COMPREHENSION PERFORMANCE OF AVERAGE READERS
USING A SUMMARIZATION STRATEGY WITH TEST PATTERNS VARIED

by

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(ABSTRACT)

Thirty-six randomly selected and assigned, ninth grade, high school students participated in this study which was designed to examine the impact of a summarization strategy on the comprehension performance of average readers under varied text pattern conditions. The strategy consisted of two phases. Phase I, called BACCA, included the processing steps of brainstorming, accuracy check and arrangement, completing, correcting, and adding. Phase II, DIGC, included the rules of deletion, invention, generalization, and combining to construct the summary. While the treatment group received instruction with the summarization strategy, a control group received instruction in question answering but no direct instruction in summary writing.

Results from a two-way analysis of variance conducted on comprehension performance indicated that a significant difference existed between the two treatment groups with regard to total comprehension scores. Differential performance was revealed for the selected text patterns. Performances on chronological and compare contrast passages were not significantly different between the treatment and control, while on the cause-effect passage, a significant difference was revealed in favor of the summarization

group. For the naturally occurring text there was a significant interaction effect for treatment by time. Qualitative analysis revealed a difference in the quality of written summaries with regard to the number of main ideas, details produced, accuracy in reporting the content of the passage, and completeness of the writings favoring the treatment group. Finally, an attitude survey reflected positive opinions by the participants toward both conditions.

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To my children there are no words to express to them my appreciation. They have watched for years, Mom and her obsession, without complaining or asking why. Both have been my most faithful and loyal supporters, and it is to them that this document is dedicated.

And finally, to my best friends, who believed in me long before I believed in myself.

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CHAPTER 1

INTRODUCTION

Background

In recent years educators have been held increasingly accountable
for what takes place in the classroom (Hodgkinson, 1987; Kirst, 1987;
Walberg, 1987). Expectations are that teachers will somehow produce
students who have acquired the factual knowledge that is desirable,
learn strategies to apply to new learning experiences, and master
reasoning and thinking skills which enable them to know what strategies
to use to analyze and synthesize new situations (Hodgkinson, 1987).

Several problems hinder teachers in meeting these expectations.
One problem that may cause difficulty in higher order comprehension
tasks is the limited use of strategic skills. "Higher order" refers to
those problems that are not caused by inadequate decoding skills or
problems in lexical access (Golinkoff, 1975-1976).

Research suggests that when the structure or conceptual load of a
text is complex and comprehension is hindered, good readers use
strategies to debug problems, determine meaning and restore meaning
(Johnston, 1983; Pressley, 1986). Poor readers for example, find it
difficult to develop and use such strategies. These students in
general, do not possess knowledge of strategies and are often not aware
of when and how to apply the knowledge they do possess. Furthermore,
research indicates that we have not been teaching these strategies to
students in the classroom (Durkin, 1979).

In addition to the lack of instruction or omission problem is a second problem, strategic application of knowledge and skills. That is, readers who may not be aware of when and how to apply the knowledge they do possess. They often cannot infer conceptual meaning from surface-level information, have poorly developed knowledge of how the reading system works, and find it difficult to evaluate text for clarity, internal consistency, and compatibility with what is already known (Canney and Winograd, 1979; Markman, 1977, 1979; Paris and Lindauer, 1976).

A third problem hindering student learning is the learning material itself. Armbruster (1984) refers to this as "inconsiderate text". When specific content organizers such as topic sentences that carry main ideas are not clearly stated, readers may find it difficult to locate the ideas the author intended. In Armbruster's (1984) description of "inconsiderate text" she lists five textual patterns which are frequently found in expository textbooks used in content areas. Research indicates that these patterns share varying degrees of difficulty and may make text comprehension more difficult for the reader (Meyer and Freedle, 1980; Englert and Hiebert, 1984).

Even though these problems can and do cause comprehension difficulty for the reader, recent research has provided teachers with information about texts, text processing, and instruction in text processing strategies which will allow them to develop tools to counter some of these problems.

Text Processing

Various models have been constructed that attempt to describe ways readers may process text. The model proposed by Kintsch and van Dijk (1978) describes how individual propositions in the text are transformed and condensed into gist by a reader. The essential components of this model are the reader's schema, the microstructure and the macrostructure of the text, and a set of macrorules for producing summaries. According to this model, readers progress through a text, reducing and organizing its microstructures into a macrostructure through the application of series of transformations known as macrorules. Different investigators using somewhat different terminology have described fundamentally similar processes as those delineated by Kintsch and van Dijk (1978), (Brown and Day, 1983; N. Johnson, 1983). Such models of processing can provide instructors ways of understanding what the reader does when he/she processes text, when the reader engages these operations, and why they enable the reader to comprehend text.

In addition to research describing the processing operations associated with text, there is also research which addresses the problems associated with text structure, including text patterns. Shannon (1985) defines text structure as the hierarchical organization of superordinate and subordinate ideas in text. Investigations focusing on text structure support the notion that readers who are sensitive to the structures used in the production of expository text have better comprehension and memory for what they read than readers who do not demonstrate this sensitivity to text structure (Meyer, Brandt, and Bluth, 1980). Although a reader's memory

for expository text appears to be enhanced if the reader follows the author's organization of ideas, in general children demonstrate minimal sensitivity to expository text structure (Meyer et al, 1980).

In Armbruster's (1984) description of "inconsiderate text" she lists five patterns that have been identified by rhetoricians, linguists and psychologists and which are frequently found in expository textbooks used in content areas. These are listing, compare contrast, temporal sequence, cause-effect and problem-solution. Research evidence indicates these patterns have varying degrees of difficulty for readers. Meyer and Freedle (1980) proposed that a time order and list structure may be acquired early in development and be more familiar and easier patterns for certain populations to process than others, while problem-solution, cause-effect, and compare contrast may be the most difficult. Elliott (1980) found that college students did better on compare-contrast patterns than sequence patterns. Elliott also studied sixth graders and suggested that they did not do as well on the compare-contrast pattern because they had not yet acquired the semantic knowledge to conceptualize and use this pattern nor deal with its complexities. Thus, it is becoming increasingly apparent that text patterns can have a significant impact on a reader's comprehension, albeit a differential one.

Reading Strategies

Simon and Newell (1972) theorize that behavior is a function of an interaction between an organism with certain constraints and abilities and the task environment in which it seeks its goals. To

achieve its goal, the organism selects and implements strategies. The organism's behavior, therefore, is determined in part by the interaction which occurs between the strategy and the essential characteristics of the task environment. The success or failure of the goal-oriented effort is dependent on the appropriateness of the strategy. The strategic processing of text provides a specific example of the strategic interaction that Simon and Newell (1972) describe.

Along with the understanding that has been gleaned from studies on text processing including text structure, there is a growing body of research in instructional strategies and the facilitating effects these strategies have for readers comprehending texts. A strategy which has received increased attention in the reading research literature is summarization. The process of summarization can facilitate learning, as it helps readers to clarify the meaning and significance of discourse (Hiebert, Englert, and Brennan, 1983). Summarization requires the writer to comprehend, evaluate, condense and produce a concise piece of writing that reflects the gist of the text (N. Johnson, 1983).

Summarization is a skill students are frequently asked to use to produce work, for example when they are told to write summaries, reports, etc. Some publishers emphasize the importance of teaching summarization skills by including them in basal texts. Also, summaries are used as a testing device to measure student performance. However, research indicates that summarization skills are not easily acquired by even the most proficient readers (Brown and Day, 1983; Garner, 1982;

Garner and McCaleb, 1985), the developmental differences are great, and the ability to produce sophisticated summaries may be one of the last skills a reader develops, if it is developed at all.

Another emphasis has been the use of summarization, or the locating of main ideas, as a way of processing text to monitor and insure comprehension (Palinscar, 1985; Roehler and Duffy, 1984). Taylor (1982) designed instruction in a hierarchial summarization task focusing on text structure and then measured comprehension and memory for expository material. These instructional strategies using summarization as a means to ensure comprehension have had positive results. However, there appears to be a limited number of studies in the instructional research literature that attempt to look at summarization as a strategy for enhancing text processing and production as a means for ensuring comprehension.

At present most studies have not specifically examined comprehension as a function of the use of a summarization strategy under selected text patterns. Given our growing understanding of how readers process text, and investigations focusing on the importance of text structure and textual patterns on a reader's performance in comprehending text, it would seem reasonable to examine the effects of a summarization strategy on a reader's performance under different text types which may vary. A strategy which provides the reader with a schema for encoding top-level ideas in text patterns and then reproducing those ideas may well yield differential effects.

Purpose Of The Study

The purpose of this study was to investigate how instruction in a summarization strategy affected the comprehension performances of average readers when expository text patterns varied. Instruction focused on a summarization strategy which was applied to different expository text patterns. Four different text patterns, chronological, cause-effect, compare contrast, and naturally occurring text patterns were used.

The Summarization Strategy

For purposes of this study a strategy is defined as a method or plan for attacking a problem (text) in order to accomplish a desired goal (comprehension). Summarization was selected as the instructional strategy for several reasons. First, the ability to get the main points or gist of what one reads is important and many students experience difficulty with this task (Kennedy, 1971). Second, sufficient research has focused on the transformation process (rules) involved in summarization to provide a conceptual framework for analyzing the task (Brown and Day, 1980; Kintsch and van Dijk, 1978). Third, it would appear, although not totally so, that the information derived from studying summarization may inform us about comprehension processes in general (Kintsch and van Dijk, 1978; Johnson, 1978; Johnston, 1981), and specifically as these processes are applied to different text patterns.

Because instructional time in the classroom does not lend itself to teach every text pattern and its variations, this strategy may enable the reader to use the text's top-level structure to actively

process and produce a summary that may be applicable across text patterns. Additionally, the actual summary is generated as a rule-governed process which incorporates the major components of the Kintsch and van Dijk (1978) model of text comprehension and production. The essential components of this model are the reader's schema, the microstructure and the macrostructure of the text, and a set of macro-rules for producing summaries which includes deletion, invention, generation, and combination.

There are two phases to this strategy as it was developed for this study. Phase I allows for the active processing of text, encoding, while providing the readers/writers a way of relieving their initial memory load, verifying their work for accuracy, completing, correcting and adding additional information. Phase I is described through an acronym called BACCA. Each letter in BACCA represents a step in Phase I. The first step is B, brainstorming. Brainstorming allows the readers to recall and focus on their initial impression of relevant facts and information while relieving some of the cognitive load associated with remembering. The second step is A, for accuracy and arrangement. Checking for accuracy allows the reader to verify what has been processed thus far and assures the reader of the validity of the information. Arranging the information in an organizational structure similar to that of the author's may enhance recall. The third letter, C, is for completing, which is the third step. By completing ideas that have already been processed the reader adds to that network of ideas and processes additional information which elaborates the original information. The fourth step is C for

correcting, which enables the reader to remove any errors found in the information being processed. The last letter and the final step is A for add. By adding new ideas the reader continues to actively process text and increase the amount of knowledge stored in memory relevant to that subject. This completes the steps for Phase I, BACCA.

The production of the written summary is Phase II of the summarization strategy. Using the notes generated from Phase I BACCA and working through them in the order they appear, the writer transfers his notes to complete sentences. This is accomplished by using the summarization rules deletion, invention, generation, and combination. After the summary is complete the writer uses the rules of summarization (having been directly taught these rules) to determine if the statements in the summary reflect the necessary deletions, and/or the appropriate generalizations, combinations, inventions, to make the summary comprehensible. That is, these summarization rules that were used to generate the summary are now used as the criteria for evaluating the summary's statements.

Instructional Model

In order to teach this strategy which incorporates Phase I BACCA, an acronym for generating main ideas and details from text, and Phase II, which is generating a written summary using summarization rules, a direct instruction model was employed. The components for this model included: (1) explanation of BACCA and the summarization rules deletion, invention, generation, combining; (2) modeling each component of Phase I BACCA and each step of Phase II summarization

generation by the instructor; (3) guided practice with feedback for the students; (4) independent practice; (5) evaluation and feedback of the independent practice. This model was chosen because it provides instruction and feedback in both Phase I and II of the strategy, and it allows answers to the "whys" needed for the students to transfer the strategy and use it independently.

Research Questions

Given the impact of text processing and text structure on a reader's performance in comprehending text, and the literature supporting summarization as a strategy for text comprehension, this study attempted to answer the following questions:

1. Does instruction in a summarization strategy affect the comprehension performances of average readers?

2. After a delayed period will students' application of a summarization strategy affect the comprehension performances of average readers 12 days after instruction has been terminated?

3. Does use of a summarization strategy on text material with text patterns varied affect the comprehension performances of average readers?

4. After a delayed period of 12 days, will students' use of a summarization strategy on text material with text patterns varied affect the comprehension performances of average readers?

5. Is there a difference in the quality of written summaries between the treatment group and control group?

Significance Of The Study

An increase in what is known about the effects of instructional strategies when used with varying text patterns on the comprehension performances of readers would be helpful since there has been a proliferation of reports about students who lack basic skills and who cannot comprehend written material because they lack mature and efficient strategies necessary for learning on their own (Simpson, 1984).

While it has been demonstrated that summarization is a strategy that can help learners, the extent of its application is less well understood. To date there is no existing research that indicates how a summarization works when applied to textual patterns such as chronology, cause-effect, and compare contrast, three very common patterns found in expository text. Therefore, the focus of this study was to examine the effects that a summarization strategy for comprehending text had on a reader's comprehension performance when text patterns varied.

Definition Of Terms

Cause-Effect: A pattern which links reasons with results. Any effect is usually the product of several combined causes, and one cause can produce several results.

Chronology: Refers to not only a sequence of events arranged from earlier time to later time, or in reverse, but also to any pattern of ideas or events arranged according to time.

Compare Contrast: Concentrates on the similarities and differences between two or more things.

Direct Instruction Model: For this study, a method of instructional delivery which includes the following steps: (1) explaining; (2) modeling; (3) guided practice and feedback; (4) independent practice; (5) evaluation and feedback of independent practice.

Naturally Occurring Text: A text that contains sentences which may exhibit chronological, causal, and comparative textual patterns all within the same passage.

Signal Words: Those words which act as connectives or cues between one proposition or item of information and the next proposition, and which help to make the relationship between the propositions explicit.

Strategy: A method or plan (summarization) for attacking a problem (text) in order to accomplish a desired goal (comprehension).

Summary: The ability to convey in writing the main points and details of a passage in an organized fashion such that a reader gets the gist of the passage.

Text Patterns: Patterns used by writers to show relationships

between ideas. Those patterns of text which have been identified as listing, temporal sequential, compare contrast, and cause-effect are frequently found in expository text in content area textbooks.

<u>Text Structure</u>: The top-level hierarchical arrangement of main (superordinate) ideas and details (subordinate) in text.

CHAPTER 2

REVIEW OF LITERATURE

Chapter 2 presents an overview of the student to text
relationship, a review of the relevant literature on studies of text
characteristics that affect comprehension and learning, organization of
text structures and their impact on remembering textual information,
and text processing strategies which relate to instruction. Final
sections focus on research studies supporting BACCA and DIGC as a
summarization strategy and literature delineating the role of the
teacher in a direct instruction model.

Introduction

The ability to comprehend expository material is essential for
success in school. This expository material is delivered to the reader
in textbook form which contains contexts that are networks of multiple
patterns. Armbruster (1984) suggests that the textbook is a key
component of any learning situation in a school setting and that given
the importance of textbooks it is expected that they will promote
understanding of important information.

Writers attempt to create texts that are organized in a manner
that they feel best conveys the information in the text to the reader.
The purpose of text patterns is to represent ideas and to achieve
particular purposes. The pattern selected by writers are forms of
communication that weave vocabulary, syntax, and organizational
patterns which shape the text in meaningful ways.

Students at the secondary level are faced with learning an increasing
amount of information in content areas, presented in text whose
patterns, used to treat particular topics, may be unfamiliar.
Students' knowledge of text organization seems to help them comprehend
and synthesize the author's meaning. Recent work on text patterning
suggests that many readers use organizing patterns as a strategy for
understanding and studying new information, organizing information in
memory, retrieving information, and reproducing text at a later date.
Yet Aulls (1982) notes that children's knowledge and use of expository
text structures in reading comprehension are not acquired rapidly, and
sometimes not at all. Perhaps one reason for this difficulty is a lack
of appropriate strategies to apply to the text. This review examines
this comprehension problem from two dimensions, text characteristics,
and instructional strategies.

Text Characteristics

There are two basic text types, narrative text and expository
text. Text types vary in familiarity and ease of processing.
Narrative texts are usually organized according to a sequential pattern
of events that follows the conventions of a story grammar. In general,
children experience greater difficulty comprehending and remembering
expository material than narrative material of stories (Taylor, 1982).

There are several reasons why narratives may be easier to
summarize. First children have more experiences with narratives than
with expositions and it is easier to judge importance, notice
inconsistencies, and condense ideas when working with more familiar

materials. Second, expositions tend to deal with not only less
familiar but also more complex ideas which the summarizer is required
to coordinate. Third, the temporal-causal course of a typical
narrative is an organized linear structure, which is easier to process
than the less organized and non linear structure found in many
expositions (Meyer and Freedle, 1984). Finally, in narratives, the
same text segments tend to be both important and interesting,
facilitating children's focusing on these parts of material; in
expositions importance and interest are less likely to overlap (Hidi,
and Baird, 1986).

By the same token, there are several reasons why expository text
may be more difficult to comprehend and remember. Expository texts are
organized differently from narrative texts in most cases. For example,
expository texts used in school textbooks attempt to use a hierarchical
pattern of main ideas and supporting details. In general this
hierarchical pattern of superordinate and subordinate information is
text specific and not organized according to a well-defined
conventional structure. And while this hierarchical pattern may
frequently be found in expository text, the organization may be
inappropriate and vague (Hidi and Anderson, 1986). That is, the
attempted hierarchical pattern may not be well produced and may further
compound the complexity of the text. Armbruster (1984) refers to this
as "inconsiderate text". When specific content organizers such as
topic sentences that carry main ideas are not clearly stated, readers
may find it difficult to locate the most important ideas because their

personal interests or background knowledge signal as important different ideas than those the author intended.

Armbruster and Anderson (1981), and Cirilo (1981) describe additional characteristics of the text that affect comprehension and learning. They refer to these as global and local coherence. Global coherence is a general overall structure of the text. Whereas local coherence is achieved within and between sentences by links that connect ideas together. Global coherence is achieved in several ways. One way is the use of signaling devices such as titles, introductions and topic sentences. Also, information that clarifies the significance of facts in the content itself is an aspect of global coherence (Armbruster, 1982). Such coherence makes the text more than just a list of facts to be memorized. The way a text is patterned to represent ideas and to achieve particular purposes plays an important role in how and what is comprehended by the reader. Kintsch and Yarbrough (1982) suggest it is the writer's responsibility to make sure that the right pattern is triggered in the mind of the reader.

Local coherence functions like "A linguistic mortar to connect ideas in the text together" (Tierney and Mosenthal, 1980). Pronoun reference, substitution, and conjunction are a few of these ties which aid in understanding and remembering text (Armbruster, 1982). Katz and Brent (1968), Marshall and Glock (1978-1979), and Pearson (1974-1975) found that cohesive texts are read faster and remembered better. It is suggested that this is true because an incohesive text makes interpretation difficult, causing the reader to spend more

time looking for link, searching his memory to retrieve the connection, or making an inference (Armbruster, 1984). Furthermore, children may not be able to readily identify such cohesive ties because of less linguistic and world knowledge. Thus awareness of these local cohesive ties and their functions in texts is particularly important in comprehending textbook material because the more coherent the text itself, the more coherent the cognitive model the reader may construct.

Other characteristics of complex text involve such aspects as low-frequency vocabulary, elaborate sentence structures, abstractness and unfamiliarity of concepts and ideas (Hidi and Anderson, 1986). Generally the more complex a text is, the more conscious and deliberate judgments are required in establishing the relative importance of its segments, the transformations of the original propositions are necessary, and the more difficult it becomes to condense the material accurately and concisely (Brown and Day, 1983). Hidi (1984a, 1984b) reported that the complexity of the target material greatly influences children's summarization performances and that, given complex text, even the majority of adult subjects adopt a linear paragraph by paragraph strategy to produce a summary.

Structures

Meyer (1975) in particular, has investigated the structures of expository text. Text structures specify the logical connections in text, provide organizational patterns that help readers identify and tie together related propositions, and specify the subordination of some ideas to others (Meyer, Brandt, and Bluth, 1980). Meyer's

classification system includes covariance (cause-effect), attribution (description), sequence (collection), adversative comparison and response (problem/solution). Meyer says that the relationships of these top-level structures are signaled to the reader by semantic and syntactic techniques. These top-level structures are equivalent to the major schemata used by authors to organize their texts (Anderson, 1977; D'Angelo, 1979; Kintsch and van Dijk, 1978; Rumelhart and Ortony, 1977). Meyer's prose analysis system provides a way for comparing top-level structures or schemata in text to students' written protocols of text. Meyer, Brandt, and Bluth (1980) found that top-level structures provided ninth graders with a systematic organized strategy for encoding information from text and retrieving it from memory. They found that good readers were knowledgeable about text structure and used strategies that used the top-level structure of a particular text. They found that the top-level structure was related to the amount of information remembered. They concluded that the ability to utilize the text's top-structure was related to the amount of information remembered. Furthermore, they suggested that the ability to utilize the text's top-structure appeared to be an important organizational strategy for remembering information from text. Organization has been shown to be a crucial variable in learning and memory (Bower, Clark, Lesgold, and Winzenz, 1969; Kintsch, 1977).

The concept of a text's organizational structure is an integral part of this study. The organization of the text allows the reader to produce a macrostructure from the microstructure by using the

macrorules of summarization. According to this model a reader cannot remember everything in a text and therefore must form a macrostructure, or gist, of the important ideas in the text to remember text content. Although some micropropositions from text may be explicitly recalled, it is the macrostructure for text that a reader primarily remembers and uses as a retrieval aid to recall more detailed text information (Kintsch and van Dijk, 1978).

When available, a reader's schema for a specific text type controls the application of macrorules to the microstructures resulting in the macrostructures. It would seem that a reader, whose goal is to remember the important information in a content textbook selection, must be sensitive to the text-specific hierarchical organization of a text in order to apply macrorules to form macrostructures. That is, the general outline of ideas in a particular text type is used by a reader to form a macrostructure for the text that retains the main ideas of the text in the correct sequence.

Research in text structure has produced a great deal of information about readers' sensitivity to text. This avenue of research continues to grow. The second approach to text structure involves awareness training in text patterns. This is becoming an active area of research, but to date has produced less information simply because of the relative newness of the topic.

In a seminal piece of research Meyer, Brandt, and Bluth (1980) found that ninth grade good readers were able to use the structure of text to comprehend and organize their recalls; however, ninth grade

poor readers were not aware of text structure and did not use it in recall. Additionally, poor readers, when asked to reproduce text, made random lists of information with no structure. Taylor and Samuels (1983) found that fifth and sixth graders who were aware of text structure were able to read and recall more from well structured passages than from scrambled passages, whereas the differences in passages made no difference to readers' recall who were not aware of structure. Kintsch and Yarbrough (1982), using college students, found similar results when students read essays written with good or poor rhetorical form. They concluded that rhetorical forms and cues may be helpful in controlling and guiding the macroprocessing of text. Further research using mature readers also found that when adults were required to read expository text, the manner in which ideas were organized affected the amount and sequence of recall (Frase, 1969; Meyers, Pexdek, and Coulson, 1973). Also, adults appear to be sensitive to the hierarchical structure of superordinate concepts and subordinate concepts (Kintsch and Keenan, 1973; Meyer, 1975).

Several studies have investigated children's sensitivity to text by having them listen to expository text (Danner, 1976; Waters, 1978; Meyer, 1977). Findings were somewhat mixed but it appeared that sensitivity to text increased with age for subjects in grades two through six. In a study by Tierney, Bridge, and Cera (1978-1979), children's ability to recall expository material after reading provided conflicting results. Neither group of third graders (good/poor readers) was sensitive to important idea units, but third

grade good readers recalled more than third grade poor readers.

The third collection of data on text structure is comprised of a much smaller selection of research. These data report an interest in using strategies to teach students to recognize and use text structure patterns while reading expository text. Bartlett (1981) lists three advantages of such instruction; readers are more likely to produce the strategy when appropriate, are more likely to apply it systematically, and are more likely to understand main ideas.

Work by Horowitz (1982) supports instruction in text patterns but questions what kind of instruction would be helpful for complex texts. She found that with simple texts and familiar topics college students did not always need text patterns made explicit, because they were familiar with the field and had stored in memory schemata of patterns which organized the text. This was not the case for complex texts of unfamiliar topics. Using structural organizers to teach expository text structure, Slater (1985) found that use of structural organizers facilitated students' comprehension and recall of text. The structural organizer described top-level structure as an aid for remembering information from text, defined the top-level organization of the passages, and provided a brief example.

Other researchers who have given students specific training on text structure have reported that there was a marked improvement in students' use of top-level structure (Bartlett, Turner, and Matham, 1980; Bartlett, 1981; Brooks and Danseereau, 1983). Trained students' written compositions also improved (Bartlett, Turner, and Matham, 1980; Taylor and Beach, 1984).

Horowitz and Rogers (1984) conducted a study with college students in which they specifically trained students using cause-effect patterns. The students received training in recognizing and marking cause-effect relations as they were expressed explicitly or implicitly in college history texts. The training also showed students how to write answers to history questions that called for cause-effect explanations. They noted that researchers have emphasized the need to teach students cause-effect patterning at all grade levels. Horowitz and Rogers concluded that such training influenced students' elaboration on ideas in history test, and improved ability to produce cause-effect patterns in essay exams.

Frequently, what is not given in instructional studies is the type of text pattern which is being used with different groups of readers. Young readers may be familiar with sequence and list like patterns, but not at all aware of more complex patterns such as cause-effect and compare contrast, because the younger grades have not yet had exposure to these kinds of patterns. While this research is very important, this kind of diversity in the type of passages used could explain some of the inconsistency in the research. Marshall and Glock (1978-1979), in referring to college students who were categorized as "truly fluent" and "not-so-fluent" suggested that these differences are due to a more well established schemata in good readers, but less complete structures for poor readers, causing them to depend more on information explicitly encoded in the surface structure of text. Using a schema theory orientation, Meyer and Freedle (1980) found that adversative, covariance, and response structures provided better organization than

list like structures because the former provided additional schemata for better textual understanding. Several research studies have concluded that the most efficient strategy students can adopt in reading expository texts is to identify and use the author's organizational framework to guide and structure their attempts to understand and remember information (Meyer and Freedle, 1980; Meyer, Brandt, and Bluth, 1980; Taylor, 1980).

In short, recent research supports the thought that sensitivity to text structure is an important component in text comprehension and text production processes. The difference in recall may occur because students who are sensitive to text structure have formed macrostructures for text with greater facility than those students who are not sensitive to text structure. It would not appear feasible to attempt to teach a strategy for each pattern given the time constraints of classroom instruction. However, instruction using a summarization strategy that focuses on a text's top-level structure to aid students in forming a macrostructure for text may be beneficial if it were applicable across text patterns.

Research Supporting Training Studies in Summarization

Research focusing on instructional strategies which produce a framework allowing readers to understand the order of text and comprehend it are developing. Summarization is one of those strategies which students are asked to incorporate into their repertoire of skills when writing and/or recalling texts. Brown, Day, and Jones (1983) suggest that while the higher order representations of text structure

are similar to summary production, this structure is not "automatically" abstracted while one reads, and in fact, requires judgment, effort, and knowledge on the part or the reader.

A summary may be defined as a brief statement that represents the condensation of information accessible to a subject and reflects the gist (central idea) of the discourse (N. Johnson, 1983). It is important to see that children are able to summarize the materials they read in school. The process of summarization can facilitate learning, as it helps readers to clarify the meaning and significance of discourse. Summarization requires the writer to comprehend, evaluate, condense and produce a concise piece of writing that reflects the gist of the text.

Different investigators, using somewhat different terminology to outline the cognitive operations in summarization have described fundamentally similar processes (Kintsch and van Dijk, 1978; Brown and Day, 1983; N. Johnson, 1983). They have identified comprehending individual propositions, establishing connections between them, identifying the structure of the text, and remembering the content as a prerequisite for summarization. Two other operations, selecting the information to be included in the summary and forming a concise and coherent verbal representation are seen as central to summarization. These operations describe a selection process in which information is consciously evaluated, material is condensed by substituting higher level concepts for lower level more detailed ideas, and recognition that concise and accurate representation of major topics requires more

integration, combination and transformation of the original text propositions (Hidi and Anderson, 1986).

In order to perform these operations for summarization Kintsch and van Dijk (1978), and Day and Brown (1983) have proposed rules of summarization called macrorules to describe how readers perform those cognitive operations just named. These rules are generalizations which involve reducing a number of specific parts to one category. Deletion is the removal of irrelevant information. Integration is a means of relating new information to prior information. Rule four, construction, is a restatement of the main idea using new terminology.

Three major components of the Kintsch and van Dijk (1978) model are: (1) meaningful elements of a text have an organizational structure and work together to give the whole text coherence; (2) the full meaning of a text is condensed into a gist as the reader reads; and (3) this gist that has been stored in memory can be used in the recall process in such a way that the reader actually generates her own new text or summary (Kintsch and van Dijk, 1978). The second major component of this model involving the reader actually forming a gist is a transformation process using those macrorules just stated. For this study the concept of text being actively processed through the use of macrorules to form a summary is very important.

Based on the Kintsch and van Dijk (1978) model and Brown and Day's (1983) rules for summarizing text, much research has proliferated in an attempt to document the development of this strategy and to determine if formalized rules could be taught and if so, their impact on comprehension of expository text.

Brown and her colleagues (1977, 1979, 1981, 1982) have done a number of studies of differences in the sensitivity of fluent and less fluent readers to major idea units, finding that younger and poorer readers had difficulty in determining importance of the overall theme, while older and more proficient readers were more sensitive to main ideas in text (Brown and Smiley, 1977). In their ability to summarize passages, this was also late developing. High school and college students were more able to abstract the significant portions of text into written summaries, whereas fifth and seventh graders produced summaries containing both major and minor points, indicating inability to distinguish between the two (Brown, Campione, and Day, 1981).

In training studies using summarization rules, results have been encouraging. Hare and Borchardt (1984), Day (1980), Armbruster, Anderson, and Ostertag (1987), and Palinscar (1981) have successfully taught summarization strategies in conjunction with monitoring strategies and found that performance on both immediate and delayed recalls improved significantly more than groups not experiencing the training.

Research indicates that summarization skills are not easily acquired by even the most proficient readers (Brown, and Day, 1983; Garner, 1982; Garner and McCaleb, 1985), the developmental differences are great, and the ability to produce sophisticated summaries is late developing.

Many factors may contribute to cognitive difficulties in producing summaries. First, the ability to reorganize the main

points or important elements of what one reads is of great importance
and may cause difficulty (Kennedy, 1971). A reader may not recognize
the macrostructure and microstructure of text to the extent that he can
determine the important ideas and convey them in a concise manner
(Winograd, 1984). Secondly, summarization may involve abstracting
unfamiliar concepts and transforming them into conceptually integrated
knowledge (Flower and Hayes, 1980), with the implication that once this
is accomplished a coherent composition can be derived. Third, they may
not be aware of the task demands (mental processes) in producing
summaries. Last, there may be difficulty in transforming and reducing
the full meaning of a text into its gist.

Hidi and Klaima (1983) and Taylor (1986) reported that young
children are confused as to what should be included in summaries,
choosing unusual ideas for the reading audience rather than the
important ideas of the text. Studies by Garner, Belcher, Winfield and
Smith (1985), and Garner (1985) found that although older students can
verbalize the general purpose of a summary, there is a discrepancy in
awareness and production that does not disappear until the college
level.

In the selection process, older subjects and adults focus on
structurally important central ideas of the text, whereas younger
children tend to concern themselves with interesting, salient text
segments (Brown and Smiley, 1977; Pichert and Anderson, 1978).

Children tend to accomplish some reduction of text when asked to
summarize. This is usually done by young children through deletion of
material while older children start condensing text ideas of close

proximity through combinations, generalizations, and superordination of concepts (Brown and Day, 1983; Hahn and Goldman, 1983; Winograd, 1984).

Younger children tend to copy, resulting in verbatim or near verbatim sentences. The majority of older students and adults represent propositions of the text by paraphrasing (Brown and Day, 1983; Brown, Day, and Jones, 1983). Research also indicates that young children are reluctant to combine text segments within a paragraph while older children perform more combinations on more distant propositions (Garner and McCaleb, 1985).

Specifically, the literature on summarization as a strategy would suggest several things. It suggests: (1) that summarization is a higher level and later developing skill; (2) training of summarization rules suggests an increased sensitivity to textual ideas that improves general comprehension; (3) the more successful training studies recommend specific training in how to use the strategy, reasons for using the strategy, and procedures for monitoring one's independent use of the strategy (Brown, Campione, and Barclay, 1978; Day, 1980; Adams, Carnine, and Gersten, 1982).

In consideration of the information gleaned from the research, summarization seems a viable strategy to pursue when reading and studying expository text. Furthermore, it seems to be one which offers the reader an organizational framework for comprehending text.

BACCA and DIGC

In the present study, three factors may account for the

advantages of the BACCA and DIGC procedures. The first half of the strategy, BACCA, operationalizes the cognitive processes that readers must complete in order to understand and learn content area material. The second half of the procedure, DIGC, is based on van Dijk and Kintsch's (1983) textlinguistic model of comprehension. Third, the strategy is taught by a direct instruction model of learning.

Cook and Mayer (1983) describe the encoding processes that involve the learner in the manipulation of incoming information. The four general types of encoding processes are selection, acquisition, construction, and integration. When students employ the steps in BACCA they are actively processing and regulating their own learning. As students brainstorm ideas, they are processing and selecting information to remember. By checking for accuracy and arranging ideas following the author's hierarchical order, students are practicing acquisition. Acquisition refers to the process of transferring information from the printed page to active consciousness and long-term memory (Cook and Mayer, 1983). Construction refers to the building of "internal connections" among ideas so that information becomes reorganized into a coherent structure (Cook and Mayer, 1983). This is accomplished as the reader corrects, completes and adds information to already existing information reported from text.

Specific research studies would suggest that subjects taught the encoding processes of selection, acquisition, and construction are able to improve their prose recall and recognition (Brooks and Dansereau, 1983; Steenwyk and Bean, 1984).

Both BACCA and DIGC are practiced during writing which is an

integrative encoding process used as students build connections between their existing knowledge and schemata and the key ideas from the passage. Writing as an integrative process requires a necessary form to demonstrate understanding (Garner and McCaleb, 1985; Hare and Borchardt, 1984), and is a generative process for creating meaning (Hidi and Anderson, 1986).

The second half of the strategy, DIGC, is a rule-governed procedure and comes directly from van Dijk and Kintsch's (1983) textlinguistic model of comprehension. According to van Dijk and Kintsch's conception of discourse processing, macropropositions subsume microlevel propositions as a reader attempts to overcome the limits of short-term memory. Thus readers delete lower level idea units and selectively retain macrolevel units in long-term memory. By converting these processes to explicit rules and sequential steps, it becomes possible to provide students with a strategy for comprehension and summarization. The DIGC procedure leads students to delete trivial propositions and retain macrolevel ideas through a rule-governed approach.

The third advantage of the BACCA and DIGC procedures is the fact that both follow a direct instruction model of learning. Students are guided through each step with teacher modeling, whole group application, feedback, and finally independent use. Therefore, this instructional strategy, using the encoding processes delineated above, combined with a textlinguistic model of comprehension, and taught by a direct instruction model of learning provides an effective strategy for the reader to use to learn from text.

The Teacher as Instructional Participant

Since this is an instructional study, the role of the teacher is vital and requires close examination and explanation. This study places the teacher in the role of active teaching in designing an instructional model for this study.

Several problems may impede a student's reading ability. One problem may be an inability to apply rules and strategies. Here a teacher has the opportunity to direct the reading processes of the reader by modeling the cognitive activities so that the student will internalize them into his/her own repertoire of skills. This interactive process engages both the teacher and the student in seeing the task is completed. It comes about when the teacher relinquishes control to the student as he participates in those self-regulatory activities which signal internalization of cognitive activities necessary for comprehension. Schallert and Kleiman (1970) delineate four activities which good teachers use to aid comprehension: (1) they work from the child's level of understanding; (2) they focus the student's attention on the main points; (3) they initiate monitoring by the student; (4) they activate schemata by helping the student see how new information is related to the student's prior knowledge.

Roehler and Duffy (1984) refer to the teacher's role in explaining reading processes as "active teaching". Their five components include: (1) emphasizing skills which represent the comprehension processes; (2) developing students' metacognitive abilities by explanations of the purpose of the skills and how to use them; (3) the teacher is a proactive participant realizing the connection between the skill

and the mental processes required to read the text; (4) instruction is explicit; (5) the teacher's instructional role goes beyond verbal statements. Certainly the success of Brown and Palinscar (1982) would suggest that we can successfully teach cognitive skills for comprehending texts if we remember that it is a process requiring awareness, control and purpose. This study utilizes those components of active teaching in designing an instructional model.

Summary

The findings of this review of literature suggest the need for the development of a summarization strategy that students can apply to text having varying textual patterns and successfully comprehend the passage by extracting the important ideas from the text. The development of such a strategy and a determination as to whether or not it provides students with a strategic tool for comprehending text was the basic purpose of this study.

This study was initiated based on assertions from the literature that students in general do not possess knowledge of strategic learning strategies, and often are not aware of when and how to apply knowledge they do possess. Furthermore, the literature revealed that text is frequently written in complex patterns with varying degrees of difficulty making text comprehension more difficult for the reader.

Research has focused on summarization as a process that can facilitate learning as it helps readers to clarify the meaning and significance of discourse. Investigators have identified the cognitive operations in summarization and Kintsch and van Dijk (1978)

have proposed macrorules to describe how readers perform these cognitive operations. Given the textlinguistic model of Kintsch and van Dijk (1978) and the impact of summarization as a processing strategy, studies have used summarization tasks and have shown positive results on comprehension. However, a search of the literature shows that studies which have developed summarization as an instructional strategy are limited.

Finally, the literature does support a direct instruction model as a framework for instructional delivery. This model has been used successfully to teach cognitive skills for comprehending text. Given these positive findings the direct instruction model provides a framework for instruction.

In short, the literature suggests a need for strategic learning strategies to be taught within an effective framework of instruction. The literature shows there are few such studies and that students do not naturally possess these strategies. The indications are that providing training for readers in learning strategies may produce positive results.

CHAPTER 3

METHOD

Introduction

The purpose of this study was to investigate how instruction in a summarization strategy would affect the comprehension performance of a representative group of average readers when they read and were tested on expository material with four different text patterns, chronological, cause-effect, compare contrast, and naturally occurring text. Instruction involving a summarization strategy was provided during six class periods to a randomly assigned class of average readers. The treatment group consisted of eighteen students. Also, eighteen additional students who were identified as average readers were randomly assigned to a control group.

Immediate and delayed recall tasks for each pattern were used as measures of comprehension and scores were compared between the treatment and control groups. There were approximately twenty multiple choice test items on each test, which were representative of main idea and detail questions. Responses were analyzed to determine if the summarization strategy had any differential effects between groups for these kinds of questions across text patterns.

Sample

The sample was drawn from a ninth-grade high school population in a rural area in the Southeast. The total school population was approximately 730 students, with 218 of the total comprised of ninth-graders. The school serves a cross-section of families with

35

low, middle, and upper educational and socioeconomic levels.

Assignment to groups. A matching process was developed to reduce the potential for gender bias. Names of males and females whose scores on the California Achievement Test (CAT) fell between the 25th and 74th percentile were obtained. This range of readers were defined as average readers. Males were rank ordered from low to high on comprehension scores and females were ranked in the same manner. Names and scores were transferred to index cards allowing each student to have an individual card. Males were grouped according to identical scores. Females were grouped according to identical scores. For example, males with scores of 62 were grouped together and females with scores of 62 were grouped together. A male name and female name were drawn from each group, thus constituting a match.

Matching with identical groups of scores continued until the availability of either the male or female names was exhausted. Any remaining names of either sex were discarded and no longer considered part of the sample population. Males and females were matched on identical scores with no range allowed. Any extraneous scores without a comparable match from the opposite sex was discarded during the rank order process and disallowed as part of the sample population. For example, a female with a score of 25th percentile was automatically eliminated because there was no comparable male score. The closest score to the 25th percentile was a male with a score at the 27th percentile. This allowed a discrepancy of two points, therefore not fitting the prescribed criteria for matched pairs.

Finally, the matched pairs were rank ordered into two rows in

ascending order. An effort was made to keep the matched pairs in one row equivalent to the matched pairs in the other row. For example, a pair with a score of 42 was matched with a pair with the same score. However, this was not possible every time so the pairs were matched within a range of scores. The widest range of scores where a match was made did not excede 4 points. For example a pair with a score of 54 was matched with a pair with a score of 57. Beginning with the third pair in each row, every third pair was selected and assigned on an alternating basis to either a treatment group or a control group. Then a coin flip designated group one as treatment and group two as control. Twelve pairs were chosen for each group for a total of 24 students in each group. Each group was comprised of 12 males and 12 females.

During the study six subjects were lost from each group. This caused the pairs to become unbalanced. Additionally, the equal balance of males and females was lost with the treatment group. The male-female ratio within the control group continued to stay balanced. The treatment group was comprised of 10 females and 8 males. The control group remained balanced with 9 males and 9 females.

A t-test revealed that the groups were not significantly different from each other with regard to reading scores (see Table 1). Because of the attrition which took place, it became more accurate to refer to the subjects as randomly selected and assigned subjects.

Design

The design of this study was a two factor, multigroup, immediate

Table 1

Mean (M) Reading Levels And Associated Standard Deviations Of

Treatment Groups

	READING LEVELS	
TREATMENT[a]	MEANS	STANDARD DEVIATION
Summarization	52.50	12.74
Control	54.83	12.91

[a]N=18 for each group.

and delayed, post-test only experimental design. Two instructional strategies (summarization, and question answering) served as the two levels of the independent variable or factor. Subjects was trained to use either one or the other of two instructional strategies as the treatment conditions. Two different sets of post-test data were collected as dependent measures at two different times. The two dependent measures consisted of : (1) comprehension performance test scores on four different passages taken after the application of the instructional strategy, (2) passage summaries on four different passages that were written prior to taking each comprehension performance test, (3) a second set of comprehension performance test scores taken 12 days after the first set of scores, (4) a second set of passage summaries taken 12 days later and just prior to administering each comprehension test on the second set of passages.

Instructional Model

The first component of the direct instruction model used with this study is explanation which involves the teacher communicating to the students the purpose of the strategy and what they will be able to do by the end of instruction. The explanation gives focus and direction to the students by delineating the specific steps that will be elaborated (Hunter, 1985a).

The modeling component helps students to not only know about, but also to see examples of an acceptable finished product or process. Modeling is accompanied by verbally describing the critical elements and what is happening so students are focused on the essential factors in the process or product (Hunter, 1985a).

During the guided practice students' initial attempts are carefully shaped so they are accurate and successful. The teacher makes sure the instruction is understood before allowing the students to practice independently. The students perform all of the task so clarification or remediation can occur immediately as it is needed (Hunter, 1985a).

Once the students can perform without major errors, discomfort or confusion, they are ready to develop fluency by practicing without the teacher. This then, is the independent practice component of the direct instruction model.

During evaluation and feedback the teacher checks and observes student performances to make sure the skills necessary to achieve the instructional objectives are in place. Posing questions both orally and in written form to the students in order to focus their attention on the problem are ways of providing evaluation and feedback (Hunter, 1985b).

Instructional Procedures Treatment Group

Instruction in the use of the summarization strategy took six days. Instruction was given during one class period a day for six consecutive school days to the treatment group. A class period was approximately fifty-five minutes in length. This researcher served as the instructor for all of the lessons for each class involved in the study. All lessons were audiotaped. A direct instruction model comprised of the components of explanation, modeling, guided practice and feedback, independent practice with feedback and summary evaluation was used to develop the summarization strategy for this study.

The first step of the instructional model was explanation which takes place on day one. The instructor began by explaining to the students that the instructional strategy has two phases. Phase I is called BACCA. Each letter in the acronym BACCA has a specific meaning and purpose in the strategy. The instructor continued by explaining what each letter stands for in the strategy. The letter B is for brainstorming. The letter A is for accuracy and arrange. The first C is for complete and the second C stands for correct. The last letter A is for add.

In the second step of the instructional model the instructor modeled how to use each letter in BACCA. Using a selected text article for this component, the teacher demonstrated how to use each letter of BACCA, beginning with B for brainstorming, to generate notes for the summary. Modeling BACCA completed the activities for day one.

On day two the teacher began step 3 by explaining Phase II of the strategy which is called summary generation. This explanation included the introduction of the summary rules deletion, invention, generation, and combination, referred to from this point on as DIGC. The meaning and purpose of each word was given within the explanation. It was explained that the summary is generated from the notes that were taken using BACCA.

To complete the second day's activities in Phase II, the teacher used the notes produced from BACCA and modeled how to generate a summary. As the summary was written the teacher talked aloud telling the students how she was using DIGC to generate the summary as she

showed them how to do it. After the summary was written the teacher does a brief review to show how and where DIGC was used in the summary. This was step 4, the modeling component of the summary generation procedure, and completed the activities for day 2.

Guided practice began step 5. In this step the students used a selected article and practiced Phase I - BACCA in the same manner as they were shown by the instructor. Brainstorming was done individually by each student and then the instructor and class did ACCA together. The instructor used the ideas from brainstorming to initiate the discussion for the other letters. These notes were written on an overhead projector. This was the activity for day 3.

The guided practice was completed in step 6 and took place on day 4. In this step 6 the students did Phase II which is the summary generation from the BACCA notes and checked Phase II with DIGC. Again this step was performed by the students in the same manner that was demonstrated to them. As the students generated summaries from the notes, the instructor facilitated with feedback as she wrote the summary on an overhead. Following the writing the students check the summary with DIGC.

An independent practice took place on day 5 and was designated as step 7. In this step the students were given an article to read. Then they were instructed to use Phase I - BACCA to generate notes and Phase II summary generation to write a summary and check it with the DIGC rules. Summaries were collected at the end of the practice.

Feedback completed the instructional model. This was step 8 and took place on day 6. The summaries were returned and appropriate

comments were made on each paper concerning the main ideas, details and organization of the summary. The students were given an opportunity to ask questions and/or to clarify any comments on their summaries. The instructor facilitated this final step by asking questions of the students about the quality of their summaries (see Table 2).

Treatment

The instructional model for this study was comprised of explanation and modeling components performed by the instructor, guided practice with the whole class, feedback and instruction during the guided practice with the whole class and independent practice with feedback and summary evaluation with the class. The steps for the instructional approach were performed in the following manner:

Explanation and modeling by the instructor. The objective of the explanation component is to provide the students with an understanding of the strategy and then to focus on Phase I - BACCA by telling what each letter means as it relates to the strategy. The objective of the modeling procedure is to show the students a way of processing text for the purpose of improving comprehension performance by means of a summarization strategy. The instructor introduces an acronym referred to as BACCA. Each letter stands for a specific activity that the reader will perform on the text.

Step 1. The teacher introduces Phase I - BACCA as step 1 of the strategy and begins by explaining the purpose and focus of the strategy and then what each letter stands for. B is for brainstorming. The first A is for accuracy and arrange. The first C is for complete, while the second C stands for correct. The final A

Table 2

Outline Of The Instructional Procedures For The Summarization Group

Within The Framework Of A Direct Instruction Model

Instructional Model	Instructional Summarization
Explanation	Step 1 Day 1: Explains BACCA
Model	Step 2 Day 1: Models BACCA
Explanation	Step 3 Day 2: Explains DIGC
Model	Step 4 Day 2: Models Summary Generation/ check with DIGC
Guided Practice	Step 4 Day 3: Students do Phase I - BACCA
Guided Practice	Step 6 Day 4: Students do Phase II - Summary Generation and check Phase II with DIGC
Independent Practice	Step 7 Day 5: Students do independent practice
Feedback and Evaluation	Step 8 Day 6: Summary evaluation and feedback

is for add.

Step 2. The instructor shows the students how to use each letter in BACCA. This is accomplished by talk alouds and a restatement of what each letter means. The teacher instructs the students to read a selected article silently as she reads it. After it is read the article is turned over and put aside as the teacher begins the modeling with B for brainstorming by talk alouds.

T: "Brainstorming is simply trying to get everything you can remember down on paper as quickly as you can. You don't pay a lot of attention as to whether it is a main idea or detail at this point. You are more interested in getting everything down that you remember. For example, the first thing I remember is that the author tried to organize the story in a certain way. Then he gave theories, and then he gave some examples. So this is his organization. I remember this much, and I'm going to brainstorm within this framework."

As the teacher talks she writes down all that she can remember about the article. This will be displayed on the blackboard. There will be no concern at this point for main idea and details, only in getting as much as possible written down quickly.

The teacher will inform the students that the next letter A stands for accuracy and arrange. The instructor turns the article back over so that she may look at it and proceed to check or affirm that what was written during brainstorming is accurate, that is there are no false statements or information stated that is not found within the article. This is accomplished through talk alouds as the teacher goes through each sentence and affirms its validity from the article.

T: "The next letter is A, which stands for affirming the ideas.
My greatest source of information is the article itself. What I'm
doing now is checking what is in the article and making sure I didn't
write something from out in left field. Is that idea in there or did I
make it up? No, it's in there so I'm ok there. I haven't
misrepresented the article."

The next part of A is arrange. The instructor shows the class how
to check to see if those ideas written down during brainstorming match
the order in which they appear in the article. This is referred to as
the author's organization. This is accomplished by showing the student
how to move back and forth between what was written and what is stated
in the article. The teacher shows by demonstration how to put the
brainstorming ideas in line with the author's organization.

T: "Now let's look at the order of main ideas and details in this
article. This is the author's organization that I have referred to
already. I want my main ideas and supporting details to follow the
same order as the article. Notice that I talked about choking and
defined it at the beginning of my notes, and that is one of the first
statements that the author makes. After this are theories
about choking, and my notes have theories next in them. I want to line
these up in the same order as the author's organization and as I
continue to go through my ideas and those in the article I will
observe the order. If I find one out of order, then I want to move it
in my notes so that is aligns with the author's organization."

The third letter is C for complete. The teacher explains to the
class that the main ideas of the author are now in place, but that

these ideas need to be expanded by including details that may complete (enhance) the idea and make it more understandable.

T: "Now I need to complete my ideas. When I brainstormed I was only interested in getting things down as quickly as possible, and I didn't use a lot of long sentences, just words. Now I need to go back and fill in the blanks and complete some of these ideas."

The modeling of this letter is accomplished by talk alouds as the teacher moves back and forth between the text and the selected main ideas to complete these main ideas with further details from the text.

T: "It says that choking occurs when you are under pressure or competition and I already have that idea. What I'm going to add is that choking can occur anytime, because I don't have that idea."

T: "Breath control. I have enough there in my notes. That idea is pretty well complete."

T: "Smile. To complete that I'm going to add that if you smile you can't be nervous at the same time."

The teacher shows the students by illustrations from her notes how some ideas are complete within themselves and others need to be expanded with details. Sentences from her notes are displayed on the board.

The fourth letter is C, standing for correction. The teacher explains the meaning of the C and why it is important to verify the truth of the information. The teacher models this procedure by going back and forth between the text and her notes as a way of checking to see that the correct notes have been taken.

T: "The next step is to correct or verify. Did I say anything

wrong? I haven't checked to see if I've misrepresented something. One thing that I know I have to correct is image vision. That is not the correct term. That's not what the article calls it. I'll strike it out and change it to positive visualization. So I've made my correction and I'm going to move on."

Correction is accomplished by talk alouds. The above shows the process the teacher goes through to verify the truth of each statement.

The final letter in BACCA is A for add. The teacher explains A and what it stands for. Through modeling by example she demonstrates how some ideas may have been left out and at this point may add main ideas and the supporting details for those ideas to further complete the note taking process.

T: "My last step is add. Do I need to put in some things that I didn't have before? I know that right here was something I could not remember. It had to do with women in competition. There is a difference in the way men compete and women compete. So I'm going to my article and add this to my notes where that information was lacking."

Step 3. Step 3 is an explanation of Phase II summary generation, the written summary, and the rules of summarization, deletion, invention, generalization, combination. The instructor tells what each letter stands for and how it can be used to generate a summary. D is for deletion. I is for invention. G is for generalization. C is for combination.

Step 4. In the 4th step the instructor models by summary generation by moving from the notes on the text generated by BACCA to

writing a summary of the text from these notes. The modeling of the summary writing process begins by the teacher explaining to the students that the intent is to transfer into a written summary those notes taken during BACCA. This is accomplished by talk alouds by the teacher. She moves back and forth between notes and sentences explaining by talking aloud how she is forming those sentences from the notes by using DIGC. With the notes on the board the students will observe her take each note and transpose it into a sentence and at the same time follow and note the author's organization. The teacher will continually note the author's organization in her talk alouds.

T: (Writing and talking) "Choking is an attack of nerves, occurring when a person freezes up. That was in my notes. I've written down here (in my notes) under pressure or competition. How about if I add here, '... and usually happens when a person is under pressure'. This combines an idea that is in my notes. This comes right out of my notes. The only difference is that with these I've just jotted down ideas and now I'm transposing to complete sentences."

Continuing with step 4 the instructor takes each sentence that was generated in the summary and shows, while she is explaining, how each sentence was generated by a rule of summarization and in some sentences how more than one rule may be used to generate a sentence from the notes.

T" "Another thing I did was to invent some ideas. When you invent something you make it up, but you use the truth to make it up. When you combine, you might have two or three sentences that are

good ideas that can be said in another way in only one sentence. Look at the first sentence I wrote. There were some sentences in there that talked about choking and freezing up and I put them together. It's in the first paragraph that I combined those ideas. Let me see if I can point them out to you."

Step 5. The fifth step in the strategy begins the guided practice. The student is given an article to read. After the reading they are instructed to turn the article over and write down as much about the article as they can remember as the brainstorming part of BACCA. They are instructed to return to the article and complete the rest of BACCA as a class. At this point the instructor asks for volunteers to use their brainstorming ideas. These ideas are written on the board and shared with the class as a starting point for the remainder of BACCA.

T; "O.K. let's work through this together. Detection? How can you say it? Detection devise. Let's look at it a minute in terms of the organization. Is this the first thing that we all remember? In your notes is history one of the first things you have in your notes? You have done something that is very important. When you brainstormed how did you organize your ideas?

K:

T: "That's right! Did you not organize your notes very closely in line with the way the author organized that story?"

The instructor guides the class through the remaining activities with a series of questions which will focus their attention on

affirming what they have written, arranging their ideas according to
the author's organization, and completing, correcting and adding any
ideas that they feel are necessary to get their notes ready for
writing. The instructor continues to remind the students of the
author's organization and encourages them to notice how much in line
they are with their organization and the author's. This kind of
instruction is primarily given through question and answering,
feedback, and citing examples from the notes which are written on the
board.

T: "So within your brainstorming you have already culled out
those main ideas. Now the point I want to make is do you see that?
Are you aware, now that we have consciously pointed it out, that this
story has been organized in a certain way so that main ideas are
followed by details which support those main ideas?"

Step 6. The next step is the guided practice for the actual
summary writing using the notes that were generated as a class in the
guided practice using BACCA and which remain on the board as the
summary is generated. The instructor accomplishes this step by asking
for volunteers to generate sentences out loud and she writes them down
as they are given. The teacher uses question answering as a way to get
the students to respond and generate sentences. Additionally her
responses give feedback and encouragement as the students volunteer
their answers.

K:

T: (Writes first sentence on board) "OK that's a good opening
sentence. Keep in mind your organization. What do you want to say

next?"

K:

T: "That's a good sentence. To pre-Christian times? OK, next?"

K:

T: "All right, you're going to take this sentence out at least for the time being? You don't like it there?"

K:

T: "Now you want to talk about sounds? Tell me how you want to say it."

K:

T: "I know what you're trying to say. Make sense out of it. Combine those ideas for me. Give me a sentence."

T: "OK! See how you're making some decisions about what you write?"

At the end of the summary writing through sentence generation, and as a step 6 of the guided practice the instructor reads the summary sentence by sentence and asks that the students respond on a voluntary basis as to how each sentence is generated by one or more summarization rules.

T: "Tell me what you did in that sentence. Which one of these did you use to generate that sentence?"

K: "Generalized"

T: "Yes, and what? Good! Is it a good generalization?

T: "What have we done in that first sentence?"

K: "Combined and generalized"

T: "Yes, combined a couple of ideas. OK, did we cite examples of all those things?"

K: "No..,"

T: "What did we do?"

K: "Deleted"

Finally, to end this step the teacher reads the summary and asks the students to judge its strength as a well written summary and asks if there is any change necessary to finalize it. She notes those changes where needed.

Step 7. The seventh step of this strategy is an independent practice with feedback and evaluation. The students are given an article and are asked to generate a summary for the article using the BACCA method and Phase II for sentence generation for the summary.

The students read the article, turn it over and brainstorm, and return to the article to complete the remaining steps ACCA. Then each student returns the article to the teacher and writes a summary from his notes. This summary is collected and evaluated for main ideas, details and the author's organization.

Step 8. For step 8 these summaries are returned to the students with comments on each paper. Finally, a brief class discussion follows to allow the students an opportunity to question and receive additional feedback on their summaries.

Instructional Procedures Control Group

In order to create an objective study which was not biased in favor of the treatment group, the control group received instruction

which was developed through a direct instruction model. The same instructional model was used for the treatment group. This investigator served as instructor for the control group. All lessons were audiotaped. The control group was given instruction in how to generate questions from a reading selection in order to better recall its content. This instruction was called networking. The idea being that questions generate a network of ideas. The three articles used with the control group were the same as those used for the treatment group during their instruction periods.

Day one involved an explanation of the instruction the group would receive and modeling of the procedure by the instructor using the first training passage. The instruction was called networking as a convenience and as a way of differentiating it from the treatment's summarization strategy. The purpose of networking was to create a network of ideas through question answering.

Day two was a continuation of day one. The networking procedure was reviewed. The guided practice component involved students answering questions which had been generated on day one as the teacher modeled how to develop questions. Additionally, students were asked to answer prepared questions and discuss these in class (see Appendix B). A discussion followed during which time the students evaluated how question generation had helped them to answer other questions about the practice passage.

On day three the networking strategy was reviewed. The class was given a passage to read and then the class and the instructor worked through question generation using the networking procedure.

This was the guided practice component for day three.

The guided practice was completed on day four. The students answered orally, those questions which had been formulated through networking. After these questions, they were given prepared questions to answer silently and then orally (see Appendix B). After answering their questions each member of the control group was asked to write a summary of the passage. This became the independent practice component of the instructional model for the control group. After the students completed writing their summaries several were read aloud. Evaluation followed. During evaluation the students discussed how networking helped them answer questions and write summaries.

Days five and six repeated the steps followed on days three and four. On day five the control group read a third article, which was the same as the third article used with the treatment group. The networking procedure was reviewed and guided practice began. However, the instructor acted only as a facilitator for networking during this guided practice. On day six guided practice was concluded and the independent practice followed. The evaluation component was accomplished through group discussion which was the same as the evaluation procedure on day four. Table 3 provides an outline of the instructional procedures. The number of days involved in the study are shown along with the step(s) that were accomplished on that designated day.

Question Answering Strategy

The instruction given the control group followed a direct

Table 3

Outline Of The Instructional Procedures For The Control Group Within
The Framework Of A Direct Instructional Model

Instructional Model	Control Group	
Explanation	Day 1:	Explains networking with questions and answers
Model	Day 1:	Teacher models networking with wh-questions who, what, where, when, why, how
Guided Practice	Day 2:	Students answer prepared questions
Evaluation	Day 2:	Discuss how networking with questions and answers helps reader comprehension
Guided Practice	Day 3:	Class networks with questions and answers
Guided Practice	Day 4:	Students answer prepared questions
Independent Practice		Students write summaries
Evaluation		Discuss how networking with questions and answers helped to comprehend text

Days 5 and 6 repeat procedures for days 3 and 4

instruction model comprised of explanation and modeling components performed by the instructor. Guided practice was done with the whole group. Independent practice with feedback and evaluation followed the group's guided practice. The students in the control group were taught to generate questions in the following manner:

Explanation and modeling by the instructor. The objective of the explanation component was to provide students with an understanding for the purpose of generating questions. By generating questions a network of ideas is created. This networking helps the reader remember the content of the passage and process that information.

During the modeling component the teacher instructed the students in how to determine the major topics of the passage. This was accomplished by asking a reflexive question, "What are the main ideas discussed in this passage?" Once those subtopics were determined, wh - questions were generated for each subtopic. The questions may not necessarily be the same for each subtopic. For example, the first subtopic may generate a what, where and when question, while the second subtopic may have three what questions. The third subtopic may carry how, why and who questions. During the modeling component, the instructor provided a demonstration of question generation for the students using wh - stem questions.

Guided practice. Guided practice for the control group involved whole class practice of networking or question generation as it was modeled by the instructor, followed by question answering. Then the students were requested to answer orally the questions they

had generated by networking ideas. Following this they were asked to answer prepared questions silently and orally.

Independent practice. Independent practice for the control group required them to write a summary. During the summary writing the group used the questions they had generated, but they did not have the article itself for reference. The summaries were read aloud.

Evaluation. Evaluation involved a discussion that focused on how helpful question generation was as a means for writing summaries and answering prepared questions.

Reliability of Instruction

In order to provide a check as to the quality of instruction for the treatment groups and the control group, all lessons for both groups were audiotaped. A review of the tapes showed that the instruction for both groups followed the same instructional model and did not attempt to bias either group in favor of one treatment or another during the instructional period. The audiotapes also provided a means of checking the amount of time spent in instruction with each group. An analysis of the audiotapes provided support for the contention that time given to instruction was reasonably equivalent across treatments (see Table 4).

Assignment to Test Condition

To control for the order effect of testing over a period of time within each group, its members received different passages and tests at each testing time. That is, all four text passages were distributed and tested during each test session. At each testing

Table 4

Delineation Of Instructional Times For The Treatment And Control Groups

For Each Component Of The Direct Instruction Model

Model	Treatment Times (Min)	Control Times (Min)
Introduction	8	8
Explanation	24	15
Model	69	30
Guided Practice	56	89
Independent Practice	75	33
Evaluation and Feedback	20	31
Average Daily Instructional Time	42	35
Total Instructional Time	252	206

Note. (Min) = Minutes.

session approximately one-fourth of the group did a chronological

passage. Another one-fourth did compare contrast, while one-fourth did

cause-effect. The last one-fourth was assigned naturally occurring

text. At the next testing session the groups were rotated to a

different passage assignment and test from the one(s) they had

previously completed, and so on.

Training Materials

The training materials for both the treatment and control groups

consisted of three articles selected by this researcher. The three

articles chosen for the training were selected primarily because this

instructor felt they were about general topics of interest that would

be enjoyable for the learners. Additionally, the topics of these

articles were not related in any way to the topics of the articles

designated as testing articles. Furthermore, these articles were

chosen because they were not written with a predominant text pattern.

That is, each passage used signal words for chronology, cause-effect,

and compare contrast but none dominated the text as a major text

pattern.

"Why Athletes Choke" by Barry Tarshis from <u>Skills for Reading D</u>

was selected as the article to be used by the instructor in the

modeling component of BACCA. It contains approximately 500 words and

45 sentences, with a reading level of 7.0. It was used with the

control group on days one and two. "More Than Meets the Ear" from

<u>Skills for Reading E</u> was used in the guided practice component of

BACCA. The article has approximately 350 words and a readability

established at 7.5. There are 16 sentences. The control group used

this article on days three and four. "Strange Beliefs About Bats" by Annabel Dean from <u>Skills for Reading D</u> was used for the independent practice component of BACCA. There are approximately 600 words and 37 sentences in the passage, and it has a readability level of 7.5. The control group used this article on days five and six (see Appendix B).

The control group answered questions related to these articles. There were ten questions for each article which were developed by the instructor. The questions for each article are shown in Appendix B.

Development of Test Materials

When developing the materials several topics were considered by this researcher. The topic of women in history was decided on because it is believed that students are somewhat aware of women's role in history but not to any extensive degree. Therefore, prior knowledge would not mask any benefits derived from the strategy and measured on these kinds of passages. Also, the passages chosen lend themselves to the kind of text patterns this researcher was interested in studying. Finally, this researcher chose to use passages with a social studies content as representative of expository text.

<u>Passages</u> A review of several social studies text confirmed that literature about women's roles in history did not appear to be treated extensively in this type of text. The articles chosen for this study provided information about women in history and were found in different texts. The articles were "Beginnings of Equality for Women" from <u>Skills for Reading E</u>, 1983, "The Lowell Girls" from

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<u>Our American Heritage</u>, 1983, "Emmeline Pankhurst" from <u>World History: Patterns of Civilization</u>, 1983, "Harriet Tubman" from <u>Skills for Reading C</u>, 1984, "Deborah Sampson: Woman Soldier" from <u>Skills for Reading D</u>, 1984, "Linda Dare: An Honest Spy" from <u>Skills for Reading D</u>, 1984, "Paula Hart: Women on the Move" from <u>Skills for Reading D</u>, 1984, "Augusta Savage" from <u>Be a Better Reader G</u>, 1978.

"Beginnings of Equality for Women" was designated as the immediate chronological passage and was rewritten to reflect that text pattern (see Appendix C). This passage contained 16 chronological signal words (see Appendix D). There were no compare contrast or cause-effect signal words in the passage. The passage was approximately 500 words in length, with 35 sentences and a readability level of 7.0 using the Raygor readability formula.

"The Lowell Girls" was designated as the immediate compare contrast passage and was rewritten to reflect that text pattern (see Appendix C). This passage contained 15 signal words (see Appendix D). There were no chronological or cause-effect signal words. The passage was approximately 500 words in length, with 26 sentences and a readability level of 8.0 using the Raygor formula.

"Emmeline Pankhurst" was used as the immediate cause-effect passage and was rewritten to reflect that text pattern (see Appendix C). This passage contained 15 cause-effect signal words (see Appendix D). There were no chronological or compare contrast signal words. The passage was approximately 500 words in length, with 26 sentences and a readability level of 8.0 using the Raygor formula.

"Harriet Tubman" was chosen as the immediate naturally occurring

text passage and rewritten to reflect a mixed pattern (see Appendix C). The passage contained ten compare contrast signal words, nine chronological signal words, and six cause-effect signal words (see Appendix D). The passage had a length of 535 words with 35 sentences, and a readability of 8.0 using the Raygor formula.

"Linda Dare: An Honest Spy" was selected as the delayed chronological passage (see Appendix C). This passage contained 15 chronological signal words (see Appendix D). There were no compare contrast or cause-effect signal words in the passage. The passage contained 456 words, with 29 sentences and a readability level of 8.0 using the Raygor readability formula.

The delayed compare contrast passage was "Deborah Sampson: Woman Soldier" (see Appendix C). The passage contained 13 signal words (see Appendix D). There were no chronological or cause-effect signal words. The passage contained 449 words, with 27 sentences and a readability of 7.5 using the Raygor formula.

"Paula Hart: Women on the Move" was used as the delayed cause-effect passage and was rewritten to reflect that text pattern (see Appendix C). The passage contained 14 cause-effect signal words (see Appendix D). There were no chronological or compare contrast signal words. The passage contained 463 words, with 26 sentences and a readability level of 8.0 using the Raygor formula.

"Augusta Savage" became the delayed naturally occurring text passage and rewritten to reflect a mixed pattern (see Appendix C). The passage contained eight compare contrast signal words, six chronological signal words, and six cause-effect signal words (see

Appendix D). The passage had a length of 552 words, with 35 sentences, and a readability of 8.0 using the Raygor readability formula.

Test Instruments

Quantitative. The test items were developed using main ideas and details. In order to determine main ideas and details, this researcher and two other raters read each test passage and decided individually what statements were main ideas and details in each passage. The raters met and discussed each passage. Initial agreement on main ideas and details was at an 80% level for "Beginnings of Equality for Women". Agreement was at an 84% level for "The Lowell Girls" and at the 90% level for "Emmeline Pankhurst". Agreement for "Harriet Tubman" was 79%. "Linda Dare: An Honest Spy" was agreed upon at the 88% level, "Deborah Sampson: Woman Soldier" was at an 88% level, While "Paula Hart: Women on the Move" showed an 82% agreement level, and "August Savage" reached 85% rater agreement.

Based on rater agreement test items were developed for each passage to reflect an even distribution of main ideas and details (see Appendix E). Differences were resolved by discussion and concensus. Test items were revised and adjusted based on rater suggestions and findings from a pilot study using these materials.

Qualitative. In order to have a standard frame of reference for analyzing the written summaries, the following procedures were followed. First, each comprehension test used in comprehension performance was mapped out as a summary. That is, each test question was written as a summary statement and identified as a main idea or

detail (see Appendix F). Second, both raters who were involved in the summary analyses developed a written summary for each passage on their own. Then they compared and meshed their individual summaries to create one compiled summary for each passage. This became the prototype summary (see Appendix F).

Data Analysis Procedure

Quantitative. Analysis was conducted on comprehension test scores to determine if there existed a significant difference in the two treatments on the dependent measures in either the immediate or delayed measures. A two-way repeated measures analysis of variance (ANOVA) with one between subjects factor and one within subjects factor was used as the statistical measure for the study.

Qualitative. Using a mapped summary and a prototype summary for each passage, two raters used these instruments to analyze the participant's written summaries. The raters scored each summary according to main ideas, details, accuracy, and completeness of ideas. Accuracy was scored as to whether or not summary ideas were correct or faulty according to the article. Completeness referred to inclusion of main ideas in the article so there was continuity within the summary.

In order to control for rater bias, student names on all summaries were covered, and a number was assigned to each summary. Then they were mixed together and divided equally between the two raters. After scoring the first set of summaries on the criteria named above, the raters exchanged sets of summaries and rated the other set.

Following this, the raters compared their scores and settled any disagreement through discussion and a review of any summary in question. Rater scores were tallied.

Scoring of summaries for completeness. In order to provide information as to the completeness of the summaries with regard to the inclusion of main ideas, a rating system was developed and used by two raters. For scoring purposes it was established that a summary could have up to two main ideas left out and still be rated as complete and given a score of "2" by the raters. A summary with three or four main ideas missing was rated as a partial summary and given a "1" by the raters. Summaries with more than four missing main ideas were given a "0" by the raters. The score for completeness for each participant's summary was arrived at by individual scoring by the raters and concensus during discussion. Finally, the summaries were regrouped according to control group or treatment group. Rater scores were tallied.

Attitude Survey

Am attitude survey was administered at the end of the six days of instruction. The primary purpose of the survey was to determine how positively or negatively students viewed their instruction with regard to assisting them in writing summaries. Other concerns reflected in the survey questions were about transference of the strategy to other areas, and to what extent these students had been taught this strategy or a similar one prior to this instruction (see Appendix G).

CHAPTER 4

RESULTS

Introduction

This study examined the impact of instruction in a summarization strategy on the comprehension performance of average ninth grade readers when text patterns were varied. Students were taught a summarization strategy over a six day period of time and compared to a control group who used a more conventional question answering strategy.

To further determine the effects of the summarization strategy an analysis of each of four different types of comprehension measures reflecting varied text patterns was undertaken in both an immediate and delayed situation. A qualitative analysis of written summaries was used to determine to what extent the summarization strategy enhanced summary production as compared to a question answering strategy. Of specific interest was the production of main ideas, details, and faulty ideas. In addition the completeness of the summary was analyzed.

Finally, students were asked to respond to a questionnaire with questions that focused on the value students placed on the summarization strategy and question answering strategy with regard to usefulness in helping students write summaries. Questions also sought to determine to what extent students had received training with these strategies or the parts prior to this study.

Rationale for Two-Way ANOVA

The analysis. A two-way repeated measures analysis of

variance (ANOVA), with one between subjects factor (comprehension scores) with two levels (treatment and control) and one within subjects factor (time with two levels-immediate and delayed) was performed on each of the following variables: total comprehension scores, chronological, cause-effect, compare contrast, and naturally occurring text.

Dependent variable. The dependent variable for the analysis of this investigation was comprehension performance, measured by comprehension test questions. There were eight different comprehension tests, four for immediate recall, and four for delayed. Four text pattern classifications were equally represented across eight passages. That is, while the eight passages were different in content, the four types of patterns found in the immediate situation were repeated in the delayed situation. Of interest to this study was the effect a summarization strategy would have on comprehension performance of average readers, reading different text patterns measured by comprehension tests and administered at two different times.

Research Questions

The questions for this study were as follows:

1. Does instruction in a summarization strategy affect the comprehension performances of average readers?

2. After a delayed period of 12 days following instruction, will students' application of a summarization strategy affect the comprehension performances of average readers?

3. Does use of a summarization strategy on text material with

text patterns varied affect the comprehension performances of average readers?

4. After a delayed period of 12 days following instruction will students' application of a summarization strategy on text material with text patterns varied affect the comprehension performances of average readers?

5. Is there a difference in the quality of written summaries between the different treatment and control groups?

Questions 1 and 2. The first two research questions dealt with the issue of the general impact of the treatment condition over time. The comprehension performances of the treatment and control groups were analyzed with a two-way analysis of variance. An overall score for the treatment and control was generated on the immediate recall situation by combining the scores from the four comprehension measures reflecting tests for four different text patterns. A second total score was obtained in the same manner for the delayed recall situation.

Table 5 displays the descriptive statistics for overall comprehension performance. As can be seen, the treatment group which received instruction in summary writing, attained higher comprehension scores than the control group which answered questions, wrote summaries but received no instruction in summary writing. The difference was maintained over time. The analysis of variance procedures verify that the difference was statistically significant between the groups, $F(1,34) = 29.08$, $p < .0001$. The interaction was not significant, $F(1,34) = .96$, $p > .33$, indicating that there were no differential effects on the two groups over time.

Table 5

Mean And Standard Deviations For Total Comprehension Scores

Group[a]	Time 1		Time 2	
	Mean	S.D.	Mean	S.D.
Treatment	65.7	4.3	67.2	1.7
Control	60.9	4.8	60.8	3.8

Note. Time 1 = Immediate; Time 2 = Delayed.

[a]N=18 in each group.

While it was valuable to note that there was a significant difference between the treatment and control groups on total scores, it did not tell where those significant differences lay in regard to performance on specific types of textual material and measured over time by different comprehension tests for each of the text patterns. One of the expectations of this study was that the use of a summarization strategy would affect comprehension performances differently as a result of varied textual material. In order to determine where the differences in performances existed, a two-way analysis of variance for each comprehension measure was performed.

Questions 3 and 4. Questions 3 and 4 asked if the use of a summarization strategy affected performance when text patterns varied and the strategy was used over time.

For the chronological test the descriptive statistics in Table 6 show that the treatment group receiving summary instruction did not attain comprehension scores higher than the control group which had questions but no instruction in summary writing. The difference was maintained over time. The analysis of variance procedures verify that the difference was not statistically significant between the groups F (1,34) = 2.2, p > .1493. In addition the interaction was not significant, F (1,34) = 1.4, p > .2489, indicating that there were no differential effects on the groups over time.

For the cause-effect test Table 7 displays the descriptive statistics for comprehension performance. As can be seen, the treatment group which received instruction in summary writing attained higher comprehension scores than the control group which

Table 6

Mean And Standard Deviations For Chronological Comprehension Scores

Group[a]	Time 1		Time 2	
	Mean	S.D.	Mean	S.D.
Treatment	15.9	2.4	17.7	1.0
Control	16.0	2.3	16.4	1.9

Note. Time 1 = Immediate; Time 2 = Delayed.

[a]N=18 in each group.

Table 7

Mean And Standard Deviations For Cause-Effect Comprehension Scores

Group[a]	Time 1		Time 2	
	Mean	S.D.	Mean	S.D.
Treatment	17.6	1.3	16.4	0.7
Control	16.0	2.0	14.1	1.8

Note. Time 1 = Immediate; Time 2 = Delayed.

[a]N=18 in each group.

answered questions and wrote summaries but received no instruction in summary writing. The difference was maintained over time. The two-way ANOVA verified that the difference was statistically significant between the groups $F(1,34) = 19.45$, $p < .0001$. No significant difference was apparent for the interaction of treatment by time $F(1,34) = 1.44$, $p > .2385$.

On the compare contrast measure the descriptive statistics for comprehension performance are shown in Table 8. This shows that there was no difference for comprehension scores between the treatment group using summary writing and the control group using question answering but no instruction in summary writing. The analysis of variance verified that there was no evidence of a significant difference. No significant main effect existed for treatment $F(1,34) = 2.76$, $p > .1058$, and no interaction with time was apparent $F(1,34) = 3.3$, $p > .0778$.

For the naturally occurring text test Table 9 displays the descriptive statistics for comprehension performance. As can be seen, the treatment group which received instruction in summary writing attained higher comprehension scores than the control group which answered questions and wrote summaries, but received no instruction in summary writing. The difference was maintained over time. The two-way ANOVA verified that the difference was statistically significant between the groups $F(1,34) = 5.0$, $p < .0321$. In examining this interaction it can be seen that the treatment effect was diminished in the delayed condition, mean 16.6 to 15.5 respectively, while the control condition evidenced almost no change in the mean

Table 8

Mean (M) And Standard Deviations For Compare Contrast Comprehension
Scores

Group[a]	Time 1		Time 2	
	Mean	S.D.	Mean	S.D.
Treatment	15.6	2.2	18.1	0.3
Control	15.5	2.1	16.8	1.1

Note. Time 1 = Immediate; Time 2 = Delayed.

[a]N=18 in each group.

Table 9

Mean (M) And Standard Deviations For Naturally Occurring Text

Comprehension Scores

Group[a]	Time 1		Time 2	
	Mean	S.D.	Mean	S.D.
Treatment	16.6	1.7	15.0	1.2
Control	13.5	1.9	13.6	1.9

Note. Time 1 = Immediate; Time 2 = Delayed.

[a]N=18 in each group.

13.5 to 13.6 respectively. This interaction effect suggests the stability of the treatment for naturally occurring text is somewhat different than for other text patterns.

Qualitative Analysis of Summaries

Ideas. Fifty percent (50%) of the summaries were selected at random and scored by two raters. The summaries were read and scored on the basis of the number of main ideas (MI) and details (D) and accuracy of the ideas.

For the chronological passages the treatment and control had almost the same number of main ideas in the immediate time, but the treatment wrote 41% more main ideas than the control in the delayed situation. With details the treatment had 42% more details on the immediate chronological passage and 57% more on the delayed passage. With faulty or inaccurate ideas the control had two more incorrect ideas than the treatment in the immediate condition, but both shared the same number in the delayed condition (see Tables 10, 11).

In an analysis of the cause-effect passages the treatment provided 22% more main ideas, and 29% more details in the immediate passage. The treatment had 63% more main ideas and 20% more details in the delayed passage. With faulty statements the control wrote four more than the treatment in the immediate condition, but only one more incorrect idea than the treatment under the delayed condition (see Tables 10, 11).

On the compare contrast passage, the treatment group identified 52% more main ideas, and 32% more details in the immediate passage.

Table 10

Total Number Of Main Ideas, Details, And Faulty Ideas In Summaries From
Immediate Recall Measures

Pattern Type[a]	Main Ideas		Details		Faulty Ideas	
	T	C	T	C	T	C
CHRON	30	32	124	71	10	12
C-E	49	38	102	72	0	4
CC	54	28	130	89	0	15
NAT	57	53	117	73	1	4

Note. T = Treatment; C = Control; CHRON = Chronological; C-E = Cause-
Effect; CC = Compare Contrast; NAT = Naturally Occurring Text.

[a]N=9 in each pattern type.

Table 11

Total Number Of Main Ideas, Details And Faulty Ideas In Summaries
From Delayed Recall Measures

Pattern Type[a]	Main Ideas		Details		Faulty Ideas	
	T	C	T	C	T	C
CHRON	46	27	83	36	6	6
C-E	54	20	55	44	3	2
CC	47	20	73	74	4	9
NAT	36	25	140	88	3	2

Note. T = Treatment; C = Control; CHRON = Chronological; C-E = Cause-
      Effect; CC = Compare Contrast; NAT = Naturally Occurring Text.

[a]N=9 in each pattern type.

The treatment had 43% more main ideas in the delayed measure, while the groups remained equal on details for the delayed measure. With faulty ideas the control group wrote 15 incorrect statements in the immediate situation compared to nine for the treatment group. In the delayed condition the control group recorded nine incorrect ideas while the treatment reported four (see Tables 10, 11).

Study on the naturally occurring text passage showed the treatment and control to be almost equal on main ideas in the immediate measure, but the treatment included 38% more details in the immediate measure. For the delayed passage the treatment had 31% more main ideas and 38% more details. The control group wrote three more faulty ideas than the treatment in the immediate condition, but the control group wrote only one more faulty statement than the treatment in the delayed condition (see Tables 10,11).

Completeness. An analysis of the total summaries provided some information as to how completely the summaries were written with regard to main ideas. That is, a complete summary has those main ideas which complement one another by preserving a continuity within the summary. Summaries were not rated as complete when main ideas were left out which would have provided for one idea to flow into the next one within the summary.

A summary could have two main ideas left out and still be rated as complete and given a score of "2" by the raters. A summary with three or four main ideas missing was rated as a partial summary and given a "1" by the raters. Summaries with more than four missing main ideas were given a "0" by the raters. The score was arrived at

by individual scoring by the raters and concensus during discussion.

In the immediate measure with the chronological passage, the treatment wrote more completed summaries than the control and both shared the same number of partial summaries (see Table 12). This also occurred in the delayed measure where the treatment again wrote more complete summaries than the control. However, the treatment group had fewer partial summaries than the control group (see Table 13).

For the cause-effect passage in the immediate measure, the treatment wrote more completed summaries than the control group. However, they shared the same number of partial summaries (see Table 12). In the delayed measure the treatment group again wrote more completed summaries than the control group. In this measure the treatment wrote fewer partial summaries than the control group (see Table 13).

In the immediate measure with a compare contrast passage, the treatment wrote more completed summaries than the control. They wrote the same number of partial summaries (see Table 12). A review of the delayed measure shows the same pattern as described in the immediate measure. The treatment group wrote more completed summaries than the control group, but they had an equal number of partial summaries (see Table 13).

In the immediate measure with a naturally occurring text passage, the treatment recorded more completely written summaries than the control and fewer partially written summaries (see Table 12). The delayed measure showed more completed summaries credited to the treatment group than the control group. The treatment group had

Table 12

Number Of Complete And Incomplete Summaries Written For Different Text

Patterns During Immediate Recall Measures

Pattern Type[a]	2		1		0	
	T	C	T	C	T	C
CHRON	6	5	3	3	0	1
C-E	6	4	3	3	0	2
CC	7	6	2	2	0	1
NAT	7	4	2	4	0	1

Note. 2 = Complete; 1 = Partial; 0 = No Credit; T = Treatment; C =
Control; CHRON = Chronological; C-E = Cause-Effect; CC = Compare
Contrast; NAT = Naturally Occurring Text.

[a]N=9 in each pattern type.

Table 13

Number Of Complete And Incomplete Summaries Written For Different Text
Patterns During Delayed Recall Measures

Pattern Type[a]	2		1		0	
	T	C	T	C	T	C
CHRON	8	2	1	4	0	3
C-E	7	2	2	4	0	3
CC	6	4	3	3	0	1
NAT	6	4	3	2	0	2

Note. 2 = Complete; 1 = Partial; 0 = No Credit; T = Treatment; C =
       Control; CHRON = Chronological; C-E = Cause-Effect; CC = Compare
       Contrast; NAT = Naturally Occurring Text.

[a]N=9 in each pattern type.

more partial summaries than the control group, but the control recorded
two summaries with a zero rating (see Table 13).

Attitudes

A questionnaire was used following the last comprehension test in
the immediate recall situation (see Appendix G). The questionnaire
attempted to qualitatively assess how valuable each group felt their
instruction had been in enabling them to generate a summary from their
respective instruction. The control group, which used a question
answering strategy, had 94% of its participants to respond "very
helpful" and 6% "moderately helpful" to question number four (4). The
treatment group, using the summarization strategy, had 100% of its
participants to respond "very helpful" to question 4, (To what degree
did you find this strategy beneficial?). In response to question 2
(Which parts/practices helped you the most? Can you tell why?) There
was a 75% response from the treatment group that all of BACCA helped,
while 25% said "Brainstorming" was the most helpful. General responses
to why it helped were: "It helped me remember what I have read
better", or "It helps the summary make more sense". The control
group's response concerned the helpfulness of asking and answering
their questions (56%), dividing the article into subtopics
(31%), and writing everything down (25%). The general response to
"why" was because it helped them remember what they had read.

With regard to the newness of the strategy (question 1), 100% of
the treatment group saw BACCA and DIGC as a new strategy. The
control group responded that generating their own questions and

answering them was new (50%), and dividing the article into subtopics and writing questions was new (50%). On question 3, (In what subject areas do you think you might be able to apply this strategy?) members of both groups responded by naming several subject areas. The treatment named literature (100%), social studies (62%) and science and health (50%). The control group's response was literature (100%), social studies (87%), and science and health (37%). All respondents to question 5 (How do you feel about writing a summary using the strategy you have just learned?) perceived summarization as an "easy task", indicating a belief in the strength of their strategy to allow them to perform a writing task.

Both groups assessed their strategy positively. They saw it as being beneficial in remembering information, and enabling them to write summaries with ease. The strategy used by each group was seen as having applicability across subject areas. Finally, all or part of each strategy was thought to be a new idea, and not something they had experienced before this practice.

CHAPTER 5

Summary and Discussion

This study was initiated with clearly established assertions from the literature: 1) Students in general do not possess knowledge of strategic learning strategies; 2) often students are not aware of when and how to apply knowledge they do possess; 3) text is frequently written in complex patterns with varying degrees of difficulty making text comprehension more difficult for the reader; 4) students find it difficult to evaluate the text on several factors that are crucial for conceptual meaning from surface-level information; 5) strategic learning strategies are not often taught in the classroom; 6) studies using summarization tasks have shown positive results on comprehension; 7) studies which have developed summarization as an instructional strategy to enhance text comprehension are limited.

This study addressed the issues of how instruction in a summarization strategy affected 1) comprehension performance of average readers with text patterns varied; 2) effectiveness of the strategy over time; 3) ability to write summaries which reflect the article's major points with clarity and accuracy. Comprehension performance was measured by comprehension tests. These tests served as the dependent measures in the analysis of the treatment results as did the summaries produced by the participants.

Finally, a questionnaire, administered as an informal procedure, was used to assess how the treatment groups viewed the value of their

instruction and its applicability across subjects.

Forty-eight high school freshmen from a rural high school in the Southeast were invited to participate in the study. The final number of participants came to thirty-six. The data used in the analysis were collected in April and May of the school year. The thirty-six subjects were randomly assigned to one of the two treatments making two groups of eighteen students for each treatment.

Training for the control and treatment groups was developed and guided by the investigator using group instruction. Training and data collection occurred over a five week period. Data collection was performed in large group sessions with each individual present applying the appropriate strategy, and then completing the test measures. Reading level data for each group was collected and analyzed after group assignment to ascertain that the groups were comparable on reading ability before the onset of the instructional study.

Summary

Investigation of the questions of this study resulted in these findings; 1) significant differences did exist between the treatment and control groups with regard to total comprehension scores, that is, the participants who received instruction in summarization produced higher comprehension scores than their counterparts in the control group; 2) on the chronological passages no difference in performance existed between the treatment and control; 3) on the cause-effect passage, the two groups differed significantly on comprehension

performance and this difference was maintained over time. 4) on the compare contrast passages, no difference in performance existed; 5) for the naturally occurring text there was an advantage for the treatment group immediately following instruction but this effect dissipated by the delayed measure; 6) there was a difference in the quality of written summaries with regard to main ideas, and details, accuracy in reporting the content of the article, and completeness of the writings favoring the treatment group; 8) an attitude survey reflected positive opinions for both instructional strategies.

Discussion

Impact of summarization instruction. When compared to the control group using a question answering strategy, the treatment group with its summarization strategy scored significantly better than the control on both the immediate and delayed overall measures. This would suggest the summarization strategy was more effective in promoting comprehension than the control's question answering instruction. Moreover, the fact that the group maintained its comprehension performance levels suggests the students had internalized the process and thus were able to demonstrate it successfully over time. Since no interaction between treatment groups and time existed it can also be concluded that the training is stable over time, in this case at least 12 days.

One interpretation for these findings is that the summarization strategy as a process contributed to the reader's comprehension of text written with different patterns. Furthermore, the process had

been internalized by the reader to the extent that he/she was able to retrieve it at a later time and use it to again comprehend effectively, text with varied patterns. Findings supporting the strength of a summarization strategy can be found in the literature (cf McNeil and Donant, 1982; Cunningham, 1982).

While the scores remained relatively constant over time, suggesting the effectiveness of the instructional strategy, total scores analysis does not pinpoint where the treatments showed their greatest effectiveness when text patterns varied. Therefore, it was necessary to examine each independent test to make that judgment.

Influence of text patterns. Beginning with the chronological measure, no treatment effects were apparent. Given the overall influence of the strategy, an important question to ask is why there was no significant difference between the treatment and control with regard to comprehension scores. One explanation is related to an assumption of this study that some text patterns are more complex in structure than others, making it more difficult for the reader to extract meaning. This assumption finds support in the literature (Hiebert, Englert, Brennan, 1983). It is believed that a chronological text passage would be less difficult to process because of a familiarity for its organization and the more extensive experiences the reader has already experienced with this type of passage. Readers have had extensive experience with this chronological pattern while other more complex patterns are encountered later in a reader's experience. Therefore, an explanation for the control and treatment groups'

performance levels on this passage may be that a ceiling effect occurred in that they already had an organizational schema for this type of text and the power of the summarization strategy was not needed to help them process the information more effectively.

For the compare contrast measure there were no significant differences revealed for the treatment. The results on the compare contrast text are similar to the findings from the chronological tests in that there was no difference between the treatment and control on their comprehension performances.

It was believed that the summarization strategy would be a more effective strategy to process a compare contrast passage because of the difficulty associated with the text structure (Hiebert, Englert, Brennan, 1983). Additional literature however, contends that compare contrast text is not as difficult as other text types (Meyer and Freedle, (1980). Reasons for the contradictions may lie in the fact that different age students with differing abilities have been studied and the tasks have varied along with age and ability. These findings might lead one to consider that facilitative effects for text structures might vary for different types of tasks such as recognition and recall due to differential processing loads and cognitive demands in addition to the population studied.

In this study students' comprehension performance on a compare contrast passage was measured by a recognition task. The summarization strategy provided no more facilitative effects than did the question answering strategy for this kind of text and task. Therefore, it could be reasoned that neither strategy was strong enough to override the complexity associated with a compare contrast

passage on a recognition task (Hiebert, et al, 1983). However, the converse may also be true; both strategies were just as effective in processing the compare contrast passage on a recognition task when one takes into account the population studied.

This explanation receives further support from a review of the qualitative data. This analysis shows that the treatment group using the summarization strategy on a reproduction task did indeed out perform the control group who used a question answering strategy. This suggests that the strength of the strategy may indeed be related to the task. That is, on the reproduction task the question answering strategy which included writing summaries did not provide the same facilitative effects as did the summarization strategy.

A final explanation deals with the reliability of this test measure. The delayed compare contrast test measured the lowest in reliability and standard deviation, therefore, it may not have provided an accurate measure of performance for either group (see Appendix E).

Such low reliability may seriously affect any explanation as to whether or not differences did in fact occur as a result of applying the strategies or simply by chance alone. It is acknowledged that the low reliability of the delayed compare contrast measure limits any plausible interpretation that may be offered for these results. A refining of the instrument for measuring performance on the compare contrast passage and a replication of the study would help to clear up some of the ambiguity associated with the results of this part of the study.

A different picture emerged for comprehension on the cause-effect
pattern. The treatment group's performances were significantly better
than the control's on both the immediate and delayed measures. This
performance indicates that the summarization strategy provided the
treatment group with a strategy for processing cause-effect text that
was more effective than the control's strategy of question answering.
This is especially important when coupled with the research literature
which suggests cause-effect is a more complex text pattern to process
(Meyer and Freedle, 1980). It would seem then that the summarization
strategy helps accommodate a more demanding text pattern. This may be
accomplished by focusing attention on the text's cause-effect
relationships. In the following example, a portion of a student's
summary reflects similar cause-effect relationships that are found in
the cause-effect passage:

> Emmeline Pankhurst and Christabel and Sylvia, her two
> daughters, started the Women's Social and Political
> Union in 1903. They did this so that their efforts
> would present a united front. In 1905 the WSPU began
> to behave more violently because the police charged their
> demonstrations and tried to break them up with harsh
> actions. Emmeline and her daughters broke street windows,
> threw stones and painted sidewalks. Because of all of
> this they were sent to prison. They disobeyed the prison
> rules and were punished so much that as a result of the
> harsh treatment the lady prisoners refused to eat. Then

they were force fed.

The important point is that the reader/writer produced a summary that was similar to the text pattern of the reading passage. She reconstructed five of the critical cause-effect relationships which carried the meaning for this passage. The summarization strategy may have provided the reader with a sensitivity to, or focused attention on the text structure's cause-effect relationships by virtue of the way it requested information be processed. The strategy may have guided the reader in generating sentences congruent with the text structure and helped the reader comprehend textual ideas related to the text topic.

For the naturally occurring texts results indicated that the treatment was productive when measured immediately after instruction. However, the effect did not hold up over time as no significant difference existed between the two conditions in the delayed test.

This lack of stability may be attributed to the fact that the mixed pattern represented by naturally occurring text created only one text pattern, cause-effect, which was influenced by the strategy. Since the mixed pattern consists of all three patterns, then it follows that the impact may decrease over time. It is also possible that the strength of the treatment would make transfer possible for a short period of time on such tasks but fade after a longer period.

Finally, another important issue related to the findings for all of these text types must be noted. The dependent measures for the statistical analysis for this study were more compatible with the control group's instruction than they were with the treatment group.

That is, the control group focused more on answering questions which was the design of the dependent measure. While the summarization strategy was effective in promoting comprehension performance in relation to several text patterns, the control group appeared to do equally well with some of the text patterns. However, the focus of the control's training was similar to the dependent measure thus favoring the control's question answering strategy. The relationship between the dependent measure and the control's training may be one of the reasons the control group did as well on the dependent measures as the treatment.

Quality of summaries. On the chronological summaries the treatment group members wrote substantially more main ideas and details than the control group in both the immediate and delayed measures. They had slightly fewer inaccurate ideas and wrote more complete summaries than the control group in both the immediate and delayed times.

The results of the summary reviews for the chronological text passages were the same for the cause-effect, compare contrast and naturally ocurring text summaries. That is, the qualitative differences for the summaries were the same across all text types.

The results of this review of the summaries would suggest that there is an important difference in the quality of a written summary for the treatment as compared to the control group for both the number and accuracy of ideas, main ideas and details, as well as the completeness of the summary. These results were generally consistent over all patterns and times.

The nature of the summarization strategy provides the reader a way to write quality summaries. First, the summarization strategy has two phases. The steps in the first phase show the reader how to extract important ideas through brainstorming and then use the other steps to verify their importance and accuracy, complete partial ideas, and add information that was left out. Phase two stresses the rules of summary writing. By processing the information in phase one through phase two, the reader may actually instantiate the information in a more concise and complete organization.

Conversely, the question answering strategy used by the control group did not demonstrate how to write a summary in a logical and organized manner. While it did provide a way for readers to extract and process information, it did not include in that process a way to check for accuracy, or complete or add needed ideas. Thus they learned about summaries in a much more indirect manner. Direct instruction in a strategy that provides the reader a technique for processing information with greater accuracy and completeness appears to make a difference in the way a summary is written and the ideas contained within its context.

The instructional model for this study does more than tell the students what to do; it shows them what to do. Moreover, it produces evidence for the student to see, in the form of a quality summary. Thus, it gives students both a model to follow and feedback for the product.

Other findings. In addition to the quantitative and qualitative analyses of this study, a questionnaire was used to

assess the value of the instruction to the student. Interestingly, both groups responded that they had learned something new about reading strategies, processing and writing summaries, and they valued the instruction. Neither group felt the actual process of writing a summary was difficult after having been taught their respective strategy, although only the treatment group was actually taught a summarization strategy. While the control group had no direct or indirect instruction in summary writing, they did not feel that summary writing presented itself as a difficult task because the question answering strategy had enabled them to extract information from passages that could be appropriately used to write a summary.

The strength of the instructional impact on the control group helps validate the findings for the treatment group. That is the control participants demonstrated comparable behavior on several measures as well as reported positive feelings about their experience. Thus, the differences that were noted in favor of the summarization strategy are more likely to be educationally significant as well as statistically significant.

Implications

Instruction. This study has implications for instruction in summarization strategies. The findings from this study showed BACCA/ DIGC and question answering to be useful strategies. The acronyms BACCA and DIGC, used for the phases of the summarization strategy in this study, and the question answering strategy provided the readers with effective ways of processing information. The readers were able to locate important ideas in expository passages and extract this

information to use to write effective summaries. Furthermore, such a strategy appeared to enhance comprehension performance when the strategy was used in conjunction with test taking on different types of text patterns. From the findings of this study and other instructional studies (Day, 1980; Palinscar, 1985; Taylor, 1986) it is suggested that more explicit instruction in the classroom can provide students with strategies that they can use to process textual material and improve comprehension performance.

Research verifies that classroom time is not used for instruction in learning strategies (Durkin, 1978). However, this study shows that summary writing as a strategy can be taught through a direct instruction model. By following the steps in this model, teachers show students what to do by example, while offering practice and feedback to strengthen the modeling. Teachers should emphasize active strategies which contain elements that require students to process information during reading. If this instruction is not provided, students may not become independent learners because they lack the tools enabling them to process information in a logical and organized fashion.

Even though BACCA/DIGC, and question answering were found to be useful strategies, no matter how useful they appear, they will have no value unless students are receptive to instruction in their use. Students in this study in fact did like these strategies and were willing to use them even over time. Perhaps this was because they saw proof that the strategies provided them with a way to produce a quality summary. With students receptive to these strategies, they

can more readily be integrated into the instructional program, thus
increasing the opportunities for the students to learn from text
through utilization of either a summarization or question answering
strategy.

Lastly, the attitude survey revealed that students had not had
prior experience with most of the parts of these strategies, yet there
is existing literature supporting these components (Day, 1980;
Palinscar, 1985; Taylor, 1986). A closer look at the methods employed
to teach students how to learn is needed. Are teachers being trained
in these practical strategies so they, in turn, can teach students how
to use them? Are teachers encouraged to explain and model and practice
strategies with students? It is imperative that research findings be
shared with teachers and that teachers should be availed the
opportunity to learn these strategies so they can introduce them in
classroom instruction. Inservice workshops, and professional
conferences are just two ways which may provide teachers the
opportunity to network and share ideas. It would seem vital that this
instructional knowledge be available to teachers. Furthermore,
teachers need to understand the relationship between the reader, text,
and task and how as instructors they impact on this relationship
through instruction that will facilitate learning.

Research. This study strongly suggests the need to develop
instructional strategies that will provide readers with skills for
comprehending text. The results reached from this study suggest that
some strategies may prove to be more effective than others when used
with varying text patterns. One of the side effects of this study

was the effectiveness of a question answering procedure that was used with the control group. Research supports the value of a question answering strategy for improving text comprehension (Cohen, 1983; Anderson, 1978). Further research with these strategies is called for in order to better ascertain where they may be most effective and how each might be refined to become effective.

Another area of research that extends from this study involves the grade level of instruction for summarization strategies. The study used ninth grade average readers as subjects. However, the study was piloted with sixth graders who responded well to the instruction. How early can these processing strategies be taught, and to what extent? Is there a developmental sequence of strategy introduction that might make sense? Also, the study group was identified as average. To what extent can this strategy be used with students who comprehend poorly and who may have less strategic methods for comprehending text than average readers? So while the strategy detailed in this study was effective in varying degrees with ninth grade average readers, there is a large population of readers for which these generalizations and findings can not be applied. Only further research with different groups will answer how effective this strategy will be for others.

Also, while an audiotape was used during this entire study, some of the recorded dialogue was not clearly audible. During subsequent research involving classroom instruction this researcher will use a videotape in order to gather more precise information. This may prove insightful into the way instruction is delivered.

Finally, it has already been acknowledged that the instruments for measuring comprehension, which were developed for this study, were much lower in reliability than was desirable. Closer attention should be given to the development of these comprehension instruments before this study is replicated with other groups. Follow-up interviews with participants may also prove useful in determining how the strategy is being applied and what impact it has on the reader's processing.

Closing Statement

What started out years ago as an investigation into the research on metacognition, helped to formulate for me a belief that students can comprehend text more effectively if they are provided opportunities to learn strategies with which to process text through focused instruction on how and why to use strategies. I found myself reading research articles which proposed ways to get readers to process texts. It was through this search that I developed BACCA/DIGC. The steps used in each of these acronyms are not new; they are frequently cited in the literature. However, what makes BACCA and DIGC different is the fact that the parts have never, to my knowledge, been put together in this manner. And it is the research that frequently supported the parts that convinced me they would work as a whole package.

As a result of this study I intend to focus my professional efforts as a researcher in two directions. One is to continue to develop this study and attempt to answer some of the questions the study has generated concerning what grade level to begin such

instruction and which groups of students may benefit from the instruction other than those defined as "average". In addition to continue work with this study I would attempt to develop other stratgies that might be meaningful ways to promote learning through more proficient reading comprehension.

Finally, I am convinced that much useful information developed from sound research practices is not always available to teachers who are looking for ways to help their students comprehend and develop into independent learners. Therefore, it is my intention to take advantage of every opportunity to share these findings and others through professional dialogue with teachers. For it is through this professional dialogue with teachers that the merit of the ideas emanating from this research can be tested against the wisdom of their practice.

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Appendix A

GENERAL MATERIALS

Letter of Permission to Participate in Study

March, 1988

Dear Parents:

   Your son/daughter has been selected to participate in an
instructional study designed to improve comprehension performance
on reading materials.

   Instruction will involve approximately 14 days of classwork.
This study will be conducted on a rotating schedule so that your
son/daughter will not miss an extended period of time from any
one of his/her regular classes.

   In order to allow your son/daughter to participate, please
sign this letter on the line provided and return to Mrs. White
in the guidance office.

   If there are any questions concerning this project, please
contact me at 386-4272 after 6:00 P.M. Thank you for your
support.

                         Yours truly,

                         Sandy Karnes

   Student's Name

   Parent's Signature

Lesson Schedule

April 13 (Wed.)
1:00 - 2:00
2:00 - 3:00

April 14 (Thurs.)
1:00 - 2:00
2:00 - 3:00

April 15 (Fri.)
1:00 - 2:00
2:00 - 3:00

April 18 (Mon.)
8:30 - 9:30
9:30 - 10:30

April 19 (Tues.)
8:30 - 9:30
9:30 - 10:30

April 20 (Wed.)
8:30 - 9:30
9:30 - 10:30

April 21 (Thurs.)
8:30 - 9:30
9:30 - 10:30

April 22 (Fri.)
8:30 - 9:30
9:30 - 10:30

April 25 (Mon.)
1:00 - 1:20
2:00 - 2:20

April 26 (Tues.)
1:00 - 2:00
2:00 - 3:00

April 27 (Wed.)
1:00 - 1:20
2:00 - 2:20

April 28 (Thurs.)
1:00 - 2:00
2:00 - 3:00

May 11 (Wed.)
1:00 - 2:00
2:00 - 3:00

May 12 (Thurs.)
1:00 - 1:20
2:00 - 2:20

May 13 (Fri.)
1:00 - 2:00
2:00 - 3:00

May 16 (Mon.)
8:30 - 8:50
9:30 - 9:50

May 17 (Tues.)
8:30 - 9:30
9:30 - 10:30

May 18 (Wed.)
8:30 - 8:50
9:30 - 9:50

Letter for Permission to Copy Articles

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Dear Ms. Bartolotta:

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at Virginia Polytechnic Institute and State University, Blacksburg,
Va. The nature of the dissertation study has been the development
of an instructional strategy to promote text comprehension.

I am requesting permission from Scott Foresman and Company
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If permission for reproducing these articles cannot be
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Thank you for any help and support you may lend in this
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Sincerely,

Saundra P. Karnes

SPK/js

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        Scott Foresman and Company, 1984

Article: "Harriet Tubman: The Moses of Her People"
Author: Marcy Galen
Publisher: Ms Magazine
Copyright: 1973
Pages: 101-106

Text: Skills for Reading D
        Scott Foresman and Company, 1984

Article: "Women in the American Revolution"
Author: Thomas Fleming
Publisher: Ford Times and The Helen Brann Agency, Inc.
Copyright: 1974
Pages: 100-104

Article: "Breaking Through: Women on the Move"
Author: Linda K. Lanier
Publisher: US News & World Report, Inc.
Copyright: 1982
Pages: 219-220

Text: Skills for Reading E
        Scott Foresman and Company, 1983

Article: "The Beginnings of Equality for Women"
Author: Larry Cuban and Philip Roden
Publisher: Scott Foresman and Company
Copyright: 1975, 1971
Pages: 84-86

Letter for Permission to Copy Articles

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Englewood Cliffs
New Jersey 07632

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of an instructional strategy to promote text comprehension.

I am requesting permission from Prentice-Hall, Inc. to
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Thank you for any help and support you may lend in this
matter.

Sincerely,

Saundra P. Karnes

SPK/js

Text: <u>Be a Better Reader G</u>
        <u>Prentice-Hall, Inc.,</u> 1978

Article: "Augusta Savage - American Artist"
Author: Jo Ann Overberg
Pages: 46-48

Text: <u>World History</u>: <u>Patterns of Civilization</u>
        <u>Prentice-Hall, Inc., 1983</u>

Article: "Emmeline Pankhurst and Votes for Women"
Pages: 448

Appendix B

TRAINING MATERIALS

"Why Some Athletes 'Choke'"

That sudden, often paralyzing, attack of nerves that strikes when the pressure of competition heats up is popularly known as "choking". It affects, at times, even the coolest of competitors. But it's the rare athlete who understands what causes it - or, more important, what can be done to prevent it.

What's clear is this: choking, or "clutching," is the reaction of mind and body to pressure. The response is triggered, in part, by the hormone adrenalin. A hormone is a chemical substance that is discharged into the bloodstream on signals from the brain. Adrenalin's function is to arouse the body. It does this by activating a number of organs, chiefly the heart, whose increased activity is necessary to support unusual effort.

Adrenalin levels in your bloodstream are constantly changing: They're low when you're inactive and relaxed, higher when you're active or under pressure. Sometimes, though, more adrenalin gets pumped into your system than your system can comfortably use. That's when you usually experience symptoms commonly associated with choking: shortness of breath, dry mouth, pounding heart, and stiffness in your legs and arms. Often, the consequences are momentary; but sometimes, the effects last for several hours. And it doesn't happen only in sports. You choke during a chemistry test, a job interview, or behind the wheel of a car. You can even choke on a first date.

Why isn't everybody affected to the same degree by this problem? Why does pressure bring out the best in some people, the worst in

others? One school of thought insists that staying cool under pressure
is a part of your personality - and is the quality that separates the
champion from others.

Another school of thought links the effects of choking to the
level of skill or knowledge you bring into a pressure situation. The
idea is that the better trained you are, the less damaging will be the
effects of choking on your performance. You may get as nervous as your
oponent, but won't falter as much because you've got more margin for
error.

One of the most intriguing theories about choking is that your
ability to hold your nerves in check is mainly a matter of learning to
deal with the adrenalized state that pressure brings on. You don't
fight the edginess - rather, you absorb it. Drink it in, enjoy it.
Experience helps; maybe this is why women athletes, as a group, seem to
have more problems with choking than men. The situation is changing,
but the average young woman doesn't grow up playing competitive sports
with the same intensity as young men. "A lot of women simply aren't
used to the aggressive feelings that build up in competition," observes
Julie Anthony, a pro tennis player who is also a psychologist. "So
they internalize these feelings, and it tightens them up."

Some people deal with choking more effectively than others.
Tennis player Arthur Ashe, for instance, managed to shed the choker's
image that haunted him by learning how to relax between points.
"Nothing complicated," he explains. "It's mainly a matter of getting
my breath under control - and of not getting down on myself when I

make a really bad mistake."

Other athletes - tennis player Virginia Wade, for instance - report success with a technique known as "positive visualization." You imagine yourself in a pressure situation but doing everything right: hitting the right shot, saying all the right things to an interviewer. "Before I went on the court for the Wimbledon finals the year I won it," Virginia says, "I had established a fixed picture in my mind of my winning, and I wasn't nearly as nervous as I thought I'd be."

There are other ways of attacking the problem. Some athletes have worked with hypnotists to acquire the confidence they say they used to lack in pressure situations. And John Newcombe, once known as one of tennis's best pressure performers, used to rely on one of the simplest techniques imaginable. "Whenever I felt myself getting nervous," Newcombe says, "I'd smile. It's hard to be nervous and to smile at the same time."

From "Why Some Athletes 'Choke'" by Barry Tarshis from <u>Seventeen</u>, September 1980. Copyright 1980 by Triangle Communications Inc.

"More Than Meets The Ear"

Porpoises are remarkable creatures. Some time ago a man and woman found themselves adrift off Florida after their boat was disabled. Sharks collected and circled the boat. Then about two hundred porpoises came from nowhere, drove the sharks off, and stood guard until the couple's boat was pushed ashore by favorable winds.

A year ago in the Red Sea, a school of porpoises rescued a drowning man and carried him on their backs through a pack of sharks. They convoyed him to a beach and waited until he had crawled ashore. This striking behavior of the porpoise is nothing new to people of the sea. Records of rescues by porpoises go back to pre-Christian times, and poets born three thousand years ago wrote of the sailor's special affection for dolphins ("Porpoise" and "dolphin" are names used interchangeably). However, these brave and playful mammals are so remarkable that humans are just beginning to see all their talents.

Research has already uncovered many interesting things about the dolphin (the species referred to here has the Latin name Turisops truncatus). The brains of dolphins are twenty to forty percent larger and work sixteen times faster than human brains. But dolphins have shorter memories; they cannot remember nearly as much as humans.

Research has also shown that dolphins communicate with each other. Their speech relies mainly on variations in time and in intensity of sound. Dolphin "words" are a series of barks, mews, moans, walls, squeals, whistles, and clicks - many pitched above the range of human hearing.

In effect, the dolphin is a highly complex submarine with its own built-in sonar. By beaming sound waves outward and picking up the echoes, a dolphin can not only spot an object in its path but also identify the object and tell how far away it is. In addition to this echo-location ability, the dolphin also relies on sound waves to convey messages. If an injured dolphin gives a certain type of distress cry, others will come swiftly and help bring it to the surface where it can breathe.

"Strange Beliefs About Bats"

When most people think about bats, they think of black, sinister creatures that flit around graveyards at night. People seem to be afraid of bats and to regard them as something unnatural or evil. This fear has led to many strange beliefs about bats. They have been both the subjects and the victims of folklore, myth, and superstition from earliest times up to the present.

In ancient times, bats, or parts of bats, were thought to have magical powers. It was believed that people could see in the dark if they rubbed their faces with bat blood. It was also believed that a bat's head tied to a person's arm would keep him from sleeping.

Bats that were cooked, dried, and powdered were used in medicines to cure many kinds of diseases. Bats cooked in sesame oil would cure sciatica - a disease that affects the nerves in the legs. But if the bats were cooked in oil of jasmine, they could cure asthma. The body oil from bats was supposed to cure rheumatism. It was thought that bat blood could be smeared on the body to remove unwanted hair. Boiled bat's brains were supposed to be a cure for disease of the eye, and bat lung mixed with vinegar was considered a good cure for tumors. Of course if you didn't get all the right things to go into these medicines, or if they weren't mixed in just the right way, they could not cure people.

Bats have often been associated with the supernatural. Throughout history, the devil has often been pictured as a half-human creature with smooth leathery wings that look very much like the wings of a bat. Thus, a bat reminds many people of their image of the devil.

The Maya Indians of Central America had a bat god. According to their belief, this powerful deity ruled the Kingdom of Darkness. People who died had to make their way through his kingdom to the interior of the earth. The bat would bite off the heads of many of those who tried to pass through.

The Mayas' bat god was portrayed as a human figure with the wings of a bat. Archaeologists studying the ancient Mayan civilization have discovered a pit full of bat bones under the altar of this god. Evidently, the Mayas sacrificed bats to their bat god.

In Finland, some people still believe that, during sleep, the soul frees itself from the body and becomes a bat. This explains why bats appear only at night while most people are sleeping. According to this belief, if you should happen to be out walking at night and a bat flies near you, it is undoubtedly the soul of someone that you know.

There still exists a deep-rooted superstition among many people that bats love to entangle themselves in women's hair. In a certain part of France, it is believed that if a bat flies into a woman's hair, within a year she can expect a disastrous love affair or, even worse, death. (It is interesting to note that there has never been any proof that bats are at all interested in human hair.)

Not all people think of bats as something evil. Throughout Europe, a superstition about the bat bringing good luck survives to this day. Europeans may nail a dead bat over the door of a house, stable, or barn. This is supposed to bring good luck to the occupants of these dwellings.

In China and some other Eastern countries, the bat has long been considered a symbol of good fortune. Some Oriental people believe that the bat can bring happiness and long life. Chinese greeting cards often have a picture of a bat on them as a token of good wishes from the sender. The figure of a bat has been used in designs on jade and lacquerware and in paintings and prints.

Questions for Training Materials

"Why Some Athletes Choke"

1. What is choking?

2. What function does adrenalin have in the body?

3. What part does adrenalin play in causing someone to choke?

4. What are some theories about why some people handle choking better than others?

5. Which theory do you think relates the most to why people choke?

6. What did the author tell you about women who experience the feeling of choking in competition?

7. Why is this changing? (Refer to 6)

8. What are some ways superstars tell us they handle choking?

9. Have you ever experienced choking or freezing up? What did you do?

10. How can this high adrenalin state sometimes work for you instead of against you?

Questions for Training Materials

"More Than Meets the Ear"

1. What is another name for porpoises?

2. How do we know porpoises have been around for a long time?

3. What have dolphins done to earn them a place in recorded history?

4. What do we know about the physical characteristics of dolphins?

5. How do dolphins communicate with one another?

6. What sea animal might be the natural enemy of the dolphin?

7. Why does the author describe the dolphin as a "highly complex submarine with its own built in sonar"?

8. Where do dolphins live (which bodies of water)?

9. Why are researchers interested in studying dolphins?

10. Have you ever seen a dolphin? If so, what was most interesting about it?

Questions For Training Materials

"Strange Beliefs About Bats"

1. Why are some people afraid of bats?

2. What special attributes have been charged to bats through the ages?

3. How do you think these superstitions about bats have evolved?

4. What are some things we do even today that helps to perpetuate the superstitions we have about bats?

5. How do the Mayan Indians perceive bats?

6. How is the superstition about bats being our freed souls related to a popular movie?

7. What kind of proof do we have that shows that bats are capable of doing some of the things they supposedly do?

8. How do China and other Eastern countries perceive bats?

9. Why do you think that Asian view is so different from the western view of bats? How do you think their views were formed?

10. What are some of the superstitions you have heard about bats? What is the basis of those superstitions?

Appendix C

READING TEST PASSAGES

Reading Passages for Immediate and Delayed Recall

"Beginnings of Equality for Women"

During the early nineteenth century, a woman ceased to exist legally as a person on her wedding day. She was officially "dead in the law." After her wedding a woman was considered a part of her husband, not a person in her own right. Then all of her property and earnings belonged to her husband.

Once women were believed to be inferior to men both physically and mentally, and were not considered ladylike if they wanted to work outside the home.

Despite these ideas, millions of women did work long hours for low pay. Then the jobs available to them were mainly in factories, on farms or as teachers or maids.

In addition to the lack of legal rights and job opportunities, women were greatly restricted by the social customs of the nineteenth century. At one time divorced women were outcasts. Single women could not go out with men unless they had chaperones. Kissing before marriage, smoking, and drinking were done only in secret. Women were supposed to be "purer" than men, and their job was to inspire men to be morally better.

Beginning in the 1840s, a number of courageous women defied social custom, ridicule, and bodily injury and spoke out for women's rights and equality. Their first successes were in getting laws changed which had prevented women from owning property and controlling their own earnings. By 1850 most states had passed laws recognizing the right of married women to own property, and in the next half century

women in two-thirds of the states gained the right to control their own earnings.

Another success was gaining the right to vote. The story of how women gained the vote is one of long, tedious labor, not exciting drama. Before women were able to have this right millions of women signed petitions; thousands wrote articles and books, handed out phamplets, and campaigned door to door for votes. They worked for and against politicians, spoke at meetings, demonstrated, marched on state capitols, and picketed the White House. They were abused, ridiculed, stoned, jailed and beaten. Time after time, women won suffrage in state elections and then lost it through outright vote frauds.

Powerful groups opposed woman suffrage. The fiercest opponents to woman suffrage were those who feared their political power. Southern states did not want to give the vote to black woman; business interests, especially in the East, were afraid that women would support factory reform laws; and liquor interests were afraid that women would vote for prohibition.

Women's efforts to gain the vote finally resulted in an amendment to the Constitution. In 1920, the Nineteenth Amendment was ratified and women could vote.

The 1920s also saw changes in social customs. Eventually attitudes toward jobs changed somewhat, and women were freer to work outside the home if they wanted to. It became acceptable for unmarried women to go out with men without chaperones. Women's clothes became less confining, and women became active in sports.

The status of women improved greatly from the 1800s to the early

1900s. Since then the struggle has not ended. Women of today still

pursue the goal of social and legal equality.

"Emmeline Pankhurst"

In the mid 1800s, women in Britain began demanding the right to vote, Parliament extended voting rights to all adult men in 1885, but ignored the requests of women. Therefore, Emmeline Pankhurst, a strong-minded woman of the 1900s, decided it was time "to wake up England to the justice of women's suffrage."

Emmeline Pankhurst and her two daughters, Christabel and Sylvia, founded the Women's Social and Political Union (WSPU) in 1903 so that their efforts would present a united front. The WSPU urged Parliament to give women the right to vote. Since the government failed to act, the Pankhursts and their supporters took direct action. WSPU members distributed leaflets and organized marches so that their views could be made known. Women who demostrated for the right to vote were called suffragettes. The suffragettes' marches and demonstrations often drew large crowds which often would lead to mounted police charging the crowds of demonstrators in order to break them up. Consequently, their action prompted the WSPU to respond with more violent action. Thus, in 1905 the WSPU adopted more millitant methods of demonstrating for the vote. Women chained themselves to the visitors gallery in the House of Commons. They threw stones at cars of government officials, broke street lamps, and painted the slogan "Votes for Women" on sidewalks and walls. In 1908, Emmeline and Christabel Pankhurst were arrested and sent to prison as a result of distributing leaflets urging people to "Rush the House of Commons."

The Pankhursts continued their campaign from prison by refusing to

obey prison regulations. They were punished by solitary confinement.
This action in turn lead to hunger strikes by the women, thus causing
a risk of death by starvation. The hunger strikes by the women caused
the government to respond by ordering prison authorities to force-feed
the imprisoned suffragettes.

Many people were horrified by the forced feedings. Because
Parliament was afraid of making the hunger strikers into martyrs, it
passed the Prisoners Act of 1913. The law allowed hunger strikers to
be released from prison, but they could be rearrested at a later date
to complete their prison terms. That is, if a suffragette showed
extreme signs of starvation, she would be released. Once out of prison
she could regain her strength. But then, under this law, she could be
tracked down and put back into prison for her same crime. Suffragettes
who participated in prison hunger strikes were released and rearrested
several times.

In 1918 British women over 30 years of age were granted the right
to vote. Poor physical condition, caused by hunger strikes and prison
terms, lead to Mrs. Pankhurst's death in 1928. One week later Parliament
passed a bill finally giving all women over 21 years of age the right to
vote.

"Lowell Girls"

In 1800, nearly nine of every ten Americans were members of farm families. Although the remaining one in every ten included some skilled and unskilled workers, in the cities there was no large pool of labor from which the rising new industries could draw. Most often the workers were women and young children. Factory working conditions and living conditions were poor.

However, a group of wealthy factory investors wanted to make a different work place in the Lowell mills. Several of the investors had gone to England and had been shocked by the awful working and living conditions of the workers. Instead of creating a depressed wage-earning class in America, they hoped to create both a pleasant and productive working environment.

In place of hiring just any type of worker they hired mostly young, unmarried women from New England farm families. While employed, usually a year or two, the girls lived in company boarding houses. However, these houses were so well kept and supervised that parents were willing to allow their daughters to work and live in Lowell.

Boarding house rules were not slack. On the contrary rules were strict; no drinking or card playing, everyone in bed by ten o'clock and church attendance on Sundays.

The girls were not allowed idle time. Instead, the girls were encouraged to read books, to write letters and to listen to lectures to improve their minds. Of their weekly wages of 2.50 to 3.00, about half went for room and board, while the rest they saved, sent to their

families, or spent.

For a time, Lowell was a showplace for foreign visitors. One
visitor in 1842 was the famous English writer Charles Dickens. A
short time before, Dickens had written a novel dealing with the
desperate condition of the English working class. But after touring
the mills in Lowell during his American tour, he wrote that he saw
"no face that bore an unhappy and unhealthy look."

Yet other reports and events suggest that all was not what is
seemed in the New England mills. A visitor to another cotton mill of
the investors wrote: "The atmosphere is charged with cotton thread
and dust, which, we are told, are very injurious to the lungs."
While another visitor, writing about the Lowell girls and contrary
to the Dickens point of view, reported, "the real mass wear out their
health, spirit, and morals without becoming one bit better off than
when they started."

In 1834 a thousand or more girls walked out in protest against
a 15 percent wage cut. The strike, however, was broken and many of the
women went home. Instead of giving up, those who stayed continued to
fight back, forming a Factory Girls' Association in 1836 with a
membership of 2500. When they went out on strike they were evicted
from the company owned boarding houses and starved into defeat. But
the struggle inspired other women textile workers, whose strikes were
later successful.

The company boarding houses soon disappeared as it became
apparent that the experiment with the Lowell mills was not the pattern
American industry would follow.

"Harriet Tubman"

Harriet Tubman was born into slavery on a plantation in
Dorchester County Maryland, about 1821. She was a nurse maid
and domestic servant, and was later sent to work in the fields.
Unusually short but stronger than most men, she split rails,
carted heavy loads, and plowed. The hard labor prepared her for
the physical endurance that would be essential to her later work.

Before she reached adulthood, Harriet saw her own sisters
sold into even worse slavery further south. When she was a young
woman she enraged an overseer who struck Harriet in the head and
nearly killed her. After several months she recovered, but she
was subject to sudden attacks of deep sleep as a result of the
accident.

She married John Tubman, a freed slave. As a hired hand, she
attempted to save a portion of her small wages; but when it
became evident this would not work, her thoughts turned to escape.
In 1849, she finally resolved to escape with her brothers and
John.   -

John, however, was content in Maryland and did not want his
wife to leave him. Consequently, Harriet disappeared from the
plantation alone one night.

She went to a woman in a nearby town who put her in touch
with the underground railroad. Aided by this illegal organization,
she eventually crossed the line into free territory.

Her joy did not last, however, Tubman felt to be a "stranger in

a strange land". She worked as a cook to raise funds, and then started south again.

Harriet gradually helped her family and many others to escape from slavery. Tubman often struck on Saturday nights because pursuit by the law could not begin until Monday. Military discipline prevailed on her "train". A person of contradictions, she was gentle as well as tough.

Her success was partially due to her ability to disguise herself as a stooped old woman shuffling down a southern road singing hymns. For traveling however, she wore men's clothes in an era that was shocked at such behavior.

Tubman's reputation became known, thus she met the leading thinkers of the day and although she had never learned to read or write, she held her own.

In 1860, she was addressing meetings in defense of women's rights. However, she preferred action to talk.

When the Civil War broke out, Harriet joined the Union Army, leading raids that freed several hundred slaves. After the war she retired to Auburn, N.Y. She remained interested in the cause of blacks and women and encouraged women to "stand together" instead of being divided by the opposition. She died in poverty, but surrounded by friends.

"Deborah Sampson: Woman Soldier"

I have sent my only brother to camp with my prayers and blessing. I hope he will not disgrace me. I have not had any tea to drink since last Christmas; nor have I bought a new cap or gown since Lexington. As free I can die but once, but as a slave I shall not be worthy of life.

These were the feelings expressed by a Philadelphia woman late in 1775 in a letter to a British officer. These expressions of commitment to the revolution were not limited to only a few. On the contrary the feelings were typical. Most American women were as wholeheartedly devoted to the Revolutionary cause as their husbands, brothers, and sons. Instead of remaining passive, many of them actually participated in the struggle, often with dramatic results.

The most direct female participant was Deborah Sampson of Massachusetts. Of medium height, heavy-boned and rather horse-faced, she disguised herself as a man and in 1782 enlisted in the 11th Massachusetts Regiment as Robert Snow. This was not an easy task, yet she survived several near discoveries in the first weeks of drilling and training. Although she made the mistake of altering her oversized army uniform so that it fit as if it were tailor made, when questioned she had a quick response. In place of panicking and blowing her cover, she explained that there were no girls in the family. His mother trained him to sew because on the one hand she believed that all of her children should be able to sew. Although having male children made her position a little different for the times.

While stationed at West Point, Sampson participated in a number of savage skirmishes with Loyalist raiders and was wounded twice. However, both times she avoided the hospital and sought refuge in a private house until her wounds healed. After campaigning against the Indians in northern New York, she was transferred to Philadelphia, where she came down with a fever and was carried raving to the army hospital. Although the doctor in charge soon discovered her secret, he was a soft-hearted fellow, and agreed to conceal it. However, when the doctor's niece fell in love with Robert Snow, instead of continuing the charage the doctor decided it was time to tell the truth.

While Deborah's secret became known and her injuries were serious, this did not stop her from continuing to fight for the revolution.

After the war, Sampson married a Massachusetts farmer, had three children, and was awarded a pension as an invalid soldier. She then began to lecture and was a sensational success, delivering a set speech climaxed by an appearance in uniform.

"Linda Dare: An Honest Spy"

Perhaps the woman who made the most important contribution to the

American cause was Linda Dare, a Quaker who lived at 177 Second Street

in Philadelphia. Her hosue was opposite the headquarters of the British

Commander-in-Chief, Sir William Howe.

A space shortage in headquarters caused the British to take over

one large downstairs room in the Dare house as a council chamber. On

December 2, 1777, one of General Howe's aides told Dare to have her

family in bed by seven o'clock. After seven o'clock they wished to use

the council chamber that night free from interruption.

Linda Dare went to bed, along with her son and daughter and

husband. Later that night she awoke feeling troubled. Her older son

was serving as a lieutenant in Washington's army, which was shivering

and starving twenty miles from Philadelphia in a place called Valley

Forge. Finally, Dare tiptoed from her bedroom to the closet adjoining

the council room. Then she heard chilling words. The British were

ending their conference. On the night of December 4, they would attack

Washington's army. Before the meeting ended, the assembled colonels

and generals agreed that victory was certain.

On the morning of December 4, Linda Dare told her family she was

going into the county to buy flour from a mill about five miles

northeast of Philadelphia. The British guard at outposts along the

route let her pass without a challenge. Once she reached the mill,

which was outside British-held territory, Dare left her flour bag to

be filled and headed west toward the Rising Sun Tavern. To her joy,

she met the commander of the third Pennsylvania Regiment, Colonel

Thomas Craig, a family friend. He was in command of American

soldiers stationed near the tavern. Beginning with the British

meeting in her home, she poured out her story to Craig. After

hearing her story, he leaped on his horse and rode straight to General

Washington with it. Later, Dare returned to the mill, picked up her

twenty five pound bag of flour and trudged back to Philadelphia, a

tired but contented woman.

Two days later a very frustrated British officer called

Ms. Dare.

The British attack had ended badly. Washington obviously knew

they were coming and had prepared for the battle, eventually winning.

Had Dare's family gone to bet as they were told to do on the night

that the British high command met in the council room?

Then Linda Dare replied that they had gone to bed at seven.

The aide did not ask her if anyone had later gotten up. He

departed, finally convinced that the secret had leaked somewhere

else. Years later, Linda Dare, a very religious Quaker to the day

of her death, told her daughter it was "very consoling" that she

had managed to serve the American army without having to tell a lie

about it.

"Paula Hart: Women on the Move"

Paula Hart grew up in Rhode Island and prepared to be a
school teacher, because this was a traditionally feminine job.
But when she looked for work in 1953, beginning teachers were
earning $2400 a year. For this reason she joined the Naval
Reserve, which offered $4200.

This led to a military career that eventually saw her
vault to the rank of rear admiral - the second woman to achieve
such statue. Her present job is commander of the naval training
center in Orlando, Florida, therefore showing the Navy's regard
for her hard work.

As a result of her work, Hart became the first woman naval
officer to attend the National War College for advanced military
studies. Consequently, her achievements have led to her appointment
as secretary of the Joint Chiefs of Staff. On loan from the Navy,
she helped set up the civilian - personnel office for President
Lyndon Johnson's war-on-poverty program. As a young officer, she
handled policy decisions involving the Navy's under-graduate-
education and foreign-language programs.

Looking back, Hart recalls that when she joined the Navy the
highest rank women could achieve was commander. If you got that far
then that was an achievement, since you only had a one percent chance
of that. Since 1981, women have been allowed to compete for any rank,
and their duties have become more varied. "I envy the young women who
have the opportunity to go to sea," she says. "I wish I'd been born

later because I would have loved to have gone to sea."

Hart wears her uniform almost everywhere, but she remains
a species many men cannot identify. In an airport once, an elderly
man noticed her gold braid, shook his head, and marveled, "you must
be a stewardess on the really big ones". Waitresses still often call
her "Hon", and she grits her teeth when male civilians greet her at
social gatherings by kissing her on the cheek and cooing, "that's
the first time I've ever kissed an admiral".

The admiral says that women are still content to be mediocre,
consequently she worries about the Navy's new recruits. In her own
trip to the top, she says "everywhere you went, you had to keep
reinventing the wheel, thus reproving that you were indeed capable.
If somebody else went home at four, then you had to stay until six".
On her desk is the plaque that reads, "Women have to be twice as good".

Hart, who says she had had "a grand time" in the Navy, recalls
the sacrifices which led to theater performances never attended, and
dinners called off. But she insists, "It's paid off. I'm 'Good Old
Dependable' - and that's not a bad reputation to have".

"Augusta Savage"

Augusta Savage was a black American who devoted her entire life
to sculpture. As a child she molded ducks and chickens out of clay
and sold them at a county fair. As a young woman she partly supported
herself by doing portraits in clay of prominent black leaders. And in
later years, when her sculpture finally brought her national recognition,
she continued to create works of grace and vitality.

Despite Augusta Savage's great ability as a sculpture however,
she found it necessary to take other jobs in order to support herself,
she worked in laundries, she did clerical work, and she took in ironing.
On the one hand these jobs were frustrating and degrading, yet they
were the economic means of her survival as an artist.

But there were bright moments, too. Occasionally, she got
commissions for her sculpture. She also won a Julius Rosenwald
scholarship to study in Europe. The award was made as a result of a
statue she created called Gamin. It was modeled from the head of a
young Harlem boy. Gamin was seen by some influential individuals who
consequently convinced the head of the scholarship fund that Augusta
Savage should receive the price. An art expert who represented the
fund saw the statue and agreed.

Augusta Savage gained further experience and won more awards while
studying portrait sculpture in Paris. She won a grant from the Carnegie
Foundation to continue her studies abroad. She won citations from her
work in Paris. At the same time she was given the opportunity to study
the work of a number of European artists. When she returned to the

United States, she became the first black woman to be elected to the National Association of Women Painters and Sculptors.

But Augusta Savage did more than just receive awards. One of her most significant contributions was in the field of teaching. As a result of a grant from the Carnegie Foundation she opened a studio in Harlem for young black artists. It soon became a mecca of creative activity. She took in talented youngsters and gave them warmth, enthusiasm, and most of all superior instruction. Therefore, providing for several black artists their first opportunity in the art world.

Augusta Savage's last major work was commissioned for the 1939-40 New York World's Fair. Based on a song, "Lift Every Voice", she modeled a vast harp, 16 feet tall. The strings tapered down from figures of singing children while the base was formed by a mammoth forearm and hand with the fingers curving gently upward to complete the support.

The fact that the World's Fair did not provide money for casting statues in bronze led to sad consequences for Augusta. Her work was cast in plaster and finished in a semblance of black basalt. Thousands of pictures of Augusta's sculpture were spread throughout the world by the fair's publicity office, but only the pictures of her statue remain. Because she had no money for storing the work or casting it in metal, the statue was destroyed by bulldozers at the end of the fair.

In 1962 Augusta Savage died. Five years later, the City University of New York held a show of the work of black artists. The largest show of its type ever held, it attracted more than 250,000 people. Of the

250 artistic work on display however, there was one that seemed to
draw the most attention and praise. It was the head of a young
black boy, and its title was Gamin.

Appendix D

SIGNAL WORDS

"Signal Words"

Chronological	Cause-Effect	Compare Contrast
first	because	however
next	since	on the contrary
then	consequently	on the one hand
later	therefore	on the other hand
finally	thus	but
before	so that	although
after	for this reason	instead
until	as a result	yet
ago	lead to	while
since then	if - then	in place of
once		
eventually		
beginning		

Appendix E

TESTS

Comprehension Test: Dependent Measure

"The Beginnings of Equality for Women"

1. Marriage marked the end of a woman's   a. freedom   b. career
   c. legal rights

2. Woman working outside the home had   a. more opportunities
   b. poor working conditions   c. social status

3. Because both actions and behaviors were restricted and severely
   criticized women were   a. socially oppressed   b. closely
   watched   c. isolated

4. In the 1840's in support of women's rights women chose to
   exercise their   a. freedom of speech   b. equality
   c. rights under the law

5. During the 1800's through long and tiring work women
   a. gained the right to vote   b. became economically
   successful   c. became politically powerful

6. Powerful groups opposed women's   a. intelligence b. suffrage
   c. speeches

7. In 1920 the_____amendment gave women the right to vote
   a. 14th   b. 21st   c. 19th

8. The 1920's saw a change in a. social customs b. career
   opportunities   c. wages and salaries

9. Today women are still engaged in the struggle for   a. free
   legal representation b. social and legal equality c. voting
   rights

10. _____decreed that marriage was the only acceptable
    lifestyle for women. a. social customs b. laws c. men

11. Job opportunities were mainly in   a. factories and farms
    b. offices and stores   c. cafes and restaurants

12. At marriage, property and earnings of a woman belonged to
    a. the state   b. her husband c. her children

13. To deviate from accepted social customs marked women as
    a. outcasts   b. troublemakers   c. adventurists

14. Social oppression was directly connected to a. moral standards
    b. community beliefs   c. a woman's wealth

15. Women worked in the a. churches   b. schools   c. political
    arena   in order to gain votes.

16. Business opposed suffrage because_____a. factory reform
    b. better working hours   c. more money and insurance benefits
    would be demanded.

17. Liquor interests were afraid women would vote for a. l
    prohibition   b. blue laws   c. liquor by the drink

18. Special interest groups opposed suffrage because it was a threat
    to their   a. jobs and money   b. property   c. power structure

19. One of the major accomplishments of the women's movement was the
    granting of the right to a. own property   b. wear pants
    c. smoke in public

20. The right to vote gave women a. social freedom b. a political
    voice   c. a and b

21. Women were considered physically and mentally   a. superior
    b. inferior   c. equal   to men.

22. Because of their commitment to suffrage women were a. ridiculed
    b. thought to be "odd"   c. praised

23. Women did not engage in kissing before marriage, smoking or
    drinking because they were thought to be a. purer than men
    b. morally stronger than men   c. a and b

"Emmeline Pankhurst"

1. In the mid 1800's women in Britain began demanding   a.
    representation in congress   b. equal pay c. the right to vote.

2. Emmeline Pankhurst and her two daughters founded the a. YWCA
    B. WSPU   C. NCAA

3. The purpose of the women's union was to   a. present a united
    front   b. help poor women   c. collect money for women
    for the cause of women.

4. Women who demonstrated for women's causes were called   a.
    prohibitionists   b. abolitionists   c. suffragettes.

5. One reason women wanted to vote was so they could a. have a
    voice in actions that affected them   b. show they could get
    their way   c. have something to fill their time since they had
    nothing else to do.

6. Often the actions of the women's organization became very   a.
    peaceful   b. violent   c. informative

7. When suffragettes had meetings often these were broken up by
    a. rowdy men b. the police   c. Parliament

8. Emmeline and ehr daughters were frequently   a. thrown in jail
    b. invited to speak in Parliament   c. given money for their
    work.

9. Some of the peaceful activities of the women's movement included
    a. writing letters and organizing marches   b. doing charity
    work c. working in schools.

10. The suffragettes went on a. trips   b. hugner strikes c. t.v.
    when placed in solitary confinement.

11. The government had to avoid too much publicity because their
    actions were gaining the attention of a. Parliament b. more
    women   c. the general public   who were horrified at the
    treatment women were receiving.

12. When women refused to eat while in prison they were a. released
    and sent home b. forced-fed by prison officials   c. left to
    starve.

13. The Prisoners Act of 1913 was a clever was for the government
    a. to help the suffragettes   b. keep the suffragettes out of

prison   c. avoid the anger of the general public for mistreatment of the women.

14. WSPU members distributed leaflets and organized marches so that a. they could get attention b. people would come to their rallies   c. their views could be known.

15. Rights of women were ignored because a. they were not considered able to make decisions   b. they did not have money   c. they were too busy with housework to have time to vote.

16. In 1918 women were granted the right to vote who were   a. over 25 b. over 30   c. over 18.

17. In 1928 British women were allowed to vote if they were a. 18 b. 21   c. 24.

18. Poor physical condition which contributed to Emmeline Pankhurst's death were   a. hereditary   b. self induced   c. caused in part by the years of poor treatment and abuse.

19. The struggle for a woman's right to vote in Britain covered a. a quarter of a century   b. less than 10 years   c. over 50 years.

20. Emmeline Pankhurst campaigned for women's rights because she believed women deserved   a. better jobs b. their freedom c. justice and equality.

"Lowell Girls"

1. In the 1800's factories had   a. a lack of workers b. plenty of workers   c. union problems

2. A group of wealthy inventors wanted to create a different kind of   a. product   b. working place   c. assembly line

3. These investors hired a. mostly men b. immigrants c. unmarried women   to work in their mills.

4. The mill was visited by foreign visitors because it was a a. model   b. poor   c. huge   work place.

5. Some people thought the system was   a. imperfect b. perfect c. doomed from the start   because of cotton dust and other things.

6. The girls lived   a. in supervised boarding houses   b. at the church   c. with individual families

7. Eventually the girls thought the system was a. hard to bear b. the best place to work   c. not modern enough in its operation

8. In 1834 1000 Lowell girls decided to   a. go on strike b. work twice as hard for more money   c. take a 15% wage cut   in order to keep their jobs.

9. The company boarding house concept   a. disappeared b. caught on and stayed in society c. still is practiced in North Carolina

10. Nine of every 10 Americans in the 1800's were   a. farmers b. hungry   c. immigrants

11. Factory and working conditions were   a. better than southern mills b. poor c. gradually improving

12. Wealthy investors wanted to create mills with a. high tech machinery   b. a pleasant and rpoductive environment c. well paid workers

13. If the employees chose to live in the boarding houses they a. could only go home on holidays   b. had to follow rules of behavior c. were usually watched by a relative

14. They were encouraged to read and listen to lectures as ways of

improving themselves a. intellectually   b. socially
c. morally

15. There were some visitors who were not as excited about the mills
    as others. They saw things that might be considered   a. fire
    hazzards   b. health hazzards   c. immoral

16. One purpose of the Factory Girls' Association was to a. have a
    group to meet for social gatherings   b. protest salary cuts by
    the mill c. form a news network

17. When the girls walked off the job in protest they became
    a. strikers   b. celebrities   c. respected

18. The strikers were defeated by such methods as a. starvation and
    eviction b. physical abuse   c. name calling and threats on
    their lives

19. The struggle of the Lowell girls caused others to a. stay in
    line and not cause trouble b. go somewhere else for work
    c. work to improve mill conditions

20. Company boarding houses have a. gained wide acceptance on mill
    sites   b. disappeared from the American scene c. gotten too .
    expensive to operate

"Harriet Tubman"

1. Harriet Tubman was born into slavery in: a. North Carolina
    b. Georgia   c. Maryland in 1821.

2. As a slave in her early life she learned physical endurance
    by: a. hard labor b. watching others   c. helping others.

3. As a young woman she interferred with an overseer and was:
    a. beaten severely b. struck in the head causing permanent
    damage c. shot.

4. Harriet was an untiring worker for: a. freedom of the press
    b. the right to vote c. human rights.

5. Harriet's crusade to help others would have begun sooner were
    it not for: a. her marriage to John Tubman b. her attacks
    of sickness c. her work schedule.

6. Determined to free herself from slavery: a. Harriet earned
    enough money to buy her freedom b. she escaped to the North
    c. she prayed quietly for freedom.

7. Harriet escaped to the North via: a. the Underground Railroad
    b. train c. multiple disguises.

8. The "stationmasters" and "conductors" were: a. freed slaves
    b. Quaker c. a and b.

9. When Harriet recrossed the line back into Maryland she became:
    a. a hero b. a hunted person c. a slave again.

10. Tubman's treatment of slaves she led to freedom could be
    described as: a. kind and gentle b. very harsh, depending
    on the circumstances c. kind or harsh, depending on the
    situation.

11. Tubman often disguised herself as: a. a stooped old woman
    singing hymns b. a nurse in the Confederate Army c. a
    plantation overseer.

12. Tubman's determination is most clearly illustrated by: a. hers
    support for schools for blacks b. leaving her family to go along
    to freedom c. working for the freedom of women.

13. When the Civil War broke out, Harriet was: a. denied the right
    to fight for freedom in an official capacity b. joined the
    Confederate Army c. commissioned as a field commander for the
    Unior forces.

14. Harriet Tubman was never comfortable as a public speaker
    because: a. she never knew what to say b. she preferred
    action to words c. she never learned to read and write.

15. After the war Harriet retired to Auburn, N.Y.: a. to raise
    her grandchildren b. to open a hotel for blacks c. and
    continued to support those who worked for human rights.

16. The reason for Tubman's success could best be described as:
    a. her great abilities as a speaker b. her personal wealth
    which supported the Underground Railroad c. her strong faith
    in the cause she was serving.

17. Tubman's character could be described as: a. joyful, undemanding,
    sympathetic b. rebellious, strong, determined c. happy,
    carefree, loving.

18. An appropriate title for this article might be: a. the
    accomplishments of Harriet Tubman b. Harriet Tubman's Life
    as a Slave c. Harriet Tubman: Fighter for Women's Rights.

19. Harriet was called "Moses" by her people because she: a.
    lived a long time like Moses b. sometimes disguised herself
    as an old man c. led her people out of bondage.

"Linda Dare: An Honest Spy"

1. Referred to in the story as the American "cause", the "cause"
    was: a. opposition to British troops   b. a fight for
    liberty c. objection to British tea and other imports.

2. One woman who did much for the American cause was: a. Betsy Ross
    b. Abigail Adams   c. Linda Dare.

3. This story took place close to: a. Gettysburg   b. Valley Forge
    c. Mount Vernon.

4. Dare's house was located: a. opposite British headquarters
    b. next to the British headquarters   c. one block from
    Independence Hall.

5. Dare's hosue became important because: a. the British used it
    for sleeping quarters   b. the Americans used it to spy on the
    British   c. the British used part of it as a "council chamber".

6. The British officer gave instructions to the family: a. to go to
    bed by seven o'clock   b. to find another place to live c. to
    convert the downstairs to a council chamber and food kitchen.

7. The british were in Dare's house because: a. they needed sleeping
    space   b. they were going to hold an important meeting c. they
    were guarding them as Prisioners fo War.

8. Linda followed the British order but: a. was too troubled to sleep
    b. was afraid for her life c. planned to ask them to leave the
    next day.

9. Linda was especially concerned about her: a. .father   b. husband
    c. son who was fighting in Washington's army down the road.

10. Dare overheard the British planning to: a. leave the city
     b. attack Washington's army c. steal the liberty bell.

11. The British thought: a. their plan might succeed   b. it was
     foolish to fight c. victory was certain.

12. Linda used the excuse of: a. going to the country to buy flour
     b. carrying clothing and food to the sick   c. going to work at
     a neightor's as a way of getting out of the house.

13. The british did not stop Linda Dare from leaving because: a. she
     had a good excuse   b. she was really on their side   c. she did
     not pose a serious threat to the British War effort.

14. After she got to the mill, she headed straight for: a. Rising Sun Tavern   b. Valley Forge   c. her sister's house

15. Dare was able to get a warning to Washington by: a. sending a telegram   b. going to Valley Forge   c. sending it by another soldier she knew

16. As a result of Dare's actions: a. the British burned her house b. questioned the family as to their whereabouts   c. continued to use the house as a meeting place

17. The British: a. lost the battle with Washington b. won the battle in spite of Linda's efforts   c. called off the attack because they knew Washington was waiting for them

18. It particularly pleased Dare that she had saved the American army   b. had not lied to the British   c. a and b

19. Linda Dare thought of herself as: a. a clever lady   b. a British subject   c. an honest spy.

20. A Quaker refers to a: a. rich group of people   b. religious group of people   c. special group of speakers

"Deborah Sampson: Woman Soldier"

1. During the American Revolution most people's attitude toward
   freedom was that: a. it could be gotten easily b. it was
   worth any sacrifice   c. congress would take care of it.

2. At the beginning of this story a woman was expressing her commitment
   to freedom in a letter to: a. a British soldier   b. her mother
   c. her sister.

3. The author was trying to illustrate by the example of the letter:
   a. the fighting spirit of women b. women's support of their
   men c. the feelings of women and their attitude toward the
   American cause.

4. A direct female participant in the war effort was: a. Betsy Ross
   b. Geraldine Ferraro c. Deborah Sampson.

5. Deborah disguised herself as a soldier and enlisted in the:
   a. army   b. navy   c. marine guard.

6. One thing that helped Deborah get into the regiment was her:
   a. long hair   b. man like build and appearance c. her
   ability to make her voice sound like a man's.

7. Sampson's secret was almost discovered when: a. her voice
   sounded like a man's   b. she had to shower with the men
   c. she altered the size of her uniform.

8. Sampson covered her mistakes by saying: a. her mother trained
   her sons to sew   b. she stopped talking c. she sneaked to
   the shower at other times.

9. While stationed at West Point, Deborah: a. worked as a nurse
   b. never engaged in a real fight c. was in a number of savage
   skirmishes.

10. When she was wounded she was able to get help from: a. friends
    in private homes   b. go to the hospital c. take care of the
    wounds herself.

11. One reason why Deborah may have been able to go away and return
    was because: a. she was clever enough to find an excuse for
    leaving   b. she had friends who covered for her c. a and b.

12. Deborah's secret came close to being revealed when: a. an old
    friend recognized her b. she was taken to a hospital with a
    fever   c. she tailored another uniform for a friend.

13. When at the hospital a doctor discovered her secret but at
    first chose to: a. keep it a secret b. blackmail Deborah
    c. tell his commanding supervisor.

14. One reason why the doctor may have remained silent was
    because: a. he did not want to get into an argument
    b. he respected her commitment to the American cause
    c. he fell in love with her.

15. In the end it was: a. a friend   b. another soldier
    c. the doctor who finally revealed her secret.

16. The one who finally revealed her secret did so because:
    a. he couldn't keep a secret   b. he decided it wasn't
    proper for a woman to fight a man's battle   c. his
    niece fell in lvoe with the man Deborah Sampson was
    disguised as.

17. After the war Sampson: a. settled down to a normal
    married life with children   b. continued to fight for
    other causes   c. traveled out west for adventure.

18. Deborah began a new career: a. sewing army uniforms
    b. by lecturing and giving speeches   c. spying on the
    enemy.

19. Sampson profited from her war experience by: a. fulfilling
    her desire to save her country   b. making a monetary profit
    c. a and b.

"Paula Hart: Women on the Move"

1. Paula Hart's original career plans were to be: a. a doctor
   b. a teacher   c. a lawyer.

2. One appeal of the Navy was its: a. salary b. job security
   c. opportunity to advance in rank.

3. Hart became the second woman to achieve the rank of: a. captain
   b. chief petty officer c. rear admiral.

4. When Hart said she "married" the Navy she was referring to:
   a. her commitment to the Navy b. making a joke c. happily
   married to a Navy officer.

5. Hart's mother could never understand why: a. her daughter
   wanted a Navy career   b. her daughter never married   c. women
   wanted to pursue a career.

6. One piece of evidence supporting the notion that Hart is a
   successful naval officer is: a. her salary   b. the important
   jobs she has held c. her experiences as a young officer.

7. Hart's present job as commander of the naval training center would
   lead one to believe that: a. Hart is very smart b. she had a
   lucky break c. she became a teacher after all.

8. Through the years Hart has seen opportunities for women in the
   Navy: a. decrease   b. increase c. stay about the same.

9. Young women have the opportunity to do what she did not get to do:
   a. attend the National War College   b. work for the Joint Chiefs
   of Staff   c. go to sea.

10. When Hart joined the Navy, for a woman to reach the rank of
    commander was: a. rare   b. common c. easily done with hard
    work.

11. The reader is aware of Hart's pride in her navy ranking because:
    a. she talks about it all the time b. she has written a book
    about her career   c. she wears her uniform everywhere she goes.

12. While in an airport, she was once mistaken for: a. a policewoman
    b. a pilto   c. a stewardess because of her gold braid.

13. A waitress who called her "Hon" and men who kissed her on the cheek
    and cooed about her title: a. irritate her   b. don't bother her
    anymore   c. remain a puzzle to her.

14. Hart worries about women entering the Navy because they:
    a. will have a harder time than she b. aren't interested
    in a Navy career c. are content to be mediocre.

15. When Hart said that wherever she went she had to "keep
    reinventing the wheel" she meant: a. she had to reprove
    she was capable b. she had to explain the mechanic operations
    of the wheel c. she had to earn her rank all over again.

16. One indication that women still have to show they can excel in
    a man's world is the plaque on Hart's desk which reads:
    a. "I've just begun to fight"   b. "It's not over till it's
    over" c. "Women have to be twice as good".

17. During her Navy career Hart has: a. always got to use her time
    the way she wanted to b. put her career first, ahead of her own
    enjoyment c. never missed a good social event.

18. Through the years Hart has been given another title which
    illustrates her hard work. That title is: a. 'Good Old
    Dependable' b. 'Good Old Reliable' c. 'Ironsides'.

19. This story illustrates a main point about hard work and sacrifice
    which is: a. they always lead to success b. its relatively
    easy to be successful c. in order to acheive one's goals you
    have to pay the price for that accomplishment.

"Augusta Savage"

1. Augusta Savage received national recognition as: a. an oil
    painter b. a teacher in Harlem   c. a sculptor.

2. As a young woman she partly supported herself by doing portraits
    in clay of a. wild life b. children's heads c. prominent
    black leaders.

3. In order to survive economically the talented artist: a. often
    performed jobs that were frustrating and degrading   b. did
    jobs that were lucrative   c. sold paintings of sunsets.

4. As a young woman, she was able to study in Europe because:
    a. she was awarded a scholarship b. she saved all her earnings
    c. she received a large commission for a work.

5. The award was made as a result of a statue she created called:
    a. knight   b. Gamin   c. Silence.

6. The award winning statue was modeled from: a. a drawing she saw
    in France   b. the photograph of a childhood friend   c. the
    head of a young Harlem boy.

7. Augusta Savage was able to continue her studies in Europe because
    of a grant from: a. the Carnegie Foundation   b. the Ford
    Foundation   c. the Paris Institute of Art.

8. Augusta became the first black woman: a. to receive a scholarship
    b. to be elected to the National Association of Women Painters &
    Sculptors   c. to win recognition as an artist.

9. Because she was interested in art education in general and
    specifically black arts she: a. awarded several scholarships
    to talented black artists b. opened an art museum for black
    artists c. opened a studio in Harlem for young black artists.

10. Although she continued her own artistic efforts, Augusta gave much
    of her time to: a. teaching b. national shows for other black
    artists c. studying new techniques in oil painting.

11. The last major work sculptured by Augusta Savage was: a. the bust
    of a New York black leader b. a statue called Life Every Voice
    c. a bronze head modeled by a boy.

12. The last sculpture was: a. three pieces of abstract art   b. the
    Virgin Mary and husband Joseph   c. a vast harp with the base
    formed on the shape of a mammoth forearm.

13. Her last major work was eventually: a. cast in bronze
    b. destroyed   c. awarded a grant by the Carnegie Foundation.

14. The fate of the statue was decided because: a. of lack of money
    b. the art world was not ready for it   c. it did not generate
    as much notice as was anticipated.

15. The story of Augusta Savage should encourage others to: a.
    persevere even if the odds against one are great   b. hope for
    lucky breaks   c. work part time until you strike it rich.

16. In 1962 Augusta Savage: a. won another scholarship   b. opened
    another school   c. died.

17. An artistic work that drew praise at a 1967 art show was: a. a
    statue based on the song, "Lift Every Voice"   b. a statue
    called Gamin   c. an oil painting by Savage.

18. With all of her fame and recognition as a great sculptor, Savage:
    a. died a wealthy lady   b. died a poor lady   c. wanted to
    win one more award.

19. A main point of this story might be that: a. the life of an
    artist is difficult   b. people like good sculptor c. women
    can be artists.

Answer Keys for Immediate Measures

"Equality for Women"   "Emmeline Pankhurst"

1. C	1. C
2. B	2. B
3. A	3. A
4. A	4. C
5. A	5. A
6. B	6. B
7. C	7. B
8. A	8. A
9. B	9. A
10. A	10. B
11. A	11. C
12. B	12. B
13. A	13. C
14. A	14. C
15. A	15. C
16. A	16. B
17. A	17. B
18. C	18. C
19. A	19. A
20. C	20. C
21. B	
22. A	
23. C	

Answer Keys for Immediate Measures

"Lowell Girls"	"Harriet Tubman"
1. A	1. C
2. B	2. A
3. C	3. B
4. A	4. C
5. A	5. A
6. A	6. B
7. A	7. A
8. A	8. C
9. A	9. B
10. A	10. A
11. B	11. A
12. B	12. B
13. B	13. A
14. A	14. B
15. B	15. C
16. B	16. C
17. A	17. B
18. A	18. A
19. C	19. C
20. B	

Answer Keys for Delayed Measures

"Paula Hart: Women on the Move"   "Linda Dare: An Honest Spy"

1. B		1. B	
2. A		2. C	
3. C		3. B	
4. A		4. A	
5. B		5. C	
6. B		6. A	
7. A		7. B	
8. B		8. A	
9. C		9. C	
10. A		10. B	
11. C		11. C	
12. C		12. A	
13. A		13. C	
14. C		14. A	
15. A		15. C	
16. C		16. B	
17. B		17. A	
18. A		18. C	
19. C		19. C	
		20. B	

Answer Keys for Delayed Measures

"Deborah Sampson: Woman Soldier"   "Augusta Savage"

1. B	1. C
2. A	2. B
3. C	3. A
4. C	4. A
5. A	5. B
6. B	6. C
7. C	7. A
8. A	8. B
9. C	9. C
10. A	10. A
11. C	11. B
12. B	12. C
13. A	13. B
14. B	14. A
15. C	15. A
16. C	16. C
17. A	17. B
18. B	18. B
19. C	19. A

Reliability Analysis of Comprehension Tests

Test	Number of Cases	Number of Items	Mean Total Score	Standard Dev.	KR-20
Chronological (1)	36	23	15.92	2.296	.573
Chronological (D)	36	20	17.03	1.641	.492
Cause-Effect (1)	36	20	16.77	1.796	.403
Cause-Effect (D)	36	19	15.21	1.738	.316
Compare-Contrast (1)	36	20	15.52	2.086	.569
Compare-Contrast (D)	36	19	17.44	1.012	.282
Naturally Occurring Text (1)	36	19	15.07	2.360	.602
Naturally Occurring Text (D)	36	19	14.28	1.742	.402

Table E-2

Distribution Of Main Ideas And Details In Tests For Each Reading

Passage

Passage	Main Ideas	Test Items Details	Total
Chronological Immediate	11	12	23
Chronological Delayed	11	9	20
Cause-Effect Immediate	10	10	20
Cause-Effect Delayed	10	9	19
Compare Contrast Immediate	11	9	20
Compare Contrast Delayed	11	8	19
Naturally Occurring Text Immediate	10	9	19
Naturally Occurring Text Delayed	10	9	19

Appendix F

MATERIALS FOR QUALITATIVE ANALYSIS

"Beginnings of Equality for Women"

Summary

During the early 19th century on a woman's wedding day, she
gave up her legal rights when she married and became a property
of her husband. All of her property and earnings belonged to her
husband.

Women were greatly restricted in job opportunities. It was
not considered proper for a woman to work outside the home.
However millions did work in factories with poor working
conditions and low pay.

Social customs further restricted women. Divorced women
were outcasts. Single women required chaperones on dates. Women
were supposed to be "purer" than men and to inspire them to be
morally better. Such things as kissing, drinking and smoking was
done with great secrecy.

In the 1840's some women defied customs and won legal rights
which allowed married women to control their own property and
earnings. Another success came when women were granted the right
to vote. This required signing petitions, writing letters and
going door to door for votes. They were abused, jailed and
beaten. Women won voting rights in several states then lost them
to voter fraud.

Powerful groups opposed women's suffrage because they were
afraid they would lose their own power.

Efforts were finally successful and women were granted the

right to vote in 1920 by the 19th amendment.

Social customs changed during the 1920's both in attitudes toward women who worked, and in the way women could respond to male companions. While the status of women improved, the struggle has not ended and the goals of social and legal equality are still pursued.

"Beginnings of Equality for Women"

Map

MI   Marriage marked the end of a woman's legal rights.

D   At marriage, property and earnings of a woman belonged to her
     husband.

MI   Social customs decreed that marriage was the only acceptable
     lifestyle for women.

MI   Job opportunities were mainly in factories and on farms.

MI   Woman working outside the home had poor working conditions.

MI   Because both actions and behaviors were restricted and
     severely criticized women were socially oppressed.

D   Women were considered physically and mentally inferior to
     men.

D   Social oppression was directly connected to moral standards.

D   To deviate from accepted social customs marked women as
     outcasts.

D   Women did not engage in kissing before marriage, smoking or
     drinking because they were thought to be purer and morally
     stronger than men.

MI   In the 1840's in support of women's rights women chose to
     exercise their freedom of speech.

D   Women worked in the political arena in order to gain votes.

D   Because of their commitment to suffrage women were ridiculed.

MI   During the 1800's through long and tiring work women gained
     the right to vote in the 1900's.

MI   Powerful groups opposed women's suffrage.

D   Business opposed suffrage because factory reform would be
     demanded.

D   Liquor interests were afraid women would vote for prohibition.

D   Special interest groups opposed suffrage because it was a threat
     to their power structure.

MI In 1920 the 19th amendment gave women the right to vote.

D The right to vote gave women social freedom and a political
   voice.

MI The 1920's saw a change in social customs.

D One of the major accomplishments of the women's movement was
   the granting of the right to own property.

MI Today women are still engaged in the struggle for social and
   legal equality.

"Emmeline Pankhurst"

Summary

In Britain in the 1800's women were demanding the right to
vote, but Parliament did not recognize this request. Emmeline
Pankhurst and her daughters decided in the 1900's to let England
know it was time to let women vote.

Emmeline, Christabel, and Sylvia formed the women's Social
and Political Union and urged Parliament to give women the right
to vote. Its members distributed phamplets, organized marches,
and made speeches so their views could be known. These rallies
drew crowds. Women who demonstrated for the right to vote were
called suffragettes.

As time went on and the issue became more heated, these
rallies became more violent, with police breaking them up and
using force to do it. The WSPU resorted to more militant
measures. They threw stones at Parliament members, broke street
lamps, and painted slogans on walls.

The Pankhursts were arrested and sent to prison where they
were put in solitary confinement. Other women were arrested
also. The women protested in prison with hunger strikes. The
government ordered the prisoners to be force fed.

The public was becoming more aware of the women's cause and
horrified by the hunger strikes. Parliament passed the Prisoners
Act of 1913 allowing the prisoners to be released and then
rearrested at a later date. Suffragettes were released and

rearrested several times.

In 1918 British women over 30 were given the right to vote.
Mrs. Pankhurst died in 1928. One week later Parliament granted
women over the age of 21 years of age the right to vote.

"Emmeline Pankhurst"

Map

MI   In the mid 1800's women in Britain began demanding the right
     to vote.

MI   Emmeline Pankhurst and her two daughters founded the WSPU.

D   The purpose of the women's union was to present a united
     front for the cause of women.

MI   Women who demonstrated for women's causes were called
     suffragettes.

MI   One reason women wanted to vote was so they could have a
     voice in actions that affected them.

MI   Often the actions of the women's organization became very
     violent.

D   When suffragettes had meetings often these were broken up by
     the police.

MI   Emmeline and her daughters were frequently thrown in jail.

D   Some of the peaceful activities of the women's movement
     included writing letters and organizing marches.

D   The suffragettes went on hunger strikes when placed in
     solitary confinement.

D   The government had to avoid too much publicity because their
     actions were gaining the attention the general public who were
     horrified at the treatment women were receiving.

D   When women refused to eat while in prison they were force-fed
     by prison officials.

MI   The Prisoners Act of 1913 was a clever way for the government
     to avoid the anger of the general public for mistreatment of the
     women.

D   WSPU members distributed leaflets and organized marches so
     that their views could be known.

MI   Rights of women were ignored because they were not considered
     able to make decisions.

D   In 1918 women were granted the right to vote who were over 30
     years old.

D   In 1928 British women were allowed to vote if they were 21
     years old.

D   Poor physical condition which contributed to Emmeline
     Pankhurst's death were caused in part by the years of poor
     treatment and abuse.

D   The struggle for a woman's right to vote in Britain covered
     over 50 years.

MI   Emmeline Pankhurst campaigned for women's rights because she
     believed women deserved justice and equality.

"Lowell Girls"

Summary

In 1800 most Americans were from farm families. This caused a lack of workers for the factories. Those who did work in the factories were women and children. Working and living conditions were poor.

A group of wealthy factory investors wanted to create a pleasant and productive working environment. They chose to hire young unmarried women. These young women lived in company boardinghouses which were well kept and supervised. The girls were required to follow boardinghouse rules and to use their time wisely. They were encouraged to read and write letters and improve their minds. They earned 2.50 to 3.00 a week. One-half was for board and they saved the rest or sent it to their families.

When Dickens toured the Lowell mills in 1842 he wrote that the workers did not appear unhappy nor did they look unhealthy. However, other reports were not as glowing. Others said that cotton dust hung in the air and the girls were ruining their health. These reports did not see the Lowell girls as being any better off than other factory workers.

In 1834 1000 girls walked out in protest of a 15% wage cut. The strike was broken but some of the girls formed a Factory Girls' Association to fight for better pay and working

conditions. Those who fought were evicted from the company

boardinghouses and starved. But others were inspired by the

struggle which later brought success.

The boardinghouses disappeared. This was not a workable

plan for improving factory working conditions.

"Lowell Girls"

Map

MI In the 1800's factories had a lack of workers.

D   Nine of every 10 Americans in the 1800's were farmers.

D   Factory and working conditoins were poor.

MI A group of wealthy investors wanted to create a different
    kind of working place.

D   Wealthy investors wanted to create mills with a pleasant and
    productive environment.

D   These investors hired unmarried young women to work in their
    mills.

MI The mill was visited by foreign visitors because it was a
    model work place.

MI There were some visitors who were not as excited about the
    mills as others. They saw things that might be considered health
    hazzards.

D   Some people thought the system was imperfect because of cotton
    dust and other things.

D   The girls lived in supervised boarding houses.

MI If the employees chose to live in the boarding houses they had
    to follow rules of behavior.

MI Eventually the girls thought the system was hard to bear.

MI In 1834 1000 Lowell girls decided to go on strike in order to
    keep their jobs and protest a 15% pay cut.

D   One purpose of the Factory Girls' Association was to form a
    news network.

MI When the girls walked off the job in protest they became
    strikers.

D   The strikers were defeated by such methods as starvation and
    eviction.

MI   The struggle of the Lowell girls caused others to work to
     improve mill conditions.

MI   The company boarding house concept has disappeared from the
     American scene.

"Harriet Tubman"

Summary

Harriet Tubman was born into slavery in Maryland in 1821.
She was sent to work in the fields because of her physical
strength which was equal to a man's. This physical work prepared
her for the physical endurance she would need later in life.

Harriet saw many family members sold into slavery. She was
seriously injured as a young adult as a result of a cruel
overseer.

She married John Tubman, a freed slave. At first she tried
to earn enough money to buy her freedom but saw she could never
reach that goal. Even though she decided to escape to the North
to freedom, her husband John was content to stay in Maryland.
Harriet went alone. With the aid of the underground railroad she
escaped into free territory. However, she was never happy in the
North and wend south again to help others escape.

Harriet helped many slaves escape. She was very strict and
discipline prevailed on her freedom "train". One reason for her
success was her ability to disguise herself, thus avoiding
capture by those who wanted to stop her.

Because of Tubman's reputation as a supporter of human
rights she was asked to speak at meetings regarding women's
rights. However, she preferred action to speech.

During the Civil War she joined the Union Army and led raids
that freed several hundred slaves. After her retirement she

remained interested in the causes of blacks and women and
encouraged women to unite and not be divided by the opposition.
She died poor, but rich with friends.

"Harriet Tubman"

Map

MI   Harriet Tubman was born into slavery in Maryland in 1821.

D   As a slave in her early life she learned physical endurance
     by hard labor.

D   As a young woman she interferred with an overseer and was
     struck in the head causing permanent damage.

MI   Harriet was an untiring worker for human rights.

D   Harriet's crusade to help others would have begun sooner were
     it not for her marriage to John Tubman.

MI   Determined to free herself from slavery she escaped to the
     North.

MI   Harriet escaped to the North via the Underground Railroad.

D   The stationmasters and conductors were freed slaves and
     Quakers.

D   When Harriet recrossed the line back into Maryland she became
     a hunted person.

MI   Tubman's treatment of slaves she led to freedom could be
     described as kind or harsh, depending on the situation.

D   Tubman often disguised herself as a stooped old woman singing
     hymns.

MI   Tubman's determination is most clearly illustrated by leaving
     her family to go alone to freedom.

MI   When the Civil War broke out, Harriet was denied the right
     to fight for freedom in an official capacity.

D   Harriet Tubman was never comfortable as a public speaker
     because she preferred action to words.

D   After the war Harriet retired to Auburn, N.Y. and continued
     to support those who worked for human rights.

MI   The reason for Tubman's success could best be described as
     her strong faith in the cause whe was serving.

D   Tubman's character could be described as rebellious, strong
    and determined.

MI An appropriate title for this article might be "The
    Accomplishments of Harriet Tubman".

MI Harriet was called "Moses" by her people because she led
    her people out of bondage.

"Women in History"

Linda Dare

Summary

During the American Revolution a woman who made an important contribution to the American cause was Linda Dare, a Quaker woman.

The British headquarters were opposite her house in Philadelphia. The British needed extra space and took over a part of her downstairs as a council chamber. On December 2 the Dare family was told to retire at 7:00. That night the British held a meeting downstairs in the Dare house to discuss a surprise attack on George Washington's troops at Valley Forge. Unable to sleep because of concern for her own son who was with Washington, Linda went downstairs and overheard the British plan to attack on December 4.

On the morning of the 4th, Linda Dare left Philadelphia on the excuse of going to a mill to get flour. The British let her pass unchallenged because they did not view her as a threat. Once out of the city Linda went to the Rising Sun Tavern and found a family friend who was also a soldier, Thomas Craig. She told him her story and he took the information to Washington. Linda got her flour and went home.

When the British attacked, Washington and his troops were ready and defeated the British. The Dare family was questioned about their actions on December 2, but all told the truth when

they said they went to bed at 7:00. Mrs. Dare did not report that
she got up after going to bed and the British did not ask. She
said later she was glad she did not have to lie in order to save
the soldiers and contribute to the war effort.

"Women in History"

Linda Dare

Map

MI   Referred to in the story as the American "cause", the "cause"
     was a fight for liberty.

MI   One woman who did much for the American cause was Linda Dare.

D   This story took place close to Valley Forge.

D   Dare's house was located opposite British headquarters.

MI   Dare's house became important because the British used part
     of it as a "council chamber".

D   The British officer gave instructions to the family to go to
     bed by seven o'clock.

D   The British were in Dare's house because they were going to
     hold an important meeting.

D   Linda followed the British order but was too troubled to
     sleep.

D   Linda was especially concerned about her son who was fighting
     in Washington's army down the road.

MI   Dare overheard the British planning to attack Washington's
     army.

MI   The British thought victory was certain.

MI   Linda used the excuse of going to the country to buy flour
     as a way of getting out of the house.

MI   The British did not stop Linda Dare from leaving because she
     did not pose a serious threat to the British War effort.

D   After she got to the mill, she headed straight for the Rising
     Sun Tavern.

MI   Dare was able to get a warning to Washington by sending it by
     another soldier she knew.

D   As a result of Dare's actions the British questioned the
     family as to their whereabouts.

MI The British lost the battle with Washington.

MI It particularly pleased Dare that she had saved the American
    army and had not lied to the British.

MI Linda Dare thought of herself as an honest spy.

D   A Quaker refers to a religious group of people.

"Woman Soldier"

Deborah Sampson

Summary

This story began by expressing to the reader the feelings that prevailed in the colonies prior to and during the American Revolution. Women expressed these feelings in writings and actions. Actions included boycotting the tea market, not purchasing British luxuries and watching family and friends go off to war and wondering if they would return. Underlying this was a "win" philosophy, and no sacrifice was too great whether material or personal.

A woman who commmted her total self to the cause was Deborah Sampson. Deborah enlisted in an army regiment and cleverly avoided being detected by using her appearance and dress to her advantage.

She was involved in several battles and sustained wounds. She somehow convinced several people to keep her secret. A fever forced her hospitalization, but again a doctor was willing to conceal her identity. However, when his niece became involved with Sampson he reported her identity.

Her life after the war may have been much like any other female with a husband and children. Deborah became a symbol of the American spirit displaying courage and intelligence. Many identified with her for this reason. She gave speeches and

lectured on war and patriotism. This was at a time when the
country needed all its spirit to put together a new nation.

"Woman Soldier"

Deborah Sampson

Map

MI During the American Revolution most people's attitude toward
    freedom was that it was worth any sacrifice.

D   At the beginning of this story a woman was expressing her
    commitment to freedom in a letter to a British soldier.

MI The author was trying to illustrate by the example of the
    letter the feelings of women and their attitude toward the
    American cause.

MI A direct female participant in the war effort was Deborah
    Sampson

MI Deborah disguised herself as a soldier and enlisted in the
    army.

D   One thing that helped Deborah get into the regiment was her
    man like build and appearance.

MI Sampson's secret was almost discovered when she altered the
    size of her uniform.

D   Sampson covered her mistakes by saying her mother trained her
    sons to sew.

D   While stationed at West Point, Deborah was in a number of
    savage skirmishes.

MI When she was wounded she was able to get help from friends in
    private homes.

MI One reason why Deborah may have been able to go away and
    return was because she was clever enough to find an excuse for
    leaving, and she had friends who covered for her.

MI Deborah's secret came close to being revealed when she was
    taken to a hospital with a fever.

D   When at the hospital a doctor discovered her secret but at
    first chose to keep it a secret.

MI One reason why the doctor may have remained silent was

because he respected her commitment to the American cause.

D   In the end it was the doctor who finally revealed her secret.

D   The one who finally revealed her secret did so because his
     niece fell in love with the man Deborah Sampson was disguised as.

MI   After the war Sampson settled down to a normal married life
     with children.

MI   Deborah began a new career by lecturing and giving speeches.

D   Sampson profited from her war experience by fulfilling her
     desire to save her country, and making a monetary profit.

"Women on the Move"

Paula Hart

Summary

Paula Hart grew up in Rhode Island and prepared to be a
teacher. However, the starting salary was only$2,400 a year, but
a Naval reserve job started at$4,200. She chose the Navy.

Today Paula is a high ranking Naval officer. She has
achieved the rank of rear admiral, a rank held previously by only
one other woman. She is currently commanding officer of the
Naval training school in Orlando, Florida.

She was held positions in the Navy which attest to her
talent and achievement. These include secretary to the Joint
Chiefs of Staff, handling policy decisions involving the Navy's
under-graduate-education and foreign-language programs, and
advisor to President Johnson's war-on-poverty program.

When Hart joined the Navy, women could only hope to rise as
high as commander in rank. She is glad women now have more of an
opportunity to compete for rank and choose a variety of duties.
She envies young women who now have the opportunity to go to sea.
This was not allowed during her earlier years in the Navy.

Hart wears her uniform almost everywhere but is frequently
confused by men as a stewardess. It irritates her to be called
"Hon" by waitresses and patronized by men.

One of the admiral's concerns is the contented attitude of

some women to be mediocre. She worries about the Navy's new

recruits. She believes that for women to rise to the top they

must be twice as good and work twice as hard.

She doesn't regret the career path she chose or the

sacrifices made to achieve her goals. She refers to herself as

'Good Old Dependable' a reputation she is proud to have.

"Women on the Move"

Paula Hart

Map

MI   Paula Hart's original career plans were to be a teacher.

D   One appeal of the Navy was its salary.

MI   Hart became the second woman to achieve the rank of rear
     admiral.

D   When Hart said she "married" the Navy she was referring to
     her commitment to the Navy.

D   Hart's mother could never understand why her daughter never
     married.

MI   One piece of evidence supporting the notion that Hart is a
     successful naval officer is the important jobs she has held.

MI   Hart's present job as commander of the naval training center
     would lead one to believe that she became a teacher after all.

MI   Through the years Hart has seen opportunities for women in
     the Navy increase.

D   Young women have the opportunity to do what she did not get
     to do which was go to sea.

MI   When Hart joined the Navy, for a woman to reach the rank of
     commander was rare.

D   The reader is aware of Hart's pride in her navy ranking
     because she wears her uniform everywhere she goes.

D   While in an airport, she was once mistaken for a stewardess
     because of her gold braid.

D   A waitress who called her "Hon" and men who kiss her on the
     cheek and coo about her title irritate her.

MI   Hart worries about women entering the Navy because they are
     content to be mediocre.

MI   When Hart said that wherever she went she had to "keep
     reinventing the wheel" she meant she had to reprove she was
     capable.

D   One indication that women still have to show they can excel
     in a man's world is the plaque on Hart's desk which reads
     "Women have to be twice as good".

MI   During her Navy career Hart has put her career first, ahead
     of her own enjoyment.

D   Through the years Hart has been given another title which
     illustrates her hard work. That title is 'Good Old Dependable'

MI   This story illustrates a main point about hard work and
     sacrifice which is, in order to achieve one's goals you have to
     pay the price for that accomplishment.

"August Savage"

Summary

Augusta Savage was a black American woman who received national recognition for her sculptures. At a very young age whe made sculptures and sold them to earn money. However, even with this great talent, Augusta had to support herself throughout the years with menial jobs such as doing laundry, clerical work, and ironing.

Her talent did become recognized and she won a Julius Rosenwald scholarship to study in Europe as a result of a beautiful sculpture called Gamin which she modeled. She continued to gain experience and win awards. She won a grant from the Carnegie Foundation to continue her studies abroad. When she returned to the U.S., she became the first black woman to be selected to the National Association of Women Painters and Sculptors.

Augusta Savage contributed her talent to the art world by teaching others. She opened a studio in Harlem for young black artists which gave some black artists their first opportunity in the art world.

Augusta's last major work was made for the New York World's Fair. It was a harp, 16 feet tall, worked in intricate detail. Augusta cast her work in plaster because she could not afford bronze. At the end of the fair the statue was destroyed by bulldozers.

Augusta died in 1962. Her art work is highly regarded in
the art world. In recent years a show of the work of black
artists was held. The large crowd was drawn to the head of a
young black boy, and its title was Gamin.

"Augusta Savage"

Map

MI   Augusta Savage received national recognition as a sculptor.

D   As a young woman she partly supported herself by doing
     portraits in clay of children's heads.

D   In order to survive economically the talented artist often
     performed jobs that were frustrating and degrading.

MI   As a young woman, she was able to study in Europe because she
     was awarded a scholarship.

D   The award was made as a result of a statue she created called
     Gamin.

D   The award winning statue was modeled from the head of a young
     Harlem boy.

MI   Augusta Savage was able to continue her studies in Europe
     because of a grant from the Carnegie Foundation.

MI   Augusta became the first black woman to be elected to the
     National Association of Women Painters and Sculptors.

D   Because she was interested in art education in general and
     specifically black artists whe opened a studio in Harlem for
     young black artists.

MI   Although she continued her own artistic efforts, Augusta gave
     much of her time to teaching.

MI   The last major work sculptured by Augusta Savage was a statue
     called "Lift Every Voice".

D   The last sculpture was a vast harp with the base formed on
     the shape of a mammoth forearm.

D   Her last major work was eventually destroyed.

D   The fate of the statue was decided because fo lack of money.

MI   The story of Augusta Savage should encourage others to
     persevere even if the odds against one are great.

D   In 1962 Augusta Savage died.

D   An artistic work that drew praise at a 1967 art show was a
    statue called Gamin.

D   With all of her fame and recognition as a great sculptor died
    a poor lady.

MI A main point of this story might be that the life of an
    artist is difficult.

Appendix G

ATTITUDE SURVEYS

Questionnaire for BACCA and DIGC

	A	B	C

1. What parts of BACCA and DIGC were new to you in
   the sense that you have never practiced them   100%
   before?

   A. BACCA and DIGC
   B. BACCA
   C. DIGC

2. Which parts/practices helped you the most?
   Can you tell why?   75%   25%

   A. BACCA
   B. Brainstorming
   C. DIGC

3. In what subject areas do you think you might
   be able to apply this strategy?   100% 62%   50%

   A. Literature
   B. Social Studies
   C. Health

4. To what degree did you find this study beneficial?   6%   94%

   A. No Help
   B. Moderately Helpful
   C. Very Helpful

5. How did you feel about generating a summary from
   BACCA (DIGC)?   100%

   A. Easy Task
   B. Hard Task

Questionnaire for Question-Answering

	A	B	C
1. What parts of Q-A were new to you in the sense that you have never practiced them before?	50%	50%	

   A. Generating questions and answers
   B. Dividing article into subtopics
      and writing of questions

	A	B	C
2. Which parts/practices helped you the most? Can you tell why?	31%	56%	25%

   A. Subtopics for article
   B. Asking and answering questions
   C. Writing everything down

	A	B	C
3. In what subject areas do you think you might be able to apply this strategy?		87%	37%

   A. Literature
   B. Social Studies
   C. Science/Health

	A	B	C
4. To what degree did you find this study beneficial?			100%

   A. No help
   B. Moderately helpful
   C. Very helpful

	A	B	C
5. How did you feel about generating a summary from your questions?	100%		

   A. Easy task
   B. Hard task

Appendix H

SASS DATA OUTPUT

Table H-1

Repeated Measures ANOVA For Chronological Comprehension Scores

Source	df	SS	MS	F	Sig of F
TREAT	1	8.0	8.0	2.2	.1493
ERR	34	124.9	3.7		
TIME	1	22.2	22.2	4.6	.0402
TIME*TREAT	1	6.7	6.7	1.4	.2489
ERR (TIME)	34	166.1	4.9		

Table H-2

Repeated Measures ANOVA For Cause-Effect Comprehension Scores

Scource	df	SS	MS	F	Sig of F
TREAT	1	70.0	70.0	19.45	.0001
ERR	34	122.4	3.6		
TIME	1	45.1	45.1	38.7	.0001
TIME*TREAT	1	1.7	1.7	1.4	.2385
ERR(TIME)	34	39.7	1.2		

Table H-3

Repeated Measures ANOVA For Compare Contrast Comprehension Scores

Source	df	SS	MS	F	Sig of F
TREAT	1	6.7	6.7	2.76	.1058
ERR	34	82.8	2.4		
TIME	1	76.1	76.1	26.78	.0001
TIME*TREAT	1	9.4	9.4	3.3	.0778
ERR(TIME)	34	96.6	2,8		

Table H-4

Repeated Measures ANOVA For Naturally Occurring Text Comprehension Scores

Source	df	SS	MS	F	Sig of F
TREAT	1	93.4	93.4	25.6	.0001
ERR	34	124.2	3.7		
TIME	1	9.4	9.4	3.8	.0611
TIME*TREAT	1	12.5	12.5	5.0	.0321
ERR(TIME)	34	85.1	2.5		

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