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**Smith, Anne Louise**

**THE RESPONSES OF SKILLED AND LESS SKILLED NINTH GRADE  
READERS TO AN ORIGINAL OR AN ADAPTED STORY**

*The University of Arizona*

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THE RESPONSES OF SKILLED AND LESS SKILLED  
NINTH GRADE READERS TO AN  
ORIGINAL OR AN ADAPTED STORY

by

Anne Louise Smith

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A Dissertation Submitted to the Faculty of the  
DEPARTMENT OF READING  
In Partial Fulfillment of the Requirements  
For the Degree of  
DOCTOR OF PHILOSOPHY  
In the Graduate College  
THE UNIVERSITY OF ARIZONA

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THE UNIVERSITY OF ARIZONA  
GRADUATE COLLEGE

As members of the Final Examination Committee, we certify that we have read  
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READERS TO AN ORIGINAL OR AN ADAPTED STORY  
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and recommend that it be accepted as fulfilling the dissertation requirement  
for the Degree of Doctor of Philosophy.

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|----------------------------|----------------|
| <u>Judy Arick Mitchell</u> | <u>9-28-82</u> |
| Date                       |                |
| <u>A. L. Smith</u>         | <u>9-28-82</u> |
| Date                       |                |
| <u>William J. Valmont</u>  | <u>9-28-82</u> |
| Date                       |                |
| _____                      | _____          |
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SIGNED: Aune Louise Smith

To Mother and Dad with love and gratitude

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## ABSTRACT

The purpose of this study was to compare the written responses of skilled and less skilled readers to either an original or an adapted story, and the written responses of less skilled readers to either an original or an adapted short story. Data were compared relative to three areas: (1) statistical analysis of frequency of clausal units, and categorization of clausal units according to recall, inference, and supplementation; (2) statistical analysis of selected elements of the short story, specifically, setting, characterization, plot, and theme; and (3) descriptive analysis of frequent responses within each subcategory.

Ninth grade students designated as skilled and less skilled readers by scores on the California Achievement Test formed two distinct sample populations. Subjects were randomly assigned to read either an original short story or an adaptation of the same story and write all they could recall, including selected elements of the short story, namely, setting, characterization, plot, and theme.

Findings indicated that in terms of frequency of clausal units and categorization of clausal units, the responses of skilled readers to the original story contained significantly more clausal units and inference statements than the responses of less skilled readers. The responses of less skilled readers to the adapted story contained

significantly more clausal units and inference statements than the responses of less skilled readers to the original story.

Additionally, in their responses to elements of the short story, skilled readers differed significantly from less skilled readers for both the original and the adapted story with respect to characterization, plot, and theme. The responses of less skilled readers to the adapted story contained significantly more plot statements than the responses of the less skilled readers to the original story.

Results point to the use of adapted stories with less skilled readers; however, caution must be used in arriving at such a conclusion since this study did not include qualitative interpretation of responses or other response measures such as reader interest and enjoyment.

## CHAPTER 1

### STATEMENT OF THE PROBLEM

The purpose of this chapter is to present the (1) background of the study, (2) statement of the problem, (3) justification of the study, (4) assumptions, (5) limitations, and (6) definition of terms.

#### Background of the Study

The goal of reading is to understand or comprehend a written communication. The skilled reader is able to make sense of the content which he reads, while the less skilled reader seems to lack facility in arriving at meaning. Golinkoff (1975-1976) has summarized the characteristics of skilled and less skilled comprehenders as follows:

#### Skilled Comprehenders

1. The skilled comprehender seems to be capable of rapid and accurate word recognition.
2. The skilled comprehender reads, at minimum, in phrase-like units.
3. The skilled comprehender is adaptable and flexible in reading.

### Less Skilled Comprehenders

1. The less skilled comprehender seems to read in a word-by-word manner, with a minimum of text organization.
2. The less skilled comprehender seems to read in minimum-sized units, a phrase or less than a phrase.
3. The less skilled comprehender is generally inflexible to variations in task demands.

The differences between skilled and less skilled readers have been the focus of many research studies. Often, less skilled readers have been compared to skilled readers while using materials that have been too difficult for them (Palmer, Slater, and Graves, 1980). With the advent of readability formulas (Dale and Chall, 1948; Fry, 1968, 1977), factors such as word and sentence length which affect the difficulty level of reading materials, were brought to the fore. With these factors in mind, educators and editors have adapted original stories to meet the needs of less skilled readers. Research which focuses on the performance of both skilled and less skilled readers when reading original or adapted short stories can provide comparisons between the two types of readers, the efficacy of adapted stories, and the nature of readers' responses to specific elements of a short story.

#### Statement of the Problem

The focus of this study concerned three general questions:

- (a) What were the characteristics of written responses of skilled and less skilled readers as indicated by frequency of clausal units and

categorization of those units according to recall, inference, and supplemental information? (b) What were the differences between the responses of skilled and less skilled readers relative to teacher-established standards of quality for selected elements of short stories? and (c) What were the differences in written responses of less skilled readers to an original or an adapted version of a short story? The specific questions addressing these areas of concern are as follows:

1. Do the written responses of skilled and less skilled readers who read an original short story differ according to frequency and categorization of clausal units (e.g., recall, inference, and supplementation)?
2. Do the written responses of skilled and less skilled readers who read an adapted short story differ according to frequency and categorization of clausal units (e.g., recall, inference, and supplementation)?
3. Do the written responses of skilled and less skilled readers who read an original short story differ according to frequency and type of information pertinent to selected elements of the short story (e.g., setting, characterization, plot, and theme)?
4. Do the written responses of skilled and less skilled readers who read an adapted short story differ according to frequency and type of information pertinent to selected elements of the short story (e.g., setting, characterization, plot, and theme)?
5. Do the written responses of less skilled readers who read an original short story differ from those who read an adapted

short story according to frequency and categorization of clausal units (e.g., recall, inference, and supplementation)?

6. Do the written responses of less skilled readers who read an original short story differ from those who read an adapted short story according to frequency and type of information pertinent to selected elements of the short story (e.g., setting, characterization, plot, and theme)?

Answers to questions one and two should provide insight into the characteristics of written responses of skilled and less skilled readers relative to frequency of clausal units and categorization of those units according to recall, inference, and supplemental information. Answers to questions three and four should afford comparisons between the responses of skilled and less skilled readers relative to selected elements of short stories. Lastly, answers to questions five and six should provide information concerning the responses of less skilled readers to an original or an adapted short story relative to frequency of clausal units and categorization of those units according to recall, inference, and supplemental information as well as selected elements of short stories.

#### Justification

Studies which have focused on differences between skilled and less skilled readers have indicated that differences may be found at every phase of the reading process. Golinkoff (1975-1976) reported that less skilled comprehenders seem to have problems in a number of

areas. They evidence poor decoding skills which, in turn, may disrupt lexical and semantic access skills (Cromer, 1970; Golinkoff and Rosinski, 1976; Weisberg, 1979). Less skilled readers also have difficulty in utilizing the organization of a text to arrive at meaning (Squire, 1964; Weisberg, 1979). Strang and Rogers (1965) observed that less skilled readers tend to respond at a literal level and fail to relate new learning with previous knowledge. They tend to read in a word-by-word fashion or in units which are less than a phrase (Cromer, 1970; Steiner, Wiener, and Cromer, 1971). Less skilled readers also lack flexibility in reading, since they tend to read all material in the same manner. Olshavsky (1976-1977) and Smith (1967) reported that less skilled readers do use strategies when reading but tend to use them less frequently than skilled comprehenders do. Goodman (1976) and Goodman and Niles (1970) observed that the difference between more and less proficient readers is not a difference in the reading process but in how well readers are able to use it.

The less skilled reader appears to lack efficiency and facility in decoding, in retaining word meanings, in noting semantic relationships between words in a unit, and in understanding beyond the literal meaning of a text. In their reading, less skilled readers lack adaptability in using textual organization as a cue to understanding of content, and in dealing with different types of texts. All of these conclusions have been reached when less skilled readers have utilized the same reading materials as skilled readers. In light of these research findings, one possible solution to the many problems of less

skilled readers may be special reading materials which are written with concern for their needs.

In an attempt to meet the needs of less skilled readers who have difficulty in reading certain types of materials such as textbooks, novels, or stories, editors and authors have simplified and adapted existing materials or written new materials with an awareness of the factors which affect the difficulty level of texts. As determined by readability formulas, text difficulty appears to be related to such external factors as word length and sentence length (Dale and Chall, 1948; Fry, 1968, 1977). Within the classroom, especially at middle and secondary levels, teachers may use readability measures to estimate the appropriateness of materials for students. Teachers also make use of rewritten or adapted texts or stories in an attempt to provide material that the less skilled reader can comprehend.

A study by Davison et al. (1980) compared original stories and their adapted versions in order to examine the types of changes which authors make in writing story adaptations and the motivation for the changes. One of the major motivators in text adaptation which Davison et al. reported was passage length. After a target readership is determined, a story is adapted to a certain length considered apropos for the intended readers. The original text is changed through sentence restructuring, content deletions or changes, lexical changes, or changes in rhetorical devices. In the texts analyzed by Davison et al., not all changes in the adapted story versions were successful in terms of rendering texts more readable. The researchers concluded that story

adaptations were most successful when adaptors functioned as conscientious writers rather than as persons trying to make a text fit a readability formula.

While much research exists concerning the differences between skilled and less skilled readers, there are few studies which focus on readers of original and adapted stories.

A study reported by Flood (1979) examined teacher and student oral responses to an original and adapted story. Recall of the original text, written at the sixth grade level, did not differ significantly for teachers or students. Recall of the adapted version of the text was significantly greater for students than for teachers. Students tended to recall textual information more readily than did their teachers. These results indicate that students may rely more heavily upon the text for information than their teachers. In another study, Palmer, Slater, and Graves (1980) compared the abilities of good and poor readers to use the author's schema when reading texts which were rewritten at lowered levels of difficulty. Results of the study indicated that the recall protocols of poor readers lacked awareness of the author's schema and in most cases were simply unorganized lists of ideas. The researchers felt that the results of the study might be related to the poor organization of the adapted texts which were used. The studies which have compared readers' responses to original and adapted stories indicate varying results in terms of comprehension depending upon the ability of the students being examined.

Researchers in reading often require oral recall or oral responses in assessing comprehension, yet classroom practices usually

require free or directed written responses to literature, particularly at secondary levels. Research conclusions based on oral recall data may not be generalizable to classroom situations in which written responses are used. There is a need for research which simulates the type of tasks which teachers require of students, whether skilled or less skilled. Since writing is a natural manner of response for students at the secondary level, it should provide an appropriate medium for making comparisons between skilled and less skilled readers after reading either an original or an adapted short story.

In summary, research into the characteristics of skilled and less skilled readers has found that less skilled readers differ from skilled readers in virtually every aspect of reading. Editors and teachers have utilized adapted texts as one way of meeting the needs of less skilled readers. However, research into the use of adapted texts has been minimal. Finally, reading research often requires oral responses, while classroom practice requires written responses to material which has been read.

In examining the differences between skilled and less skilled readers, further study of the two groups needs to be made with respect to original and adapted texts. Since most studies of skilled and less skilled readers have utilized only one type or difficulty level of reading material, comparisons of the responses of the two types of readers to both original and adapted short stories need to be made. Less skilled readers may or may not evidence the same types of difficulties when reading adapted stories as when reading original stories. Further,

since adapted stories often appear to lack coherence and organization, responses of skilled readers as well as less skilled readers may indicate similar comprehension weaknesses. Even though skilled readers do not require adapted stories in instructional situations, their reading of these stories for research purposes should yield additional data for comparison of the two groups of readers.

Variables that have not been examined for skilled and less skilled readers responding to an original or an adapted text include the following: (1) the length of written response in terms of frequency of clausal units; (2) the readers' understanding of the story as evidenced by verbatim recall, inference, and supplementation; and (3) the quality of readers' response to selected elements of setting, characterization, plot, and theme.

Previous research has reported that less skilled readers tend to recall literal facts and details while not making interpretive statements (Strang and Rogers, 1965). The present study will investigate whether the written responses of less skilled readers are different for adapted stories than for original stories. Categorization of clausal units from protocols of skilled and less skilled readers into three areas, recall, inference, and supplementation, should provide insights into the processing of information by less skilled readers.

Further, analysis of the responses of skilled and less skilled readers relative to selected elements of the short story (e.g., setting, characterization, plot, and theme) should indicate added information regarding the ability of less skilled readers to extrapolate certain

literary understandings from a story. Written responses should be used since classroom work at the secondary level is predominantly written work. Such conclusions concerning the performance of less skilled readers which utilize written responses may be readily generalizable to situations where written responses are the norm.

The present study sought to compare whether the responses of less skilled readers when using adapted stories differ from their responses when using original stories. Specifically, information was sought concerning the effects which the use of adapted texts might have upon the written responses of less skilled readers.

Results of this study should have significance for instructional purposes. Potential areas of importance include: increased information concerning the benefit of using adapted stories and texts with less skilled readers; additional knowledge focusing on the ability of the less skilled reader in the areas of recall, inference, and supplementation; and further insights into the responses of less skilled readers to literary elements within adapted texts.

#### Assumptions

In proposing this study, the following assumptions have been made:

1. An adapted short story contains some of the characteristics of the original short story from which it was derived.
2. Silent reading is an appropriate vehicle for examining readers' understanding.

3. Subjects' written responses after reading a short story give insight into aspects of comprehension.
4. Clausal units are appropriate measures indicating frequency of ideas in written protocols.

#### Limitations

The study is subject to the following limitations:

1. The study is restricted to ninth graders in regular and laboratory English classes. Therefore results can be generalized only to similar populations.
2. Two versions of a short story will be utilized in the study. Hence, results can be generalized only to similar types of passages.
3. Since a single measure of comprehension, namely, written recall will be used, other measures of understanding may yield different results.
4. Since subjects will be asked to communicate their perceptions of important information in written form, writing ability may affect subjects' response to the task.
5. No comprehension measure represents any reader's total understanding.

#### Definition of Terms

To clarify their meanings as they will be used in this study, the following terms are defined:

1. Original Text--a text as it was written by the author, without alterations after its final completion and editing by the author.
2. Adapted Text--a published version of a story, not manipulated for research purposes; often intended for persons who are not fluent readers.
3. Skilled Readers--students in regular English classes who score at or above the 76th percentile on the California Achievement Test (CAT).
4. Less Skilled Readers--students in laboratory English classes who place at or below the 40th percentile on the California Achievement Test (CAT).
5. Clausal Unit--any independent, dependent, relative, or clearly implied clause; groups of words which contain a subject and finite verb, including any accompanying modifiers.
6. Protocol--the written response of a student to the story which has been read.
7. Important Information--information which the reader thinks is necessary to understand the story.

## CHAPTER 2

### REVIEW OF THE LITERATURE

Differences in the performance of skilled and less skilled readers are evident in virtually every phase of the reading process (Golinkoff, 1975-1976). Since original texts and stories are too difficult for many less skilled readers, adapted texts have been utilized in hopes of meeting the needs of less skilled readers.

The intent of this study is to compare the responses of skilled and less skilled readers to either an original or an adapted short story. The written protocols of the subjects will be analyzed for frequency of clausal units; for categorization of such units according to recall, inference, or supplementation; and for selected elements of the short story, namely, setting, characterization, plot, and theme. It is the purpose of this chapter to review literature which is relevant to the following areas:

1. Comprehension studies involving readers' recall of what they have read, and descriptions of various types of recall studies;
2. Studies concerning written response;
3. Comprehension studies focusing on the performance of skilled and less skilled readers;
4. Studies utilizing original and adapted texts;

5. Studies pertaining to clausal units and systems for categorizing reader response;
6. Studies dealing with elements of the short story.

Since students were required to use written recall as a response format, a review of literature was conducted concerning studies of recall in general, as well as studies of written recall. Skilled and less skilled readers who read either an original or an adapted short story formed the sample population for the study; hence, an examination of studies which made comparisons between skilled and less skilled readers, as well as original and adapted stories, has been pertinent. Lastly, because the protocols of students were segmented into clausal units, categorized according to recall, inference, and supplementation and classified for selected literary elements, a review of such literature has been appropriate.

#### Readers' Recall

Research into comprehension using recall has taken a variety of forms. Some studies have focused on the reader's free recall of information, other studies have focused on the reader's skills, such as reading for specific purposes or reading to answer certain questions, while still other studies have tried to examine the processes by which the reader understands what he has read.

In recall studies, researchers have traditionally tried to determine how faithfully a reader has adhered to a text. Studies of this type date back to Bartlett's (1932) analysis of adult subjects'

recall of prose at intervals up to several years. Bartlett observed a large proportion of inaccuracies in the recall data and found that subjects had added new information based on their own interests and knowledge base. Bartlett concluded that memory involves more than a revival of an earlier event but involves the reader's processing of information in light of his beliefs and understanding.

Studies of recall indicate that recall is never an accurate reproduction of the text. Such factors as time lapse between initial reading and recall or the type of directions given to subjects also affect the recall process. Recall becomes highly personal when a reader selects or adds elements for recall which seem important. The reader chooses certain information on the basis of personal experience and knowledge.

In trying to replicate Bartlett's study, Zangwill (1972) concluded that the reader notes elements of a passage in terms of importance and eliminates nonessential elements. In another study reported by Zangwill (1972), Gauld and Stephenson (1958) repeated a study of Bartlett but the researchers' instructions to avoid mistakes greatly reduced the number of errors made by readers in their recalls of text.

#### Introspective and Retrospective Studies

Introspective and retrospective studies allow researchers to analyze the processes which a reader uses when reading. In an introspective study, an approach may be used which requires the reader to relate his thoughts and feelings as he reads a story. The reader is

asked to stop and comment on his reading at various stages while reading a text (Squire, 1964).

In retrospective research the reader is asked to reflect upon his reading after a text has been read. In this approach the subject reads a selection, is shown a segment of the text which is then reread and, finally, responds to the text segment (Strang and Rogers, 1965). In some cases the reader may reply to questions related to the processing of information (Smith, 1967). The reader's comments include recall information, as well as feelings, reactions, and descriptions of how the text has been understood.

#### Protocol and Discourse Analysis Studies

Protocol analysis and discourse analysis enable researchers to study the comprehension process. Both of these procedures make use of recall. In protocol analysis a reader may be asked to recall or reconstruct a text after he has read the material or to think aloud after reading a certain amount of content (Olshavsky, 1976-1977; Farr, 1981). Olshavsky's procedure placed more emphasis on recall of the text than on personal feelings and reactions to a text, whereas Farr's procedure focused on both textual recall and reaction. Analysis of recall data allows the researcher to observe a reader's reliance on a text and to note the influence which background and experience have on the reader's reconstruction of a text.

Discourse analysis also involves the reader in recall after reading a text. The adherence of a reader to the propositional base of a text is generally measured. An index of completeness of recall is

usually obtained. A protocol gives evidence of a reader's recall of explicit and implicit information, organization of the content of a text, and indicates whether the reader has followed the organizational framework of the author (Weisberg, 1979).

Miscue analysis studies permit researchers to analyze the observable oral reading responses of readers. A miscue has been defined as any deviation from a text which a reader may make when reading orally (Goodman and Burke, 1972). In this approach a reader is asked to read a passage aloud and then give an oral retelling. The session is tape recorded and transcribed. The miscues of the reader are then analyzed according to phonemic, syntactic, and semantic information categories (Goodman, 1973). Analysis of the miscues which a reader makes allows a researcher to examine the process by which a reader tries to understand a written communication.

While introspective and discourse analysis studies require a reader to articulate thoughts or reactions as he reads a passage, miscue analysis actually requires the reader to read the text aloud. The retelling which follows the reading may then be compared to the text itself.

Since this study utilized a recall or retelling strategy, all types of studies which have used retellings have been of importance. Moreover, some studies which focus on reading for specific purposes and process methodology have provided insights which are especially important to this study.

### Written Response

Since written language was the mode of expression in the present study, a review of literature relative to written response is of importance. In attempting to articulate understanding, a person must make use of some expressive form of language. Although reading is a receptive process, expression is required to measure the comprehension of what has been read. In conveying what has been comprehended, the reader must organize a response; thus the attention of the reader may shift from comprehension per se to focus on the manner of response. The two primary vehicles for evaluating comprehension are oral or written responses. Written responses differ from oral responses in several ways.

Gibson and Levin (1975) have observed that writing is a meager system when compared to the richness of speech. A speaker has a range of sound patterns which are not available in writing. Markings, such as dashes and quotes, are attempts to convey pauses and emotion. Goodman (1973) has discussed the differences in oral and written language in terms of context. He notes that speakers may rely on the situational context to make referents explicit, whereas written language tends to be out of situational context. The writer must create a context through language and employ a degree of specificity which would be unnatural and, perhaps, unnecessary in speech. Smiley et al. (1977) noted that a writer must be able to convey a message that the reader, removed from him in time and space and unable to ask questions, can comprehend. Cayer and Sacks (1979) have distinguished between oral and written language in terms of the demand upon the writer for more

elaborated and syntactically complex language. Unlike speech, written language may be edited and it is enduring.

Two factors seem to affect the length and quality of written response. These factors are audience and mode of discourse. When students wrote for different audiences, Crowhurst and Piche (1979) found that syntactic complexity varied with audience. When students wrote for a teacher, their syntactic complexity was greater than when they wrote for a friend. Mode of discourse also affected the responses of the students in Crowhurst and Piche's study. The researchers found that more syntactic complexity, as indicated by T-units, occurred when students wrote on narrative material than on argumentative material. These findings contradicted findings from three other studies reported by Crowhurst (1979) who noted that when students from six different grade levels wrote expository arguments the syntactic complexity of their writing was greater than when they wrote narrative descriptions. Gordon et al. (1978) found that recall of a short story was greater than for definitional or instructional material. Conclusions from recalls for three types of text indicated that text type affected reader response. Other researchers have observed that skilled readers tend to recall more information than less skilled readers regardless of mode of response (Eamon, 1978-1979; Smiley et al., 1977).

Additional studies which have utilized written responses when students have read original and adapted texts have been noted elsewhere in this review (See Eamon, 1978-1979; Flood, 1979; Marshall and Glock, 1978-1979; Palmer et al., 1980; Smiley et al., 1977).

In written response there is a shift from focus on comprehension to focus on mode of expression which in some cases may affect the quality and quantity of a recall. In verbal communication, the speaker must provide basic information and may then add ideas, retract statements, use discussion or provide examples to clarify a message. In written communication, the writer must organize information so clearly that, in a sense, he anticipates all the possible questions which a reader might raise about a topic. However, written response tends to simulate the type of response which teachers require of students. Research into written response may have unique application to classroom situations in which written response is utilized.

Studies of written response have indicated that audience and mode of discourse affect response as noted by Crowhurst (1979), Crowhurst and Piche (1979), and Gordon et al. (1978). In general, studies utilizing written response favor the good reader over the poor reader just as studies using oral response favor the skilled reader. This seems to suggest that the less skilled reader may have difficulty not only in the reading process but also in expression of what he has comprehended.

#### Skilled and Less Skilled Readers

A comparison of the responses of skilled and less skilled readers has been of significance to this study. In making comparisons between these two groups of readers, researchers have analyzed a variety of factors. Research which focused on process-oriented studies and on units of comprehension were especially pertinent to this study. While

none of the process-oriented studies reviewed has pursued the specific questions addressed in this study, the results of studies of skilled and less skilled readers have provided useful insights. Studies comparing the unit which is read by skilled and less skilled readers have been crucial to the development of the current study.

#### Process-Oriented Studies

Several studies have utilized retrospection or introspection in comparing the responses of skilled and less skilled readers. These include studies by Smith (1967), Strang and Rogers (1965), Piekarcz (1956), and a study reported by Gray (1958).

A case study method, which utilized a structured interview and retrospection, was used by Smith (1967) to investigate the nature of responses of good and poor readers when reading for specific purposes. Twelfth grade students were asked to read for general impressions and to grasp details. Before reading, subjects were given written instructions which included the purpose for reading the selection, a guiding question, and a suggested method of reading. During two interviews on successive days, subjects answered questions about their reading for different purposes. Smith found that good and poor readers responded differently to questions of detail than they did to questions of general impressions. Good readers answered detail questions more successfully than poor readers, but when reading for general impressions, there was no difference in the performance of good and poor readers. Other findings in Smith's study indicated that poor readers were able to adjust to the prereading instruction to read for a specific purpose. This

finding has particular relevance to the present study since subjects will receive written instructions to read to note specific literary elements.

A retrospective study by Strang and Rogers (1965) examined individual differences in the interpretive responses of eleventh grade students of low, average, and high ability when reading a short story. The procedure involved an interview ten days after a short story had been read. The interview included three phases: an unstructured, open interview; specific questions; and reactions to selected paragraphs shown to students. High and low ability students differed significantly in their grasp of explicit and implicit meanings.

Strang and Rogers' use of specific questions was important to the present study since their questions were somewhat similar to the directions of the present study for recording certain literary elements. In Strang and Rogers' study, subjects were asked to note main ideas, main points, and reactions to characters in the story. Low-level readers were less competent than the higher readers in their responses to questions. The low-level readers had difficulty in grasping main story events and in remembering factual information.

A retrospective study by Piekarz (1956) compared responses of higher and lower level readers when reading on a topic of parent-child relationships. Subjects reread segments of the text, answered questions, and explained how they arrived at answers when the reasons were not obvious. Lower level readers limited their responses to literal meanings and gave only limited attention to implicit meanings.

In a later case study of two subjects, Piekarz found that the lower level reader did not read objectively; thus competency in interpretation was impaired. Piekarz observed that student responses may be affected by topic, and further, that students' comprehension may be affected by their emotional reaction to a text. The use of general interest short stories rather than content material dealing with social interaction may result in less subjective responses on the part of readers.

In an introspective study reported by Gray (1958), Swain analyzed the ability of college students to identify conscious thought processes involved in answering questions based on passages read. Results indicated that the response of the readers depended upon their level of competence. Poor readers focused most of their attention on word perception. Better readers focused on the analysis of language in identifying the author's meaning and on the restructuring of meanings in the light of purpose for reading.

Other studies of the responses of skilled and less skilled readers have utilized discourse analysis or protocol analysis. Studies using these types of methodologies have been reported by Palmer et al. (1980), Weisberg (1979), and Olshavsky (1976-1977).

In a study which examined the effects of passage difficulty on good and poor readers' use of author's schema, Palmer et al. (1980) compared the responses of high, average, and low ability eighth grade students. Subjects read two passages written at two different levels of difficulty. After reading each passage, subjects wrote all they

could recall. Propositional analysis of protocols gave a score which indicated whether subjects had followed the author's schema. Another score noted the percentage of text propositions that subjects had included in their written recalls.

Analysis of the first score assigned to protocols indicated that good readers used the authors' schema more than the poor readers. Analysis of the second score showed that subjects who followed the schema of the author recalled a significantly higher percentage of propositions than those who failed to follow the authors' schema.

Though their methods of analysis differ, the variables chosen by Palmer et al. (1980) are similar to those used in the present study. They compared the written recalls of good and poor readers when reading original and rewritten texts. However, the sample size selected by the researchers was small. There were ten subjects in both the high and average groups, and eight subjects in the low ability group. The researchers themselves advise caution in interpreting results because of sample size. Also, they do not indicate whether results of the study were affected by the order in which the passages were read.

A study by Weisberg (1979) utilized a discourse analysis approach to compare the responses of fourth grade good and poor readers when asked to read or listen to a short story and then recall the story. Subjects' oral retellings were then divided into semantic propositions and matched with propositions contained in the story. Differences between the responses of good and poor readers were significant whether the subjects had read or heard the story. Good readers tended to recall

basic idea units and seemed to use more cues to relationships than poor readers. For the good readers, the organization of the story seemed to aid recall of both explicit and implicit information. While Strang and Rogers (1965) also noted that good readers grasped explicit and implicit information better than poor readers, they did not relate such findings to story organization.

In another study, Bridge (1977) employed discourse analysis in comparing the inferences generated by third graders who were classed as good or poor readers. The students were directed to read a passage orally and were then requested to tell everything they could remember. Free recall was followed by probed recalls. Each retelling was analyzed according to Frederiksen's procedure of propositional analysis. Findings of the study showed that good readers recalled significantly more units of explicit information, generated more units of inferred information, and had longer total recalls. There was no significant difference in the relative proportion of inferred information to total information in the recalls of good readers compared to poor readers. Both groups of subjects had approximately 45 percent inferred information in their recalls but they differed in the type of inferred information they recalled. Poor readers tended to substitute general concepts for specific ones while good readers made more inferences which required causal information.

Olshavsky (1976-1977) used protocol analysis in evaluating student recalls. This type of analysis, borrowed from cognitive psychology, required a subject to think aloud as he solves a problem.

Olshavsky adopted this strategy in order to observe the reading strategies of skilled and less skilled tenth grade readers. Subjects were required to "think aloud" after reading each clause of a short story. Results supported the hypothesis that good readers employ strategies more frequently than poor readers. A strategy was defined as a purposeful means of comprehending an author's message. Olshavsky reported that protocol analysis was the best method for determining strategy usage. Yet her procedure, which required subjects to stop and comment after reading each independent clause, created an unnatural reading process. In a later report, Olshavsky (1978) observed that protocol analysis may possibly cause some interference with the reading process. However, Olshavsky assumed that the strategies which were employed by subjects in her study were similar to the strategies that readers employ when reading a text without interruption.

A study which utilized the free written responses of truly-fluent and not-so-fluent readers was reported by Marshall and Glock (1978-1979). The truly-fluent readers were from a university while the not-so-fluent readers were drawn from a nearby community college. Manipulated descriptive passages were used in the study. Results of the study indicated that the university students recalled significantly more semantic content and were not affected by the manipulation of text structure. The community college students recalled significantly less when information was not explicitly stated in the passages. The fluent readers were able to recreate the author's schema and use this schema in organizing their ideas into a cohesive entity.

Marshall and Glock recommended that replications of their study be done by using oral recall since writing ability might have accounted for much of the differences between the two populations. Oral recall might lessen the differences between the two groups of readers, yet in all likelihood, oral response would favor the fluent readers as Smith (1967), Strang and Rogers (1965), and Weisberg (1979) have observed.

A study conducted by Eamon (1978-1979) involved better and poorer readers in an introductory college class. Students read six paired paragraphs which had different themes on a similar topic. After reading each paragraph, one-half of the group was shown cue cards, one word per page, which were consistent with paragraph themes. The other half of the group was shown cue words which were not related to the theme of the paragraphs. Once cues were presented, subjects were directed to write down everything they could recall about the paragraphs. Subjects recalled more information about thematic concepts than about non-thematic concepts. Better readers were selective in their processing of thematic statements and their reading strategies reflected their abilities to identify and utilize differences in the types of information presented in prose.

A study conducted by Smiley et al. (1977) utilized written recall of good and poor seventh grade readers after listening to one passage and after reading another passage of the same type and difficulty level. The written protocols were then analyzed for number and level of idea units recalled. Results of the study indicated that good readers differed from poor readers in amount recalled and in their

sensitivity to levels of importance of idea units. The researchers concluded that poor readers suffer from a general comprehension deficit at the receptive level which may become apparent when either reading or listening is the mode of communication. However, Guthrie (1976) suggested that differences between good and poor readers exist regardless of mode of presentation.

In summary, regardless of the methodology used in their studies, researchers have found significant differences in the performance of skilled and less skilled readers. Studies cited in this section have shown that skilled and less skilled readers differ in their responses to detail questions and questions of explicit and implicit meanings, their processing of information, their abilities to make use of the author's schema and textual cues to relationships, their abilities to make use of strategies while reading, and in the amount of information which is recalled.

#### Original and Adapted Texts

Research concerning reader responses to original and adapted texts was relevant to the present study. However, few studies have been identified which make use of text adaptations.

Studies employing original and adapted texts have been reported by Flood (1979), Goodman (1976), Lantaff (1978), Mitchell, Bradley, and Ames (1981), Palmer et al. (1980), and Taylor (1980). A study which was previously cited compared reader responses to original and rewritten versions of two passages (Palmer et al., 1980).

In Palmer et al. two original passages were written at a college level and at a tenth or eleventh grade level of reading difficulty. Adaptations were rewritten at the eighth and fifth grade levels respectively, according to the Fry readability formula. Both the original and adapted versions of each text had several levels of hierarchically ordered propositions. The researchers sought an index of whether reader recalls followed the author's textual schema and the percentage of propositions recalled by subjects.

Results of the study indicated that when reading the difficult versions, high and middle ability eighth grade students used the authors' schema in 14 out of 20 protocols, while low ability students did not evidence such use at all. When reading the adapted versions of the texts, high ability students used the authors' schema in nine of ten protocols, middle ability students used it in six of ten cases, and low ability students used it in two of eight protocols. Thus, the simplification of the passages did not aid good or poor readers. The researchers noted that simplification of text resulted in difficult sentences being rewritten as two sentences, in the replacement of low frequency words with words of high frequency, and in the deletion of difficult vocabulary items. In discussing the fact that the text adaptations did not favorably affect responses, the researchers concluded that text difficulty results not only from syntactic complexity and vocabulary difficulty but also from students' interest and experience.

While the adaptations in the two texts are consistent with procedures in rewriting texts (Davison et al., 1980), the researchers did not comment on the fact that the adaptations resulted in significantly

shortened texts which were 26 percent and 17 percent shorter than the original passages. Mitchell et al. (1981) have raised the question whether adapted texts may be more difficult for readers than the original versions since the adaptations may contain less information. Readers may then have to make more inferences when reading shortened passages. Further analysis of the propositional data of Palmer et al. could provide some information relative to this question.

Lantaff (1978) compared the responses of graduate students to passages designed for fifth grade students and college students. A text rated as easy had a readability of fifth grade. A text which was rated as difficult had a readability of grade twelve or college level. Subjects were asked to recall text at three different times: immediately after reading, 48 hours later, and a week later. Analyses indicated significant differences in the amount of information recalled according to the reading levels of the texts and the immediate and delayed recall conditions. Subjects who read the fifth grade level text recalled more than subjects who read the college level text. Subjects also recalled more of the text immediately than they did after 48 hours.

While Lantaff did not use original and adapted texts but chose texts written at an easy and difficult level, the results of Lantaff's study regarding level of text are pertinent. All of Lantaff's subjects were graduate students, yet subjects who read the easier texts recalled more information. Since adapted texts are generally used by less able readers, Lantaff's findings may not be generalizable beyond his unique population. His findings also differ from the findings of Palmer et al.

(1980), who found no differences in subjects' responses to an original or an adapted text attributable to reading ability.

In a study involving groups of readers in eighth and tenth grade, Goodman (1976) did not use original and adapted stories but did use a story that even high ability tenth graders found difficult and then used a less complex story with the same students. A comprehending score was obtained which equaled the percent of semantically acceptable miscues added to the percent of semantically unacceptable miscues that were successfully corrected. High tenth graders had a mean score of 70 percent on the more difficult story, with a mean of 77 percent on the less complex story. Low ability tenth graders had an average of 43 percent for the difficult story and an average of 70 percent for the less difficult story. For both groups of students, the less complex story resulted in a greater comprehension score, but the increased mean score for the low ability group was significant. Goodman concluded that low ability readers were more likely to produce unacceptable grammar than proficient readers. Low ability readers were also less able to recognize when their miscues needed correction.

In discussing Flood and Lapp's comparison of fourth and seventh grade students and their teachers, Flood (1979) reported a study which used original and adapted texts. Subjects were each asked to read an original and an adapted text. The original text was written at the sixth grade level and the adapted version was written at a third grade level. Subjects' written protocols were marked for propositions as a basis for further analysis of inference generation. Frequency of

propositional recall of the sixth grade version of the text was not significantly different at either grade level for students and teachers. The total amount of propositions recalled by teachers increased by text version. The recall of fourth grade students decreased with the sixth grade version, whereas the recall of seventh graders and teachers increased with the sixth grade version of the story. Fourth and seventh grade students recalled more propositions than their teachers on the third grade version of the text. However, when the protocols were analyzed for inferences, results indicated that teachers generated more inferences than their students. Flood observed that a propositional scoring system could not adequately account for the most crucial differences in teacher and student recalls. It appears then that recall of information in a merely quantitative sense is inadequate for making comparisons of reader responses to original and adapted texts.

A discourse analytic study conducted by Taylor (1980) compared three groups of readers--sixth grade good readers, sixth grade poor readers, and fourth grade good readers. An expository passage written on two levels of difficulty was used in the study. A passage written on a sixth grade level contained more difficult words than an adaptation which was written on a fourth grade level. Difficult words were replaced by synonyms in the adapted passages. All students who recalled the top-level structure of the text recalled more than those who did not cue in to text organization. In addition, the researcher noted differences in recall ability of good and poor readers. When sixth grade poor readers read the adapted passage, they were able to recall as much

of the passage immediately after reading as the sixth grade good readers. After a delay of two days, the poor readers were not able to recall as much of the passage as the good readers. Findings of this study would seem to indicate that though poor readers may initially recall information from less complex passages, they do not retain the information as well as good readers.

A study by Mitchell et al. (1981) compared perceptions of seventh and eighth grade students relative to difficulty and preference after reading both an original and an adapted short story. Two short stories and three published adaptations were used in the study. For one story, both versions were written at a second grade level. The other original story was written at a sixth grade level, with one adaptation at second grade and the other adaptation at the fourth grade level. The choice of stories allowed comparison of responses to two versions written at the same level as well as comparison to versions written at different readability levels.

Subjects were asked to read an original and an adapted version of the same story. Order of presentation of the passages was controlled to eliminate the possibility of order effects. After reading, subjects were asked to respond to a Likert-type rating inventory which included items on story difficulty, story interest, and story preference.

Analysis of the data indicated that there was an order effect. The second story read received significantly higher ratings for both preference and interest items, regardless of story version. For difficulty items, five of six story conditions were rated significantly

easier when read second than when read first. It was also found that mean ratings on difficulty items reflected actual story version readability differences. Subjects favored the last story read regardless of which version was read last. Subjects did not indicate preference for the adapted version as was anticipated by their teachers. Order also affected subjects' ratings of difficulty level of the versions read. When an original story was read first, that version was rated as much more difficult than the adapted version. However, for two of three conditions, when the adapted version was read first, the original was then considered only slightly more difficult. The researchers concluded that perceived difficulty may be related to the degree of familiarity which students have with a story.

Research on reader response to original and adapted texts has produced varying data. Palmer et al. (1980) found that adapted passages did not aid poor readers. Lantaff (1978) found that graduate students who read an easy text recalled more than other graduate students who read a difficult text. Goodman (1976) found that less proficient readers tend to use less acceptable grammar and make fewer corrections than high ability readers. Flood (1979) reported that the adapted version of a text produced more recall data for fourth grade students but recall was of a literal type. Taylor (1980) found that poor readers did as well as good readers on immediate recall but were significantly lower than good readers on delayed recall. Finally, Mitchell et al. (1981) found that order of presentation rather than difficulty of text affected subjects' story preference and interest.

Clausal Units and Systems for  
Organization of Reader Response

In this study the responses of skilled and less skilled readers were analyzed for number of clausal units and for categorization of response according to recall, inference, and supplementation. For this reason, a review of literature pertaining to clausal units or units of analysis and systems for categorizing reader response was appropriate.

### Clausal Units

In examining syntactic complexity or syntactic maturity in oral or written responses, the clause has been a significant unit of analysis (Cayer and Sacks, 1979; Crowhurst and Piche, 1979; Hunt, 1970; and Witte and Davis, 1980). Research has indicated that syntactic complexity develops chronologically and varies with mode of discourse.

The office of National Assessment of Educational Progress has conducted three national assessments of writing with samples obtained from nine-, thirteen-, and seventeen-year-olds (Mullis and Mellon, 1980). These assessments have analyzed syntactic ability expressed in written discourse. The analysis has described aspects of writing which include syntax, cohesion, and mechanics. Syntactic analysis has followed the plan of Hunt, who divided sentences into independent clauses or "T-units." The "T-unit" or "minimal terminal unit" is defined as one main clause plus any subordinate clause or nonclausal structure that is attached or embedded in it (Hunt, 1970). Hunt's findings indicated that syntactic maturity is indicated by a writer's use of two strategies of syntactic sentence combining--embedding and conjoining (Mullis and Mellon, 1980).

The use of the sub-sentential clausal unit has advantages over utilization of the sentence both for comparison purposes and for further analyses of data. A sentence may contain several ideas expressed in independent and dependent clauses. If sentences are counted as the unit of analyses, differences in sentence complexity would not be apparent. Segmentation of protocols into clausal units takes into account the syntactic maturity of the writer who makes use of subordination.

Other researchers have used a variety of ways to determine acceptable units within written discourse. The phonological unit was adopted by Strickland (1962), while the "communication" unit was used by Loban (1963), and the acceptable pausal location was chosen by Johnson (1970) and Brown and Smiley (1977). Others made use of the proposition in determining the structure of prose (Meyer, 1975; Thorndyke, 1977). Semantic considerations were the basis for the information unit of Smith (1978) and the thought unit of Farr (1981). All of these units reflect the specific concern of each researcher.

Since the clausal unit is a basic structure in connected discourse, segmentation of written protocols into clausal units is a viable way to make comparisons between responses of skilled and less skilled readers. The clausal units can be identified and then classified into categories for further analyses.

#### Systems for Categorization of Reader Response

Systems for categorizing reader response to text have been devised to analyze a reader's understanding of a passage. Based on a unit of information such as a clause, protocols have been segmented and

classified according to categories which range from literal to interpretive.

Some researchers have used such systems to identify the strategies that a reader may use in retrospection or introspection (Farr, 1981; Olshavsky, 1976-1977; Smith, 1978). In protocol analysis, categorization of oral or written recall may be utilized to investigate readers' immediate responses to a story and the degree to which textual statements are recalled or paraphrased.

Ideas expressed in recalls may be further categorized according to inference when story information is not fully explicit and a reader must connect, understand, and retain information (Trabasso and Nicholas, 1977). Flood (1979) has noted two views on inference. One point of view considers inference to be a joining together of information explicitly stated in the text. Another view holds that inference involves the generation of meaning from information sources both internal and external to the text. This latter point of view considers the knowledge and experience base of the reader and the transaction which occurs between reader and text (Rosenblatt, 1978). According to Trabasso and Nicholas (1977), exact recall of material is an exception rather than the norm. Memory usually involves a transformation of the original material which is dependent upon the text, the reader, and the conditions surrounding recall and response. Frederiksen (1977) has observed that inference is required not only to produce coherent interpretation, but also to generate interpretations of discourse which are contextually appropriate. Furthermore, the nature of response, such as written expression, may require the generation of certain inference statements.

Since the reader brings to his reading a unique background, he may add information from prior experience. A category for supplemental information accounts for the inclusion of extra-textual ideas in recall data. In a study of reader response to differing text types, Fareed (1971) identified four types of readers. Two of the reader types are of importance here. One group of readers included passive receptive readers who confined their responses to ideas stated in the text. Another group were associative readers who included many associations from prior experience but few judgments in their responses. Fareed utilized content reading in his study; however, examination of recall data of narrative material may also identify categories of readers who respond to the text in a variety of ways.

In conclusion, a system can be devised to categorize written responses which are based on the text or which are an added dimension of the recall situation. Use of an appropriate system seems to be a viable way to make comparisons between skilled and less skilled readers when responding to original and adapted stories.

Protocol analytic studies may take several directions; the focus may be on reader recall, on adherence to the text, or on strategies employed by the reader. Regardless of focus, systems for classification of information are then devised by the researcher according to the purpose of the study and according to the type of response data available from the reader. The classification systems of Olshavsky (1976-1977) and Smith (1978) and Farr (1981) were useful to the present study. Olshavsky's system was developed to classify subjects' recall of text

and their descriptions of their "problem-solving techniques." Olshavsky (1976-1977, p. 668) noted the following categories and subcategories:

1. Word-related strategies
  - a. use of context to define a word
  - b. synonym substitution
  - c. stated failure to understand a word
2. Clause-related strategies
  - a. re-reading
  - b. inferences
  - c. addition of information
  - d. personal identification
  - e. hypothesis
  - f. stated failure to understand a clause
3. Use of information about the story

Olshavsky's use of the clause is particularly important since she required subjects to verbalize their understanding and processing of the text after reading each clause. Olshavsky seems to focus on understanding of words and clauses and use of information about the story. The third category is very broad and undefined.

Smith (1978, pp. 80-81) devised a system to categorize readers' recall statements. Her categories differed somewhat from Olshavsky's system. The categories and their subheadings are as follows:

1. Recall--statement deals with explicit text information
  - a. repetition of text
  - b. paraphrase of text
  - c. erroneous repetition or paraphrase
2. Inferences--statement based on text information
  - a. conclusions
  - b. generalizations
  - c. logical reasoning
  - d. statement summarizing
  - e. identification of key ideas or structure of the text
  - f. formulation of hypotheses
  - g. formulation of questions

3. Supplementation--statement relates outside the text
  - a. addition of information
  - b. association of text-explicit or inferred information with information outside text
  - c. evaluation of text, task or general subject matter
  - d. application of concepts or principles given explicitly or implicitly in the text or outside the text.

Smith's categories are based on subjects' literal and interpretive understanding of a text. A third category considers responses which go beyond the text.

Farr (1981, p. 123) constructed a system which examined the strategies which readers employ when processing narrative and expository materials. Her system focused heavily on the knowledge base and prior experience of the reader. The categories which were adopted by Farr are as follows:

1. Print-Oriented Strategies
  - a. re-reading
  - b. use of context to determine word meaning
  - c. use of other to determine word meaning (defined in passage, use or footnote)
  - d. use of graphics--pictures, headings, graphics
  - e. deliberation
  - f. picturing, imagining
2. Message-Oriented Explicit Strategies (based on text)
  - a. restatement of text
  - b. paraphrase of text
3. Message-Oriented Implicit Strategies (based on text)
  - a. making inferences based on text (interpreting, conjecturing, drawing conclusions)
  - b. engaging in logical thinking
  - c. examining alternatives
  - d. predicting
  - e. sorting out key ideas and making summary statements
4. Integrative-Evaluative Strategies (extending beyond text)
  - a. relating text information to prior experiences or knowledge outside text
  - b. critiquing text, text structure, task, or general subject matter
  - c. generalizing beyond text by making an application or evaluation to situations outside text

- d. adding information of a factual nature to text information
- e. indicating awareness of new learning
- f. making judgments in regard to text content
- g. experiencing anticipating (indicating desire to read ahead)

While the three systems have some similarities, Olshavsky's system required subjects to report what they were doing while reading at the clause level. Smith's system did not include such reporting. Olshavsky failed to include subheadings which would account for literal responses or extra-textual responses, as did Smith and Farr's systems. Farr included aspects of both Olshavsky's and Smith's systems in her approach.

The systems which Smith and Farr used seem appropriate to examine recall of texts of a literary nature. These systems are more applicable to recall data than Olshavsky's system because they consider explicit recall. However, all three systems indicate that reader response can be classified into units for analysis of ideas.

#### Elements of the Short Story

The short story is a relatively brief story which can usually be read at one sitting. As such, it has appeal for the teacher and the researcher. The short story has several elements which may be evaluated by students (Freier and Lazarus, 1962; Peltzie, 1966; Rodrigues and Badaczewski, 1978). These elements include such areas as setting, characterization, plot, and theme. Appreciation of a short story may be enhanced by awareness of the elements of the short story.

The elements of setting, characterization, and plot are generally well known to the reader. Theme, when considered as an element

of the short story, differs from the term as used by Eamon (1978-1979) which is often used synonymously with focus, topic, or subject of discourse. Eamon defined theme as the concept in a discourse which occurs in the greatest number of proposition and identity constituents. Theme in a literary work takes on a different meaning. Freier and Lazarus (1962) defined theme as an idea around which a story may be built. A theme may be either explicitly stated or may be implied. In this study, theme refers to what the story means to the reader, or what the story may indicate to the reader about life.

The short story is a narrative which has certain features, such as brevity and compactness of plot, which makes it meaningful to students. Researchers have observed that children best remember material which is meaningful. The form or structure of a story is familiar, even to very young children.

In their concern for the way in which readers process information, researchers have begun to analyze the organization and structure of narrative discourse. Recent research on narratives have provided information about the format of stories. Mandler and Johnson (1977), Thorndyke (1977), and Trabasso and Nicholas (1977) have used the terms "story grammar" or "story schema" to refer to the internal representation of the structure of a story and the interrelationships of story parts. The young reader already has a certain set of expectations when he reads or listens to a story. The reader develops an internal representation of story structure to guide comprehension during encoding and as a means to recall (Mandler and Johnson, 1977).

Story structure, according to Guthrie (1977, p. 577) has multiple components. "Comprehension of a story is not comprehension of haphazard facts or a main idea, but is comprehension of the story structure. That is to say, it is comprehension of the setting, theme, plot and resolution, their components, and their relationships."

Story schemata are constructed from two sources, according to Mandler and Johnson (1977). One source comes from familiarity with stories which enables one to acquire a sense of story sequencing as well as how a story begins and ends. Another source arises out of one's knowledge of the world and awareness of causal relations and action sequences. A story schema provides the reader with a framework to organize comprehension. This framework allows the reader to focus on certain aspects of material while keeping track of preceding information. The framework finally signals to the reader that a certain segment of a story is complete and can be held or stored.

There is no one story structure; story structure may have many components. As a person begins to read a selection, the initial action triggers within the reader certain schemata which enable the reader to make predictions and add various components to the initial framework he perceives. The schemata become an organizing framework which allow the reader to make sense of the material to be read. A story schema affects both the retention and the recall of story data since it provides an organizational structure for story specific information.

In summarizing the work of several researchers, Trabasso and Nicholas (1977) have observed that recall of stories is ordered in a

certain manner regardless of the age of the reader or the format of the story. The order of recall from best remembered to least well recalled is: major settings, direct consequences, initiating events, attempts, reactions, minor settings, and internal responses.

In guided recall, or when probe questions are used, children tend to recall information which is less well remembered in a free recall situation. In a comprehensive review of studies of response to literature, Applebee (1977) found free response, directed written response, or selected questions to be the characteristic modes of response.

Probe questions are used in some cases after free recall is terminated. Probes are used to target contextual information not included in the free recall. In other situations, directions to guide recall, especially written recall, may be provided. The directions often assume the nature of an advanced organizer in providing a framework for response. Since a reader may have many schemata for stories, possibilities for retrieval are vast. A directed recall narrows the range of possibilities for recall which might be chosen and may allow the reader to focus on selected aspects of a story. A directed recall format has certain advantages over free recall since a focus on certain elements of a story may elicit in-depth information.

Research studies which have utilized short stories have found wide differences in the responses of skilled and less skilled readers. Researchers have observed that less skilled readers fail to note the influence of character upon plot, have failed to grasp plot sequence, or have not understood theme statements.

Several studies which have been previously cited have made reference to reader response to elements of a story. Strang and Rogers (1965) found that low level readers were less aware of clues to setting than were high level readers and were less able to understand symbolism, simile, and metaphor. In understanding characterization, Smith (1967) found that good readers when reading for details associated terms with characters, thus distinguishing role and purpose in the story. Strang and Rogers (1965) found that low level readers missed finer points of characterization although they did remember attitudes of characters and reported more sensory impressions than high level readers. Strang and Rogers also reported that low level readers often failed to grasp main story events while high level readers placed ideas in a chronological order.

In understanding the element of theme, Weisberg (1979) found that good readers were significantly better in understanding logical relationships than poor readers. She concluded that this finding may reflect good readers' use of story themes. Strang and Rogers (1965) found that most low level readers missed the theme of the story, yet the researchers noted that both high and low level readers tended to confuse theme with moral.

In investigating ninth grade students' responses to four short stories, Squire (1964) found that there were several sources of difficulty among his readers. Two of these are relevant to the present topic. Squire found that subjects failed to grasp the obvious meanings of the author and were sidetracked by irrelevant associations. These

difficulties may be linked to weak vocabulary and comprehension skills, as well as an inability to control unrelated personal associations. Such difficulties may result in fragmented understanding of elements of the short story.

In comparing narrational responses of the five most able and the five least able readers, Squire found that high percentages of factual restatements of the narrative were made by the less able readers; that is, the less able readers tended to repeat story elements in an attempt to clarify meaning.

In a massive study conducted in ten countries, Purves, Foshay, and Hansson (1973) used questionnaires, scales, checklists, and multiple-choice tests to collect information concerning reader response to literature. Subjects were between the ages of 14 and 18. Purves et al. found that the ability to comprehend and interpret short stories was closely related to reading ability and was less the result of school instruction in literature than it was the result of a favorable home and school environment.

Studies pertinent to elements of the short story have been useful to the present study. The element of theme, from a literary standpoint, was clarified. Research relative to story grammar was cited since story structure influences retrieval and recall. The mode of recall has provided insight into the value of directed recall as utilized in the present study.

The studies of literary response of skilled and less skilled readers were based on original texts only. In some cases, the texts or stories may have been too difficult for the less skilled readers.

While findings from these studies provide insight into the differences in quality of literary response of skilled and less skilled readers, questions may be raised about appropriateness of the texts. It may be questionable whether less skilled readers have the same type of problems when they are reading texts or stories which are written at an easier level of readability.

### Summary

In this chapter, studies have been reviewed which have been important to the development of the present study. A brief summary of topics investigated is as follows:

A review of recall studies and methodologies provided background concerning the variety of systems by which recall and comprehension has been assessed. Results of these studies show wide differences in the responses of skilled and less skilled readers. Studies of written recall have indicated that the added dimension of written expression may affect nature of reader response.

Studies which have compared reader response when using original and adapted stories or texts have generally supported the assumptions that adapted texts allow for greater recall. However, conclusive evidence is lacking because such studies have utilized only skilled readers or the direction of their analyses was in terms of inference-generation or reader preference.

Studies which have developed systems for categorizing recall units were also reviewed. Such categorization systems provide meaningful ways to compare reader responses.

Lastly, studies have compared the literary responses of skilled and less skilled readers. The understanding of literary elements is important to interpretation and appreciation of the short story.

## CHAPTER 3

### DESIGN OF THE STUDY

The purpose of this chapter is to describe the (1) sample population, (2) instruments used in the study, (3) formation of the scoring guides, (4) procedures in gathering the data, (5) procedures in scoring the protocols, (6) procedures in ascertaining reliability of the scoring guides, (7) analyses of the data, and (8) summary.

#### Description of the Sample Population

Students in ninth grade classes at a high school in Tucson, Arizona were selected for the sample population. Students in three classes in a regular English program (N = 94) and students in two classes in a laboratory English program (N = 60) comprised the total population from which subjects were selected for the study. By definition, students in the regular ninth grade English classes scored at or above the seventh grade level on the ZIP Test (Cramer and Dorsey, 1970), a test of verbal opposites. Students in the ninth grade laboratory English classes scored below the seventh grade level on the ZIP Test.

Subjects for this study were drawn from the regular and laboratory English classes on the basis of percentile scores obtained by all students on the California Achievement Test (CAT) (1977), administered in April, 1981. Those 40 students in the regular English classes who had the highest percentile scores constituted the skilled reader

population. Those 40 students in the laboratory English classes who had the lowest percentile scores comprised the less skilled reader population.

### Description of the Instruments

The instruments used in the study included the following: (1) the target passages, (2) three response forms which provided directions to students, and (3) teacher classification of elements of the short story.

#### The Target Passages

The passages read in this study were two short stories entitled "Feathered Friend" and "Space Pet." "Feathered Friend" was written by A. C. Clarke and published in The Other Side of the Sky by Harcourt, Brace and World in 1958. "Space Pet," an adaptation of Clarke's story was published by Macmillan in a basal reader entitled The Magic Word in 1966. (See Appendices A and B.)

The readability level of each passage was determined by using the Fry Readability Formula (Fry, 1977) in repeated measures. The original story, "Feathered Friend," contained 1,310 words and had a readability range of fifth to eleventh grade, with an average readability of eighth grade. The adapted story, "Space Pet," with 740 words, had a readability range of third to sixth grade, and the passage had an average readability of fourth grade.

These short stories were selected for use because they are representative of the types and length of short stories used in English

classes. In ninth grade regular English classes, the short story, with length and difficulty level similar to "Feathered Friend" is common, while condensed versions of stories are often used in laboratory English classes.

#### Response Forms: Directions to Students

Several forms were utilized in gathering the subject responses to be analyzed in the study.

The Initial Oral Directions to Students form was developed to provide subjects with a statement concerning the researcher's purpose in conducting the study. These directions were read to students at the beginning of the session (see Appendix C).

The second form, which each subject received, provided the students with specific details about the written responses which were required after either the original or the adapted short story was read (see Appendix D).

As stated on this form, students were asked to read and then write all the important information that they could recall from the story. Recall is a procedure which is frequently used in research studies. The use of recall eliminates the possibility that subjects will merely copy material if they have access to a text while writing.

In order to clarify the writing assignment, subjects were asked to include all of the important information that was necessary to understand the story. In order to increase the possibility of a well-formulated recall, subjects were directed to write as if telling the story to someone who had never heard it. The intention of these

directions was to aid subjects in determining the format and scope of their written responses.

English teachers at the secondary level often require written reports such as book reports or character sketches, after students have read an essay, a short story, or novel. However, free recall is generally not a typical form of student response assigned by teachers. Therefore, in their writing of important information, subjects were asked to include elements which are considered as basic to the short story in general, and to the two stories used in this study. These elements include four areas: setting, characterization, plot, and theme.

These elements of the short story were chosen for three reasons: (1) an examination of texts and essays dealing with the short story showed that these elements are frequently discussed; (2) English teachers who were consulted concerning their reactions to the basic elements of the short story felt that these elements were important; and (3) the researcher studied the stories utilized in the study and found that these elements are addressed in both story versions. The explanation of each of the elements found in the Cover Sheet was made on the basis of consultation with several English teachers at the school where the study was conducted.

The third form, Final Oral Directions to Students, was written to provide subjects with additional information about the task (see Appendix E). Since subjects read differently when they realize that they will be expected to recall information (Bridge, 1977), subjects

were told that the copy of the story would be collected once it had been read. Subjects were instructed that they should not be concerned about spelling and punctuation, since attention to these aspects of writing might affect quality and length of their written responses. Lastly, students were advised that they would have as much time as needed to read and write about the story.

#### Teacher Classification of Elements of the Short Story

A group of ten high school English teachers, from the high school in which the study was conducted, participated in the formation of the instruments for the final scoring of the student protocols. Separate scoring instruments were developed for evaluating the responses of students who read the original text and those who read the adapted story since the stories differ in length and information. Each of the instruments addressed the categories of (1) setting, (2) characterization, (3) plot, and (4) theme. Three teachers of regular English classes and two teachers of laboratory English classes were asked to form the instrument used to evaluate subjects' understanding of the original short story. Three teachers of laboratory English classes and two teachers of regular English classes were asked to participate in forming the instrument used in evaluating students' understanding of the adapted short story.

English teachers from the target school were asked to participate in forming the scoring instruments since they were familiar with the requirements of the regular and/or laboratory English classes.

These teachers all presented the genre of the short story in their classes whether they were teaching skilled or less skilled readers. On the basis of their classroom instruction, these teachers were able to determine what they might expect from students regarding elements of the short story. Teachers were given a packet containing Directions for Teachers (see Appendix F) and a copy of the target story.

To guide their responses, the teachers were also given copies of the directions which subjects would receive before reading the passage (see Appendices C, D, and E). The teachers were asked to first read either the original or the adapted short story, and then list the important information they would expect students to gain in each of the four categories.

The teachers had access to the story when they responded to each of the categories, since this is a natural procedure which teachers utilize when constructing student evaluation forms. Two scoring guides to evaluate subject protocols were constructed by the researcher from the teacher responses.

Criteria for including responses in the scoring instrument were established by consensus of the five teachers who participated in the listing of important ideas for each of the four categories. If three out of five teachers included the same information in their list of important ideas, that item was included in the instrument for scoring subjects' protocols. Thus, two scoring instruments were developed, one for each story. Each instrument addressed each of the four categories of story elements.

### Formation of Scoring Guides

Three types of scoring guides were used in the study. The Scoring Guide for Clausal Units involved the identification of clausal units contained in each subject's protocol (see Appendix G). The Scoring Guide for Categorization of Clausal Units outlined the classification of clausal units into three categories of response: recall, inference, and supplementation (see Appendix H). Definitions and examples of each category were also developed to aid categorization decisions (see Appendix I). The third form, Scoring Guide for Elements of the Short Story, covering selected short story elements, was developed from responses of English teachers who were asked to indicate the information relative to setting, characterization, plot, and theme which they would expect students to gain from an original or an adapted version of the short story. Two forms, one for the original story and one for the adapted story, were used in analyzing subjects' protocols (see Appendices J and K).

#### Formation of Scoring Guide: Clausal Unit

A scoring guide was developed for the identification of clausal units in each student protocol. This instrument provided information pertinent to the clausal unit and examples of the ways in which specific syntactic constructions could be divided according to clausal units. Sample statements were drawn from protocols obtained in the actual study (see Appendix G).

The clausal unit was used in this study for two reasons: (1) it provided an index for comparison of the written responses of skilled

and less skilled readers; and (2) it permitted the segmentation of written protocols into units for further analysis.

For this study, the clausal unit was defined as a group of words which contained a subject and predicate, including any accompanying modifiers. Independent, dependent, and clearly implied clauses were considered as clausal units. Following Hunt's (1970) criterion for determining clausal status, each clausal unit contained a subject and a finite verb form. Using another procedure which Hunt (1970) adopted, partial statements which occurred between a capital letter and a terminal marker were also counted as clausal units. Other statements which lacked sentence-like features were not counted as clausal units but were joined to the preceding unit. The clausal unit was considered as a surface unit of analysis. The procedure which was used in segmenting a protocol into clausal units involved placing a slash mark (/) at the termination of each clausal unit.

Examples of clausal units which were given in the Scoring Guide (see Appendix G) illustrated the manner in which independent and dependent clauses were segmented. A simple sentence which consisted of one independent clause formed one clausal unit. An example of this type was the following statement: "One morning everyone had trouble getting up."

Compound sentences which consisted of two independent clauses joined by a conjunction formed two clausal units. An example of this type was the following statement: "They gave it oxygen / and the canary came around."

Other sentences consisted of an independent clause and one or more dependent clauses. Examples of these patterns included: "There

was no rule / that said / pets were not allowed in a space station;" and "Claribel was a delightful creature / who adapted to her space surroundings very well."

Cases of clearly implied clauses were common to a large number of protocols. Examples of the most common forms were: "There was a man / called Sven Olsen;" and "Sven had a canary / named Claribel / whom he smuggled into the space station from earth." In both cases, the second group of words was considered a clausal unit since a partial predicate was given while the subject and copula were implied.

In two instances, responses were written in a list manner which indicated that clausal units were implied. The following example was drawn from one of the two protocols: "Sven Olsen: a wiry Nordic / who brought Claribel on board the space station / and found the bird almost dead." The colon seemed to replace the copulative verb; thus, the unit "Sven Olsen: a wiry Nordic . . ." was counted as one clausal unit. This pattern was used when characters and their roles in the story were being discussed.

Incomplete statements which were written in sentence form with capitalization and a terminal marker were considered as separate clauses. Such statements included the following: "(The story took place in the future). Up in space." The latter phrase was counted as a separate clausal unit.

In statements which contained appositives, the clause which was separated by a dependent clause in apposition was counted as one unit. The statement in apposition was considered a clausal unit if it was a

dependent clause or a clearly implied clause, as noted above. In marking the clausal unit, an arrow was used to indicate the dependent clause surrounding the statement in apposition. The following example was used in the Scoring Guide:

"The narrator of the story / a man who was in charge of  
inventory / noticed that / the bird adjusted well."

The two statements "The narrator of the story" and "noticed that" were counted together as forming one clausal unit.

The division of protocols into clausal units ensured a consistent procedure which allowed for further categorization of units into recall, inference, and supplementation.

#### Formation of Scoring Guide: Categorization of Clausal Units

A scoring form was developed for the categorization of clausal units contained in subjects' protocols once the clause units had been noted. The clausal units were then categorized under one of three headings: recall, inference, and supplementation. Each heading contained several subheadings (see Appendix H). In order to facilitate categorization of the clausal units, a form was developed which provided definitions and examples of each area in the three categories. Examples were drawn from subjects' protocols (see Appendix I).

The categorization system was an adaptation of Sharon Smith's (1978) system for classifying student responses (see Chapter 2). Smith used her system to analyze student responses to content area material. The present study examined student responses to short story material.

Since students may respond to expository material in a different manner than they respond to literature (Gibson and Levin, 1975), some changes in Smith's format were required.

In this study of responses to an original or an adapted short story, the main headings of recall, inference, and supplementation defined by Sharon Smith were retained, while subheadings within these categories were adapted after analysis of protocols. The three categories required different types of reader response to text. The following definitions and explanation of the three categories served to illustrate these differences.

(1) Recall involved literal adherence to information as it appeared in the text. The recall category included subheadings of repetition/paraphrase and erroneous repetition or paraphrase. In Sharon Smith's system, repetition and paraphrase were separate subheadings.

(2) Inference referred to information implied in the text or the inclusion of added reasoning which is triggered by statements in the text. Subheadings in this category differed from Sharon Smith's terms in several ways. The subheading of interpretation was added to this category since story analysis indicated a need for this type of response. This subheading, using terms from Farr (1981), combined the notion of reasoning without tentativeness with the possibility of reasoning with some tentativeness. Statements indicating tentative reasoning included qualifiers, such as "I think." Smith's study, which was done in Social Studies, did not include this subheading; however,

there seemed to be a need for it in dealing with responses to the short story as indicated by Squire (1964). In a study of response to short stories, Squire found that a high percentage of responses were interpretational. Others, noted by Squire, including Taba (1955) and Wilson (1962) indicated the need for including the category of interpretation when analyzing responses to literature.

The next three subheadings in the inference category, key ideas, conclusions, and generalizations, were taken from Smith's system. Smith's subheading of summarization was joined to key ideas since there seemed to be some overlap between the two areas. The subheading of logical reasoning was omitted from the system since student protocols indicated only a few items which fit that category while they also fit either the interpretation or conclusion subheading. Smith's final subheadings of formulation of hypotheses and formulation of questions were omitted from the system as student protocols did not include examples of either type of statement.

(3) The area of supplementation referred to the addition of information from sources beyond the text or from personal evaluation. Three of Smith's subheadings, which included addition of information, association of information with information outside the text and application of concepts were replaced by one subheading of personal comment. This subheading included comments on story format, style, genre of the short story, comments based on past experience, or other comments which were made by students in rendering the written retelling. The subheading of evaluation, as used by Smith, was the final subheading in this

category. Evaluation consisted of statements which critiqued the story or some aspect of the story.

In summary, Smith's system for categorization of information units was modified in order to reflect responses to short story material. When subheadings seemed to be redundant or seemed to overlap, they were combined. When new subheadings were required on the basis of protocol data, they were added to the appropriate categories.

#### Formation of Scoring Guides: Elements of the Short Story

A scoring form noting selected elements of the original and adapted short stories was developed from the teacher classification of elements of the short story. The elements of the short story included setting, characterization, plot, and theme. Five teachers classified elements of the original short story, and five teachers categorized elements of the adapted short story. A scoring form was developed for each short story.

In forming each scoring guide, the responses of each teacher relative to each category were written on individual sheets of paper. The responses were sorted and all similar responses for each category were grouped together. Similar responses by at least three of the five teachers were placed on the scoring form. Responses which did not have agreement of at least three teachers were set aside. Variations in syntactic format, or the use of synonymous terms were also noted if they occurred in the teacher responses (see Appendices J and K).

The scoring forms contained the semantic elements or key ideas pertaining to each category of setting, characterization, plot, and

theme. However, it was understood that the semantic unit might be expressed in many ways in the subjects' protocols. In constructing the scoring guide, it was not expected that students would necessarily express an idea in exactly the same format as it appeared on the scoring form.

If an idea was contained in both the original and adapted story but was only recorded by teachers evaluating one type of story, that idea was placed on the scoring format for both the original and adapted short stories. This procedure ensured that comparisons might be made between responses to each type of short story.

Differences were noted in the ways teachers responding to both types of stories responded to the four elements of setting, characterization, plot, and theme. Specifically, teachers who responded to one type of story included elements not cited by teachers who examined the other story. The following examples indicate where these differences occurred.

Three teachers who read the adapted short story, "Space Pet," included two characters, Jock Duncan and Jim, in their lists of characters. Teachers who read the original story, "Feathered Friend," did not include these characters in their lists. In the elements of plot, three teachers in each group were in agreement in all plot statements except in one area. Those teachers who read the adapted story included a summary statement: "Claribel saved the lives of the crew," while the statement was not found in the plot lists of teachers who read the original short story. Teachers who read the original short story did

not evidence a need to actually write this statement, but their progression of comments indicated that the idea was inferred.

In the category of theme, three teachers who read the adapted short story included an item which was not noted by teachers who read the original short story. The idea that "Old fashioned things are needed along with modern devices," was expressed by three teachers who critiqued the adapted story.

In the category of setting, teachers who read each short story were in complete agreement as to statements relative to setting.

In the areas of setting, plot, and characterization, the teachers expected students to include several ideas pertinent to each element. However, in the category of theme, teachers expected students to formulate only one theme statement since this is typical of classroom procedure when reading and then writing about a short story.

In order to account for the differences between teacher responses to the elements of characterization, plot, and theme, as noted above, a decision was made to list items on each form when they were included by at least three teachers who had read either story type if the idea was contained in both story forms. This decision allowed for comparisons between student responses to each type of short story.

#### Procedures for Gathering the Data

Ninth grade students in intact classes were asked to participate in the study. Subjects were randomly assigned to read either an original or an adapted short story. Following the reading, subjects were asked to write a recall of the important information contained in the

story. In their writing, subjects were specifically directed to include statements pertaining to setting, characterization, plot, and theme.

In preparation for the gathering of data in each class, oral directions were given to the students (see Appendix C). Next, each student received a packet containing a cover paper with written directions, a copy of either the original or the adapted short story, and three sheets of blank paper. The two versions of the short story, original and adapted, were placed alternately in one pile beforehand, and were randomly distributed to the students. After they received their packets, students were asked to follow along as the directions on the cover sheet were read aloud by the researcher (see Appendix D). Further procedural directions were given orally before the students began reading (see Appendix E).

All students who were in five classes participated in the study. However, in the regular English classes, only those students who scored at or above the 76th percentile on the California Achievement Test (CAT) were selected for the sample of skilled readers. Likewise, in the laboratory English classes, only those students who placed at or below the 40th percentile on the California Achievement Test (CAT) were selected for the sample of less skilled readers. Data obtained from students with percentile scores between the 41st and 75th percentiles were not analyzed for this study.

Table 1 describes the various treatment groups for both the regular and laboratory English classes.

Table 1. Description of treatment groups

|                | Less Skilled<br>Reader | Skilled<br>Reader |
|----------------|------------------------|-------------------|
| Original story | N = 21                 | N = 19            |
| Adapted story  | N = 19                 | N = 21            |

#### Procedures in Scoring the Protocols

Scoring of the data was divided into three phases. The first phase focused on the identification of clausal units within protocols. The second phase involved the classification of clausal units into one of three categories: recall, inference, or supplementation. The final phase in scoring the data required the identification of specific elements of the short story, namely, setting, characterization, plot, and theme.

#### Scoring of Clausal Units

In preparation for scoring the data, the written protocol of each subject was copied and used for scoring. The first phase of scoring the data involved the identification of clausal units within protocols. Each protocol was read and segmented into clausal units by placing a slash mark at the end of each unit. The units were counted and the total number of units within each protocol were recorded on Subject Scoring Form I (see Appendix L).

### Categorization of Clausal Units

After the clausal units were segmented, each unit was designated according to one of three possible categories: recall, inference, or supplementation, and then assigned to a subheading within a given category. For example, if a clausal unit was classed as a generalization in the inference category, it was labelled 2-d, since that was the designation for that subheading in the Scoring Guide for Categorization of Clausal Units (see Appendix H). The number of responses in each category was recorded on a separate scoring form for each subject (see Subject Scoring Form 1, Appendix L).

### Classification of Selected Elements of the Short Story

Further scoring of the data involved checking off statement units which pertained to selected elements of the short story, such as setting, characterization, plot, and theme. Each statement which was classed as an element was designated with an initial letter which referred to the element. For example, a statement which was designated as pertaining to setting of the story was marked with the letter S. Characterization was marked with a C, plot units with the letter P, and theme statements with a T. Ideas under each heading were marked with an appropriate number. Thus, a response which corresponded to plot idea number 5 on the teacher-formed instrument was labelled P5. The number of elements in each category was recorded on a separate scoring form for each subject, Subject Scoring Form 2 (see Appendix M).

In scoring the protocols for information classified according to the four categories noted above, the data drawn from subjects'

protocols were scored in terms of frequency of items in each category as related to the teacher scoring instrument (see Appendices J and K). The following table may clarify the scoring procedure (see Table 2).

In summary, the record of number of clausal units and assignment of units to the categories of recall, inference, or supplementation were noted on one scoring form (see Appendix L). The assignment of statements to selected categories relative to setting, characterization, plot and theme were recorded on a separate scoring form (see Appendix M).

#### Procedures in Ascertaining Reliability of the Scoring Guides

Three pairs of raters participated in determining the reliability of the three measures used to classify the written responses. The three areas included: (1) the identification of clausal units; (2) the assignment of clausal units to one of three categories of response, namely, recall, inference, or supplementation; and (3) the designation of short story elements of setting, characterization, plot, and theme.

##### Identification of Clausal Units

Two graduate students were each asked to determine the reliability of the researcher's identification of clausal units in student protocols. The raters each designated the clausal units in six protocols. The researcher drew five protocols from student responses to the original short story and five from student responses to the adapted short story. Copies of the first protocol drawn from each type of

Table 2. Scoring procedure

| Subject | Element          | Story    | Number of Elements<br>on Teacher Scoring<br>Instrument | Number of Responses<br>Subject<br>Protocol |
|---------|------------------|----------|--|--|
| #1      | Characterization | Original | 19   | 13   |
| #26     | Plot             | Adapted  | 10   | 3  |

story, e.g., one protocol based on the original short story and one based on the adapted short story, were given to each rater. The other eight protocols were randomly given to each rater so that each rater received two protocols of the original short story and two protocols of the adapted short story.

A practice session was held in order that written instructions and practice in noting the clausal units might be given. Each rater was given a copy of Scoring Guide for Clausal Units (Appendix G). The Scoring Guide contained examples from protocols other than those selected for the reliability check of information units. After the raters had read the instructions, they marked the clausal units within a paragraph (see Appendix N). If questions arose in deciding units, they were discussed and resolved by the researcher and raters at this time. The raters then worked independently and marked the clausal units in the packet of protocols which they had received.

Agreement between raters for the two protocols which were reviewed by both raters relative to clausal units was determined. Agreement between raters and the researcher for the other eight protocols was also determined. Agreement between raters and between raters and research was noted according to the following formula (Bridge, 1977):

$$\frac{\# \text{ of agreements}}{\# \text{ of agreements} + \# \text{ of disagreements}}$$

Agreement in designating the clausal units for the two protocols which were reviewed by both raters was 95 and 97 percent, respectively, between Rater A and Rater B. Agreement with the researcher was 95 percent for both protocols for Rater A and 95 and 100 percent for Rater B.

For the four protocols which were examined individually, agreement with the researcher ranged from 91-100 percent for Rater A and 91-100 percent for Rater B. Total agreement between the researcher and both Raters A and B was 97 percent. These levels of agreement compared favorably with other studies in which designated units of analyses have been independently rated (Fareed, 1971; Farr, 1981).

#### Identification of Categories of Response

Two other graduate students were asked to determine the reliability of the researcher's judgment in assigning clausal units within six protocols to one of three categories of response: recall, inference, or supplementation. Two protocols were reviewed by both raters and the other four protocols differed for each rater. Copies of the first protocol drawn from each type of story, e.g., one protocol based on the original short story and one based on the adapted short story, were given to each rater. The other eight protocols were randomly given to each rater so that each rater received two protocols of the original short story and two protocols of the adapted short story.

At a practice session each rater was given a copy of the Scoring Form--Categorization of Clausal Units (Appendix H) and a copy of Definitions and Examples drawn from subjects' protocols other than

those selected for this phase in determining reliability of categories (Appendix I).

The raters practiced assigning clausal units from a sample protocol to the appropriate categories of recall, inference, or supplementation (see Appendix O). As difficulties were encountered, they were discussed and resolved at that time. It was necessary to discuss the category of supplementation as contrasted to the category of inference in regard to time of setting of the two stories. One rater thought that a statement pertinent to setting should be classed under supplementation since one needed information from outside the story in order to determine time of setting. This was resolved through discussion of supplementation as the actual addition of information from other sources. After the discussion, the raters worked independently in categorizing responses of protocols within the packets they received.

Agreement between raters for the two protocols reviewed by both raters was determined. Agreement between raters and the researcher for the other eight protocols was likewise determined. Agreement was noted according to the formula cited under identification of clausal units:

$$\frac{\# \text{ of agreements}}{\# \text{ of agreements} + \# \text{ of disagreements}}$$

Agreement between raters in categorizing clausal units for the two protocols which were reviewed by both raters was 90 and 94 percent between Rater C and Rater D. Agreement with the researcher was 94 and 96 percent for Rater C. Agreement between the researcher and Rater D was 88 and 93 percent.

Agreement between the researcher and Rater C for the four protocols which were examined separately ranged from 86-100 percent. Agreement between the researcher and Rater D ranged from 88-95 percent. Total agreement between the researcher and Rater C was 95 percent. Total agreement between the researcher and Rater D was 91 percent. This level of agreement compared favorably with other studies which have required categorization of information (Fareed, 1971; Farr, 1981; Smith, 1978).

#### Classification of Elements of the Short Story

In order to establish reliability of the researcher's designation of elements within each student's protocol which related to setting, characterization, plot, and theme, two English teachers were asked to examine six protocols each. Five protocols were drawn from student responses to the original short story and five from student responses to the adapted short story. Raters examined two of the same protocols and four different protocols. Copies of the first protocol drawn from each type of story, e.g., one protocol based on the original short story and one based on the adapted short story were given to each rater. The other eight protocols were randomly given to each rater so that each rater received two protocols of the original short story and two protocols of the adapted short story.

A practice session was held to familiarize raters with the procedure. The raters were given copies of the Scoring Guide for Elements of the Original Short Story (Appendix J) and the Scoring Guide for

Elements of the Adapted Short Story (Appendix K) with samples drawn from subjects' protocols other than those selected for this phase in determining reliability of elements of the short story. The raters were given a sample passage and were asked to identify on those statements units which pertained to setting, characterization, plot, and theme (see Appendix P). Any difficulty in identifying the elements was discussed and resolved during the practice session. The raters worked independently and identified the elements within each protocol in the packets they received.

Agreement between raters for the protocols which they reviewed was determined. Agreement between the raters and the researcher for the other eight protocols was then determined. Agreement was noted according to the formula utilized in the identification of Clausal Units and Categories of Response:

$$\frac{\# \text{ of agreements}}{\# \text{ of agreements} + \# \text{ of disagreements}}$$

Agreement in determining elements of the two short stories which were reviewed by both raters was 95 and 96 percent between Rater E and Rater F. Agreement between the researcher and Rater E was 90 and 100 percent. Agreement between the researcher and Rater F was 100 and 92 percent.

Agreement between the researcher and Rater E for the four protocols which were examined independently ranged from 94-100 percent. Agreement between the researcher and Rater F ranged from 90-100 percent. Total agreement between the researcher and Rater E was 97.5 percent.

Total agreement between the researcher and Rater F was 96 percent. This level of agreement compared favorably with other studies which have utilized procedures of similar complexity (Smith, 1978; Squire, 1964).

#### Analyses of the Data

The three areas of concern which were the focus of this study were: (1) the characteristics of the written responses of skilled and less skilled readers as indicated by clausal units and categorization of clausal units according to recall, inference, and supplementation; (2) the differences between the responses of skilled and less skilled readers relative to teacher-established standards of quality for selected elements of the short story; and (3) the comparison of written responses of less skilled readers to an original or an adapted version of a short story as indicated by clausal units and categorization of those units according to recall, inference, and supplemental information, as well as to selected elements of the short stories.

The statistical analyses of the data involved the use of the Mann Whitney U Test, which is a nonparametric rank test for two independent samples (Spence et al., 1968) and the Fisher t-test, a parametric test which compared mean scores and standard deviations (Spence et al., 1968).

The Mann Whitney U Test allowed for an unequal number of scores and was used to compare clausal units, recall, inference, and supplementation of skilled and less skilled readers responding to original and adapted stories. The Fisher t-test was used to compare differences

between groups relative to responses concerning story elements of setting, characterization, plot, and theme.

In reference to the specific questions addressed in this study, various analyses were conducted. In determining the answers to questions one and two, which compared the responses of less skilled readers who read either an original or an adapted short story with the responses of skilled readers who read the same story, and question five, which compared responses of less skilled readers to the original and adapted short story, the following analyses were conducted: (1) number of clausal units and numbers of responses for each category of recall, inference, or supplementation were calculated; and (2) mean scores for each group of subjects were computed and compared to determine differences in responses of skilled and less skilled readers for each story type and for less skilled readers between story types.

In response to questions three and four, which attempted to determine whether the responses of less skilled readers to selected elements of setting, characterization, plot, and theme, within either an original or an adapted short story differed from the responses of skilled readers, and question six, which sought to compare the responses of less skilled readers to elements of the original and adapted short story, the following analyses were done: (1) frequency of responses to elements of the short story were calculated; and (2) mean scores for each group of subjects were computed and compared to determine differences in responses of skilled and less skilled readers for each story type and for less skilled readers between story types.

Examples of responses to the categories of recall, inference, and supplementation were selected from the protocols of skilled and less skilled readers for the original and adapted stories. Patterns which occurred frequently within a given response category were identified for discussion. Examples of the most frequent types of responses to the elements of the short story were also identified and compared to the teacher-determined responses for skilled and less skilled readers of the original and adapted stories. Examples of elements were cited which students mentioned which were not addressed by teachers.

#### Summary

The two passages used in this study were an original short story and an adaptation of that story. Subjects read and responded to one of the two story types. Subjects' written protocols were then analyzed for three purposes: (1) to determine the clausal units in each protocol; (2) to categorize clausal units according to recall, inference, or supplementation statements; and (3) to compare subjects' responses to teacher classification of the elements of setting, characterization, plot, and theme. The data were analyzed to determine whether the responses of skilled readers differed from the responses of less skilled readers for original and adapted stories and for less skilled readers between story types.

## CHAPTER 4

### ANALYSES OF THE DATA

Analyses of data concerning the comparison of the responses of skilled readers to either an original or an adapted short story or less skilled readers to the original or the adapted story are reported in this chapter. The data analyses are presented in the following manner:

1. Data and statistical analyses are presented pertinent to the clausal unit and categorization of clausal units according to recall, inference, and supplementation for the two population samples relative to the original and adapted stories. Analyses of the data relative to recall, inference, and supplementation are considered in terms of total categories.
2. Data and statistical analyses of specific story elements are classified according to setting, characterization, plot, and theme statements.
3. Descriptive data from responses are categorized as recall, inference, and supplementation, as well as story elements classified as setting, characterization, plot, and theme statements. Data pertinent to the categories of recall, inference, and supplementation are discussed according to subheadings within those categories. Discussion of format of response to story elements and responses of subjects to statements not included

in the teacher-determined scoring guide for story elements are included. Lastly, there is a general discussion of the relationship of analyses.

The data are presented in relation to the three comparisons: (1) the responses of skilled and less skilled readers of the original story; (2) the responses of skilled and less skilled readers of the adapted story; and (3) the responses of less skilled readers to the original or the adapted story.

Data from which the tables were derived are listed in Appendix Q. Interpretation of each analysis follows each summary table for each area investigated; general discussions of each area complete the section.

#### Analyses of Data Related to the Clausal Unit and Categorization of Clausal Units

Data relative to the clausal unit and categorization of clausal units according to recall, inference, and supplementation addressed the first, second and fifth questions raised in this study. Questions one and two compared the responses of skilled readers with the responses of less skilled readers who read either the original or the adapted story. Question five compared the responses of less skilled readers to the original and the adapted story. The first phase of this comparison involved the categorization of clausal units into categories of recall, inference, and supplementation.

Information relative to the clausal unit and categorization of clausal units was reported in terms of frequency, mean scores, and  $z$

scores for the following comparisons: (1) skilled and less skilled readers responding to an original story, (2) skilled and less skilled readers responding to an adapted story, and (3) less skilled readers responding to an original or an adapted short story.

Data was tabulated, classified and converted to z scores for purposes of comparison. Tests for significance were determined by using the Mann Whitney U Test, a nonparametric measure. The Mann Whitney U Test permitted comparison of unequal independent samples. This test was appropriate for this phase of the study because of the nature of the data to be analyzed. The measure, like other nonparametric measures, makes few assumptions about the distribution of scores. Since the data was in the form of free responses by subjects, it was impossible to predict whether responses would distribute in a normal fashion over the population. Use of the Mann Whitney U procedure of ranking responses according to frequency allowed for the analysis of data which did not have fixed limits.

Table 3 summarizes the responses of skilled and less skilled readers to the original short story. Total clausal units and categorization of clausal units according to recall, inference, and supplementation are noted.

Statistical significance at the .01 level was noted in total clausal units of skilled and less skilled readers. Statistically significant differences at the .01 level were also noted in the category of inference for skilled and less skilled readers.

Table 3. Responses of skilled and less skilled readers to the original story by clausal unit and categorization of clausal units and number, frequency, mean and z scores

| Response Category and Reader Group | N  | Frequency | Mean Score | z-Score |
|------------------------------------|----|-----------|------------|---------|
| <b>Clausal Unit</b>                |    |           |            |         |
| Skilled reader                     | 19 | 624       | 32.84      | 4.59*   |
| Less skilled reader                | 21 | 334       | 15.90      |         |
| <b>Recall</b>                      |    |           |            |         |
| Skilled reader                     | 19 | 147       | 7.74       | 1.93    |
| Less skilled reader                | 21 | 121       | 5.76       |         |
| <b>Inference</b>                   |    |           |            |         |
| Skilled reader                     | 19 | 443       | 23.32      | 4.76*   |
| Less skilled reader                | 21 | 204       | 9.71       |         |
| <b>Supplementation</b>             |    |           |            |         |
| Skilled reader                     | 19 | 34        | 1.79       | 1.17    |
| Less skilled reader                | 21 | 9         | .58        |         |

\*p < .01

These data suggest that the responses of skilled readers to an original story contain significantly more clausal units and inference statements than less skilled readers when responding to an original story.

Table 4 summarizes data relative to the responses of skilled and less skilled readers to the adapted short story. The summary indicates total clausal units and categorization of clausal units according to recall, inference, and supplementation.

The responses of skilled and less skilled readers to the adapted story did not differ significantly relative to total clausal units and categorization of clausal units. These results suggest that skilled and less skilled readers may respond similarly to the adapted story when responses are measured in terms of clausal units and categorization of clausal units.

In Table 5 information is summarized relative to the responses of less skilled readers to the original and the adapted short story. Data pertinent to total clausal units and categorization of clausal units according to recall, inference, and supplementation are provided.

Statistically significant differences at the .01 level were noted in total clausal units for responses of less skilled readers in favor of the adapted short story. Statistical significance at the .01 level was also noted relative to the inference category for less skilled readers of the adapted story over less skilled readers of the original story. These findings suggest that less skilled readers may recall more information and make more inferences when reading the adapted story than when reading the original story.

Table 4. Responses of skilled and less skilled readers to the adapted story by clausal unit and categorization of clausal units and number, frequency, mean and z scores

| Response Category and Reader Group | N  | Frequency | Mean Score | z-Score |
|------------------------------------|----|-----------|------------|---------|
| <b>Clausal Unit</b>                |    |           |            |         |
| Skilled reader                     | 21 | 689       | 32.81      | .89     |
| Less skilled reader                | 19 | 499       | 26.26      |         |
| <b>Recall</b>                      |    |           |            |         |
| Skilled reader                     | 21 | 144       | 6.86       | .27     |
| Less skilled reader                | 19 | 107       | 5.63       |         |
| <b>Inference</b>                   |    |           |            |         |
| Skilled reader                     | 21 | 492       | 23.43      | 1.19    |
| Less skilled reader                | 19 | 381       | 20.05      |         |
| <b>Supplementation</b>             |    |           |            |         |
| Skilled reader                     | 21 | 53        | 2.52       | 1.5     |
| Less skilled reader                | 19 | 11        | .58        |         |

Table 5. Responses to original and adapted stories by less skilled readers by clausal unit and categorization of clausal units and number, frequency, mean and z scores

| Response Category and Story Type | N  | Frequency | Mean Score | z-Score |
|----------------------------------|----|-----------|------------|---------|
| <b>Clausal Unit</b>              |    |           |            |         |
| Original story                   | 21 | 334       | 15.90      | 2.77*   |
| Adapted story                    | 19 | 499       | 26.26      |         |
| <b>Recall</b>                    |    |           |            |         |
| Original story                   | 21 | 121       | 5.76       | .41     |
| Adapted story                    | 19 | 107       | 5.63       |         |
| <b>Inference</b>                 |    |           |            |         |
| Original story                   | 21 | 204       | 9.71       | 3.49*   |
| Adapted story                    | 19 | 381       | 20.05      |         |
| <b>Supplementation</b>           |    |           |            |         |
| Original story                   | 21 | 9         | .43        | .19     |
| Adapted story                    | 19 | 11        | .58        |         |

\*p < .01

Discussion of Data Relative to the Clausal Unit  
and Categorization of Clausal Units

Discussion of data pertinent to the responses of skilled and less skilled readers to the original story, and to the adapted story, as well as the responses of less skilled readers to either the original or the adapted story will be presented in two phases. The first phase focuses on the frequency of clausal units and the second phase considers the categorization of clausal units according to recall, inference, and supplementation.

Clausal Unit

Data analysis indicated that the frequency of clausal units of the skilled reader-original story sample was significantly greater than the responses of less skilled readers. The findings may suggest that the difficulty level of the original passage had an effect on the ability of less skilled readers in processing and in responding to the story. These results are consistent with other research findings which indicate that the responses of less skilled readers differ significantly from the responses of less skilled readers in length of response (Bridge, 1977; Marshall and Glock, 1978-1979; Smiley et al., 1977). In terms of length of response, the results of this study further suggest that the protocols of less skilled readers contained far less information than the protocols of skilled readers in responding to the original story.

However, there were no significant differences in the frequency of clausal units between skilled and less skilled readers of the

adapted story. This appears to indicate that the adapted story affected the responses of both skilled and less skilled readers in a similar manner. Comparison of the frequency of clausal units of the less skilled readers-original story sample and less skilled readers-adapted story sample seems to indicate that the adapted story aided comprehension and recall. The data also suggest that written response may have been less of a problem for less skilled readers when responding to the adapted story. For the less skilled readers responding to the original story, it is unclear whether the differences stem from difficulty with the text, with written response, or with a combination of the two.

The analyses of data relative to the categorization of clausal units is presented according to the following categories: recall, inference, and supplementation.

#### Recall

In general, the results indicate that the recall of each set of the sample populations did not differ significantly. The mean number of recall units for the skilled reader-original story sample was 7.74 while the mean for the less skilled reader-original story sample was 5.76. For the skilled reader-adapted story sample the mean number of recall units was 6.86 and for the less skilled reader-adapted story sample the mean score was 5.63. For the less skilled readers of each story type the mean number of recall units was nearly identical.

Less skilled readers tended to recall inaccurate information to a much greater degree than skilled readers for both story conditions. Had the data analysis excluded inaccurate recall as a subcategory,

skilled readers would have differed significantly from less skilled readers in the amount of information recalled. These data suggest that quality of recall, rather than amount of recall, distinguishes readers of different abilities.

The skilled reader-original story sample differed significantly from the less skilled reader-original story sample. Significant differences were also noted for the less skilled reader-original story sample when compared to the less skilled reader-adapted story sample.

The mean number of inference units for the skilled reader-original story sample was 23.32 and the less skilled reader-original story sample had a mean of 9.71. Differences in scores would appear to be attributable to difficulty level of the story. In comparing the less skilled reader samples for the original story and the adapted story, the mean scores were 9.71 and 20.05 respectively. These results suggest that less skilled readers make more inferences when material is written at an appropriate level of difficulty. However, in responding to the adapted story, less skilled readers did not differ from skilled readers in generating inferences. This may indicate that less skilled readers perform similarly to skilled readers relative to number of inferences when difficulty level of the material is appropriate for their needs.

When comparing frequency of inferences to frequency of total clausal units for the less skilled reader-original story sample, two-thirds of total clausal units were categorized as inference units. This proportion was similar to the proportion of inference units to total clausal units for the skilled reader-original story population.

Thus, it appears that less skilled readers generate inferences in proportion to total recall similarly to skilled readers. Bridge (1977) also found no differences in proportion of inferences to total information given in protocols of good and poor readers. It seems, therefore, that response as indicated by total clausal units and frequency of inferences rather than proportion of inferences to clausal units distinguishes skilled and less skilled readers.

In comparing total inference units to total clausal units, the two less skilled reader samples were somewhat different. As noted above, for the less skilled reader-original story sample, the proportion of inference units to total clausal units was two-thirds; for the less skilled reader-adapted story sample, inference units accounted for three-fourths of total clausal units. Less skilled readers of the adapted story inferred proportionally more than the less skilled reader-original story sample. This finding seems to indicate again that less skilled readers produced longer responses and more inferences when material was written at an appropriate level of difficulty.

#### Supplementation

Student responses that were categorized as supplemental were minimal for nearly all groups hence there were no significant differences in the supplemental responses of the skilled readers and less skilled readers of the original story or the adapted story or for less skilled readers of either story type.

The lack of data indicates that supplementation was not an appropriate category for this study. The lack of supplemental

information may have resulted from one of three reasons: (1) the use of narrative material, (2) the type of story and story adaptation which was chosen, or (3) the structure of the task. Each of these reasons is discussed.

Perhaps the short story narrative material may not have elicited supplemental information from the reader. The short story may have been so concise and unified that the reader had no need to add other information in the written response. However, this is contrary to the findings of Farr (1981) who noted that strategy use, which included supplemental data, was greater for narrative than for expository material.

The type of science-fiction story and story adaptation which was used in the study may not have lent itself to supplemental statements. The science-fiction story with a focus on future events may not have elicited supplemental information from subjects because they did not have sufficient background to respond. Only one protocol contained extensive supplementary information which was pertinent to science-fiction.

The structure of the task which subjects were asked to follow may have discouraged supplemental data. Subjects were asked to recall important information from the story and write as if telling the story to someone who had not heard it. They were asked to include statements relevant to setting, characterization, plot, and theme in their response. The primary emphasis was placed on recall of certain story elements while the intended audience was someone unfamiliar with the story. Since the directions did not specify adding information from other sources or critiquing the story, subjects may not have felt that

such responses were appropriate. Bridge (1977) found that directions which were given caused subjects to focus on certain aspects of response which then produced specific types of data in subsequent protocols. This last possible reason for the lack of supplemental data seems to be most plausible.

In summary, in comparing the responses of the skilled reader and less skilled reader samples for the original story and the less skilled readers for the original and adapted story, significant differences were found in total clausal units which seem attributable to story type. Responses of skilled readers to the original story contained more clausal units and more inferences than less skilled readers. Responses of less skilled readers to the adapted story contained more clausal units and more inferences than responses to the original story. The relation of inference to clausal units was proportionally equivalent across sample groups for both story types.

For original texts, the responses which distinguish skilled readers from less skilled readers are the clausal unit and inference categories. As might be expected, the responses of skilled readers to original stories were longer than those of less skilled readers. There were no differences between skilled and less skilled readers with respect to recall of information or supplementation. Recall of information included inaccurate recall data which tended to obscure differences between the sample groups. If inaccurate recall had been omitted from the frequency data, significant differences between the skilled reader and less skilled reader samples would have been detected. Frequency

of inference appears to be linked to total clausal length and indicates that less skilled readers produce inferences proportional to total length of response. The category of supplementation does not appear to be an appropriate response category for this task since frequency of response was minimal across both skilled and less skilled reader samples.

The responses of skilled and less skilled readers to the adapted story indicate that the responses of less skilled readers did not differ significantly from the responses of skilled readers in terms of number of clausal units and categorization of clausal units according to recall; inference, and supplementation. This comparison supports the use of adapted stories with less skilled reader populations. Though the responses of skilled readers to each story type were not statistically compared in this study because adapted stories are not generally used with skilled readers, the data indicate that skilled readers responded to both story types in a similar manner. Therefore, if skilled reader responses are used as a benchmark, less skilled readers perform similarly to skilled readers when text difficulty is controlled.

It might also be argued that these data also warrant the use of adapted stories for skilled reader populations, since responses of these readers do not differ significantly across text types. A preferable interpretation might rather be that the responses of skilled readers are not affected by text difficulty as long as difficulty level is within their ability range. Further evidence is needed in the form of responses of these skilled readers to stories beyond their ability levels in order to verify this interpretation.

Caution should be exercised, however, in accepting such interpretations relative to both less skilled and skilled reader samples since the analyses did not include an examination of the qualitative differences between the responses of the two sample populations or between the two types of stories. Such further analyses are needed before these interpretations can be accepted as more than possible explanations.

In the comparison of less skilled readers of the original and the adapted story, readers of the adapted story produced significantly more clausal units and inferences than those who read the original story. Such results further indicate that adapted stories aid less skilled readers. Again, caution must be taken in accepting such a view since, as noted earlier, this comparison involved the use of quantitative measures only.

#### Analyses of Data Related to Classification of Story Elements

Data pertinent to the classification of story elements according to setting, characterization, plot, and theme addressed the third, fourth and sixth questions in the study. Questions three and four compared the responses of skilled readers with the responses of less skilled readers who read the original or the adapted story. Question six compared the responses of less skilled readers to the original and the adapted short story.

Information relative to story elements was reported in terms of frequency, mean and variance for the following comparisons: (1) responses of skilled and less skilled readers to the original short

story; (2) responses of skilled and less skilled readers to the adapted story; and (3) responses of less skilled readers to either the original or the adapted story (see Tables 6, 7, and 8).

Data were tabulated and classified for purposes of comparison. Tests for significance were determined by using the Fisher t-test to compare mean scores and standard deviations. The Fisher t-test, a parametric measure, was appropriate for this phase of the study since fixed limits were established for the data to be analyzed. With input from English teachers, scoring guides were developed to identify the acceptable possible responses of students. Frequency of response of subjects could therefore be assumed to be normally distributed in terms of interval measurement. The t-test was used to make pairwise comparisons between sample group means. The procedure also permitted comparison of proportional frequencies, necessary because of unequal characterization and plot statements contained in the scoring guides for the two story versions.

Table 6 summarizes the responses of skilled and less skilled readers to the original story. Story elements were classified according to setting, characterization, plot, and theme.

Statistical significance at the .01 level was noted in story elements of characterization, plot, and theme for skilled and less skilled readers. The data suggest that the responses of skilled readers to an original story may contain significantly more character, plot, and theme statements than the responses of less skilled readers.

Table 6. Story elements recalled by skilled and less skilled readers-original story by N, mean score, variance and t values

| Story Elements and Reader Group | N  | Mean | Variance | t Value |
|---------------------------------|----|------|----------|---------|
| <b>Setting</b>                  |    |      |          |         |
| Skilled reader                  | 19 | 1.32 | .23      | 1.91    |
| Less skilled reader             | 21 | 1.05 | .15      |         |
| <b>Characterization</b>         |    |      |          |         |
| Skilled reader                  | 19 | 6.42 | 3.92     | 4.65*   |
| Less skilled reader             | 21 | 3.52 | 3.46     |         |
| <b>Plot</b>                     |    |      |          |         |
| Skilled reader                  | 19 | 6.74 | 3.87     | 8.24*   |
| Less skilled reader             | 21 | 1.71 | 3.21     |         |
| <b>Theme</b>                    |    |      |          |         |
| Skilled reader                  | 19 | .68  | .23      | 4.60*   |
| Less skilled reader             | 21 | .10  | .09      |         |

\*p < .01

Table 7. Story elements recalled by skilled and less skilled readers-adapted story by N, mean score, variance and t values

| Story Elements and Reader Group | N  | Mean | Variance | t Value |
|---------------------------------|----|------|----------|---------|
| <b>Setting</b>                  |    |      |          |         |
| Skilled reader                  | 21 | 1.19 | .16      | 1.28    |
| Less skilled reader             | 19 | 1.05 | .05      |         |
| <b>Characterization</b>         |    |      |          |         |
| Skilled reader                  | 21 | 5.90 | 4.39     | 3.06*   |
| Less skilled reader             | 19 | 3.74 | 4.98     |         |
| <b>Plot</b>                     |    |      |          |         |
| Skilled reader                  | 21 | 6.76 | 2.79     | 4.17*   |
| Less skilled reader             | 19 | 4.21 | 4.40     |         |
| <b>Theme</b>                    |    |      |          |         |
| Skilled reader                  | 21 | .51  | .26      | 4.35*   |
| Less skilled reader             | 19 | 0    | 0        |         |

\*p < .01

Table 8. Story elements recalled by less skilled readers-original and adapted stories by N, mean score, variance and t values

| Story Elements and Reader Group     | N  | Mean  | Variance | t Value |
|-------------------------------------|----|-------|----------|---------|
| <b>Setting</b>                      |    |       |          |         |
| Original story                      | 21 | 1.05  | .15      | .05     |
| Adapted story                       | 19 | 1.05  | .05      |         |
| <b>Characterization<sup>1</sup></b> |    |       |          |         |
| Original story                      | 21 | 18.55 | 95.91    | .50     |
| Adapted story                       | 19 | 24.91 | 221.39   |         |
| <b>Plot<sup>1</sup></b>             |    |       |          |         |
| Original story                      | 21 | 15.58 | 265.67   | 4.38*   |
| Adapted story                       | 19 | 42.11 | 439.77   |         |
| <b>Theme</b>                        |    |       |          |         |
| Original story                      | 21 | .10   | .09      | 1.35    |
| Adapted story                       | 19 | 0     | 0        |         |

<sup>1</sup>Adjusted to proportional values because of unequal items  
\*p <.01

Table 7 summarizes the responses of skilled and less skilled readers to the adapted story. Data relative to story elements classified according to setting, characterization, plot, and theme are provided.

The responses of skilled and less skilled readers to the adapted story differed significantly in respect to story elements of characterization, plot, and theme. Differences were significant at the .01 level. The results suggest that skilled and less skilled readers respond differently to the adapted short story when responses are analyzed for story elements of characterization, plot, and theme.

Table 8 summarizes the responses of less skilled readers to the original and the adapted short story. The summary indicates story elements categorized according to setting, characterization, plot, and theme.

Statistically significant differences at the .01 level were noted for plot statements in responses of less skilled readers to the adapted story. These findings suggest that less skilled readers may recall more information pertinent to plot when responding to the adapted story than when responding to the original story.

#### Discussion of Data Relative to Classification of Story Elements

The analysis of data relative to the classification of story elements is presented according to the following categories: setting, characterization, plot, and theme.

### Setting

The results indicate that responses to the element of setting of each pair of sample groups did not differ significantly from one another. These data suggest that response to story setting may not distinguish skilled readers from less skilled readers for either original or adapted stories.

### Characterization

Findings indicate that skilled readers of both the original and the adapted story differed significantly from less skilled readers of both story types in response to characterization. Frequency of response was consistent for both sample groups across story type. No significant differences in frequency of characterization statements distinguished the responses of less skilled readers according to story type. The results suggest that the adapted story did not aid the less skilled readers in responding to story characters.

### Plot

Significant differences were noted across all sample groups in response to plot statements. In terms of number of plot statements, the less skilled reader-adapted story sample recalled significantly more plot statements than the less skilled reader-original story sample, while skilled readers recalled significantly more plot statements than less skilled readers when reading either story type. The differences in responses of skilled and less skilled readers to plot statements in both story types suggest that the difficulty level of the story significantly affected the recall of plot statements of less skilled

readers. Less skilled readers who responded to the adapted story were able to recall significantly more plot statements than those who responded to the original story. This finding offers further evidence to support the notion that the difficulty level of the story may affect recall of the plot.

#### Theme

In the element of theme, significant differences were found between skilled and less skilled readers of the original story. Significant differences were also noted between skilled and less skilled readers of the adapted story. For the latter sample, significant differences occurred because no theme statements were recalled by less skilled readers of the adapted story. No significant differences were noted, however, for less skilled readers according to story type.

In summary, in the element of setting, the responses of skilled and less skilled readers of the three pairs of sample groups did not differ. Significant differences in response to characterization were noted for skilled readers of both the original and adapted story. In regard to plot statements, there were significant differences in responses for the three sample groups favoring skilled readers over less skilled readers for both story types and favoring adapted over original story for less skilled readers. Significant differences in recall of theme statements were observed for skilled readers of the original and adapted stories.

It would appear that the significant differences between the two reader samples for the original story in the areas of

characterization, plot, and theme may be related to difficulty level of the story. However, when the responses of the two sample populations were compared for the adapted story, skilled readers differed significantly from less skilled readers in precisely the same areas. Since the adapted story was markedly easier than the original story, it follows that these differences regarding story elements cannot necessarily be related solely to the difficulty level of the story. The use of the adapted story did not aid the less skilled readers relative to most story elements.

When the responses of less skilled readers to each story type were compared, less skilled readers of the adapted story gave significantly more plot statements than those who responded to the original story, but there were no differences in frequency of statements of setting, characterization, and theme. It may be that in the adapted story, information may have been condensed to the extent that less skilled readers might better respond to plot statements. On the one hand, these results may be taken as an indication that adapted stories aid less skilled readers; on the other hand, the data indicate that the adapted story did not aid less skilled readers in their response to characterization and theme. While it may be argued that recall of story plot is an important consideration, failure to respond to other story elements indicates a need for caution in viewing adapted stories as meeting the needs of less skilled readers. Further analyses are indicated to clarify these somewhat conflicting data.

Descriptive Analyses Related to Categorization  
of Clausal Units and Classification of Story Elements

In this section, the responses of less skilled readers to the original and the adapted stories are described. Data are presented relative to categorization of clausal units and classification of story elements.

Data pertinent to categorization of clausal units are tabulated and discussed according to categories of recall, inference, and supplementation. Data relative to the classification of story elements are tabulated and discussed according to categories of setting, characterization, plot, and theme.

#### Clausal Units

Table 9 summarizes the frequency of responses of skilled and less skilled readers according to categorization of recall, inference, and supplementation for original and adapted stories. Results are discussed according to those subcategories.

Recall. The recall category, measured in terms of clausal units, included recall/paraphrase and inaccurate recall/paraphrase. Discussion of both types of recall follow.

Recall/paraphrase--frequency of recall of skilled readers of the original and adapted story was 133 and 125 statements respectively. For less skilled readers of the same stories, the frequency was 52 and 56 respectively (see Table 9). Skilled readers of the adapted story recalled fewer units than skilled readers of the original story. Less skilled readers of the adapted story recalled only four more statements

Table 9. Frequency of recall, inference, and supplementation recalled by skilled and less skilled readers according to story type

| Categories of Response | Subcategory of Response      | Original Story           |                               | Adapted Story            |                               |
|------------------------|------------------------------|--------------------------|-------------------------------|--------------------------|-------------------------------|
|                        |                              | Skilled Reader<br>N = 19 | Less Skilled Reader<br>N = 21 | Skilled Reader<br>N = 21 | Less Skilled Reader<br>N = 19 |
| Recall                 | Recall/Paraphrase            | 133                      | 52                            | 125                      | 56                            |
|                        | Inaccurate Recall/Paraphrase | 14                       | 69                            | 19                       | 51                            |
| Inference              | Interpretation               | 347                      | 153                           | 366                      | 317                           |
|                        | Key Ideas                    | 54                       | 21                            | 76                       | 19                            |
|                        | Conclusions                  | 9                        | 6                             | 6                        | 7                             |
|                        | Generalization               | 33                       | 24                            | 44                       | 38                            |
| Supplementation        | Personal Comment             | 11                       | 1                             | 45                       | 3                             |
|                        | Evaluation                   | 23                       | 8                             | 8                        | 8                             |

than less skilled readers of the original story. The data seem to indicate that the adapted story did not particularly aid recall of either the skilled or less skilled samples.

The type of information categorized as recall/paraphrase was similar for skilled and less skilled readers of both story types. Both groups tended to recall descriptions and details such as, "Sven was a good construction worker" and "Claribel weighed almost nothing."

Inaccurate recall/paraphrase--frequency of inaccurate recall statements of skilled readers of the original and adapted story was 14 and 19 statements respectively. Inaccurate recall of less skilled readers of the two story types was 69 and 51 statements respectively. The frequency and proportion of inaccurate recall was much greater for less skilled readers than for skilled readers.

Both skilled and less skilled readers inaccurately recalled details concerning the story. Skilled readers who did not recall Claribel's name substituted unique names such as Delia, Sibyl, Matilda, and Gabriel. Less skilled readers who could not recall Claribel's name tended to substitute terms such as parikey (sic) and hummingbird.

Skilled readers of both story types tended to assign an inaccurate proper name to someone while the remainder of the statement was accurate. In the examples which follow, the inaccurate portion of the statement is underlined. "Then Joan remembered that miners used to bring canaries into the mines," and "Then Sven reminded him that the second alarm wasn't connected yet." Such inaccurate recall did not seem to result in loss of understanding and only the clause containing the inaccurate statement was assigned to the inaccurate recall category.

Less skilled readers of both stories tended to recall inaccurate story events. Less skilled readers of the original story had slightly more statements of this type than less skilled readers of the adapted story, yet inaccurate events predominated in the inaccurate recall of both groups. Less skilled readers of the original story had statements such as the following: "The man couldn't have a pet in space," and "Sven the 6 foot tall guy was running out of oxygen." Less skilled readers of the adapted story made statements such as these: "Two characters are in space and they come across this pet," and "The air outside wasn't good and they remember a man was outside." Such statements seemed to indicate lack of understanding of at least a portion of the story whether less skilled readers were responding to the original or the adapted story.

In summary, the inaccurate recall of skilled readers tended to include details which did not affect total response; whereas the inaccurate recall of less skilled readers tended to include information which was not appropriate to the story. This latter type of inaccuracy often seemed to affect total response to the story.

Inference. The category of inference included four types of information: interpretation, key ideas, conclusions and generalizations (see Table 9). The inference category accounted for the greatest frequency of clausal units for all sample groups.

Interpretation--in the subheading of interpretation, the frequency of interpretive statements of skilled readers of the original and the adapted story was 347 and 366 respectively. For less skilled

readers of the same stories the frequency of interpretive statements was 153 and 317 respectively. The skilled readers did not differ by story relative to frequency of response, while the less skilled readers of the adapted story had twice as many interpretive responses as the less skilled readers of the original story.

The interpretative subcategory included inferred ideas which were definite or tentative. There were very few tentative statements in protocols. Interpretive statements often included one idea joined to one or more related ideas. Statements generally included information about story events. Aspects of events which readers tended to interpret were: the question of rules regarding pets in space, the feeling the men had for Claribel the canary, events connected with the loss of the canary, the source of the problem.

Some specific cases of interpretation as indicated above are as follows: Both stories began with a statement about the fact that there was no rule against pets. Later, both stories tell of the men hiding Claribel whenever visitors came. The original story implied that the men feared losing Claribel and the adapted story states that the men weren't sure if they were breaking a rule. Skilled readers of both stories interpreted that "Claribel was somewhat forbidden," "It was illegal to keep her," and "VIP's would take her away." Only one protocol of the less skilled readers of the original story reported that "It was against the rules to keep a bird on board." Five less skilled readers of the adapted story mentioned the rules, mainly indicating that "It was against the rule." The remainder of the less skilled reader samples did not address this aspect of the story.

Both the original and the adapted story stated that Claribel soon became a pet to all. Most protocols of skilled and less skilled readers who reported this idea interpreted it to read: "Everyone loved the canary."

The recovery of the canary was described in the original and the adapted story alike as follows: Sven went looking for Claribel and returned with her in his hand. The canary was lying with her claws in the air. Then the men (man, in the adapted story) asked what was wrong. Sven replied that he didn't know. Most skilled and less skilled readers of each story sample who reported this event stated that the bird was dead or looked dead.

Each story noted that there were mechanical problems involving an air line or air purifier which had frozen and an alarm system that had failed to go off. Skilled readers of the original story and skilled and less skilled readers of the adapted story often joined parts of each idea together and reported that "the alarm had frozen." Less skilled readers of the original story did not tend to report the same information. Several protocols reported that "the men were using chemicals which were poisoning the air."

In summary, the skilled readers of both story types made interpretive statements which were appropriate. Less skilled readers of both story types tended to interpret events concerning Claribel. However, when ideas were stated in more than one way as in report of rules and the mechanical problems, less skilled readers of the original story either failed to mention the incident or gave contradictory information.

Key ideas--key ideas were those inferences which summarized important information in the story. Frequency of key ideas of skilled readers of the original and adapted story was 54 and 76 respectively. The frequency of key ideas of the less skilled readers of each story type was 21 and 19 respectively. Skilled readers made 50% more statements about key ideas related to the adapted story than the original story. Less skilled readers made relatively the same number of such statements regardless of story type. Though skilled readers made more statements which were key ideas, skilled readers and less skilled readers tended to respond in the same manner.

Some expressions which skilled and less skilled readers used in their responses included: "The conflict was . . .," "The biggest problem was . . .," "It centered around . . .," "The story was about . . .," "The result was . . . ." The following statement is an example of a key idea: "This is a story about a yellow canary named Claribel and how she saved the lives of the men working at the space station."

In summary, skilled and less skilled readers did not differ in the type of key ideas reported, although skilled readers reported such ideas more frequently.

Conclusions--inferences which were conclusions generally referred to terminal ideas pertaining to an action in the story. Frequency of conclusion of skilled and less skilled readers of the original story was 9 and 6 respectively, while the frequency of response of less skilled readers was 6 and 7 respectively. There were no differences in the type of conclusions produced by skilled and less skilled readers.

Examples of conclusions made by skilled and less skilled readers were "The canary was all right," and "The men were safe." In general, statements referred to concluding ideas in the story.

In summary, skilled and less skilled readers made minimal conclusions about the story. Those skilled and less skilled readers who did make conclusions did not differ in manner of response.

Generalizations--generalizations involved the formation of generalized statements or applications based on story statements. Frequency of generalizations of skilled readers of the original and adapted story was 33 and 44 respectively. For less skilled readers of the two stories, the frequency was 24 and 38 respectively.

Skilled readers tended to make generalized statements while less skilled readers made more statements of application. Examples of generalizations of skilled readers include: "It just shows that something live works better than a machine and can be fun too," and "Machines are not always better than living things." Examples of generalizations made by less skilled readers are: "Always take a canary with you when you are working on explose (sic) fueling so they can tell you when gas is leaking . . .," "The story tells me we can rely on anything such as a canary to save our lives."

In summary, skilled and less skilled readers made generalizations. Skilled readers of both stories made generalized statements. Less skilled readers made more statements of application than of generalized information.

Supplementation. The supplementation category includes personal comments and evaluation. There were minimal types of responses assigned to this category (see Table 9).

Personal comment--frequency of personal comment of skilled readers of the original and adapted stories was 11 and 45 respectively. For less skilled readers of the same stories the frequency was 1 and 3 respectively. The personal comments made by skilled readers of the adapted story was nearly all from one protocol (43 responses) and were not necessarily indicative of that sample group. Many of the responses were about a futuristic story.

Examples of personal comment made by skilled readers were comments about narration, such as ". . . which is an example of first person narration," and "The author of the story told the story from his point of view."

In summary, personal comments generally came from skilled readers of the original story and involved comments about the narrator. Less skilled readers did not tend to make such personal comments.

Evaluation--evaluation included statements in which the reader made evaluative comments about the story. Frequency of evaluation of skilled readers of the original and adapted story was 23 and 8 respectively. For less skilled readers of the same story, the frequency was 8 and 8 respectively. Evaluative responses were minimal for all sample groups.

Statements of evaluation fell into two discrete categories based on reader sample. Skilled readers of each story gave comments about liking the story, noting that it seemed realistic. Less skilled readers

of each story stated that they didn't understand the story, that it didn't mean anything or that it just talked about the future, which is important.

In summary, evaluative statements were positive for skilled readers. For less skilled readers, evaluation was negative or indicated uncertainty.

In conclusion, the category of recall included inaccurate statements which were more frequent in protocols of less skilled readers than skilled readers. The data seem to indicate that the adapted story did not particularly aid recall of the less skilled readers.

In the category of inference, less skilled readers of the adapted story made twice as many interpretations as less skilled readers of the original story. The adapted story seemed to aid less skilled readers in interpreting story events. Less skilled readers of the original story tended to give contradictory information or not mention an incident when ideas were noted in more than one way.

In the subcategories of key ideas, conclusions, and generalizations, the responses of skilled readers did not differ from the responses of less skilled readers. Skilled readers made more inferences in these areas but the type or manner of inference was similar across similar groups.

Minimal responses for both skilled and less skilled readers were assigned to the category of supplementation. Possible reasons for lack of response were discussed in a preceding section.

### Story Elements

Table 10 summarizes the frequency of responses of skilled and less skilled readers according to classification of story elements of setting, characterization, plot, and theme for original and adapted stories. Results are discussed according to those subcategories.

Table 10. Frequency of story elements as recalled by skilled and less skilled readers according to story type

| Story Element    | Original Story           |                               | Adapted Story            |                               |
|------------------|--------------------------|-------------------------------|--------------------------|-------------------------------|
|                  | Skilled Reader<br>N = 19 | Less Skilled Reader<br>N = 21 | Skilled Reader<br>N = 21 | Less Skilled Reader<br>N = 19 |
| Setting          | 25                       | 22                            | 25                       | 20                            |
| Characterization | 122                      | 74                            | 124                      | 71                            |
| Plot             | 128                      | 36                            | 142                      | 80                            |
| Theme            | 13                       | 2                             | 11                       | 0                             |

Setting. In the category of setting, subjects who read either story were asked to note when and where the story took place. Frequency of setting statements of skilled readers of the original story and adapted story was 25 and 25 statements respectively. For less skilled readers of the same stories, the frequency was 22 and 20 statements respectively (see Table 10). All but one subject across all sample groups observed that the story took place in a space station. In noting when the story occurred only six of the skilled reader-original

story sample and four of the skilled reader-adapted story sample responded that the story would take place in the future. Only two of the less skilled reader-original story sample and one of the less skilled reader-adapted story sample noted when the story might occur. Two less skilled readers of the adapted story sample wrote that the text didn't say when the story took place. These subjects were looking for literal statements of time and did not infer the information. Whether other readers had the same thoughts but did not note them was not apparent from their responses. In summary, total recall of information pertinent to setting did not differ for less skilled readers of either story type.

Characterization. Subjects who read either story were asked to note characters and their role in the story. The scoring guide for characters in the original story included 19 items, whereas the list for the adapted story noted 15 ideas (see Appendices J and K). Specific ideas which at least one-third of the subjects in a given sample have noted in their responses are discussed.

Frequency of characterization statements of skilled readers of the original and adapted story was 122 and 124 statements respectively. Characterization statements of less skilled readers of the two story types were 74 and 71 respectively (see Table 10).

In responding to characterization in the original story, skilled readers noted the narrator but did not state his function. Sven Olsen was named and was described in terms of his job, his size, and was noted for bringing Claribel aboard the space craft. Most responses included Claribel's name and the fact that she was a yellow canary.

The doctor was noted by that term, not by his name. The characters which less skilled readers reported were Sven Olsen and Claribel the canary. Less skilled readers did not mention Sven's job, size or the fact that he brought Claribel aboard.

The skilled readers noted four characters and gave added information about Sven while the less skilled readers merely named two characters without role descriptors.

In noting the characters in the adapted story, skilled readers gave Sven Olsen's name and noted that he brought the canary to the space station and owned it. Claribel was named and described as a yellow canary. The cook-doctor was mentioned without reference to his name. Less skilled readers gave Sven Olsen's name and stated that he owned the canary. Claribel was named and described as a canary. The doctor was mentioned without reference to his name or dual role as cook.

Responses of these two reader groups to the adapted story included three characters and were nearly alike. Unlike the skilled reader-original story sample, these skilled readers did not include the narrator as a character.

The last character in each scoring guide was not cited by any sample groups. Less than one-third of the sample indicated Jim, the engineer, as a character.

Differences in characters which skilled and less skilled readers noted occurred mainly in the descriptions pertaining to Sven. Skilled readers provided more information about function, appearance and ownership of Claribel. Evidently skilled readers felt those ideas

were important to the story. The reason that less skilled readers did not include them is not clear.

Comparison of the two less skilled reader samples indicate that less skilled readers of the adapted story included information about Sven that the readers of the original story omitted. They observed that Sven was the owner of Claribel. Also, the same sample listed the doctor as a character. Neither less skilled reader sample noted the narrator as a character.

Plot. Subjects who read either story were directed to recall story events, including the main problem. The scoring guide for plot statements in the original story contained 11 items and the adapted story included 10 items. Again, specific ideas noted by at least one-third of the subjects in a given sample are discussed.

Frequency of plot statements of skilled readers of the original and adapted story was 128 and 142 statements respectively. For less skilled readers of the same stories, the frequency was 36 and 80 statements respectively (see Table 10).

In their response to plot statements, the skilled reader-original story samples included all ideas except two. The ideas not included were: the statements that the alarm had failed to go off, and that the incident set a precedent for keeping canaries in space stations. In other aspects, skilled readers tended to include ideas which appeared on the scoring guide. For the adapted story, skilled readers addressed all but the final plot statement which indicated that a precedent had been established for keeping canaries on space stations.

Less skilled readers of the original story noted only one plot statement. They recalled that Sven found that the canary had passed out. Less skilled readers of the adapted story tended to recall seven plot ideas. They recalled the following: that the crewmen accepted Claribel; that the canary had passed out; that the canary was revived with oxygen and the men realized it was a warning to them; that there was an equipment failure; that Claribel had saved the lives of the crewmen; and lastly, that a precedent was set for using canaries in space stations. In this last idea, the less skilled readers made observations which the skilled readers failed to make.

Thus, skilled and less skilled readers differed considerably in their recall of plot statements in the original story. As noted earlier, less skilled readers of the original story reported a high frequency of recall data which was inaccurate. Such inaccurate recall probably affected recall of characterization and plot statements. Comparison of the less skilled reader samples indicates that those who read the adapted story generally recalled plot statements, while those who read the original story recalled only one statement. The less skilled reader-adapted story sample tended to indicate the progression of events and resolution of the problem while the less skilled reader-original story sample only recalled the scene in which the canary was found. While this scene indicated a problem in the plot development, the less skilled readers did not note what preceded or followed that event.

Theme. In the category of theme statements, subjects were asked to formulate a statement indicating what the story meant or what it said about life. The scoring guide for each story included six theme statements; however, subjects were expected to indicate only one theme for the story read.

Frequency of theme statements of skilled readers of the original and adapted story was 13 and 11 statements respectively. Theme statements of less skilled readers of the two story types was 2 and 0 respectively (see Table 10).

As a group, the skilled reader-original story sample responded to all of the themes which teachers had listed. The skilled reader-adapted story sample responded to three themes. The theme statement: "Something unimportant may be more dependable than scientific equipment," was the theme most noted by the skilled readers of the two sample populations.

Responses of less skilled readers to the theme of the story were almost nonexistent. However, less skilled readers of the adapted story noted the final plot statement of "a precedent set for keeping canaries at space stations" whereas skilled readers did not note that plot statement. It may be that less skilled readers perceived concluding plot statements as theme statements.

Format of Response. In their recall of story elements, most subjects tended to write summaries of key points of the story. There were only a few cases in which responses included very detailed responses. These responses came from skilled readers of the adapted story.

Several protocols from each sample group were organized according to the four elements of the short story. Less skilled readers of both stories followed that format more than skilled readers. The format appeared to serve as an organizer of responses.

Differences in Responses of Teachers and Subjects. In three cases skilled and less skilled readers of either story type mentioned ideas which teachers did not include in their list of important ideas. Specific items which appeared one-fourth of the time in the protocols of readers of either story are discussed. Responses include ideas belonging to the elements of characterization and plot.

In their response to the original story, skilled and less skilled readers included the crew as a collective group of characters in addition to those crew members already cited. Teachers did not include additional crew members in their list.

Skilled and less skilled readers of each story noted two plot statements which teachers omitted. The first statement referred to the narrator and his feeling of drowsiness when he awoke. This was the first indication, however minor, of a problem in the station. Teachers did not perceive this as important, yet some subjects did. The second statement referred to a fact noted by the narrator concerning miners' use of canaries to detect gases in mines. This statement was crucial to the solution of the air problem. Many subjects recalled this statement yet teachers did not specifically list this statement on the scoring guide for either story. The differences between the responses

of students and teachers may be linked to different expectations of the two groups.

The data relative to frequency of recall, inference, and supplementation, as well as frequency of story elements, are different for each sample group. Skilled readers of either story recalled more information, noted more key ideas and made more personal comments than less skilled readers. They also provided more aspects of characterization, and more complete plot and theme statements.

Less skilled readers of either story type gave more inaccurate recall data than skilled readers. In regard to story elements, they recalled setting statements as often as skilled readers.

Less skilled readers of the adapted story responded differently than less skilled readers of the original story. Those who read the adapted story provided more interpretive and generalization statements. They also recalled more plot statements than those who read the original story.

#### Discussion of Relationship of Analyses

Results of the study are somewhat conflicting. The responses of skilled and less skilled readers to the adapted story did not differ significantly with respect to clausal units and categorization of clausal units. However, data relative to story elements indicate that responses of skilled and less skilled readers to the adapted story were indeed different. Skilled readers recalled significantly more statements pertinent to characterization, plot, and theme than the less skilled readers. On the surface then, less skilled readers responded

to an adapted story similarly to skilled readers in terms of quantitative measures of length of recall and frequency of inference, yet with regard to comprehension of story substance as measured by written retellings, the two sample populations were quite dissimilar. Results of the first comparison appear to favor the use of adapted stories with less skilled readers, while results of the second comparison indicate caution regarding their use and a need for further information.

Comparison of less skilled readers of each story type favored the adapted story in the area of total clausal units and frequency of inference. Response to plot statements also favored the adapted story. Caution must be used in arriving at such a conclusion, however, since these analyses did not include qualitative interpretation of responses or other response measures such as interest and enjoyment of readers.

Descriptive data relative to subcategories within the categorization of clausal units indicate that the inclusion of inaccurate recall within the recall category did not give a realistic picture of the recall of less skilled readers. The less skilled readers of each story recalled more inaccurate information which was inappropriate to the story than the skilled readers. For skilled and less skilled readers of either story type, responses to the subcategories of conclusions and generalizations within the inference category were minimal. Lack of response to these areas may be related to task structure. The entire category of supplementation seemed inappropriate because the structure of the task did not direct students to go beyond or to evaluate the story.

The descriptive data relative to story elements indicate that awareness of story setting was similar across sample groups. Skilled readers recalled more elements related to characterization, plot, and theme when responding to both story types. The descriptive data further indicate that skilled readers provided more complete descriptions of characters and their roles or functions in the story. Skilled readers of either story type addressed most aspects of the plot whereas the responses of less skilled readers to the adapted story indicated only the progression of events in the plot. Responses to the element of theme were quite similar for skilled readers of either story type, but the responses of less skilled readers to theme were virtually nonexistent. It appears that for the less skilled reader samples, awareness of theme may be lacking or may be confused with story conclusion.

The focus of this study was on measures which compared quantity of total response and categorization of total response as well as frequency of response to selected story elements. These quantitative measures alone may not be sufficient to compare responses of skilled and less skilled readers to original and adapted stories. Further descriptive analyses of responses to story elements need to be conducted. Further study should also include such qualitative measures as reader interest and enjoyment of both original and adapted stories.

#### Summary

In this chapter, data and statistical analyses as well as descriptive data are presented pertinent to the clausal unit, the categorization of clausal units according to recall, inference, and

supplementation, and the classification of story elements according to setting, characterization, plot, and theme statements.

Regarding the comparison of skilled and less skilled readers of the original story, skilled readers recalled significantly more information, as indicated by clausal units, than less skilled readers who read the same story. The skilled readers of the original story also made significantly more inference statements than less skilled readers who read the original story. In terms of selected elements of the short story, skilled readers recalled significantly more characterization, plot, and theme statements than less skilled readers of the original story.

With respect to the comparison of skilled and less skilled readers of the adapted story, the skilled readers did not differ from the less skilled readers in terms of clausal units or categorization of those units into recall, inference, and supplementation. Yet, with regard to story elements, skilled readers recalled significantly more characterization, plot, and theme statements than less skilled readers of the adapted story.

As indicated by the comparison of less skilled readers of the original story with less skilled readers of the adapted story, readers of the adapted story recalled significantly more information, with reference to clausal units, than readers of the original story. The same sample also made significantly more inference statements than the less skilled readers of the original story. The less skilled readers of the adapted story also recalled more plot statements than the less skilled readers of the original story.

## CHAPTER 5

### SUMMATION

This chapter contains a summary of (1) the problem, (2) related literature, (3) the design and procedures, and (4) findings of the study. Conclusions, implications, and suggestions for further research are also presented.

#### The Problem

The purpose of this study was to compare the written responses of skilled and less skilled readers to either an original or an adapted short story relative to frequency of clausal units, categorization of clausal units according to recall, inference, and supplementation, and selected elements of the short story. The study also sought to compare the written responses of less skilled readers to either an original or an adapted short story relative to these same variables.

The questions to be explored in the study were:

1. Do the written responses of skilled and less skilled readers who read an original short story differ according to frequency and categorization of clausal units (e.g., recall, inference, and supplementation)?
2. Do the written responses of skilled and less skilled readers who read an adapted short story differ according to frequency

and categorization of clausal units (e.g., recall, inference, and supplementation)?

3. Do the written responses of skilled and less skilled readers who read an original short story differ according to frequency and type of information pertinent to selected elements of the short story (e.g., setting, characterization, plot, and theme)?
4. Do the written responses of skilled and less skilled readers who read an adapted short story differ according to frequency and type of information pertinent to selected elements of the short story (e.g., setting, characterization, plot, and theme)?
5. Do the written responses of less skilled readers who read an original short story differ from those who read an adapted short story according to frequency and categorization of clausal units (e.g., recall, inference, and supplementation)?
6. Do the written responses of less skilled readers who read an original short story differ from those who read an adapted short story according to frequency and type of information pertinent to selected elements of the short story (e.g., setting, characterization, plot, and theme)?

#### Related Literature

Literature relevant to the study was identified and reviewed.

Studies in the following areas were pertinent:

1. Comprehension studies involving readers' recall of what they have read, and descriptions of various types of recall studies;
2. Studies concerning written responses;

3. Comprehension studies focusing on the performance of skilled and less skilled readers;
4. Studies utilizing original and adapted texts;
5. Studies pertaining to clausal units and systems of categorizing reader response;
6. Studies dealing with elements of the short story.

#### Design and Procedures

The sample in this descriptive study was drawn from ninth grade classes at a high school in Tucson, Arizona. Subjects were selected from regular and laboratory English classes on the basis of percentile scores obtained on the California Achievement Test. Forty students in regular English classes who scored at or above the 76th percentile constituted the skilled reader sample. Forty students in laboratory English classes who placed at or below the 40th percentile comprised the less skilled reader population.

Two short stories which included an original story and an adaptation of the same story were utilized in the study. The original story had an average readability of eighth grade while the adapted story had an average readability of fourth grade.

Subjects in intact classes were randomly assigned to read either an original or an adapted short story. Before reading, subjects were told that they would be asked to write a recall of the important information in the story and also to include selected elements of the short story, namely, setting, characterization, plot, and theme in their response.

Three instruments were developed in order to score the data according to (1) total clausal units, (2) categorization of clausal units according to recall, inference, and supplementation, and (3) classification of specific story elements of setting, characterization, plot, and theme. The first two instruments were constructed by the researcher and the third was developed in conjunction with ten high school English teachers who indicated specific ideas concerning short story elements they would expect students to identify for each story. After all data were recorded, three independent samples of one-eighth of the protocols were independently reviewed by three pairs of raters to verify (1) clausal units, (2) categorization of clausal units according to recall, inference, and supplementation, and (3) classification of specific story elements of setting, characterization, plot, and theme. Reliability of researchers was 97, 91, and 96 percent respectively. Comparisons of reader responses pertinent to these instruments were made between (1) skilled and less skilled readers of the original story, (2) skilled and less skilled readers of the adapted story, and (3) less skilled readers of the original or the adapted story.

Analyses of the data included the use of statistical and descriptive measures. Data pertinent to clausal units and categorization of clausal units were reported in terms of frequency, mean, and z scores. The Mann Whitney U Test was used to test for significance. Data relative to the story elements of setting, characterization, plot, and theme were noted for frequency, mean, and t scores. The Fisher t-test was employed to test for significance. Descriptive data included

discussion of patterns of subject responses to subheadings within the categories of recall, inference, and supplementation; examples of statements relative to setting, characterization, plot, and theme; and story elements which were included in subject responses but not part of teacher-developed scoring instruments for story elements.

### Findings of the Study

#### Clausal Units

1. Significant differences at the .01 level were found for frequency of clausal units in responses of skilled readers to the original story. The responses of skilled readers contained significantly more clausal units than the responses of less skilled readers.
2. No significant differences were found for frequency of clausal units in responses of skilled and less skilled readers to the adapted story.
3. Significant differences at the .01 level were found for frequency of clausal units in responses of less skilled readers to the adapted story. The responses of less skilled readers to the adapted story contained significantly more clausal units than the responses of less skilled readers to the original story.

#### Categorization of Clausal Units: Recall

4. No significant differences were found for frequency of recall units in responses of skilled and less skilled readers to the original story.
5. No significant differences were found for frequency of recall units in responses of skilled and less skilled readers to the adapted story.
6. No significant differences were found for frequency of recall units in responses of less skilled readers to the original or the adapted story.

#### Categorization of Clausal Units: Inference

7. Significant differences at the .01 level were found for frequency of inference units in responses of skilled readers to the original story. The responses of skilled readers contained significantly more inferences than the responses of less skilled readers.
8. No significant differences were found for frequency of inference units in responses of skilled and less skilled readers to the adapted story.
9. Significant differences at the .01 level were found for frequency of inference units in responses of less skilled readers to the adapted story. The responses of less skilled readers to the adapted story contained significantly more inferences than the responses of less skilled readers to the original story.

Categorization of Clausal Units:  
Supplementation

10. No significant differences were found for frequency of supplementation units in responses of skilled and less skilled readers to the original story.
11. No significant differences were found for frequency of supplementation units in responses of skilled and less skilled readers to the adapted story.
12. No significant differences were found for frequency of supplementation units in responses of less skilled readers to the original or the adapted story.

Elements of the Short Story: Setting

13. No significant differences were found for frequency of setting statements in responses of skilled and less skilled readers to the original story.
14. No significant differences were found for frequency of setting statements in responses of skilled and less skilled readers to the adapted story.
15. No significant differences were found for frequency of setting statements in responses of less skilled readers to the original or the adapted story.

Elements of the Short Story:  
Characterization

16. Significant differences at the .01 level were found for frequency of characterization statements in responses of skilled readers to the original story. The responses of skilled

readers contained significantly more characterization statements than the responses of less skilled readers.

17. Significant differences at the .01 level were found for frequency of characterization statements in responses of skilled readers to the adapted story. The responses of skilled readers contained significantly more characterization statements than the responses of less skilled readers.
18. No significant differences were found for frequency of characterization statements in responses of less skilled readers to the original or the adapted story.

#### Elements of the Short Story: Plot

19. Significant differences at the .01 level were found for frequency of plot statements in responses of skilled readers to the original story. The responses of skilled readers contained significantly more plot statements than the responses of less skilled readers.
20. Significant differences at the .01 level were found for frequency of plot statements in responses of skilled readers to the adapted story. The responses of skilled readers contained significantly more plot statements than the responses of less skilled readers.
21. Significant differences at the .01 level were found for frequency of plot statements in responses of less skilled readers to the adapted story. The responses of less skilled readers to the adapted story contained significantly more plot statements

than the responses of less skilled readers to the original story.

#### Elements of the Short Story: Theme

22. Significant differences at the .01 level were found for frequency of theme statements in responses of skilled readers to the original story. The responses of skilled readers contained significantly more theme statements than the responses of less skilled readers.
23. Significant differences at the .01 level were found for frequency of theme statements in responses of skilled readers to the adapted story. The responses of skilled readers contained significantly more theme statements than the responses of less skilled readers.
24. No significant differences were found for frequency of theme statements in responses of less skilled readers to the original or the adapted story.

#### Conclusions

1. When difficulty level of the text is adjusted according to reading ability, less skilled readers recall as well as skilled readers in terms of amount of information and inference.
2. Less skilled readers recall adapted stories better than original stories.
3. When difficulty level of the text is adjusted according to reading ability, less skilled readers do not perform as well

as skilled readers in terms of understanding of story elements (setting, characterization, plot, and theme).

4. Less skilled readers understand story plot of an adapted story better than an original story.

#### Implications

1. Teachers should expect less skilled readers to recall as much information and make as many inferences as skilled readers when reading adapted stories.
2. If the focus of a reading assignment is on recall of story content, teachers may wish to use adapted stories with less skilled readers rather than original stories.
3. When using original or adapted stories, teachers should be aware that less skilled readers may require assistance in grasping story elements.
4. Adapted stories facilitate plot awareness for less skilled readers; however, teachers should be aware that other aspects of the story may not be enhanced by adjusting text difficulty.

#### Recommendations

1. Comparison of the responses of skilled and less skilled readers should be made to more than one story and its adapted version. Mode of response might include oral and written recall with a focus on response to elements of the short story.
2. Comparison of the responses of skilled and less skilled readers should be made using measures other than quantitative measures.

Such comparisons might focus on qualitative aspects of interest, enjoyment and retention of story elements.

3. Investigation should be made of the inferential responses of skilled and less skilled readers to stories of various length under a variety of conditions, such as: responding after receiving minimal directions, responding after instruction in story elements, and responding after participation in instruction at various stages during reading.
4. Comparison of the responses of skilled and less skilled readers should be made which would eliminate inaccurate recall data from total responses.
5. Comparison of the supplemental responses of skilled and less skilled readers should be sought by giving specific directions to subjects regarding the addition of supplemental information.

## APPENDIX A

### ORIGINAL STORY

Feathered Friend, by Arthur C. Clarke

To the best of my knowledge, there's never been a regulation that forbids one to keep pets in a space station. No one ever thought it was necessary--and even had such a rule existed, I am quite certain that Sven Olsen would have ignored it.

With a name like that, you will picture Sven at once as a six-foot-six Nordic giant, built like a bull and with a voice to match. Had this been so, his chances of getting a job in space would have been very slim; actually he was a wiry little fellow, like most of the early spacers, and managed to qualify easily for the 150-lb. bonus that kept so many of us on a reducing diet.

Sven was one of our best construction men, and excelled at the tricky and specialized work of collecting assorted girders as they floated around in free fall, making them do the slow-motion, three-dimensional ballet that would get them into their right positions, and fusing the pieces together when they were precisely dovetailed into the intended pattern. I never tired of watching him and his gang as the station grew under their hands like a giant jigsaw puzzle; it was a skilled and difficult job, for a space suit is not the most convenient of garbs in which to work. However, Sven's team had one great

advantage over the construction gangs you see putting up skyscrapers down on Earth. They could step back and admire their handiwork without being abruptly parted from it by gravity . . .

Don't ask me why Sven wanted a pet, or why he chose the one he did. I'm not a psychologist, but I must admit that his selection was very sensible. Claribel weighed practically nothing, her food requirements were infinitesimal--and she was not worried, as most animals would have been, by the absence of gravity.

I first became aware that Claribel was aboard when I was sitting in the little cubbyhole laughingly called my office, checking through my lists of technical stores to decide what items we'd be running out of next. When I heard the musical whistle beside my ear, I assumed that it had come over the station intercom, and waited for an announcement to follow. It didn't; instead, there was a long and involved pattern of melody that made me look up with such a start that I forgot all about the angle beam just behind my head. When the stars had ceased to explode before my eyes, I had my first view of Claribel.

She was a small yellow canary, hanging in the air as motionless as a hummingbird--and with much less effort, for her wings were quietly folded along her sides. We stared at each other for a minute; then, before I had quite recovered my wits, she did a curious kind of backward loop I'm sure no earthbound canary had ever managed, and departed with a few leisurely flicks. It was quite obvious that she'd already learned how to operate in the absence of gravity, and did not believe in doing unnecessary work.

Sven didn't confess to her ownership for several days, and by that time it no longer mattered, because Claribel was a general pet. He had smuggled her up on the last ferry from Earth, when he came back from leave--partly, he claimed, out of sheer scientific curiosity. He wanted to see just how a bird would operate when it had no weight but could still use its wings.

Claribel thrived and grew fat. On the whole, we had little trouble concealing our unauthorized guest when VIPs from Earth came visiting. A space station has more hiding places than you can count; the only problem was that Claribel got rather noisy when she was upset, and we sometimes had to think fast to explain the curious peeps and whistles that came from ventilating shafts and storage bulkheads. There were a couple of narrow escapes--but then who would dream of looking for a canary in a space station?

We were now on 12-hour watches, which was not as bad as it sounds, since you need little sleep in space. Though of course there is no "day" or "night" when you are floating in permanent sunlight, it was still convenient to stick to the terms. Certainly when I woke up that "morning" it felt like 6 a.m. on Earth. I had a nagging headache, and vague memories of fitful, disturbed dreams. It took me ages to undo my bunk straps, and I was still only half awake when I joined the remainder of the duty crew in the mess. Breakfast was unusually quiet, and there was one seat vacant.

"Where's Sven?" I asked, not very much caring.

"He's looking for Claribel," someone answered. "Says he can't find her anywhere. She usually wakes him up."

Before I could retort that she usually woke me up, too, Sven came in through the doorway, and we could see at once that something was wrong. He slowly opened his hand, and there lay a tiny bundle of yellow feathers, with two clenched claws sticking up pathetically into the air.

"What happened?" we asked, all equally distressed.

"I don't know," said Sven mournfully. "I just found her like this."

"Let's have a look at her," said Jock Duncan, our cook-doctor-dietitian. We all waited in hushed silence while he held Claribel against his ear in an attempt to detect any heartbeat.

Presently he shook his head. "I can't hear anything but that doesn't prove she's dead. I've never listened to a canary's heart," he added rather apologetically.

"Give her a shot of oxygen," suggested somebody, pointing to the green-banded emergency cylinder in its recess beside the door. Everyone agreed that this was an excellent idea, and Claribel was tucked snugly into a face mask that was large enough to serve as a complete oxygen tent for her.

To our delighted surprise, she revived at once. Beaming broadly, Sven removed the mask, and she hopped on to his finger. She gave her series of "Come to the cook-house, boys" trills--then promptly keeled over again.

"I don't get it," lamented Sven. "What's wrong with her? She's never done this before."

For the last few minutes, something had been tugging at my memory. My mind seemed to be very sluggish that morning, as if I was still unable to cast off the burden of sleep. I felt that I could do with some of that oxygen--but before I could reach the mask, understanding exploded in my brain. I whirled on the duty engineer and said urgently:

"Jim, there's something wrong with the air! That's why Claribel's passed out. I've just remembered that miners used to carry canaries down to warn them of gas."

"Nonsense," said Jim. "The alarms would have gone off. We've got duplicate circuits, operating independently."

"Er, the second alarm circuit isn't connected up yet," his assistant reminded him. That shook Jim; he left without a word while we stood arguing and passing the oxygen bottle around like a pipe of peace.

He came back 10 minutes later with a sheepish expression. It was one of those accidents that couldn't possibly happen; we'd had one of our rare eclipses by Earth's shadow that night; part of the air purifier had frozen up, and the single alarm in the circuit had failed to go off. Half a million dollars' worth of chemical and electronic engineering had let us down completely. Without Claribel, we should soon have been slightly dead.

So, now, if you visit any space station, don't be surprised if you hear an inexplicable snatch of bird song. There's no need to be alarmed: on the contrary, in fact. It will mean that you're doubly safe-guarded at practically no extra expense.

## APPENDIX B

### ADAPTED STORY

Space Pet, by Arthur C. Clarke

As far as I know there has never been a rule against pets in a space station. We had just never had any pets until Sven Olsen decided he wanted one. None of us ever figured out why he chose the pet he did.

I first saw Claribel when I was working in my office. I heard a musical whistle near my ear and thought it had come over the radio. I waited for the news to follow. Instead, there was a lovely song. I looked up and had my first view of Claribel.

She was a small yellow canary, hanging very still in the air. Her wings were folded quietly at her sides. She could stay that way because nothing has any weight in space. Before I recovered from the surprise of seeing a canary in our space station, she did a kind of backward loop. No earthbound canary could have done it.

In no time at all, Sven's pet was everybody's pet. We had a little trouble hiding her when important guests came to visit the space station. We couldn't be sure if we were breaking any rule having her there. But we liked her too much to take a chance on losing her.

Claribel always got noisy when we hid her. Sometimes we had to think fast to explain the peeps and whistles that came from the oddest places. There were a few narrow escapes, but then who would ever dream of looking for a canary in a space station?

All of us at the station were on duty for 12 hours at a time. This was not as hard as it sounds, since you need little sleep in space. Of course there is no "day" and "night" when you are always floating in sunlight. But we found it easier to think of time as being divided into day and night.

One "morning" when I woke up, I could scarcely drag myself out of bed. I was still only half awake when I joined the other men at breakfast. I noticed they seemed unusually sleepy, too. Then I saw that one seat at the table was empty.

"Where's Sven?" I asked.

"He's looking for Claribel," someone answered. "He can't find her. She usually wakes him up."

Just then Sven appeared at the door. In his hand lay a tiny bunch of yellow feathers, with claws sticking up in the air.

"What happened?" we asked.

"I don't know," said Sven sadly. "I just found her like this."

"Let's have a look at her," said Jock Duncan, our cook and doctor. We waited in silence while he held Claribel against his ear, trying to hear a heartbeat.

Presently he shook his head. "I can't hear her heart. But that does not prove she's dead. Let's try giving Claribel some oxygen."

Claribel was put into a face mask. It was as large as an oxygen tent for her. To our delighted surprise, she came back to life at once. Beaming broadly, Sven removed the mask and she hopped onto his finger. She sang her song, then fell over again in his hand.

"I don't understand what's wrong with her," said Sven. "She's never done this before."

For the last few minutes I had been trying to remember something. My mind seemed to be working very slowly, as if I were still sleepy.

Suddenly I understood. "There's something wrong with the air!" I yelled. "That's why Claribel passed out. I just remembered that coal miners often take canaries down into mines to warn the men when the air is bad."

"Oh no!" said Jim, our engineer. "The alarm would have gone off. We have two good warning systems."

"The second alarm isn't connected yet," another man reminded him. That really upset Jim. He left without a word. The rest of us passed around the oxygen bottle like an Indian peace pipe. We gave Claribel more oxygen, and she came back to life.

Ten minutes later Jim came back and explained what had happened. During the night, part of an air line had frozen and the alarm had failed to go off. Half a million dollars' worth of engineering instruments had let us down. Without Claribel, all of us might have died.

Today, if you should visit a space station, don't be surprised if you hear a canary singing. It means you have a double safeguard at the cost of some birdseed.

## APPENDIX C

### INITIAL ORAL DIRECTIONS TO STUDENTS

I am interested in finding out about students' ideas when they read short stories. What you will be doing with me now will not affect your work or your grade in English class.

You will be given a direction sheet with a story attached to it. Please do not look at the story just yet. On the direction sheet, please put your name, your teacher's name, and the class period at the top of the page.

APPENDIX D

COVER SHEET

Name \_\_\_\_\_ Story \_\_\_\_\_

Name of Teacher \_\_\_\_\_

Class Period \_\_\_\_\_

Each of you will read a short story. After you have finished reading, I will collect your copy of the story. Then you can begin to write about the story.

Write all of the important information that you can remember from the story. Write about the story as if you were telling it to someone who has never heard it. Include all of the important information that you think is necessary to understand the story.

In your writing, be sure to include statements about each of the following:

1. Characterization, which means what the characters are like and their role in the story;
2. Setting, which refers to when and where the story takes place;
3. Plot, which means what happens in the story, including the main conflict or problem;
4. Theme, which refers to what the story means to you, or what it tells you about life.

## APPENDIX E

### FINAL ORAL DIRECTIONS TO STUDENTS

Now you may read the story. After you finish reading, raise your hand and I will collect your copy of the story. You will find paper in your packet. Do not be concerned about spelling and punctuation in your writing. Keep the direction sheet to refer to as you write about the story.

## APPENDIX F

### DIRECTIONS TO TEACHERS

This study is intended to compare the responses of ninth grade students in regular and laboratory English classes to either an original short story by A. C. Clarke or an adapted version of the same story.

Students will read either short story and will then write the important information which they can recall from the story. When writing they will not have access to the story. In their writing students will be asked to include information concerning each of four areas: (1) characterization, (2) setting, (3) plot, and (4) theme.

In order that you may know what is expected of the students, directions for students are included. Before reading, students will be given some oral procedural directions and written instructions to guide them in their reading and writing.

In constructing a form for scoring the data to be obtained from students, it is important to gain information from English teachers about what they believe students should gain from either story relative to the categories of characterization, setting, plot, and theme.

Please read the enclosed short story. Then list the information students should have in the four categories noted above. Note as many ideas under each category as you feel are appropriate. Keep in

mind that students will be reading the story once and will be recalling what they have read.

Thank you for taking the time to participate in helping to form the scoring instrument for this study. I realize that this is a very busy time of year for you. I greatly appreciate your assistance.

## APPENDIX G

### SCORING GUIDE FOR CLAUSAL UNITS

The clausal unit is defined as any independent, dependent, relative, or clearly implied clause. Clauses usually contain a subject and finite verb, including any accompanying modifiers.

Directions: Mark the clausal units by placing a slash mark (/) at the end of each unit.

#### Examples of Clausal Units:

- (a) One morning everyone had trouble getting up. / (one unit)
- (b) They gave it oxygen / and the canary came around. /  
(two units)
- (c) There was no rule / that said / pets were not allowed in a  
space station. / (three units)
- (d) Claribel was a delightful creature / who adapted to her  
space surroundings very well. / (two units)

#### Additional criteria defining clausal units:

1. Clearly implied clausal units contained within statements will be counted as separate clausal units.
  - (a) The story is about a yellow canary / named Claribel. /  
(two units)
  - (b) No one had ever had a pet on a space station before /  
until Sven Olsen. / (two units)

2. Partial statements which occur between a capital letter and a terminal marker will be counted as clausal units.
  - (a) Very intelligent too. / (one unit)
  - (b) Up in space. / (one unit)
3. Statements which are placed in apposition will be counted as separate clauses.
  - (a) The narrator of the story, / a man who was in charge of inventory, / noticed that / the bird adjusted well. / (three units)
  - (b) All things / that are said to be bad / are usually good in at least one way. / (two units)

## APPENDIX H

### SCORING GUIDE: CATEGORIZATION OF CLAUSAL UNITS

Directions: Classify each of the clausal units into one of the following three major categories by placing the number corresponding to the appropriate category above the clausal unit.

1. Recall:

- a. Repetition or paraphrase--repetition or paraphrase of text-explicit statement
- b. Erroneous repetition or paraphrase--erroneous repetition or paraphrase of text-explicit information.

2. Inference:

- a. Interpretation--interpreting one or more stated ideas with or without tentativeness
- b. Key ideas--summarization of key ideas in the text
- c. Conclusions--drawing a conclusion based upon statements in the text
- d. Generalizations--formulating a generalized statement or making application based upon statements in the text

3. Supplementation:

- a. Personal comment about text--comment based on background experience, prior knowledge of format, style, or elements of the short story; comments added while rendering retelling
- b. Evaluation--critique of text or general subject matter

## APPENDIX I

### CATEGORIZATION OF CLAUSAL UNITS

#### DEFINITIONS AND EXAMPLES

#### 1. Recall

- a. Repetition or paraphrase--reader repeats or paraphrases a statement which closely follows text.

| <u>Text</u>  | <u>Reader</u>  |
|--|--|
| "This was not as hard as it sounds, since you need little sleep in space." | "But it wasn't all that hard because you don't need that much sleep when you're in space." |
| "The second alarm isn't connected yet . . ."                               | ". . . the second alarm wasn't hooked up yet."   |
| ". . . miners used to carry canaries down to warn them of gas."            | ". . . miners used to bring canaries down into caves to see if there was any gas."         |

- b. Erroneous repetition or paraphrase--reader restates or paraphrases in part, but adds erroneous information.

| <u>Text</u>   | <u>Reader</u>  |
|---|--|
| ". . . by that time it no longer mattered, because Claribel was a general pet." | "Soon everyone loved Sybil the canary."                  |
| ". . . you will picture Sven at once as a six-foot Nordic giant . . ."          | "Sven, the six-foot-tall guy was running out of oxygen." |

#### 2. Inference

- a. Interpretation--reader interprets one or more stated ideas with or without indicating tentativeness.

Reader

"The story was about a man named Sven Olsen. He was a construction worker in a space station sometime in the near future."

"Claribel was a delightful creature who adapted to her space surroundings very well."

"All the men in the shuttle decided to keep it confidential to any outside people just in case it was against the rules."

- b. Key ideas--reader elaborates on key ideas in the text by summarizing them.

Reader

"Claribel was very special to us all but we never imagined she would some day save us all."

"This is a story about a yellow canary named Claribel and how she saved the lives of the men working at the space station."

"The main problem was poison in the air."

- c. Conclusions--reader draws upon statements in the text and formulates a conclusion.

Reader

"In a few hours everything was back to normal."

"(Sven was regarded as one of the best in his business) for he did not let the fact of no gravity bother him."

"Well, at that very day Claribel became a hero."

- d. Generalizations--reader formulates a generalization or makes an application based upon the text.

Reader

"The theme is that natural devices are more sound than man made."

"This story tells me that even the smallest things in life will be the biggest help to us in the end."

"After this maybe all space stations should have canaries."

### 3. Supplementation

- a. Personal comment--reader makes a comment about textual format, style, or elements of the short story; reader adds comments while rendering retelling.

Reader

"The author of the story told the story from his point of view."

"(The other character is the man who told the story) which is an example of first person narration."

"The setting," I said, "it's great--a huge, multicorned octagon."

- b. Evaluation--reader offers a critique of the text or content.

Reader

"I liked the story. It was very real even though it was in the future."

"The characters seem to be pleasant and kind."

"I'd never expected that a bird could go up in space but they managed quite well with Claribelle."

APPENDIX J

SCORING GUIDE: ELEMENTS OF ORIGINAL SHORT STORY

Feathered Friend

Directions: Classify each clausal unit into one of the following four categories by placing the number corresponding to the appropriate category above the clausal unit.

Setting: (2)\*

- S1. Story occurs in space station.
- S2. Story occurs in the future, or, in the 21st century.

Characterization: (19)\*

- C1. narrator
- C2. unnamed person
- C3. supply person
- C4. person in charge of ordering technical equipment

---

- C5. Sven Olsen
- C6. engineer
- C7. construction worker in space station
- C8. small in stature
- C9. brought canary to space station
- C10. owned canary

---

- C11. Claribel
- C12. small
- C13. yellow
- C14. canary

---

- C15. Jock Duncan
- C16. cook
- C17. doctor

---

- C18. Jim
- C19. engineer at space station

---

Plot: (11)\*

- P1. Sven selects Claribel, a canary, for pet on space station.
- P2. Canary is quickly accepted as pet by crew members.
- P3. Men have to hide canary from visiting VIP's.
- P4. Sven found the canary passed out, dead, or thought to be dead.
- P5. Men revive canary with oxygen.
- P6. Bird passed out after first being given oxygen.
- P7. One man realized that canary's condition was caused by lack of oxygen, or gas in air.
- P8. Men discover equipment failure.
- P9. Alarm system failed to go off.
- P10. Claribel saved the lives of the crew.
- P11. Precedent set for keeping canaries as pets in space stations.

Theme: (1)\*

- T1. Something which appears small may become a life-saving device.
- T2. Something which is relatively unimportant may have importance beyond its normal function.
- T3. Something unimportant may be more dependable than scientific equipment.
- T4. Animals are more sensitive than humans to unseen dangers.
- T5. Animals may benefit man.
- T6. Old-fashioned things are needed along with modern devices.

\*Total number of elements possible

APPENDIX K

SCORING GUIDE: ELEMENTS OF ADAPTED SHORT STORY

Space Pet

Directions: Classify each clausal unit into one of the following four categories by placing the number corresponding to the appropriate category above the clausal unit.

Setting: (2)\*

- S1. Story occurs in space station.
- S2. Story takes place in the future.

Characterization: (15)\*

- C1. narrator
  - C2. unnamed person
  - C3. technician, or person who handles records
- 

- C4. Sven Olsen
  - C5. wanted a pet
  - C6. brought canary aboard space station
  - C7. owned canary
- 

- C8. Claribel
  - C9. yellow
  - C10. canary
- 

- C11. Jock Duncan
  - C12. cook
  - C13. doctor
- 

- C14. Jim
  - C15. engineer at space station
-

Plot: (10)\*

- P1. Sven chooses a canary as a pet.
- P2. Crewmen accept canary as pet.
- P3. Crewmen assist in hiding canary from visitors.
- P4. Sven found canary passed out or appearing to be dead.
- P5. Canary is revived after being given oxygen.
- P6. Canary's fainting is warning to crew of shortage of oxygen.
- P7. Men discover equipment failure.
- P8. Alarm system failed to go off.
- P9. Claribel saved the lives of the crew.
- P10. Precedent set for using canaries as pets in space stations.

Theme: (1)\*

- T1. Humblest of creatures can be of vital importance.
- T2. Something which seemingly has no function may be important.
- T3. Something unimportant may be more dependable than scientific equipment.
- T4. Men can learn from animals.
- T5. Animals may benefit man.
- T6. Old-fashioned things are needed along with modern devices.

\*Total number of elements possible

APPENDIX L

SUBJECT SCORING FORM I

Protocol number: \_\_\_\_\_

Story: Original \_\_\_\_\_  
Adapted \_\_\_\_\_

Total number of information units: \_\_\_\_\_\*

Recall:

- 1a. Repetition or paraphrase \_\_\_\_\_
- 1b. Erroneous repetition or paraphrase \_\_\_\_\_

Inference:

- 2a. Interpretation \_\_\_\_\_
- 2b. Key ideas \_\_\_\_\_
- 2c. Conclusions \_\_\_\_\_
- 2d. Generalizations \_\_\_\_\_

Supplementation:

- 3a. Personal comment \_\_\_\_\_
- 3b. Evaluation \_\_\_\_\_

Total \_\_\_\_\_ \*should agree

APPENDIX M

SUBJECT SCORING FORM 2

Protocol number: \_\_\_\_\_

Story: Original \_\_\_\_\_  
Adapted \_\_\_\_\_

| Element              | Number of elements on teacher scoring instrument | Number of responses in protocol | Proportion obtained out of possible |
|----------------------|--|---------------------------------|-------------------------------------|
| Setting (S)          | Original (2)<br>Adapted (2)                      | _____                           | _____ %                             |
| Characterization (C) | Original (19)<br>Adapted (15)                    | _____                           | _____ %                             |
| Plot (P)             | Original (11)<br>Adapted (10)                    | _____                           | _____ %                             |
| Theme (T)            | Original (1)<br>Adapted (1)                      | _____                           | _____ %                             |

APPENDIX N

RATER PRACTICE FORM FOR  
IDENTIFYING CLAUSAL UNITS

Directions: Mark the clausal units by placing a slash mark (/) at the end of each clausal unit.

The story tells about several men aboard a space shuttle. Sven Olsen is a construction worker, Jock Duncan is the cook-doctor-dietitian and Claribel is the canary. It all took place when they're aboard the shuttle and Sven's pet canary was lost, Sven searched for her and finally found her. Jock Duncan took a quick look at Claribel and told the other men to get the oxygen. Jock revived the canary by using the oxygen.

## APPENDIX 0

### RATER PRACTICE FORM FOR IDENTIFYING CATEGORIES OF RESPONSE

Directions: Classify each of the clausal units into one of the following three major categories (recall, inference, supplementation) by placing the number corresponding to the appropriate category above the clausal unit.

One day Sven can't find the canary, / he looks all over the ship looking for the bird. / When the crew is eating / Sven comes into the room with the canary in his hand, / the crew wonders / what happened to the bird, / then one of the crew members gets the ship's doctor. / He finds out / that the bird isn't dead / and he gets some oxygen for the bird / and puts the mask around the bird. / The bird, surprising everyone, gets up / and starts chirping again, / then he falls again. /

## APPENDIX P

### RATER PRACTICE FORM FOR CLASSIFYING ELEMENTS OF THE SHORT STORY

Directions: Classify the selected elements of the short story into one of the following four major categories (setting, characterization, plot, theme) by placing the number corresponding to the appropriate element above the statement.

There is a guy / named Sven Olsen / who is a wiry construction worker on a space station orbiting Earth. / One day, he came back to the station with a small canary from Earth. / No pets were allowed on the station / but no one really cared / since she weighed so little / and hardly ate anything. / They had to hide her from people / who came from Earth, though, / or they would take her away. /

One day, after the canary had been there awhile / everyone woke up tired and with a headache. / The bird was missing also. / When the bird was found, / it appeared to be dead / but to make sure they gave it some oxygen. / It came right back to life / but when the oxygen stopped / it slowly fell down again. / One of the crew realized / there must be something in the air supply / and checked it out. /

A piece of equipment had frozen overnight in an Earth-eclipse / and poisoned the air. / The warning systems had also failed / but the canary didn't. / It just shows / that sometimes something live works better than a machine / and it can be fun too. /

APPENDIX Q

FREQUENCY DATA RELATIVE TO CATEGORIZATION  
OF CLAUSAL UNITS AND CLASSIFICATION  
OF STORY ELEMENTS

Table 01. Original story--skilled readers

| Subjects | Clausal Units |        |           | Supplemen-<br>tation | Setting | Story Elements        |      |       |
|----------|---------------|--------|-----------|----------------------|---------|-----------------------|------|-------|
|          | Total         | Recall | Inference |                      |         | Character-<br>ization | Plot | Theme |
| 1        | 19            | 5      | 10        | 4                    | 1       | 4                     | 4    | 1     |
| 2        | 32            | 6      | 23        | 3                    | 2       | 6                     | 6    |       |
| 3        | 31            | 8      | 23        |                      | 1       | 5                     | 8    | 1     |
| 4        | 38            | 19     | 19        |                      | 1       | 8                     | 9    |       |
| 5        | 26            | 4      | 21        | 1                    | 2       | 5                     | 7    | 1     |
| 6        | 37            | 6      | 31        |                      | 1       | 8                     | 8    | 1     |
| 7        | 33            | 9      | 24        |                      | 2       | 6                     | 8    | 1     |
| 8        | 21            | 5      | 16        |                      | 1       | 4                     | 8    | 1     |
| 9        | 22            |        | 21        | 1                    | 1       | 4                     | 7    | 1     |
| 10       | 34            | 7      | 26        | 1                    | 1       | 5                     | 6    | 1     |
| 11       | 34            | 5      | 23        | 6                    | 2       | 7                     | 4    |       |
| 12       | 30            | 5      | 25        |                      | 1       | 5                     | 9    | 1     |
| 13       | 34            | 12     | 22        |                      | 1       | 5                     | 5    |       |
| 14       | 45            | 11     | 34        |                      | 1       | 7                     | 7    | 1     |
| 15       | 40            | 12     | 28        |                      | 1       | 7                     | 9    |       |
| 16       | 33            | 7      | 26        |                      | 2       | 7                     | 5    | 1     |
| 17       | 45            | 9      | 36        |                      | 2       | 10                    | 8    | 1     |
| 18       | 38            | 10     | 25        | 3                    | 1       | 11                    | 8    | 1     |
| 19       | 32            | 7      | 10        | 15                   | 1       | 8                     | 2    |       |
| Total    | 624           | 147    | 443       | 34                   | 25      | 122                   | 128  | 13    |
| Mean     | 32.84         | 7.74   | 23.32     | 1.79                 | 1.32    | 6.42                  | 6.74 | .68   |

Table 02. Adapted story--skilled readers

| Subjects | Clausal Units |        |           | Supplemen-<br>tation | Setting | Story Elements        |      |       |
|----------|---------------|--------|-----------|----------------------|---------|-----------------------|------|-------|
|          | Total         | Recall | Inference |                      |         | Character-<br>ization | Plot | Theme |
| 20       | 31            | 3      | 28        |                      | 2       | 6                     | 9    |       |
| 21       | 13            | 1      | 11        | 1                    | 1       | 5                     | 5    | 1     |
| 22       | 14            | 3      | 9         | 2                    | 1       | 4                     | 6    |       |
| 23       | 30            | 9      | 21        |                      | 1       | 6                     | 8    |       |
| 24       | 20            | 3      | 17        |                      | 1       | 3                     | 8    | 1     |
| 25       | 43            | 10     | 31        | 2                    | 2       | 8                     | 6    | 1     |
| 26       | 77            | 7      | 27        | 43                   | 2       | 7                     | 6    | 1     |
| 27       | 12            |        | 12        |                      | 1       | 3                     | 4    |       |
| 28       | 46            | 4      | 42        |                      | 1       | 9                     | 10   |       |
| 29       | 35            | 7      | 28        |                      | 1       | 6                     | 6    | 1     |
| 30       | 41            | 9      | 32        |                      | 1       | 9                     | 9    |       |
| 31       | 37            | 8      | 29        |                      | 1       | 5                     | 8    | 1     |
| 32       | 32            | 4      | 28        |                      | 1       | 7                     | 8    | 1     |
| 33       | 91            | 47     | 44        |                      | 1       | 7                     | 8    |       |
| 34       | 24            | 7      | 17        |                      | 2       | 10                    | 7    | 1     |
| 35       | 24            | 4      | 20        |                      | 1       | 5                     | 6    |       |
| 36       | 33            | 7      | 26        |                      | 1       | 5                     | 7    |       |
| 37       | 28            | 7      | 21        |                      | 1       | 8                     | 5    |       |
| 38       | 19            | 2      | 17        |                      | 1       | 3                     | 7    | 1     |
| 39       | 19            | 1      | 18        |                      | 1       | 4                     | 5    | 1     |
| 40       | 20            | 1      | 14        | 5                    | 1       | 4                     | 4    | 1     |
| Total    | 689           | 144    | 492       | 53                   | 25      | 124                   | 142  | 11    |
| Mean     | 32.81         | 6.86   | 23.43     | 2.52                 | 1.19    | 5.90                  | 6.76 | .52   |

Table 03. Original story--less skilled readers

| Subjects | Clausal Units |        |           | Supplemen-<br>tation | Setting | Story Elements        |      |       |
|----------|---------------|--------|-----------|----------------------|---------|-----------------------|------|-------|
|          | Total         | Recall | Inference |                      |         | Character-<br>ization | Plot | Theme |
| 41       | 11            | 7      | 4         |                      | 1       | 1                     |      |       |
| 42       | 32            | 9      | 23        |                      | 1       | 3                     | 6    |       |
| 43       | 35            | 21     | 14        |                      | 2       | 3                     | 4    |       |
| 44       | 17            | 3      | 14        |                      | 2       | 6                     | 1    | 1     |
| 45       | 10            | 3      | 7         |                      | 1       | 1                     |      |       |
| 46       | 6             |        | 5         | 1                    | 1       | 2                     |      |       |
| 47       | 16            | 6      | 10        |                      | 1       | 1                     |      |       |
| 48       | 21            | 12     | 9         |                      | 1       | 3                     | 6    |       |
| 49       | 9             | 2      | 5         | 2                    | 1       | 2                     | 1    |       |
| 50       | 8             | 1      | 7         |                      |         | 2                     | 1    |       |
| 51       | 4             |        | 2         | 2                    | 1       | 2                     |      |       |
| 52       | 15            | 5      | 7         | 3                    | 1       | 2                     | 1    |       |
| 53       | 10            | 4      | 6         |                      | 1       | 4                     | 3    |       |
| 54       | 21            | 4      | 17        |                      | 1       | 7                     | 3    |       |
| 55       | 27            | 9      | 18        |                      | 1       | 4                     | 2    |       |
| 56       | 13            | 6      | 7         |                      | 1       | 6                     | 1    |       |
| 57       | 13            | 7      | 6         |                      | 1       | 5                     | 2    |       |
| 58       | 23            | 14     | 9         |                      | 1       | 5                     | 2    |       |
| 59       | 16            | 2      | 13        | 1                    | 1       | 4                     | 1    |       |
| 60       | 14            | 3      | 11        |                      | 1       | 6                     | 1    |       |
| 61       | 13            | 3      | 10        |                      | 1       | 5                     | 1    | 1     |
| Total    | 334           | 121    | 204       | 9                    | 22      | 74                    | 36   | 2     |
| Mean     | 15.90         | 5.76   | 9.71      | .43                  | 1.04    | 3.52                  | 1.71 | .095  |

Table 04. Adapted story--less skilled readers

| Subjects | Clausal Units |        |           | Supplemen-<br>tation | Setting | Story Elements        |      |       |
|----------|---------------|--------|-----------|----------------------|---------|-----------------------|------|-------|
|          | Total         | Recall | Inference |                      |         | Character-<br>ization | Plot | Theme |
| 62       | 21            | 7      | 14        |                      | 1       | 1                     | 6    |       |
| 63       | 35            | 9      | 26        |                      | 1       | 6                     | 6    |       |
| 64       | 34            | 2      | 32        |                      | 1       | 4                     | 6    |       |
| 65       | 16            | 4      | 10        | 2                    | 1       | 3                     | 4    |       |
| 66       | 16            |        | 12        | 4                    | 2       | 3                     | 4    |       |
| 67       | 9             | 4      | 5         |                      | 1       | 1                     | 4    |       |
| 68       | 27            | 5      | 22        |                      | 1       | 4                     | 3    |       |
| 69       | 31            | 4      | 26        | 1                    | 1       | 8                     | 7    |       |
| 70       | 25            | 8      | 17        |                      | 1       | 4                     | 5    |       |
| 71       | 13            | 1      | 12        |                      | 1       |                       |      |       |
| 72       | 27            | 4      | 23        |                      | 1       | 5                     | 6    |       |
| 73       | 29            | 6      | 23        |                      | 1       | 3                     | 5    |       |
| 74       | 40            | 6      | 34        |                      | 1       | 3                     | 7    |       |
| 75       | 29            | 10     | 16        | 3                    | 1       | 5                     | 3    |       |
| 76       | 10            |        | 10        |                      | 1       | 8                     | 1    |       |
| 77       | 30            | 15     | 15        |                      | 1       | 2                     | 2    |       |
| 78       | 49            | 11     | 38        |                      | 1       | 5                     | 4    |       |
| 79       | 13            | 4      | 8         | 1                    | 1       | 1                     | 1    |       |
| 80       | 45            | 7      | 38        |                      | 1       | 5                     | 6    |       |
| Total    | 499           | 107    | 381       | 11                   | 20      | 71                    | 80   | 0     |
| Mean     | 26.26         | 5.63   | 20.05     | .579                 | 1.05    | 3.74                  | 4.21 | -     |

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