cards. Briefly note that the call number occurs on each, as well as the author, title, publisher, place of publication, and date of publication. Describe sample situations in which various types of references should be used. For example, ask "If you wish to locate a book entitled Artists of the Midwest, what type of card should you use?

Using the overhead projector, show students a page of the Reader's Guide to Periodical Literature. Study the format with the students carefully. Project the key that interprets the symbols used. Discuss with the students the information that is contained in the Reader's Guide, but not in the card catalog. A brief discussion of other indexes, such as dictionaries, and Roget's International Thesaurus, and their purposes might follow.

Ask students what information they might gain from an encyclopedia. Elicit answers such as a brief summary of the topic and bibliographic references. Ask students how they might find information in an encyclopedia. Be sure students realize that there are both subject headings and an index. Discuss the arrangement of entries in the encyclopedia.

Give students a subject that they might need to research in the library and ask them to decide which topics they might look under to find information on the role of Serbia in the First World War.

The last step in this lesson would be to take students to the library and have the librarian show them the location of the card catalog, the indexes and the encyclopedias. A natural follow-up activity would be to have students find several references on a topic, using the card catalog, indexes, and encyclopedias.

Students are exposed to many tables, graphs, and maps. The student who is attempting to put together a model is often referred to a diagram. Graphs are frequently used in social studies, health, and science books. Students should be made to realize that graphic materials can aid their comprehension by presenting information in a concise and pictorial manner, thus making it easier to remember.

The tables we teach students to read generally are tables in mathematics such as the time table, tables used on cereal boxes to indicate nutritional value, and tables used in presenting facts in an almanac such as a list of famous explorers or military heroes. If we teach students to follow the horizontal and vertical lines to the point at which the information is presented, we have done part of our task. If we teach them to compare the information presented within the table and make inferences from the table, we will be teaching them to derive more meaning.

Reading Rate and Purpose

In addition to the general purpose of getting recreation or information, we usually read with some specific purpose in mind--to solve problems, to reproduce the material later, to follow a story, to find out how to play a game or construct an object. The specific purpose not only affects the choice of reading matter but how it is read. Students should be taught that thinking about the purpose of their reading and looking over the material before they read will help them to save time and do a better job.

A key to creative, effective reading, then is flexibility--adjusting the reading speed and approach to the difficulty of the material, and the purpose for which it is read. Some directed practice in adjusting rates to the task at

hand will develop a flexible reader who learns to slow down and speed up in relation to need. Students should also be taught that a reader sometimes must adjust his rate as he reads. For example, if he is reading a novel at a rapid reading rate, he may want to slow down to read a section that is especially humorous. Conversely, if he is reading a required book at a textbook reading rate and he comes to a section that is already familiar to him, he can increase his rate accordingly.

One method of teaching students about reading rates and the advantages of using them appropriately is to present students with hypothetical situations and then have them discuss the appropriate reading rate (Robinson, 1975). A hypothetical situation might read:

You are to read the chapter on the life of the early settlers in Missouri in your social studies book.

Your purpose for reading is to obtain an overview of life, not specific facts. Assuming that the social studies text was very readable students would probably read at a rapid rate because no retention of facts was required. (Robinson, 1975, p. 289)

Students might then be asked to read short selections from their textbooks for a variety of purposes and to discuss the rates at which they read each selection.

These reinforcement procedures were suggested by Dillner and Olson (1977) to be used in teaching flexibility

in reading. Explain to students that they are to read several pages in their textbook in order to locate most of the relevant details. Before they read, give them a few minutes to look over the page and place an S by those portions that they think should be read at a slow careful rate, an M by those portions that they think should be read at a moderate rate, and an F by those portions that they think could be read at a fast rate. At the end of the time limit, assemble the students in small groups and ask them to compare these markings to those of their peers. After several minutes, ask a member of each of the small groups to report any difference of opinion. Discuss with the whole class how the purpose relates to the rate and what the rates for each of the portion of the textbook should have been.

Give the students a new purpose for reading the pages (e.g., identify main ideas) and repeat the above procedure.

McIntyre (1977) claims skimming "is one of the best techniques of all for insuring future carryover into life situations" (p. 112). Skim until you find what you want, then do the type of reading required to fulfill the purpose for which you are reading. Explain to students that the purpose of skimming is to quickly pass over an entire selection to get a general impression. Skimming means that students do not have to read every word in a line of paragraph. The method might include reading the first few words of a sentence, reading phrases within sentences,

italicized words, reading a word here and there, or all three. Show the students how to develop their own method of skimming. They should try to find words or ideas in a paragraph or page that will give them a clue to the information they are to look for.

Use the content area textbook and ask specific questions that students may answer by skimming. For example, in history, "What was Truman's speech about?"; in mathematics, "What does the author say is the purpose for the chapter on congruence?"; or in science, "State several ways in which a midlatitude deciduous forest is different from a tropical rain forest." Any gains in rate must be continually reinforced by similar procedures.

Explain to students that scanning is a technique to locate specific information. Our eyes glance rapidly over a page, or pages, to pick out the one detail that we are seeking. We may scan an index, table of contents, page of a telephone book, or dictionary. Dillner and Olson (1977) suggest using

transparencies of paragraphs related to source content, show students how to scan for target words. Ask specific questions and demonstrate what words or phrases they should look for in order to find answers to the questions. (p. 321)

Another useful technique from the same authors is to make a guided reading sheet that contains questions and page numbers on which the answers may be located. Ask students to locate the answers and then state the key word or words that helped them locate the answer.

Frequently study skills are taught in isolation with materials that are designed for the purpose of teaching a specific skill or skills. Burmeister (1978) feels that in "most cases there need be no dichotomy between the teaching of reading skills and the teaching of content. Each should reinforce the other" (p. 14). Usually the teaching of a study skill can be integrated with the teaching of an idea which is of interest and value to the student. Or the teaching of a reading skill can grow from the need to have that skill in order to understand ideas.

CHAPTER V

SUMMARY

An understanding of the spiral concept of reading entails discarding the idea that all reading skills are taught in the elementary school, and emphasizing, instead, the idea that learning in the secondary school will be improved by attention to the reading techniques appropriate to each subject area.

Every academic classroom teacher is dealing with materials that must be read. It follows then, that every teacher is a teacher of students who are reading. The improvement of learning in the secondary school subjects is also related to the classroom teacher's commitment to developing in the students the reading skills discussed in this paper.

Comprehension is very complex part of the reading process. McIntyre (1977) says that if we as teachers are to get away from the word callers produced by the Round Robin, still prevalent in too many reading classes, teachers must understand the part comprehension plays in the process. (p. 246)

It is in this area of the active task of teaching comprehension that the greatest changes must occur in the techniques and strategies used by the teacher. Doake (1976) notes that

teachers will need to understand and use the different procedures in teaching children the processes involved in comprehending while reading at increasingly higher levels of thinking. They also have to teach children how to learn the information and ideas obtained as the results of their reading. (p. 135)

Reading comprehension skills mastered at one level must still be taught at succeeding levels. Likewise, a comprehension skill mastered with one type of material, such as social studies, must still be taught and mastered in other types of materials, such as science and math. Any successful comprehension program provides for continuous development of comprehension skills at all grade levels and in all content areas.

Pearson and Johnson (1978) offer the following analogy: We likened understanding comprehension to a doctor attempting to diagnose a respiratory ailment. The doctor collects several sets of data Each new datum offers a different perspective on the same organism. The human body under study has not changed, only the perspective. Each technique offers something unique,

but some of the information is redundant. The redundancy is important, however, because it helps the doctor to settle on a diagnosis. (p. 230)

REFERENCES

REFERENCES

- Barnes, D., Burgdorf, A., & Peak, P. Pinpoint: Critical reading series (teachers' ed.). Austin, Texas: Steck Vaughn, 1980.
- Boning, R. A. Specific skills series. Baldwin, N.Y.: Barnell Loft, 1977.
- Burmeister, L. E. Reading strategies for middle and secondary school teachers (2nd ed.). Reading, Mass.: Addison-Wesley, 1978.
- Carrillo, L. W. Teaching reading. New York: St. Martin's Press, 1976.
- Catterson, J. Comprehension: The argument for a discourse analysis model. In Pennock, C. (ed.) Reading comprehension at four linguistic levels. Newark, Delaware: International Reading Association, 1979.
- Crowder, W. W. Using content materials to sharpen comprehension skills. In Pennock, C. (ed.) Reading comprehension at four linguistic levels. Newark, Delaware: International Reading Association, 1979.
- Dillner, M. H., & Olson, J. P. Personalizing reading instruction in middle, junior and senior high schools. New York: MacMillan, 1977.

- Doake, D. D. Comprehension and teaching strategies.
In Guthrie, J. T. (ed.). Cognition, curriculum
and comprehension. Newark, Delaware: International
Reading Association, 1977.
- Duffy, C. G., Roehler, L. R., & Sherman, G. B. How to
teach reading systematically (2nd ed.). New York:
Harper & Row, 1977.
- Durkin D. What classroom observations reveal about
reading comprehension instruction. Urbana, Ill.:
University of Illinois, 1978. (ERIC Document
Reproduction Service, No. ED 162-259).
- Freidman, G., & Reynolds, E. G. Enriching basal reader
lessons with semantic webbing. The Reading Teacher,
March 1980, 33, 677-684.
- Gagné, E. D. & Memory, D. Instructional events and
comprehension: Generalization across passages.
Journal of Reading Behavior, 1978, 10, 321-335.
- Griese, A. A. Do you read me? Practical approaches to
teaching reading comprehension. Santa Monica, Calif.:
Goodyear, 1977.
- Hafner, L. E. Improving reading in middle and secondary
schools (2nd ed.). New York: MacMillan, 1974.
- Hafner, L. E. Teaching of reading in the middle and
secondary schools. New York: MacMillan, 1977.

- Harris, A. J. & Sipay, E. R. How to increase reading ability (6th ed.). New York: Longman Inc., 1975.
- Harris, R. & Spargo, E. Reading in the content fields. Providence, R. I.: Jamestown, 1978.
- Herber, H. L. & Nelson, J. B. Questioning is not the answer. Journal of Reading, April 1975, 8, 512-517.
- Isakson, R. L., O'Harra, N. J., & Miller, J. W. Finding the main idea: Can your students do it? Reading World, October 1979, 19, 28-35.
- Jensen, P. E. Theories of reading speed and comprehension. Journal of Reading, April 1978, 21, 593-600.
- Johnson, D. D., & Pearson, P. D. Teaching reading comprehension. New York: Holt, Rinehart & Winston, 1978.
- Kolzow, L. V. Idea power for reading comprehension. Englewood Cliffs, N. J.: Prentice Hall, 1976.
- Lee, J. W. Increasing comprehension through use of context clue categories. Journal of Reading, December 1978, 22, 259-262.
- McIntrye, V. M. Reading strategies and enrichment activities for grades four to nine. Columbus, Ohio: Charles E. Merrill, 1977.
- Melnik, A. Literal comprehension: A reevaluation. In Merritt, J.E. (ed.). New horizons in reading. Newark, Delaware: International Reading Association, 1976.

- Mikulecky, L., Smith, C. B., & Smith, S. L. Teaching reading in secondary school content subjects. New York: Holt, Rinehart & Winston, 1978.
- Miller, J. W. Teaching language clues to reading comprehension. Reading Horizons, Fall 1977, 18, 23-31.
- Morrison, B. S. One route to improved reading comprehension: A look at word meaning skills. In Pennock, C. (ed.), Reading comprehension at four linguistic levels. Newark, Delaware: International Reading Association, 1979.
- Page, W. D. Comprehending and cloze performance. Reading World, October 1977, 17, 17-21.
- Page, W. D. & Pinnell, G. S. Teaching reading comprehension. Urbana, Ill.: National Council of Teachers, 1979.
- Robinson, H. A. & Thomas, E. L. Improving reading in every class. Boston: Allyn & Bacon, Inc., 1977.
- Singer, H. Active comprehension: From answering to asking questions. The Reading Teacher, May 1978, 31, 901-908.
- Smith, C. T. Evaluating answers to comprehension questions. The Reading Teacher, May 1978, 31, 896-900.
- Smith, F. Comprehension and learning: A conceptual framework for teachers. New York: Holt, Rinehart & Winston, 1975.

Spriegel, D. L. Ten ways to sort out reading comprehension problems. Learning, March 1979, 7, 40-41.

Stauffer, R. G. Directing the reading-thinking process.
New York: Harper & Row, 1975.

Sterling Publishing Co., Inc. Guinness world records reading comprehension module, Program II. Chicago: 1978.

Tovey, D. Improving children's comprehension abilities.
The Reading Teacher, December 1976, 30, 288-292.

Van Etten, G. A look at reading comprehension. Journal of Learning Disabilities, January 1978, 11, 30-39.