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OBSERVED IN THE READING LESSON

DISSertation

Presented in Partial Fulfillments of the Requirements
for the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

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1968

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CHAPTER I

NATURE OF THE PROBLEM

Introduction

Through the growing knowledge of science and technology, man has created and continues creating fantastic socio-economic changes which demand new structures and new modes of thinking and behaving. Knowledge explosion indicates that it is impossible and quite useless for students to learn the sum total of existing knowledge. What is needed is for the pupils to develop ways of thinking which will help them solve the problems they will encounter, many of which the school of today cannot foretell.

Thus, current literature on the aims and purposes of education is suffused with articles dealing with the need for developing higher intellectual skills among the students. Bloom and his associates, for example, stressed the need for increasing the "emphasis on the higher mental processes of problem solving rather than the existing stress on information learning". 1 Consequently, we find new curriculum programs - new mathematics, new science, new social studies emphasizing big ideas, fundamental structure, and modes of inquiry basic to each subject area. These new programs teach the

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students how to learn and think for themselves rather than absorb knowledge passively.

Has reading instruction moved in conjunction with this emphasis on thinking? The answer to this question appears to be meager. In reading, the teaching of how to decode the printed symbol in order to fight illiteracy tends to attract greater concern than the movement to emphasize thinking. New developments in reading — ITA, the various linguistic programs, words in color, motor-sensori approaches, modified phonics program — tend to emphasize the instrumental aspect of teaching beginning reading. It is true that the predominant illiteracy existing among the people residing in culturally deprived and under-developed areas of the world is a problem but the serious problem called by Chase as "higher illiteracy", should also be equally recognized. He maintained that:

The higher illiterate can absorb and repeat ideas found on the printed page, but he has not developed the ability to relate these ideas to the life around him. He does not engage in the kind of dialogue which will test the relevance of what he has read to his own personal experience, to the lives of those he meets, or to the behavior of individuals and social groups in general. He does not know how to bring about the conscious interplay between ideas previously encountered and the content of what is being read at the moment. He does not raise the sharp questions which probe the content of reading for meaning, test it for accuracy and penetration, and weights its implication for himself and society. ... He lacks the courage to consider ideas which seem threatening to cherished beliefs or vested interests. He is unable to enter appreciatively into values, modes of behavior and points of view arising in cultures other than in which he has been nurtured.2

Thinking is closely related with language. As pointed out by Wees,\(^3\) "... language, as an instrument of thought, partakes of thought so intimately that it is almost impossible to separate the two". Therefore, reading which deals with the printed language, has to play a vital role if we are to reach the new educational goal emphasizing thinking. Dale suggested that "Teachers need to see reading as thinking".\(^4\)

In reading instruction, the habit of questioning the material being read, the attitude of mind which causes the reader to ask mentally, "What is the significance of the main thought of this paragraph?" must be developed rather than the slavish acceptance of everything that is found in print.

**Background of the Problem**

Questions are one of the teacher's main tool for guiding and directing the pupil's thought toward one mode of thinking and to another. Through the **Taxonomy of Educational Objectives**,\(^5\) Bloom and his associates have shown that questions can be structured to provide progression from merely absorbing and

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recalling of facts to critical and creative thinking. Results of related research indicate that the kind of questions asked as an important factor in determining the level of thinking required of children in responding to the materials being read.6

The quality and techniques of questioning a teacher use indicate his primary aims and purposes in teaching. If a teacher's main concern is having the students acquire factual knowledge, then it is logical to expect that his questions would require students to recall what is read. If a teacher's primary purpose is to stimulate the students to think not only in terms of absorbing and recalling information but also in organizing, analyzing, and synthesizing known facts to solve current problems creatively, then he will use certain types of questions that will provoke such types of thinking activities. As pointed out by Langer, "... the intellectual treatment of any datum, any experience, any subject, is determined by the nature of our questions and only carried out in the answers".7


If reading instruction is to move harmoniously with the present trend of emphasizing higher levels of thinking, questions which will stimulate such type of thinking should be used. However, this is not happening. Judging from the number of articles in educational journals and books, critical reading, for example, may be considered an important goal in reading instruction. Nevertheless, the same articles and results of current studies reveal that this goal is a topic of discussion but is not being fulfilled in practice. Torrance, for instance, decries the fact that over 90 percent of the questions teachers ask call only for the reproduction of what is in the textbooks. If we agree that the questions "give the style" in which pupils store and retrieve information as well as the manner in which they solve their problems, then by the nature of the questions the pupils are asked, the schools are not developing individuals capable of critical and creative thinking but mere "duplicators" who simply reproduce what is fed them and "recorders" who simply repeat what is prompted to them.

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10 Susanne Langer, Philosophy in a New Key, p. 16.
Current knowledge about the learner indicates that even the very young can think critically and creatively. As pointed out by Calitri, the autistic, analytic, and esthetic encompassing communication are so intertwined that some form of analysis takes place as the child begins to view his own surroundings and reactions to such surroundings. To wit, "... from the very beginning of his experience, reading faces from his crib, he has been noting similarities and differences and has been making conclusions about meaning".  

However, teachers especially in the lower grades, continue to ask questions which simply call for the parrot-like repetition of what is in the book. This implies the belief that before a person can use higher levels of thinking, he must spend a long period of time acquiring facts. This postulate, according to Taba, hinders the implementation of thinking as an educational objective. The teachers seem to assume that higher levels of thinking ability will develop among the pupils as a result of growth and development even without direction and guidance. On the other hand, the scant attention being paid by teacher-training institution to the development of the ability to ask thought-provoking questions among the teachers in training implies the belief that this ability is developed through intuition. Fortunately, some children do learn how to think critically and creatively for there are those who learn in spite of


12Hilda Taba, *Teaching Strategies*, p. 32.
the teachers and there are teachers who develop the ability to ask thought-provoking questions through their own insights.

Educators are emphasizing independent and self-study techniques, but very little attention is being paid to the quality of questions found in guidebooks, textbooks, and supplementary readers. It is only recently that important aspects of questioning strategies have been included in books and journals dealing with the art and science of teaching.\textsuperscript{13}

The Problem

Generally, the main concerns of the study were (1) to investigate the ability of primary teachers to ask thought provoking questions; (2) to study the kinds of questions posed in the resource manuals; and (3) to ascertain the relationship between the questions posed in the guidebooks and those used by the teachers. In addition, the study may answer the question raised by Amidon and Furst which asked, "How much do the teachers' manuals and teacher editions textbooks, especially in reading, influence the teacher's approach to the teaching process and is the influence reflected in their verbal behavior?"\textsuperscript{14}


Specifically, the study aimed to answer the following questions:

1. What types of questions do teachers ask in primary reading classes?
2. What types of questions are listed in the guidebooks teachers used?
3. Do the questions given by the teachers parallel those listed in the guidebooks?
4. What types of objectives do teachers try to accomplish?
5. What are the types of objectives listed in the guidebooks?
6. Do the objectives stated by teachers differ with objectives suggested in the guidebooks?
7. Do the types of objectives teachers aim to accomplish parallel the type of questions they present?
8. Do the objectives and questions listed in the guidebooks differ?

Significance of the Study

Teaching is highly complex. To date, there is practically no meaningful agreement on what it is. However, since the quality and quantity of teacher-pupil interaction in the classroom has become an area of vital interest in educational research, objective definitions of teaching are coming to light. The current interest in interaction analysis which is based on the careful and systematic observation of classroom verbal behavior enables the educators not only to describe teaching but also to formulate and test hypotheses about its salient

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15See N.L. Cage ed., Handbook of Research on Teaching (Chicago: Rand McNally & Company, 1963), Chapters 2 and 3
nature. As pointed out by P.J. Lawrence.16

Teachers and pupils engage in a very great number of verbal actions in the course of a school day as they deal with the predominantly verbal materials of instruction, and it is these actions which need to be studied in great detail if theories of teaching are to be formulated and teachers to be trained adequately.

Interaction analysis, then appears to be one objective way of studying the relationship between what the teacher does and says and what the children learn. Nevertheless, it must be realized that signs other than language are employed in the classroom to indicate feelings and attitudes in an intricate way. Thus, a definition of teaching based on verbal interaction is by no means complete. Furthermore, the verbal behavior occurring in the classroom is in itself too complex to be categorized simply. It must be considered as a series of observable behavior occurring over a period of time. How many different types of behavior to be seen at any given time will depend upon what one is looking for. Smith suggested, "... the fact that language is the primary medium of instruction is not as important as the things we do with language. For if we are to understand teaching we must know what the actions are that we perform linguistically".17 One type of such linguistic behaviors which can be observed, quantified and qualified, is the asking of questions which is the main concern of this study.


If the techniques of questioning the teachers use do play a significant role in fostering higher levels of thinking, the scarcity of research dealing mainly with teachers' questions particularly in the primary grades is deplorable. Complex socio-economic changes and the impact of mass media suffused with propaganda demand citizens who can think not only in terms of absorbing and recalling of information but also in using known facts in solving problems and in making decisions and choices. Evidence to date indicates that questions influence students to organize, analyze, synthesize, and evaluate past experiences in relation to their current problems and needs. In a recent study, Taba maintained that the questions teachers ask greatly influence the development of pupils' thinking skills. It is hoped that this study may spark interest in considering the topic of questioning in research, thus putting its significance in its proper perspective.

In a study sponsored by the U.S. Office of Education, Wolf, Huck, and King reported evidences that teachers can be trained to ask questions which will prompt higher levels of thinking among their pupils. The study may arouse the interest in including the improvement of questioning skills of the classroom teachers during in-service training. The study may also spark the interest in including the subject of questioning in the training of teachers, not

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18 Hilda Taba, *Teaching Strategies*, p. 43.

only in theory but also in practice through classroom observation or through simulation techniques.

Since the study considered the questions in relation to the objectives being purported to be accomplished not only by the primary reading teachers but also by the authors of reading guidebooks and textbooks being used, the study may also generate the interest in considering the types of questions and projects suggested in those textbooks and guidebooks - when authors are writing them; when publishers are considering them for publications; and when teachers and administrators are considering their merits for possible school use. If the questions encountered by the pupils do influence their levels of thinking and their style of storing and recalling of information, considering the questions listed in reading materials is important particularly for those used in independent and individual study.

**Assumptions**

In proposing this study, certain basic assumptions have been made. They are:

1. The quality and technique of questioning used by teachers and listed in the teachers' manuals not only influence the pupils' style of storing and retrieving of information, but also the type of mental processes they apply in reading.

2. Questions given by teachers and listed in the teachers manuals can be classified according to the Taxonomy of
Educational Objectives developed by Bloom and his associates.

3. Questioning is a basic tool not only in classroom group instruction but also in individual and self-instruction.

4. Teachers can be trained in the art of questioning.

5. Questions suggested in textbooks and guidebooks can be further improved.

6. The experience of classifying and analyzing questions given by teachers in real classroom and those listed in the guidebooks may be an essential experience for students of education.

**Hypotheses**

Based upon these assumptions, the study was designed to test the following hypotheses:

1. Questions asked by teachers in primary reading classes will involve the following categories:
   a. Memory
   b. Translation
   c. Interpretation
   d. Application

2. There are no significant differences between the questions asked by the teachers in the primary reading classes and those listed in the guidebooks.

3. The types of objectives given by the teachers will not differ significantly with the types of questions they ask the pupils.

4. The types of objectives and questions listed in the
guidebooks will not differ significantly.

3. There are no significant differences between the objectives given by teachers and the objectives listed in the guidebooks.

Limitations of the Study

Although the most useful data needed to study and improve teaching may be obtained through direct and formal observations of what happens in the classroom while the teachers teach, study of this nature is rare indeed because of certain inherent limitations. Among these limitations are:

1. The human observer is "imperfectly reliable and often not highly valid in his recorded judgements". 20

2. "The presence of an observer in a classroom is so disturbing that the behavior seen can not be regarded as typical of the behavior which goes on when an observer is not present." 21

3. Direct observation in the classrooms are expensive in terms of time and money, thus, the study is limited not only in terms of the number and length of observations but also in the geographical area covered.


4. The preparation of the researcher may not equal the professional skill demanded by a study of this nature. As pointed out by Medley and Mitzel, "Research on classroom behavior is not a pastime for amateurs; it is a full-time occupation for technically competent professionals."22

**Delimitations**

The geographical area covered by this investigation was limited to the City of Regina, Saskatchewan, Canada. The data collected was limited to that obtained by observing teachers who were randomly selected from those who expressed willingness to participate in the study. The teachers were connected with the Public and Separate School Boards of Regina.

**Definitions of Terms**

1. The term questions was used to designate any intellectual exercise calling for a response; this included both problems and projects presented to the pupils and accomplished within the period of observation ranging from 20 to 30 minutes.

2. Taxonomy of Educational Objectives adapted in classifying questions:*  
   a. Memory - the student recalled or recognized information.

22Medley and Mitzel, *op. cit.*, p. 248

*These were adapted from the classification of questions developed by Sanders and described in his book, *Classroom Questions: What Kinds?*
b. Translation - the student changed information into different symbolic form of language.

c. Interpretation - the student discovered relationships.

d. Application - the student solved a lifelike problem that required the identification of the issue and the selection and use of appropriate generalization and skills.

e. Analysis - the student looked at the components and their relationship to the whole.

f. Synthesis - the student solved a problem that required original, creative thinking; recombined previously learned information into unique ideas and planned or proposed a set of operations or a set of abstract relations.

g. Evaluation - the student made a judgement of good or bad, right or wrong and accepted or rejected according to standards he designated; exhibited awareness of problems, definitions, and gaps in information.

3. **Guidebooks** - The term was used to refer to the manuals or teachers' edition issued by publishers to guide and offer suggestions to teachers who are using their textbooks and supplementary readers.

**Summary**

The important role played by teachers' questions in developing higher levels of thinking particularly in relation to reading has been recognized. Little research has been carried out
to date, however, to ascertain (1) what kinds of questions teachers ask in primary reading classes, (2) what objectives the teachers intend to accomplish during such classes, and (3) the relationship of teachers' questions with the objectives they intend to attain.

The present investigation appeared to be a worthy undertaking for several reasons. First, it may help to ascertain the present state of teaching reading-thinking skills and therefore may generate interest in improving it further. Secondly, the study may spark the interest in including the teaching of strategies of questioning for teachers both during in-service and pre-service training. Finally, it may also stimulate the interest in considering different teaching strategies in relation to the accomplishment of the educational goals intended to be attained.

Limitations in the research were recognized to be the following: (1) unlike the recorded judgement of a machine, the recorded judgement of the human observer is imperfectly reliable and often not highly valid, (2) the observers' presence in the classroom may disturb the behavior of the teacher thus the behavior seen may not be an accurate representation of the teachers' typical behavior which goes on when observers are not present, and (3) it is limited in terms of the geographic area covered and the number of observations made.

Chapter II will contain a review of related research. Pertinent theoretical writings will be cited when needed. Subjects, instruments, and procedures used in the study will be described in Chapter III. The data will be presented and interpreted as findings
in Chapter IV. Chapter V will include a summary of the findings, conclusions, implications, and recommendation for further research.
CHAPTER II

REVIEW OF THE LITERATURE

The purpose and nature of the study reported in this paper called for a review of the literature dealing with several subjects. It was necessary to consider not only studies involving teachers' questions and their relationship to reading, but also those involving teacher-pupil verbal interaction analysis - one way of collecting data about the learning situation existing in the classroom. Because the elements of this review have to stay within the scope of this particular investigation, the review of related research dealing with such prolific subjects as reading the characteristics and qualities of teacher-pupil interaction was exacting and the selection of the studies to be included in the particular review of related research is a difficult undertaking. However, the following review of the literature should convey why the consideration of the research included in this report is not only desirable but also necessary.

Interaction Analysis in the Classroom

To date, studies of teacher quality, trait, and behavioral characteristics have been markedly unproductive. However, there has been some evidence of progress in the study of the teaching process through careful and systematic observation of interactive behavior of teachers and pupils in the classroom. The emphasis is on what teachers and pupils do rather than on what they are as persons. As defined by
Flanders,

Interaction analysis is an observation procedure designed to ... permit a systematic record of spontaneous acts, and scrutinize the process of instruction by taking into account each small bit of interaction, thus reducing the prejudices that warp the reports of observers. (italics mine.)

By and large, interaction analysis involves the investigation of ways in which the teachers use verbal language to convey meaning and induce patterns of cognitive processes among the pupils. Teachers verbal behavior is the prime concern of interaction analysis, not only because the teaching act is highly verbal in nature, but also because the verbal behavior can be observed with more objectivity and consistency, than the non-verbal aspect of teaching. Thus, if we consider the importance of non-verbal behavior in human interaction, the description of teaching based on verbal behavior is by no means complete. However, it is considered that the verbal behavior of an individual concurs with his non-verbal behavior. To wit,

In the classroom we must assume that the verbal statements of a teacher are consistent with his non-verbal gestures, in fact, his total behavior. ... A feeling for what is involved can readily be obtained by closing your eyes when a teacher is talking, having a friend keep you informed concerning "happy", "neutral", and "angry" expressions or gestures, and then deciding whether your friend's observations are consistent with your interpretation of the teacher's statements.


2Ibid., pp. 2-3.
Taxonomies of Classroom Interaction

The purpose of interaction analysis is to obtain an accurate description of teaching and learning situations existing in the classroom through unbiased records of observations. Therefore, research workers find it necessary to develop or adapt systems of describing not only the verbal behavior of the teachers but also the type of thinking elicited by such behaviors among the pupils. The systems of describing verbal interactions in the classroom vary according to the nature and purpose as well as the setting and population of the particular investigation a researcher is working on. These systems of description serve as the chief tools for securing the data needed in studies dealing with the act of teaching. Smith maintained that these predetermined description may not only help to describe teaching accurately, but may also reduce the verbalism which hinders the thorough analysis of teaching.3

One of the earliest attempts to study not only the teaching act but also the impact of such an act on what the pupils learn was made by Marie Hughes.4 In her study to determine the effects of control and freedom in the classroom, she used the following five categories:


4Marie Hughes, et. al., "Development of the Means for the Assessment of the Quality of Teaching in the Elementary School", (Salt Lake City: University of Utah, 1959). (Mimeographed) reviewed by Hilda Taba, Teaching Strategies and Cognitive Functioning in Elementary School Children (San Francisco: San Francisco State College, February, 1966), pp. 24-25
1. Controlling, acts which tell children what to do, how to go about it, and who should do what;
2. Facilitating, acts such as those which check, demonstrate, and clarify;
3. Content development, acts such as those which elaborate the structure of the problem under consideration, or build data for generalizing;
4. Personally responsive acts, and
5. Positively and negatively affective acts.

From this study, Hughes deduced that a large percentage of controlling acts by the teacher limits the pupils' intellectual activity to memory and recall while a large percentage of acts designated as content development encourages mental processes other than mere memory and recall.

Another attempt to develop a classification of verbal interaction between teachers and pupils is the system developed by Wright and Proctor to analyze the teaching of algebra to high school students. Together with the several categories of interaction analyzed is one called "processes", which means the processes involved in inducing mathematical thinking. This category is broken down into the following sub-classes: (1) analyzing, (2) synthesizing, (3) specializing, and (4) generalizing. Each sub-class is again broken down into different classification which can be identified by

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separate observers. The "Analysing" processes, for instance, are divided into: (1) a chain of backward implication as in the logical form 'is implied by,' (2) a less systematic seeking of known premises to establish an approach to proof, (3) the justification of a statement, and (4) moving back over an argument to discover a mistake or clarify meaning.

The essential contribution of this study lies in the level of specificness and definiteness at which the verbal exchanges are analysed, and the identification of particular types of cognitive operations underlying the verbal exchanges during mathematical lessons.

One of the most prolific research workers in the area of interaction analysis is Flanders. He has been involved in analyzing classroom interaction since 1946, and the setting of his research includes not only the United States but New Zealand as well. In his efforts to study teacher influence in the classroom, he developed ten categories for interaction analysis, which include:

1. Accepting feeling
2. Praising or encouraging
3. Accepting or using ideas of students
4. Asking questions
5. Lecturing
6. Giving directions
7. Criticizing or justifying authority
8. Student talk -- response
9. Student talk -- initiation
10. Silence or confusion which means pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.  

The categories are divided into two general classifications: (1) Teacher Talk, and (2) Student Talk. Teacher Talk is divided further into two sub-general classifications: (1) Indirect influence, and (2) Direct influence. Flanders pointed out that there is no scale implied in the numbers used to designate the ten categories; that to write down the numbers during observation is to relate the situation in the classroom; "not to judge a position on a scale."

Using fifteen high school classes from the metropolitan and suburban area of New York City selected on the basis of teacher willingness to participate in the study, Bellack and his associates studied the characteristics of the language in the classroom. The research workers developed a highly intricate system of coding the teaching act being observed. The system includes eight general categories of "pedagogical moves," and each category is broken down into sub-classes which, in turn, are divided into several sub-classes. For example, one of the eight general categories of the pedagogical move is "Substantive-Logical Meaning," defined as

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6Ned Flanders, Interaction Analysis, p.7.

"Cognitive processes involved in dealing with the subject matter under study," which in this particular case is high school social studies. This category is divided into three sub-classes which are: (1) Analytic process, defined as "purposes of language or established rules of logic," (2) Empirical process, defined as "sense of experience as criterion of truth," and (3) Evaluative process, defined as "set of criteria or value system for verification." Each of these sub-classes are further broken down into several categories. For instance, the analytic process is divided into: (1) Defining - general; (2) Defining - denotative; (3) Defining - connotative; and (4) Interpreting.

While the study may have succeeded in developing a coding system that is specific and definite, the reader questions the feasibility of using such an intricate and laborious system of coding verbal behavior in the classroom; particularly if the training of observers and the degree of agreement they should attain in making valid use of the code are taken into consideration.

Nevertheless, through the study the research workers were able to describe the "general rules of the language game of teaching." The most active player in the game is the teacher. Both the teacher and the pupil generally use fact-stating and explaining rather than evaluating and opining moves. The teacher's primary role is that of a "solicitor" or an inducer of response and activity, while the primary role of the pupil is that of a respondent.

Furthermore, the study also provides a basis for hypothesizing
that the behavioral role of the teacher is largely influenced by culture; that the role is consistent from teacher to teacher. The research workers contend that both the teachers and the pupils, regardless of personality traits or subject matter being learned, consciously or unconsciously follow the rules of the classroom game, rules which are highly determined by culture. This hypothesis may explain the hardships encountered by researchers in training teacher participants to teach creative and cognitive skills among the pupil participants. For instance, Torrance maintained that:

In one experiment our efforts involved the provision of materials which would help teachers in assuming attitudes which would show respect for the questions, creative ideas, and other productions of pupils. In spite of an apparent eagerness on the part of the participating teachers, however, it was soon evident that many teachers have within themselves attitudes which make it extremely difficult for them to manifest such respect. This was true even when they tried deliberately to do so.8

Classroom verbal behavior is so complex that some of the resulting classification systems are too complicated. However, some researchers restrict their observation to a limited number of categories depending upon what they are looking for. A wide variety of expansions and contractions of categories developed by the researchers previously mentioned, are possible to meet specific

research needs. Examples of this kind of observation are studies dealing solely with teachers' questions. As suggested by Flanders, if the relationship between the nature of the teacher's questions and the responses of pupils to these questions are of central interest to the researcher, he could expand the "Teacher statements" category in his system to include: (1) asks facts, (2) asks opinion, (3) asks for proposed action, (4) asks for inference, prediction or conclusion and (5) other teacher statements.9

The following section of this chapter will consider some of the research studies in teacher questioning and the classifications of questions used as tools in collecting the needed data.

Teacher Questioning

Results of verbal interaction analyses indicate that teachers' talk dominates the verbal out-put in the classroom and that teachers' questions constitute a large portion of this verbal out-put. As pointed out by Hyman, "Anyone who has been in a classroom for at least five minutes is fully aware that the asking of questions constitutes a lion's share of the verbal behavior there."10 Therefore, teacher questioning is an important determinant not only of the content to be learned but also of the nature and quality of learning that exists in the classroom.

9N. Flanders, Interaction Analysis, p. 41.

If it can be shown that questioning is related to the development of higher levels of thinking skills among the pupils and if the development of thinking abilities is an important educational objective, then the effectiveness of our educational system may be partly determined by the quality of questions teachers ask - thus the present development of interest in determining the kind of questions teachers ask through verbal interaction analysis.

**Systems of classifying questions teachers ask**

The improvements being made on the different systems for interaction analysis demonstrate the present trend of recognizing teacher questions as an important teaching device. For example, in one of the first category systems developed by Amidon and Flanders, the questions asked by teachers were only quantified but not qualified. However, when Amidon worked with Hunter in devising another verbal interaction category system, teachers' questions were not only quantified but also qualified as narrow or broad.

In their study, "Analyses of Classroom Interaction," Gallagher and Aschner developed a system of classifying questions and responses containing four categories:

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1. Cognitive Memory Questions - call for facts or other items which can be recalled.

2. Convergent Questions - call for the analysis and integration of given or remembered date.

3. Divergent Questions - call for answers which move into new directions.

4. Evaluative Questions - deal with matters of judgement, value and choice.

The researchers found out that "a slight increase in the percentage of divergent questions asked by the teacher brought about a large increase in the divergent production of pupils."\(^{14}\) The classification of questions developed by Gallagher and Aschner was adapted by Amidon and Hunter in their recent attempt to improve further their verbal interaction category system.\(^{15}\)

Torrance contends that it is possible for every teacher to improve classroom creativity by asking more thought provoking questions. However, results of his survey study\(^{16}\) indicate that teachers were not aware of the different kinds of questions other than those calling only for the mere recall of what is in the textbook. He suggested the following categories of questions:

\(^{14}\)Amidon and Hunter, Improving Teaching, p. 27.

\(^{15}\)Ibid.

\(^{16}\)Paul E. Torrance, "Creativity in the Classroom: Asking Provocative Questions," The Instructor LXXIV (October, 1964), p. 35.
1. Comprehension questions
2. Questions requiring application of information
3. Questions requiring analysis
4. Questions requiring synthesis
5. Questions requiring evaluation

These categories were adapted from the Taxonomy of Educational Objectives which was developed by Bloom and his associates. According to Torrance, this classification can also be used as a system for classifying kinds of thinking.

In the present study focusing on teacher questioning, the classification of questions was adapted from the category system developed by Sanders. Through the Wisconsin Improvement Program, Sanders was involved in four summer workshops with public school teachers concerned with the development of new ideas in the area of questions. The taxonomy of questions which had evolved from these workshops include the following categories: (1) Memory; (2) Translation; (3) Interpretation; (4) Application; (5) Analysis; (6) Synthesis; and (7) Evaluation. (For the definitions of these categories, please see the section of the definition of terms in Chapter I of this report.)

The basic ideas underlying this classification generated from the Taxonomy of Educational Objectives developed by Bloom and


18Ibid., p. 3.
his associates, thus it is very similar to the classification of questions developed by Torrance which is mentioned before in this report. Both classifications were adapted from the Taxonomy of Educational Objectives.

Sanders pointed out that the level of thinking brought about in the minds of students by any questions are influenced by the following factors: (1) the kind of question in terms of its classification in the taxonomy; (2) the knowledge of the subject that each student brings to the classroom; and (3) the instruction that precedes the asking of a question.19

Therefore, the level of thinking generated by questions in the minds of students are not determined by the kind of questions per se. For instance, many educators deplore the predominance of "what," "where," and "when" questions and advocate the use of more "why," and "how" questions with the implication that the last two types of questions demand higher levels of thinking. However, such types of questions are only memory questions when the answers are provided for in the text or in the teacher's lecture. "Why," and "how" questions are more than memory questions only when they are presented in such a way that the student has to figure out the answer for himself.

Questions and children's thinking

One of the basic underlying assumptions of most studies

19Norris Sanders, Classroom Questions, p. 8.
dealing with thinking is the fact that the questions encountered by the individual highly influence their thinking experiences. For instance, when Bloom and his associates developed the "Cognitive Domain" section of the Taxonomy of Educational Objectives, they defined a number of categories of thinking such as "knowledge," "comprehension," "application," "analysis," and "synthesis." Under each category, they give examples of questions that will elicit such types of thinking, thus implying that questions are the main tools of provoking different types of thinking.

In a study of children's thinking, Taba underscored the crucial function of questions in developing thought patterns of children. The study was based on the assumption that thinking can be taught if the specific processes and skills comprising it are identified and those processes and skills which can be systematically taught are differentiated. To implement this assumption, a category system of the cognitive tasks which allows the identification and differentiation of such processes and skills was devised. It is composed of three categories: (1) Concept Formation; (2) Inferring and Generalizing; and (3) Application of Principles. Under each category, the characteristics of the observable activity and the mental operation involved as well as the example of question eliciting each type of activity were given. For example, under "Cognitive Task 3:

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Hilda Taba, Teaching Strategies and Cognitive Functioning in Elementary School Children CRP No. 2404 (San Francisco: San Francisco State College, 1966).
Application of Principles," one "overt activity" described is "predicting consequences, explaining unfamiliar phenomena, and hypothesizing." The corresponding "covert mental operation" described is "analyzing the nature and the dimension of the problem or condition," and the corresponding example of "eliciting question" is "What would happen if ...?"

Results of the study indicate that the nature of questions teachers ask determines the degree of perception and thinking skills that can be put to use. The use of open-ended questions was suggested. Open-ended questions permit spontaneity and participation in the quest by students of different abilities allowing them to respond in terms of their own perceptions instead of pursuing the line of thought along the path established by the teacher.

Frequency of teachers' questions

One of the earliest reports on studies dealing with teachers' questions was made by Stevens in 1912.²¹ His study covered a period of four years' observation of grades seventh grammar through the last year in high school. One of his major findings was the overwhelming number of questions the teachers ask - two, three or four questions per minute. He also found out that individual pupils were given almost no opportunity for oral expression and teachers

were doing 85 percent of the work; the pupils collectively, 15 percent. He concluded that a large number of questions is a valuable indicator of bad instruction for the following reasons:

1. It develops a classroom climate of high nervous tension.
2. It means that the teacher monopolizes the work of the class period instead of guiding the pupils in doing.
3. The pupils are not allowed to recall their experiences nor associate ideas leading to higher levels of thinking.
4. The pupils are not given the opportunity to express themselves. They are called upon merely to repeat the content of the books.
5. Very little thought is given to the needs of the individual.
6. It makes the classroom a place for displaying knowledge rather than a laboratory for learning.
7. Very little effort is put forth to teach students to be self-reliant and independent thinkers.

In the study of *The Language in the Classroom* mentioned earlier in this chapter, Bellack and his associates included the topic of questioning under the title, "Soliciting and Responding Moves." It is worthwhile to note that although Stevens did his study fifty-four years ago, his findings match those of Bellack's study -

\[22\] Romiet Stevens, *The Question as a Measure of Efficiency*, p. 29.
that the teachers are the chief sources of questions; the teachers speak 86.9 percent of all the soliciting moves in the fifteen classes; and that the ratio of expected responding components dealing with fact-stating to those with evaluating is 15 to 1. In the Bellack study, the topic under consideration when the teachers were observed was trade policies, a topic which necessarily involves giving and justifying opinions. However, responses with analytic or evaluating meanings were rarely expected. These two studies indicate that in fifty years, development and innovation in education did not improve the teachers' style of questioning. And if questions are indeed the very core of learning, this lack of improvement is deplorable.

**Kinds of questions teachers ask**

While statements of educational objectives are suffused with intentions to develop higher levels of thinking among the pupils of today's schools, results of research indicate that the kinds of questions teachers use do not enhance the attainment of such purposes. As pointed out by Hunkins, "Questions which teachers ask substantiate stated objectives and reveal unverbalized aims ... Yet, from current research, the predominant emphasis of teachers' questions seems to be knowledge of facts - not thinking."  

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Results of recent doctoral theses suggest that answering memory questions dominate the class activity. Floyd studied questions asked by primary teachers and concluded that there existed a poor balance of questions with memory type towering the class activity.\(^\text{24}\) In a similar study, Adams discovered the same dominating emphasis on memory questions.\(^\text{25}\) When Davis and Hunkins\(^\text{26}\) analyzed the questions in fifth-grade Social Studies textbooks, they found that the emphasis was on memory. Pfeiffer and Davis\(^\text{27}\) found similar emphasis when they analyzed teacher-made examinations.

Another study dealing with the kinds of questions used in the classroom situation was made by Bell (1942).\(^\text{28}\) His subjects were fifteen-year-olds in Scotland. He found out that comprehension questions can be arranged on a continuum ranging from easy to difficult. Such a continuum includes:


\[^{25}\text{Thomas Adams, "The Development of a Method for Analysis of Questions Asked by Teachers in the Classroom Discourse" (Doctor's thesis, New Jersey State University, New Brunswick, 1964).}\]


\[^{27}\text{Isobel Pfeiffer and O.L. Davis, Jr. "Teacher-made Examination: What Kind of Thinking Do They Demand?" NASSP Bulletin XLIX (Sept. 1965) pp. 1-10.}\]

\[^{28}\text{Gage, (editor) Handbook of Research, p. 899.}\]
1. Questions of direct reference, the answers of which can be found in the text in the same words.

2. Questions of indirect reference, the answers of which can be found in the text slightly different in words.

3. Questions demanding easy inferences not stated in the text but can be inferred from it and may range from easy to difficult.

4. Comprehension involving qualifying phrases such as "largely," "alone," "chief," "only," "full," and other similar words.

5. Questions demanding difficult inferences with emphasis on ideas rather than words.

Purposes of teachers in asking questions

The various systems of classifying questions imply that there are several types of questions which teachers may ask. However, the appropriateness of the questions used are determined by the objectives the teachers wish to accomplish. A study to find out if teachers know why they asked questions was undertaken by Pate and Bremer. Of the 190 elementary school teachers from grades one to six, 68 percent said that they asked questions to check on what pupils have learned; 47 percent said questions are used to check pupils' ability to recall specific facts; others said

that questions require pupils to use facts in generalizing and in making inferences; 54 percent said that questions serve to diagnose pupils' difficulties. Only one percent recognize the potential of questioning in discovering pupils' interest; and 17 percent in meeting individual needs. The researchers concluded that teachers ask questions that require short answers, thus missing opportunities to give pupils the practice in the skill of using facts to generalize and to make inferences.

**Teacher Questioning and Reading**

Reading journals are suffused with articles linking reading with thinking and admonishing teachers to teach not only literal comprehension skills but critical and creative reading skills as well. However, there is a prevailing belief that such information is not reaching the classroom. One way of ascertaining the state of skill development in reading existing in the schools, is to study and analyze the questions teachers use during the reading lessons. Questioning can either stimulate response or it can stultify inquiry; it tends to structure learning not only with regards to what is learned but also the mode by which it is learned. Thus, in reading lessons, questions teachers use can foster certain modes of thinking such as analyzing plot structure, comparing reports or evaluating the worth of a written material.

In order to determine the state of thinking skill development in reading, Guszak examined the interaction of pupils and teachers
during the reading lessons. Twelve teachers were selected from a population of 106 second, fourth and sixth grade teachers. Lessons were tape-recorded over a three day period. These taped recordings were transcribed and analyzed according to the research questions. He found out that seventy percent of the questions were of the literal comprehension type which called for the "trivial factual makeup of the story."

In a similar study of questions teachers asked in third grade reading classes, Hostetler found out that only 1.8 percent of all the questions asked could be classified as requiring critical thinking.31

In the study of Critical Reading Ability of Elementary School Children, the research workers found out that teacher questioning and pupil thinking improved with training.32 The experimental teachers who received materials and instruction in teaching critical reading asked more analyzing and evaluating types of questions which in turn influence the growth in depth of their pupils' thinking. The children who received instruction in critical reading

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32Willavene Wolf, Charlotte S. Huck and Martha L. King, Critical Reading Ability of Elementary School Children Project No. 5-1040 (Columbus: The Ohio State University Research Foundation, 1967).
gave more evaluating responses and fewer recalling of trivial facts than their schoolmates who did not receive such instruction. The results of this study support the contention of Taba that thinking can be taught and learned.

Summary

A brief overview of the research in verbal interaction analysis as well as questioning and its influence to the content and mode of learning existing in the classroom has been presented. An attempt was made to determine from the literature how observation and analyses of questions can be used to ascertain the state of teaching reading-thinking skills. This was done first by looking at the different category systems of interaction analysis and their possible use as tools for describing the actual teaching situation existing in the classroom; second, by considering questions as an aspect of these systems of verbal interaction analysis and finally, by examining the relationship of the quality of questions teachers asked with the development of higher levels of thinking among their pupils.

It was noted that teachers dominate the verbal output in the classroom and that questions form an important part of this output. Therefore, questions tend to structure the nature and content of learning. Relating this to reading, questions can foster certain modes of thinking such as analysing an argument, plot, structure or

Hilda Taba, Teaching Strategies, pp. 31-32
explanation; comparing reports, editorial, two statements or two characters; or evaluating the style or worth of the written material.

The study described in this report should provide evidence to describe the state of teaching reading-thinking skills in the classroom not only by taking into consideration the questions but also the objectives purported to be accomplished by both the classroom teachers and the authors of guidebooks.
CHAPTER III

METHODS OF PROCEDURE

In their efforts to break away from a formal and unimaginative approach to teaching, educators have underestimated the complexity and difficulty of understanding the educational process. Educational innovators exalt one method over all others and claim that by using their way of teaching the pupils will learn more. For instance, proponents of the phonic method claim that the phonic method is the best way of teaching reading, but to date, educational research fails to provide significant proof supporting such claims. Results of first-grade studies showed that there was greater variations in teaching within a single method than there was between two methods.

To differ from the common studies of comparing one method with another, the present investigation is concerned only with one aspect of the cognitive and logical dimension of teaching. This dimension is often referred to imprecisely as "thinking," a process invoked by questions, directions, and motivating statements encountered by pupils through their teachers and the materials they read.

The present investigation analyzed the questions teachers asked in relation to the objectives the teachers intended to accomplish. Comparative analyses were made between the questions and objectives from the teachers and the questions posed and the objectives stated by the authors of the guidebooks the teachers used. The taxonomy of questions developed by Sanders was adapted as a descriptive rating scale with seven categories which were: (1) memory, (2) translation, (3) interpretation, (4) application, (5) analysis, (6) synthesis, and (7) evaluation.  

The study involved the selection of the teacher sample; the selection and training of the observers; actual classroom observations by the trained observers; and examination of the questions and objectives suggested in the guidebooks about the particular lessons the observers observed. The research design called for direct and formal observation of what happened in the classroom and required the observers to categorize the questions teachers asked while teaching primary reading. Therefore, the observers were trained to categorize the questions teachers asked and the objectives the teachers intended to attain to the degree where the observers obtained the highest correlation possible in categorizing those questions and objectives. Thus, the inves-

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2 See Appendix A
tigation was exacting and time consuming. In addition, because of sampling limitations, results can be regarded as suggestive only. Nevertheless, such results may suggest possible ways of describing what Lawrence termed as the "anatomy of teaching" both quantitatively and qualitatively. The detailed description of procedures and methods follows.

Selection of the Teacher Participants

The study was conducted in selected primary classrooms of the Regina Public School Board and the Regina Separate School Board. The superintendents from both school boards submitted lists of teachers who were willing to participate in the study. From the fifty-eight names of first, second, and third grade teachers submitted, a sample of six teachers at each grade levels was randomly selected for the actual study. Therefore, there were eighteen teacher participants in ten different schools. (See Table I).

TABLE I
SAMPLE SIZE BY GRADE

<table>
<thead>
<tr>
<th>Grade</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Teachers</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Number of Pupils</td>
<td>180</td>
<td>174</td>
<td>179</td>
<td>533</td>
</tr>
</tbody>
</table>

The teachers' years of experience in teaching range one year to twenty-six years. Educational qualifications of the teachers were not easily available. Nevertheless, teachers in the study were representative of those in the system.

The volunteer teachers who were not included in the sample of eighteen were requested to participate during the training of observers. Recordings of reading lessons were made in their classrooms for training in phases 2, 3, and 5. Five of these taped-recorded lessons were transcribed for the phase 2 training. The teachers were informed that they would be identified in the study.

**Selection and Training of Observers**

Twenty students in teacher education involved in observation and participation received instruction in the art of questioning and analyzing questions. They had lessons based on the following books:


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4 See Appendixes C and D.


Using Chapter I of Russell's book dealing with the nature of thinking as a starting point, the students investigated the various theories and philosophical explanation of thinking as well as its relationship with language. Considering the hierarchical structures and terms used, the "Schema for Thinking,"5 developed by Russell was studied and compared with the "Schema of Mental Levels"6 devised by Burt. In turn the two schemas were compared with the Taxonomy of Educational Objectives.

The samples of questions listed by Bloom and Sanders to exemplify each classification of objectives were analyzed and compared with those given by Raths and his associates. Examples of these lessons were as follows:7

**Lesson I** - Using Bloom's six major classification of cognitive skills, (knowledge, comprehension, application, analysis, synthesis, and evaluation)8, students were asked to classify questions taken

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5 Russell, *Children's Thinking*, p. 10.
7 See Appendix B for complete sample of questions used in the study.
8 Bloom, et. al. *Taxonomy of Educational Objectives.*
from the examples given by Raths and his associates in the book, 
Teaching for Thinking. Examples of such questions were:

1. Show a picture of someone at work. Ask the children 
to describe the work.
2. Compare two characters from a story which have been 
read by the teacher.
3. Ask the children to suggest captions or titles for 
a series of pictures.

Lesson 2 - Using Raths' classification of thinking operations, 
(comparing, summarizing, observing, classifying, interpreting, 
criticizing, looking for assumptions, imagining, hypothesizing, 
applying facts and principles in new situations, decision-making,  
and designing projects or investigations), the students were 
asked to classify questions given by Bloom and Sanders in 
references previously listed. Examples of these questions were 
as follows:11

1. (Show a map of the United States indicating the amount 
of rainfall each year). Which two states are most 
similar in the amount of rainfall?
2. Suppose a man is required by his boss to work until

9  
Raths, et. al., Chapter I.  
10  
Ibid.  
11  
See Appendix B for the samples of questions for the entire 
lesson.
2:00 A. M. to complete a job. While driving home from work, he falls asleep at the wheels and runs into a tree. What caused the accident?

Lesson 3- The two sets of questions were printed into a transparency and then projected on to a screen through the use of an overhead projector. Then the students were asked to pick out two questions which seem to be of the same kind, first by using Raths' categories; second, by using Bloom's six major classes of cognitive skills and third by using Sanders' taxonomy of questions.

These lessons were given to the twenty students of education to make aware that there are different types and levels of thinking and that these types and levels of thinking can be stimulated by certain types of questions. Furthermore, it was a training for them in classifying questions according to a hierarchy which was the focus of the study.

Students often disagreed on the classification of questions but this was expected because it is difficult to classify questions with precision. Sanders maintained that the relationship between the categories of questions are akin to the relationship between the colors on a spectrum where the primary and the secondary colors are plainly visible but between each color, the shade is hard to distinguish because it is neither one nor the other but a part of both. Likewise, it might be easy to distinguish between questions

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12 Sanders, op. cit., p. 7.
involving memory and evaluation; but it might be difficult to
differentiate questions involving translation from those involving
interpretation.

Furthermore, the students have to make some assumptions
about the learning situations which have preceded the asking of
questions before they can decide on the classification of these
questions. For example, question number 7 in Lesson Two may be
classified by the students as memory or application of generali-
ization depending upon the assumptions they have made about the
learning situation that precede the asking of this particular
question.13

Finally, using the descriptive scale adapted for this study,
the students were asked to analyze and classify questions and
objectives listed in the guidebooks and textbooks being used in
the primary reading classes of the city schools. All the schools
were using the Scott Foresman And Company Basic Readers, 1956
edition. The guidebooks and textbooks used in the study were as
follows:

1. First grade: (a) The Three Pre-Primers; (b) The New
Fun with Dick and Jane; (c) The New Our New Friends.

2. Second Grade: (a) The New More Friends Old and New;

13
See Appendix B.
(b) The New Friends and Neighbors; (c) The New More Friends and Neighbors;

3. Third Grade: (a) The New More Streets and Road; (b) Finding New Neighbors; and (c) More Roads to Follow.

After the course was over, the four students with the highest standing in class were selected for training.*

Training of Observers

The training of observers was divided into five phases:

1. First, the observers classified questions taken from the guidebooks. (Since the observers had already discussed the contents of the readers in the education methods course, it was felt that reading the stories pertaining to the lessons observed were no longer necessary.) The observers compared the way they classified the questions and discussed their differences. When correlations ranging from .62 to .84 Pearson r were obtained, they moved on to the next phase of training. (See Table 2).

2. During the second phase of training, the observers classified questions from transcripts of taped-recorded reading lessons. Again, they compared their answers and discussed their differences. When a correlation ranging from .73 to .83 Pearson r was obtained, they moved on to the third phase of training. (See Table 2). During this stage of training, the observers

* The students were paid $20.00 each month, from February to April.
realized the need for ground rules to follow to increase the consistency of their choices. Some of the ground rules established were:

a. Questions ending with "don't you," "isn't it," "aren't we," "doesn't he," and other similar endings were classified as memory questions. Examples of such questions asked by the teachers were: "Billy thought that would happen, didn't he?" "This is a funny story, isn't it?" "Ben was about your age, wasn't he?" While these questions did not necessarily call for memory, the observers felt that such questions only required the pupils to parrot back what the teachers said. Considering the language game in the classroom, children know that they are expected to answer "yes" to this type of questions whether they agree or not with the statements preceding them. Therefore, the observers classified this type of questions as memory, the lowest category in the scale.

b. Directions which call for identification or reading of certain part such as: "Who can read the part which tells how Mother felt?" were classified as memory questions.

c. Only questions which required responses were to be classified. Sometimes, teachers give a series of questions without waiting for any response except for the last question. Only the last question will be considered.
3. Then the observers listened to taped-recorded reading lessons and classified the questions. After classifying the questions, they played back the record and discussed their differences. When the observers attained correlations ranging from .73 to .90 Pearson r, they moved on to the next phase of the training. (See Table 2).

4. The observers visited a classroom as a group and classified the questions they heard. * This lesson was also recorded. After the observation, they listened to the tape and discussed their differences. The observers obtained correlations ranging from .69 to .87 Pearson r. (See Table 2).

**TABLE 2**

<table>
<thead>
<tr>
<th>Observers</th>
<th>First Phase (Pearson r)</th>
<th>Second Phase (Pearson r)</th>
<th>Third Phase (Pearson r)</th>
<th>Fourth Phase (Pearson r)</th>
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</thead>
<tbody>
<tr>
<td>Best-Blezzard</td>
<td>.84</td>
<td>.89</td>
<td>.89</td>
<td>.87</td>
</tr>
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<td>.82+</td>
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<td>.86</td>
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<tr>
<td>Blezzard-Kleckner</td>
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<td>.83</td>
</tr>
<tr>
<td>Mckinnon-Blezzard</td>
<td>.70</td>
<td>.84</td>
<td>.85</td>
<td>.80</td>
</tr>
<tr>
<td>Kleckner-Mckinnon</td>
<td>.62</td>
<td>.70</td>
<td>.84</td>
<td>.69</td>
</tr>
</tbody>
</table>

* Considering the great pressure on the teacher being observed by five people with a tape recorder, this was done only once. Furthermore, the observers felt that they were already classifying questions with consistency and the taped-recorded lessons obtained from teachers selected for training purposes could be used as substitute for lived observations.
Collection of Data

In a meeting held on February 8, 1968, the observers met the participating teachers. Each participating teacher was to be observed six times. Two observers were assigned five teachers each. It was decided that observations would take place every Wednesday for six weeks starting February 19th. Each observer would visit two teachers during the morning and two during the afternoon sessions, one at a time for a maximum period of 30 minutes with each teacher. Thus each observer would do a minimum of four observations a week. At the end of the third week, teachers observed in the morning would be observed in the afternoon and vice-versa.

Each teacher was given (1) six copies of the Classroom Observation Sheet where she stated the objectives of each lesson; and (2) six copies of the Teachers' Guide Record Sheet where she indicated the source or sources of the lesson. During each observation, the observer received from the teacher the appropriate record sheet where the observer recorded the data observed.

It was decided that the classification of the teachers' objectives and the objectives suggested in the guidebooks would be...
be done by the team of observers as a group rather than by each individual observer. This was done each week during the Continuing Phase (Phase 5) of the training.

**Instrumentation**

A descriptive rating scale (Illustration A) for classifying questions and objectives was developed as a tool for recording the observations. The scale was divided into two columns - one for questions and one for objectives. It has seven categories listed consecutively. The seven categories were as follows: (1) memory; (2) translation; (3) interpretation; (4) application; (5) analysis; (6) synthesis; and (7) evaluation. Each category occupied a horizontal block. During the observations, the student observers classified the questions they heard by recording them in sequence according to their proper categories. For example, if the first questions they heard fell under the interpretation category, they wrote "1" in the block designated as interpretation and if the tenth question they heard fell under the memory category, then they wrote "10" in the block designated as memory. In the same manner, the students classified the objectives stated by the teacher in the second column. Likewise, the questions posed by the authors of the guidebooks and the objectives they listed were categorized with the use of the Teachers' Guide Record Sheet.*

*See Appendix A.
ILLUSTRATION A

Question Analysis
Record Sheet
Teachers' Manuals

Title of the Book: ___________________ Grade: ___________________

Publisher and date of Publication: ___________________________________

Pages: ___________________________________________________________

Objectives/objectives suggested:

___________________________________________________________________

___________________________________________________________________

Questions

<table>
<thead>
<tr>
<th>Categories:</th>
<th>Memory</th>
<th>Translation</th>
<th>Interpretation</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
<th>Evaluation</th>
</tr>
</thead>
</table>

Objectives

<table>
<thead>
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<th>Categories:</th>
<th>Memory</th>
<th>Translation</th>
<th>Interpretation</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
<th>Evaluation</th>
</tr>
</thead>
</table>

SUMMARY

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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analysis and Presentation of the Data

The basic data of this study were analyzed descriptively and statistically. These data were examined in the following ways:

A. From the total number of questions recorded from both the teachers and the teachers' guides, the percentage constituting each classification was computed.

B. From the total number of objectives recorded from both the teachers and the teachers' guidebooks, the percentage constituting each classification was computed.

C. Using the percentage data, the following were compared:
   1. Categories of questions asked by teachers with the categories of questions suggested in the guidebooks.
   2. Categories of objectives from the teachers and the categories of objectives listed in the guidebooks.
   3. Categories of teachers' objectives with the categories of teachers' questions.
   4. Categories of objectives listed in the guidebooks and the categories of questions posed by the authors of the guidebooks.
D. The Z test which may be used for testing the differences between proportions was chosen to test the significance of the findings because of the following reasons:

1. The number of questions teachers asked differed with the number of questions posed by the authors of the guidebooks.

2. The number of objectives stated by both sources (i.e., teachers and authors of guidebooks) differed with the number of questions posed by both sources.

3. To allow for comparisons of frequencies belonging to each category, the frequencies were reduced to proportions.

4. The Z test used for testing the differences between proportions considers the standard error of the difference between proportions which increases the correct interpretation of the results. Thus, to test the hypotheses postulated in this study, the following formula for the Z test was applied:

\[ z = \frac{p_1 - p_2}{\sqrt{\frac{p_1(1-p_1)}{n_1} + \frac{p_2(1-p_2)}{n_2}}} \]

Summaries of the findings were presented in tables showing the proportions, the $Z$ scores, and the levels of significance of differences for each category. Table II in Downie and Heath's *Basic Statistical Methods* was used to find the significant differences at the .01 and .05 levels of confidence.\(^{15}\)

**Summary**

The primary concern of the study was the examination of the questions encountered by pupils in their reading classes in relation to the objectives being purported to be accomplished in such classes. Since questions are highly instrumental in provoking thinking, it was also indirectly concerned with the examination of the present state of teaching reading-thinking skills.

To be able to record the data being observed, a descriptive rating scale of classifying questions and objectives with seven categories was developed. Four students of education were selected as observers and were given intensive training in classifying questions before they went out to observe reading lessons. There were eighteen teacher participants - six from each of the first, second, and third grade. Each teacher was observed six times. There were 533 pupils involved from the first, second, and third grade.

To test the significance of the findings, the differences between proportions of questions and objectives belonging to each category were analyzed through the use of the Z test, a way of testing the differences between two proportions divided by the standard error of the difference between two proportions. The presentation and interpretation of the data gathered through these procedures were discussed in the next section of this report.
CHAPTER IV

PRESENTATION AND INTERPRETATION OF DATA

One of the basic assumptions underlying recent research dealing with strategies of teaching is that the technique of questioning used by the teacher plays an important role in determining the kinds and qualities of thinking experiences the pupils will have. Relating this assumption to reading, this study was designed to investigate the kind of questions primary pupils meet in their reading classes. The questions were analyzed and categorized in relation to the objectives the teachers and the authors of reading guidebooks intend to accomplish.

This chapter is divided into three parts to present the data relative to: (1) the analysis of questions asked by the teachers and the questions posed by the authors of guidebooks; (2) the analysis of objectives stated by the teachers and suggested by the authors of the guidebooks; and (3) the comparison of the categories of objectives from both sources. The data concerning the hypotheses are presented in answer to the eight questions which were asked in the study. The general procedure to be followed in this chapter is as follows: (1) stating the questions; (2) presenting the data pertinent to the question; and (3) interpreting the data as findings.
The Z test, a statistical test to examine the significance of findings, as well as the instrument used for collecting the data was described in Chapter III.

Analysis of Questions

Kinds of questions teachers asked

The first question asked of the data was:

What types of questions do teachers ask in the primary reading classes?

Data pertaining to the kinds of questions teachers asked in reading lessons is shown in Tables 3 and 4. Out of the 108 lessons observed, the total number of questions recorded was 7476. Of this number, 2631 were in grade one; 2492 were in grade two; and 2353 were in grade three. The average number of questions asked per lesson varied from 65 to 73 and averaged 69.23. Of the total number of questions recorded, 47.54 per cent were classified as memory. (See Table 4). Memory questions were those that required the pupils to use memory skills in locating and recalling information from the materials they had read. For example, from the questions asked by a first grade teacher while teaching a lesson from the book, We Come and Go, the observers classified the following as memory questions:

1. "Paul, will you read the title of the story."
2. "What people did Sally say were in the car?"
### TABLE 3

**SUMMARY OF TEACHERS' QUESTIONS**

<table>
<thead>
<tr>
<th>Grade</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Lessons Observed</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>108</td>
</tr>
<tr>
<td>Number of Questions Asked</td>
<td>2631</td>
<td>2492</td>
<td>2353</td>
<td>7476</td>
</tr>
<tr>
<td>Average Number of Questions Per Lesson</td>
<td>73</td>
<td>69.22</td>
<td>65.36</td>
<td>69.23</td>
</tr>
</tbody>
</table>

### TABLE 4

**PER CENT OF TEACHERS' QUESTIONS**

**BELONGING TO EACH CATEGORY BY GRADE LEVEL**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Grades</th>
<th>I&lt;sup&gt;a&lt;/sup&gt;</th>
<th>II&lt;sup&gt;b&lt;/sup&gt;</th>
<th>III&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Total&lt;sup&gt;d&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td></td>
<td>46.11</td>
<td>45.96</td>
<td>49.98</td>
<td>47.54</td>
</tr>
<tr>
<td>Translation</td>
<td></td>
<td>3.84</td>
<td>2.52</td>
<td>3.59</td>
<td>3.42</td>
</tr>
<tr>
<td>Interpretation</td>
<td></td>
<td>12.76</td>
<td>6.96</td>
<td>6.86</td>
<td>9.08</td>
</tr>
<tr>
<td>Application</td>
<td></td>
<td>4.18</td>
<td>1.64</td>
<td>0.87</td>
<td>2.29</td>
</tr>
<tr>
<td>Analysis</td>
<td></td>
<td>24.05</td>
<td>29.67</td>
<td>25.31</td>
<td>25.94</td>
</tr>
<tr>
<td>Synthesis</td>
<td></td>
<td>7.14</td>
<td>9.98</td>
<td>10.60</td>
<td>9.16</td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td>1.88</td>
<td>3.23</td>
<td>2.76</td>
<td>2.55</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>99.96</strong></td>
<td><strong>99.96</strong></td>
<td><strong>99.97</strong></td>
<td><strong>99.98</strong></td>
</tr>
</tbody>
</table>

<sup>a</sup><sub>N = 2631</sub>
<sup>b</sup><sub>N = 2492</sub>
<sup>c</sup><sub>N = 2353</sub>
<sup>d</sup><sub>N = 7476</sub>
3. "Were any of the pets in the car?"
4. "What did he ask Jane?"
5. "Who spoke the lines?"

The next most frequently used kind of questions, as shown in Table 4 were those involving analysis which constituted 25.94 per cent of the total number of questions recorded. Questions which required pupils to predict were categorized as analysis because this type of questions called for the pupils to look at the components and their relationship to the whole in order to make conjectures. The following questions taken from the first grade lesson mentioned earlier were examples of questions classified by the observers as analysis questions:

1. "Do you think he is going to go?"
2. "Does that mean that Spot is going to go?"
3. "Now if Dick could decide, do you think he would take Spot?"
4. "What do you suppose Spot did when the car drove away?"
5. "Before you turn the page, what do you think will happen next?"

The results shown in Table 4 show that application and evaluation questions were rarely used. Of the total number of questions recorded, only 2.29 per cent were application questions and only 2.55 per cent were evaluation questions.
Application questions were defined as questions which involved the solution of a lifelike problem that requires the identification of the issue and the selection and use of appropriate generalizations and skills. In children, these generalizations and skills are non-verbalized and internalized generalizations and skills applied unconsciously, while in adults, these generalizations are more verbalized and are applied consciously and logically. For example, when a child says, "I builded a house," he is applying a non-verbalized generalization about language which he learned through the actual use of the language although he is applying the generalization erroneously because the word "build" is an exception to the rule. Therefore, questions such as "How would you feel if this happened to you?" were classified as application because in order to respond to this kind of question, a child has to use the internalized generalizations he had learned unconsciously by actually experiencing the phenomenon over and over again in various forms. Examples of teachers' questions categorized by the observers as application questions are the following:

1. "Do you or any of your family save buttons, strings, or things like that?"
2. "How would you feel if this had happened to you?"
3. "Suppose you were Dick, what would you do?"
4. "What would you do if she were your little sister?"
Evaluation questions required the pupils to make judgment of good or bad; and right or wrong, according to the standards or values he designated. Thus, to evaluate meant to set up appropriate standards or values and then to determine how closely the idea or object met these standards or values. Examples of teachers' questions classified by the observers as evaluation questions are:

1. "Do you think Spot will have a good time?"
2. "Was this a good way to help Sally get her drink?"
3. "Describe your favorite show window."
4. "Tell me the part you like best?"
5. "Are you enjoying it?"

It will be noticed that in the above examples of evaluation questions, the teacher did not ask the pupils to support their value judgments. In his study, Guszak found out that this practice of not asking the pupils to support their value judgment was a common practice in the reading classes and maintained that,

It seems imperative that teachers pattern the all-important "Why" questions after students take position. Until such is the common practice it seems that teachers will condition students to take value positions without vital weighing of evidence that seems to separate the thinking individual from the mob member.

The results of the observations presented in Table 4 show that the first grade teachers involved in the study often asked

1 Guszack, op. cit., p. 234.
questions in the following categories: (a) memory, 46.11 per cent; (b) analysis, 24.05 per cent; and (c) interpretation, 12.76 per cent.

Sanders explained that interpretation questions are hard to define because all higher levels of thinking involve certain refinements of interpretation. The distinguishing characteristic, however, is that in answering interpretation questions, the pupils have to discover or use a relationship between two or more ideas. When questions deal with pictures, the observers had some difficulties differentiating interpretation with other categories, specially with translation. Questions such as "What can you see in the picture?" were classified as translation because these questions involved changing an information into different symbolic forms - from pictures to oral language. Questions such as "What is happening in the picture?" were classified as interpretation questions because these types of questions not only involved the recognition of the contents of the picture but also the relationship existing between the illustrations and then describing the events being portrayed based upon the pupils' experiences. Examples of questions asked by the teachers in the first grade and classified as interpretation questions by the observers were as follows:

1. "Who will tell everything that is happening in the picture?"

Sanders, op. cit., p. 42.
2. "What is Sally doing now?"

3. "How can you tell the water is splashing?"

4. "What is the goat doing in this page?"

5. "What is happening in the picture?"

Table 4 shows that of all questions asked in the second grade, 45.96 per cent involved memory; and 29.67 per cent involved analysis. Of all the questions asked in the third grade level, 49.98 per cent were categorized as memory; and 25.31 per cent as analysis.

Of all questions asked in the first grade level, only 1.88 per cent were evaluation questions. Of all questions asked in the second grade level, only 1.64 per cent were in the application category. Likewise, of all questions asked in the third grade level, only 0.87 per cent were in the application category.

Examination of teachers' questions revealed that the pupils of the primary reading classes used in the study encountered questions involving memory, and analysis. The pupils were seldom asked evaluation, application, and translation questions. Therefore, the hypothesis which states that questions asked by the teachers in primary reading classes will involve translation, interpretation, and application was rejected.

These findings concur with the findings of other research dealing with teacher questioning such as those done by Torrance.

---

Torrance, op. cit., p. 35
and Guszak⁴ which found out that teachers asked largely memory questions and rarely asked questions requiring higher levels of thinking. However, during the training phases of the study, the observers being trained expressed some doubts concerning the relationship of children's thinking and memory. The observers expressed concern that they might be classifying questions as memory which in terms of a child's experience and way of thinking involved more than memory. For example, what seems obvious to us as adults may not seem obvious to the children and vice-versa. The same concern was expressed by Taba when she maintained that more research is needed to enlighten educators regarding children's thinking.⁵

Although the results of the study indicate that a large number of questions teachers used involved memory, analysis of individual transcripts of taped lessons appears to indicate that the nature of the reading lessons and the materials being read influence the types of questions the teachers used. Two different types of third grade reading lessons from the same teacher were analyzed. In the first transcript, she was teaching a group of slow readers using the basal reader.⁶ It will be noticed that she

⁴ Guszak, op. cit., p. 233.
⁵ Taba, op. cit., pp. 1-17.
⁶ See Appendix C.
asked literal comprehension type of questions which required the children to merely recall facts and give short responses. By simply looking at the physical make-up of the transcript, it is obvious that the teacher talked more than the pupils. In the second transcript of a lesson from the same teacher, she was questioning a group of children with higher level of reading achievement who were involved in reading individually while she was teaching the slower group using the basal reader.\(^7\) Examination of the transcript of the taped lessons reveals that in this type of lessons, the teacher asked more questions involving evaluation. Examples of such questions were: "How would you evaluate the book?" "Are you enjoying it?" "What part did you like best?" However, the teacher did not ask the pupils to support their value judgments. She did not ask the children why they were enjoying what they were doing; or why they liked a certain part of the book. The teacher did not encourage the children to evaluate the materials they were reading in terms of certain criteria such as the literary devices used by the writer, the style of writing or the veracity or worth of the writing.

In this type of lessons the teacher asked more questions involving not only recalling of facts but also analyzing, synthesizing, and organizing of such facts. Examples of these types

\(^7\) See Appendix D.
of questions were: "What is the main idea of the story?" "Who is the main character in the book?" At the end of the transcript, it will be noticed that the children were involved in making various kinds of projects related to the books they were reading.

Analysis of two transcripts of taped lessons from a grade two teacher revealed similar findings. In the first transcript of a lesson taken while the teacher was teaching with the basal reader, the questions asked involved memory and required short responses from the pupils.\(^8\) By simply looking at the transcript, it can be noticed that most of the time, the lines indicating the teacher's statements were longer than the lines indicating the pupils' responses. This implies that the verbal output of the teacher was greater than the verbal output of the pupils.

In the second transcript involving interviews of children concerning their library reading books, the teachers asked questions requiring higher levels of thinking and longer responses from the pupils.\(^9\) This teacher not only asked evaluation questions but she also required the pupils to support their value judgments. Examples of these evaluation questions were: "Now what part of the story did you like best? ... Is there any particular part that you were very interested in? ... Why did you pick that part?" "Why did you like turtles?" "Are there any other things or people that you particularly like? ... Why did you like Tommy?"

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\(^8\) See Appendix E.

\(^9\) See Appendix F.
She also asked application questions such as: "I wonder what would happen at your home if that took place? Have you any sisters or brothers? ... What would you think if they did that?"

Questions from the guidebooks

To further explore the types of questions used in reading lessons, the second question was asked:

What types of questions are listed in the guidebooks teachers used?

Table 5 and 6 present the data relevant to this question. There were 108 lessons analyzed from the guidebooks being used by the reading teachers. These lessons corresponded to the lessons observed in the classrooms. Out of the 108 lessons from the guidebooks, 3883 questions were recorded. Of this number, 1602 were from the first grade; 1302 were from the second grade, and 979 were from the third grade. The average number of questions per lesson was 35.95. (See Table 5) Results of the analysis indicate that authors of primary reading guidebooks posed more questions in the following categories: (a) memory, 41.46 per cent; (b) analysis, 32.85 per cent; and (c) synthesis, 12.16 per cent. The authors of the primary reading guidebooks asked only 1.01 per cent of the questions involving application; only 2.19 per cent involving evaluation; and only 2.50 per cent involving translation. (See Table 6).
TABLE 5

SUMMARY OF QUESTIONS FROM THE GUIDEBOOKS

<table>
<thead>
<tr>
<th>Grade</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Lessons Analyzed</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>108</td>
</tr>
<tr>
<td>Number of Questions Classified</td>
<td>1602</td>
<td>1302</td>
<td>979</td>
<td>3883</td>
</tr>
<tr>
<td>Average Number of Questions per Lesson</td>
<td>44.50</td>
<td>36.16</td>
<td>27.19</td>
<td>35.95</td>
</tr>
</tbody>
</table>

TABLE 6

PER CENT OF QUESTIONS FROM THE GUIDEBOOKS BELONGING TO EACH CATEGORY BY GRADE LEVEL

<table>
<thead>
<tr>
<th>Categories</th>
<th>Grades</th>
<th>I (^a)</th>
<th>II (^b)</th>
<th>III (^c)</th>
<th>Total Sample (^d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td></td>
<td>44.10</td>
<td>43.49</td>
<td>36.21</td>
<td>41.46</td>
</tr>
<tr>
<td>Translation</td>
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<td>1.05</td>
<td>2.08</td>
<td>2.50</td>
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<tr>
<td>Interpretation</td>
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<td>4.01</td>
<td>5.91</td>
<td>7.80</td>
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<tr>
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<td>1.14</td>
<td>0.41</td>
<td>1.01</td>
</tr>
<tr>
<td>Analysis</td>
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<td>34.79</td>
<td>37.88</td>
<td>32.85</td>
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<td>Synthesis</td>
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<td>10.22</td>
<td>12.71</td>
<td>14.23</td>
<td>12.16</td>
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<tr>
<td>Evaluation</td>
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<tr>
<td>Total</td>
<td></td>
<td>99.97</td>
<td>99.96</td>
<td>99.96</td>
<td>99.97</td>
</tr>
</tbody>
</table>

\(^a\)N = 1602
\(^b\)N = 1302
\(^c\)N = 979
\(^d\)N = 3883
Of the 1602 questions posed in the first grade reading
guidebooks, 44.10 per cent were in the memory category; and 27.76
per cent in the analysis category. Of the questions posed in the
second grade reading guidebooks, 43.49 per cent involved memory;
34.79 per cent in solved analysis; and 12.71 per cent involved
synthesis. Of the total questions posed by the authors of the
third grade guidebooks, 37.88 per cent involved analysis; 36.21
per cent involved memory and 14.23 per cent involved synthesis.

The following questions taken from the third grade guide-
Pumpkin Seed," were examples of questions classified as synthesis:

1. Can you imagine how people farmed in early days?
2. Do you suppose that farming was harder or easier than
   it is today? Why?
3. If you had been Ben or Betsy Chase what would you have
   enjoyed most about the way you lived? Why?

Authors of first grade guidebooks rarely posed questions
involving evaluation (1.00 per cent) and application (1.38 per cent).
Authors of second grade and third grade guidebooks seldom suggested
questions involving application, translation, and evaluation. (See
Table 6).
Comparison of teachers' questions and questions suggested in the guidebooks

The third question asked was:

Do the questions given by teachers parallel those questions listed in the guidebooks?

To find out whether or not the categories of questions used by the teachers differ significantly with the categories of questions posed by the authors of the guidebooks, the significance of the difference between the proportions of questions from the teachers and the questions posed by the authors of the guidebooks belonging to each category were analyzed through the use of the Z test. The differences between the proportions of teachers' questions and the questions posed by the authors of the guidebooks belonging to each category were divided by the standard error of the differences between the proportions.

The results which are presented in Table 7 show significant differences at the .01 level of confidence in using questions involving memory, translation, application, analysis and synthesis; and .05 level of confidence in using questions involving interpretation. The authors of guidebooks posed more questions involving analysis and synthesis and less questions involving memory, translation, interpretation and application than the classroom teachers. Both sources infrequently posed questions involving evaluation.

Comparison of the categories of questions used by the teachers and the categories of questions posed by the authors of the guidebookds in each grade shown in Table 15 indicate that in
TABLE 7

COMPARISON OF TEACHERS' QUESTIONS AND QUESTIONS LISTED IN THE GUIDEBOOKS

Based on Proportion Belonging to Each Category Using the Z Test

<table>
<thead>
<tr>
<th>Categories</th>
<th>Teachers $^a$</th>
<th>Guidebooks $^b$</th>
<th>Z Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>47.54</td>
<td>41.46</td>
<td>6.21 $^c$</td>
</tr>
<tr>
<td>Translation</td>
<td>3.42</td>
<td>2.50</td>
<td>2.81 $^c$</td>
</tr>
<tr>
<td>Interpretation</td>
<td>9.08</td>
<td>7.80</td>
<td>2.35 $^d$</td>
</tr>
<tr>
<td>Application</td>
<td>2.29</td>
<td>1.01</td>
<td>5.42 $^c$</td>
</tr>
<tr>
<td>Analysis</td>
<td>25.94</td>
<td>32.85</td>
<td>-7.61 $^c$</td>
</tr>
<tr>
<td>Synthesis</td>
<td>9.16</td>
<td>12.16</td>
<td>-4.83 $^c$</td>
</tr>
<tr>
<td>Evaluation</td>
<td>2.55</td>
<td>2.19</td>
<td>1.21</td>
</tr>
</tbody>
</table>

Total          | 99.98        | 99.97           |

$^a$$N = 7476$ (See Table 3)

$^b$$N = 3883$ (See Table 4)

$^c$Significant at .01 level

$^d$Significant at .05 level
Illustration B

The following are examples of teachers' questions and questions from the guidebooks dealing with the same lesson. The classification made by the observers were also indicated.

<table>
<thead>
<tr>
<th>Teachers' Questions</th>
<th>Category</th>
<th>Questions from Guidebooks</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>What happened when Henry roared?</td>
<td>Memo.</td>
<td>What words can you think of to describe Henry before he lost his teeth?</td>
<td>Syn.</td>
</tr>
<tr>
<td>Why was Henry happy?</td>
<td>Anal.</td>
<td>Can you think of words to describe Henry as he grew older?</td>
<td>Syn.</td>
</tr>
<tr>
<td>What could Mrs. Parrot do because she is clever?</td>
<td>Anal.</td>
<td>Where did Mrs. Parrot go first?</td>
<td>Memo.</td>
</tr>
<tr>
<td>Who did Mrs. Parrot go to see?</td>
<td>Memo.</td>
<td>Why did she go to Dr. Page rather than to some other dentist?</td>
<td>Memo.</td>
</tr>
<tr>
<td>What did Dr. Page say when he found out the teeth were for a lion?</td>
<td>Memo.</td>
<td>How did he feel at first?</td>
<td>Memo.</td>
</tr>
<tr>
<td>Where did Mrs. Parrot go next?</td>
<td>Memo.</td>
<td>How did he feel when Mrs. Parrot went on to explain about the teeth?</td>
<td>Memo.</td>
</tr>
<tr>
<td>Where did the old man keep his stuffed animals?</td>
<td>Memo.</td>
<td>What could you see Mrs. Parrot doing next?</td>
<td>Memo.</td>
</tr>
<tr>
<td>On which day did the doctor say he would have the teeth ready?</td>
<td>Memo.</td>
<td>How many people worked together to make Henry the happiest lion alive?</td>
<td>Memo.</td>
</tr>
<tr>
<td>How did Henry see his new teeth?</td>
<td>Memo.</td>
<td>Which one did you like best or think the funniest?</td>
<td>Eval.</td>
</tr>
</tbody>
</table>
first grade there were significant differences at the .01 level of confidence in the frequency of using questions involving interpretation, application, and analysis and .05 level of confidence in using questions involving evaluation. Authors of first grade guidebooks posed more questions involving analysis and synthesis than the teachers; while teachers asked more questions involving application than the authors of guidebooks.

In the second grade, the categories of questions posed by the authors of the guidebooks differed significantly with questions teachers asked in the translation, interpretation, analysis, and synthesis categories. Authors of second grade guidebooks posed more questions involving analysis and synthesis than the teachers; while second grade teachers asked more questions involving translation and interpretation than the authors of second grade guidebooks. In the third grade, there were significant differences in the frequency of using questions involving memory, translation, analysis, and synthesis. Third grade teachers asked more questions involving memory, translation and application than the authors of third grade guidebooks; while authors of third grade guidebooks asked more questions involving analysis and synthesis.

Analysis of Objectives

Teachers' Objectives

It was postulated that the types of questions teachers asked will depend upon the purposes they intend to accomplish. To find out what these goals were, the fourth question was posed:
What types of objectives do teachers intend to accomplish?

One of the difficulties encountered by the researcher, specially during the preliminary investigation was obtaining statements of specific goals that the teachers expected to accomplish in their reading lessons. Therefore, when the meeting between the observers and the teacher participants was held, the teachers were requested to write the objectives of a particular lesson on the Record Sheet before they gave it to the observers.

Objectives were often expressed in such vague and general terms that they do not give clear indication of the approach to be used in teaching reading or the pupil learnings sought. Such vagueness and generalities in stating the objectives also presented certain problems in classifying these objectives according to the seven categories defined in this study. Examples of such objectives, two from each grade, follows:

1. Be friendly to newcomers at school
2. Literary appreciation
3. To teach guided silent reading of "The New Teacher."
4. It is good to train our pets.
5. To prepare the children for a comprehensive elucidation of the story through presentation of the new vocabulary in context and questioning following individual interpretation through guided silent reading.
6. To learn the habits of an otter.
TABLE 8

SUMMARY OF TEACHERS' OBJECTIVES

<table>
<thead>
<tr>
<th>Grades</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of lessons Observed</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>108</td>
</tr>
<tr>
<td>Number of Objectives Listed</td>
<td>109</td>
<td>75</td>
<td>78</td>
<td>262</td>
</tr>
<tr>
<td>Average Number of Objectives/lesson</td>
<td>3.02</td>
<td>2.08</td>
<td>2.16</td>
<td>2.42</td>
</tr>
</tbody>
</table>

TABLE 9

PER CENT OF TEACHERS' OBJECTIVES
BELONGING TO EACH CATEGORY BY GRADE LEVEL

<table>
<thead>
<tr>
<th>Categories</th>
<th>Grades</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td></td>
<td>15.04</td>
<td>0.00</td>
<td>5.47</td>
<td>8.46</td>
</tr>
<tr>
<td>Translation</td>
<td></td>
<td>1.76</td>
<td>0.00</td>
<td>0.00</td>
<td>0.80</td>
</tr>
<tr>
<td>Interpretation</td>
<td></td>
<td>2.65</td>
<td>0.00</td>
<td>8.21</td>
<td>3.62</td>
</tr>
<tr>
<td>Application</td>
<td></td>
<td>17.69</td>
<td>29.03</td>
<td>23.28</td>
<td>22.17</td>
</tr>
<tr>
<td>Analysis</td>
<td></td>
<td>49.55</td>
<td>59.67</td>
<td>57.53</td>
<td>54.43</td>
</tr>
<tr>
<td>Synthesis</td>
<td></td>
<td>10.61</td>
<td>8.06</td>
<td>5.47</td>
<td>8.46</td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td>2.65</td>
<td>3.22</td>
<td>0.00</td>
<td>2.01</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>99.95</td>
<td>99.98</td>
<td>99.96</td>
<td>99.95</td>
</tr>
</tbody>
</table>
It will be noticed that the objectives stated by the teachers do not describe the kinds of skills, abilities, and understandings unique to reading but rather deals with the subject matter content of the materials being read such as "To learn the habits of an otter."

Table 8 presents the number of objectives stated by the teachers. During the entire period of this investigation, 262 teachers' objectives were recorded. Of this number, 109 were from the first grade, 75 were from the second grade, and 78 were from the third grade. Table 9 shows that the most frequently stated objectives involved analysis, 54.43 per cent; followed by application, 22.17 per cent. Objectives involving translation was most infrequently mentioned category, 0.80 per cent; followed by evaluation, 2.01 per cent.

Of the total number of objectives stated by first grade teachers, 49.55 per cent were in the analysis category; 17.69 per cent in the application category; and 10.61 per cent in the synthesis category. (See Table 9). Bearing in mind the difficulties mentioned earlier in classifying the objectives, the following were the examples of objectives the teachers in the first grade intended to accomplish. The manner in which they were classified by the observers were also indicated:

1. To teach vocabulary - Analysis
2. Literary appreciation - Application
3. Families can have fun together - Application
4. Teach children to be moderate in choosing toys - Application
5. Learn about the care of pets - Application
6. Remind children to help others - Application
7. To allow children opportunity to read for enjoyment - Application
8. To develop fluent reading - Application
9. To introduce the children to the new friends and to strengthen character - Application
10. Visualization of details which distinguish the new friends - Analysis
11. Introduce the new story character - Application
12. Develop an awareness of their characteristics - Analysis

The second grade teachers' objectives consist mostly of those involving analysis, 59.67 per cent; and application, 29.03 per cent. Examples of such objectives taken from six lessons were as follows:

1. Be friendly with newcomers or on your street - Application
2. To teach new vocabulary of the story - Analysis
3. To teach guided silent reading of "The New Teacher," - Application
4. It is good to train our pets. Some of them can learn many things but the training requires patience and time - Analysis
5. Too much of one thing can be bad - Application
6. To understand the feelings that a young child would have for a new toy - Analysis
7. To understand the reactions of all other people in the story - synthesis
8. Children should understand that making new friends can be fun - Application
9. When trying to do something, you should keep on trying until you succeed - Application

Over one-half of the third grade teachers' objectives were in the analysis category, 57.53 per cent; and 23.28 per cent involved application. Examples of such objectives taken from a sample of six lessons were:

1. To learn the habits of an otter - Analysis
2. To learn what wild animals do to survive - Analysis
3. Reading for fun and enjoyment - Application
4. To arouse the interest in young, wild animals - Analysis
5. Reading for enjoyment - Application
6. Extending memory skills - Memory
7. Extending interpretation to promote understanding of why pioneers were of necessity thrifty, industrious people - Analysis
The fifth question asked was:

What types of objectives are suggested in the teachers' guidebooks?

Table 10 presents the data needed to ascertain the types of objectives listed in the guidebooks. Out of the 108 lessons analyzed, the total number of objectives recorded was 382. In the first grade texts, 143 objectives were listed; 126 in the second grade; and 113 in the third grade. The average number of objectives per lesson was 3.54. Table 11 shows that in the lessons the observers analyzed, 48.57 per cent of the objectives involved analysis; 17.32 per cent, synthesis, and 14.20 per cent, application. Examples of such objectives classified by the observers - one from each of the six lessons were as follows:

1. To guide the children to read between the lines - Analysis
2. Direct the pupils' attention to the story characters' emotional reactions and reasoning - Analysis
3. Help students to develop empathy - Application
4. Improve the ability to make conjectures - Analysis
5. To organize ideas for the purpose of remembering - Analysis
6. Forming visual images - Synthesis
TABLE 10
SUMMARY OF OBJECTIVES FROM THE GUIDEBOOKS

<table>
<thead>
<tr>
<th>Grade</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Lessons Analyzed</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>108</td>
</tr>
<tr>
<td>Number of Objectives Classified</td>
<td>143</td>
<td>126</td>
<td>113</td>
<td>382</td>
</tr>
<tr>
<td>Average Number of Objectives per Lesson</td>
<td>3.97</td>
<td>3.50</td>
<td>3.14</td>
<td>3.54</td>
</tr>
</tbody>
</table>

TABLE 11
PER CENT OF OBJECTIVES FROM THE GUIDEBOOKS BELONGING TO EACH CATEGORY BY GRADE LEVEL

<table>
<thead>
<tr>
<th>Categories</th>
<th>Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Memory</td>
<td>22.00</td>
</tr>
<tr>
<td>Translation</td>
<td>0.66</td>
</tr>
<tr>
<td>Interpretation</td>
<td>3.99</td>
</tr>
<tr>
<td>Application</td>
<td>7.99</td>
</tr>
<tr>
<td>Analysis</td>
<td>43.33</td>
</tr>
<tr>
<td>Synthesis</td>
<td>20.66</td>
</tr>
<tr>
<td>Evaluation</td>
<td>1.33</td>
</tr>
<tr>
<td>Total</td>
<td>99.96</td>
</tr>
</tbody>
</table>
In grade one, 43.33 per cent of the objectives from the guidebooks involved analysis; 20.66 per cent involved synthesis; and 22.00 per cent involved memory. Examples of such objectives from a group of six lessons analyzed were:

1. Recall previous story - Memory
2. Discuss the similarities between farm animals and zoo animals - Analysis
3. Review the identity of different animals - Memory
4. Promote the ability to visualize word forms - Memory
5. To strengthen the ability to form associations between characters and events - Memory
6. To remember sequential development of the plot - Memory
7. Foster understanding of narrative text and implied action - Analysis
8. To strengthen the ability to create visual imagery - Synthesis
9. To enrich speaking-meaning vocabulary - Application
10. To strengthen the ability to interpret pictures - Interpretation

In the second grade, 51.11 per cent of the objectives from the guidebooks analyzed were in the analysis category; 21.11 per cent were in the application category and 16.66 per cent were in the synthesis category. Examples of such objectives classified by
the observers were:

1. To have the pupils react to and use the ideas obtained from reading - Application
2. To develop the ability to retell the story in a sequence - Memory
3. To encourage discussion - Application
4. To develop memory based on observation and association - Memory
5. To stimulate imagination - Synthesis
6. To stimulate unusual visual images - Synthesis
7. To appreciate the feelings of the characters in the story - Evaluation
8. To organize information about characters - Analysis
9. To enable children to interpret thoughts and reactions of characters in the story - Interpretation
10. To extend the skill of memory based on association - Memory.

In the third grade, 53.11 per cent of the objectives from the guidebooks analyzed were in the analysis category; 16.96 per cent were in the application category; and 13.66 per cent were in the synthesis category. Examples of such objectives categorized by the observers from a group of six lessons were:

1. To organize ideas for the purpose of remembering - Memory
2. To extend interpretative skills - Interpretation
3. To form visual images - Synthesis
4. To grasp the main idea of the story - Analysis
5. To understand cause-effect relationship - Analysis
6. To present new vocabulary - Analysis
7. To extend skills and abilities of memory - Memory

Comparison of teachers' and guidebook objectives

The sixth question suggested by the hypotheses of this study was:

Do the objectives stated by the teachers differ with the objectives suggested in the guidebooks?

From the total number of observations made, there were 262 teachers' objectives recorded and 382 objectives suggested in the guidebooks. To compare the frequency of use of the categories of objectives by the teachers and the authors of the guidebooks, Z tests were made using the percentage data representing the frequency of use of the different categories of objectives by the teachers and the authors of the guidebooks.

The results of the analyses made presented on Table 12 indicate that there was a significant difference at the .01 level of confidence in the frequency of using objectives involving synthesis and significant differences at the .05 level of confidence in using objectives involving memory, and application. The teachers
TABLE 12
COMPARISON OF TEACHERS' OBJECTIVES
AND OBJECTIVES LISTED IN THE GUIDEBOOKS
Based on Proportion Belonging to Each Category Using the Z Test

<table>
<thead>
<tr>
<th>Category</th>
<th>Teachers(^a)</th>
<th>Guidebooks(^b)</th>
<th>Z Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>8.46</td>
<td>13.35</td>
<td>-2.00 (^d)</td>
</tr>
<tr>
<td>Translation</td>
<td>.80</td>
<td>.56</td>
<td>.36</td>
</tr>
<tr>
<td>Interpretation</td>
<td>3.62</td>
<td>1.98</td>
<td>1.20</td>
</tr>
<tr>
<td>Application</td>
<td>22.17</td>
<td>14.20</td>
<td>2.54 (^d)</td>
</tr>
<tr>
<td>Analysis</td>
<td>54.43</td>
<td>48.57</td>
<td>1.48</td>
</tr>
<tr>
<td>Synthesis</td>
<td>8.46</td>
<td>17.32</td>
<td>3.42 (^c)</td>
</tr>
<tr>
<td>Evaluation</td>
<td>2.01</td>
<td>3.97</td>
<td>-1.48</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>99.95</strong></td>
<td><strong>99.95</strong></td>
<td></td>
</tr>
</tbody>
</table>

\(^aN = 262\)
\(^bN = 382\)

\(^c\text{Significant at .01 level}\)
\(^d\text{Significant at .05 level}\)
stated more objectives involving application than the authors of
the guidebooks; while the authors of the guidebooks suggested more
objectives involving memory and synthesis than the teachers.

There were no significant differences between the frequencies
of objectives stated by the teachers and those suggested by the
authors of the guidebooks in the following categories: (1) trans­
lation; (2) interpretation; (3) analysis; and (4) evaluation.

Teachers listed objectives in these categories with the same fre­
quencies used by guidebook writers.

Comparison of Questions and Objectives

Objectives and questions
of teachers

To ascertain the relationship existing between teachers' questions and objectives, the seventh question was asked:

Do the types of objectives teachers intend to accomplish parallel the types of questions they asked?

To find out whether or not there were differences between the categories of questions teachers asked and the categories of objectives the teachers intended to accomplish, the differences between the proportions of questions and objectives belonging to each category were tested using the Z test. The number of questions and the number of objectives differ widely. There were 262 teachers' objectives and 7476 teachers' questions. Thus, the data
recorded were treated in percentage basis. The results of the analyses which are presented in Table 13 indicate that the frequencies of teachers' objectives and the frequencies of teachers' questions belonging to each category differed significantly. Except for synthesis and evaluation, the categories of the questions and objectives differed at the .01 level of confidence. The objectives frequently stated by the teachers involved analysis and application while the questions often asked required memory. The objectives very seldom stated were in the translation category, while the questions seldom asked were those involving application. It is worthwhile to note that while the objectives often stated involved application, questions seldom asked were in the same category.

Teachers; questions in the first grade differ significantly at the .01 level of confidence with the objectives they purported to accomplish in the following categories: (a) memory; (b) translation; (c) interpretation; (d) application; and (e) analysis. (See Table 15). In the second grade, the frequencies of teachers' questions differ significantly at the .01 level of confidence with the frequencies of the objectives in the following categories: (a) memory; (b) interpretation; (c) application; and (d) analysis. (See Table 15). In the third grade, the frequencies of teachers' questions and objectives differ significantly at the .01 level of
<table>
<thead>
<tr>
<th>Category</th>
<th>Questions $^a$</th>
<th>Objectives $^b$</th>
<th>Z Scores $^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>47.54</td>
<td>8.46</td>
<td>21.55 $^c$</td>
</tr>
<tr>
<td>Translation</td>
<td>3.42</td>
<td>0.80</td>
<td>4.45 $^c$</td>
</tr>
<tr>
<td>Interpretation</td>
<td>9.08</td>
<td>3.62</td>
<td>4.55 $^c$</td>
</tr>
<tr>
<td>Application</td>
<td>2.29</td>
<td>22.17</td>
<td>-7.73 $^c$</td>
</tr>
<tr>
<td>Analysis</td>
<td>25.94</td>
<td>54.43</td>
<td>-9.14 $^c$</td>
</tr>
<tr>
<td>Synthesis</td>
<td>9.16</td>
<td>8.46</td>
<td>0.40</td>
</tr>
<tr>
<td>Evaluation</td>
<td>2.55</td>
<td>2.01</td>
<td>0.61</td>
</tr>
<tr>
<td>Total</td>
<td>99.98</td>
<td>99.95</td>
<td></td>
</tr>
</tbody>
</table>

$^a_N = 7476$

$^b_N = 262$

$^c$ Significant at .01 level
confidence in the following categories: (a) memory; (b) translation; (c) application; (d) analysis; and (e) evaluation. (See Table 15). Therefore, the null hypothesis of no difference between the categories of teachers' objectives and teachers' questions was rejected.

**Questions and objectives listed in the guidebooks**

The eighth question asked was:

Do the objectives and the questions listed in the guidebooks differ?

To find out the relationship existing between the objectives and questions from the guidebooks, Z test analyses of the recorded data were made. Because of the great difference in the quantity of questions and objectives recorded - 3883 questions to 382 objectives - the data obtained were treated in percentage basis.

Table 14 presents the data obtained in the comparison of objectives and questions from the guidebooks. Results of the Z test analyses indicate significant differences in the frequencies of objectives and questions from the guidebooks belonging to each categories at the .01 level of confidence in the first six categories and at the .05 level of confidence in the evaluation category.

The frequencies of questions and objectives from the first grade guidebooks differ significantly at the .01 level of confidence in all categories except evaluation. In the second grade, the
TABLE 14

COMPARISON OF QUESTIONS AND OBJECTIVES FROM GUIDEBOOKS

Based on Proportion Belonging to Each Category Using the Z Test

<table>
<thead>
<tr>
<th>Category</th>
<th>Questions a</th>
<th>Objective b</th>
<th>Z Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>41.46</td>
<td>13.35</td>
<td>14.71 c</td>
</tr>
<tr>
<td>Translation</td>
<td>2.50</td>
<td>0.56</td>
<td>4.25 c</td>
</tr>
<tr>
<td>Interpretation</td>
<td>7.80</td>
<td>1.98</td>
<td>6.99 c</td>
</tr>
<tr>
<td>Application</td>
<td>1.01</td>
<td>14.20</td>
<td>-7.36 c</td>
</tr>
<tr>
<td>Analysis</td>
<td>32.85</td>
<td>48.57</td>
<td>-5.90 c</td>
</tr>
<tr>
<td>Synthesis</td>
<td>12.16</td>
<td>17.32</td>
<td>-2.57 c</td>
</tr>
<tr>
<td>Evaluation</td>
<td>2.19</td>
<td>3.97</td>
<td>-1.73 d</td>
</tr>
</tbody>
</table>

Total 99.97 99.95

aN = 3883
bN = 382

c Significant at .01 level

d Significant at .05 level
frequencies of questions and objectives from the guidebooks belonging to each category differed significantly at the .01 level of confidence in the first six categories. In the third grade, the frequencies of the questions and objectives belonging to each category differed significantly at the .01 level of confidence in the following categories: (a) memory; (b) interpretation; (c) application; and (d) analysis; and at the .05 level of confidence in the evaluation category. (See 14). Therefore, the null hypothesis of no difference between the types of objectives and questions listed in the guidebooks was rejected.

Results of the study indicate that first grade teachers of primary reading asked more questions than the second and third grade teachers. Likewise, authors of the first grade guidebooks used in the study posed more questions than the authors of second and third grade guidebooks. The questions teachers asked was almost twice the number of questions posed by the authors of guidebooks. The teachers' questions differed with those posed by the authors of guidebooks in quality and content.

While teachers' questions were twice as many as the questions posed by the authors of guidebooks, this relationship was reversed in terms of objectives. The authors of guidebooks stated more objectives than the teachers. The first grade teachers as well as the authors of first grade guidebooks stated more objectives than the second and third grade teachers and authors of second and third grade guidebooks.
TABLE 15

COMPARSED CATEGORIES OF QUESTIONS AND OBJECTIVES BY GRADE LEVEL
BASED ON PROPORTIONS BELONGING TO EACH CATEGORY USING THE Z TEST

First Grade

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach Quest</td>
<td>46.11</td>
<td>3.84</td>
<td>12.76</td>
<td>4.18</td>
<td>24.05</td>
<td>7.14</td>
<td>1.88</td>
</tr>
<tr>
<td>Guide Quest</td>
<td>44.10</td>
<td>3.78</td>
<td>11.73</td>
<td>1.38</td>
<td>27.76</td>
<td>10.22</td>
<td>1.00</td>
</tr>
<tr>
<td>Z Score</td>
<td>1.27</td>
<td>0.10</td>
<td>0.10</td>
<td>5.75a</td>
<td>-2.66a</td>
<td>-3.39a</td>
<td>2.42b</td>
</tr>
</tbody>
</table>

| Teach Quest         | 46.11  | 3.84   | 12.76  | 4.18   | 24.05 | 7.14 | 1.88  |
| Guide Quest         | 44.10  | 3.78   | 11.73  | 1.38   | 27.76 | 10.22| 1.00  |
| Z Score             | 8.73a  | 1.58   | 6.05a  | -3.67a | -5.24a| -1.16| -0.49 |

| Guide Quest         | 44.10  | 3.78   | 11.73  | 1.38   | 27.76 | 10.22| 1.00  |
| Guide Object        | 22.00  | 0.66   | 3.99   | 7.99   | 43.33 | 20.66| 1.33  |
| Z Score             | 6.00a  | 3.77a  | 4.24a  | -2.89a | -3.63a| -3.00a| -0.33 |

| Teach Object        | 15.04  | 1.76   | 2.65   | 17.69  | 49.55 | 10.61| 2.65  |
| Guide Object        | 22.00  | 0.66   | 3.99   | 7.99   | 43.33 | 20.66| 1.33  |
| Z Score             | 1.43   | 0.77   | 0.60   | 2.26b  | -4.64a| -2.24b| 0.73  |

*a Significant at .01 level
b Significant at .05 level

N Teacher Quest - 2631
N Guide Quest - 1602
N Teach Obj. - 109
N Guide Obj. - 143
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\( ^a \) Significant at .01 level
\( ^b \) Significant at .05 level

\( c \) Teacher Quest - 2492
\( d \) Guide Quest - 1302
\( e \) Teach Obj. - 75
\( f \) Guide Obj. - 126
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<sup>a</sup>Significant at .01 level  
<sup>b</sup>Significant at .05 level  
<sup>c</sup>Teacher Quest - 2353  
<sup>d</sup>Guide Quest - 979  
<sup>e</sup>Teach Obj. - 78  
<sup>f</sup>Guide Obj. - 113
Summary of Findings

There were five hypotheses postulated in the study about teachers' questions and objectives in primary reading classes and their relationship with the questions and objectives suggested in the guidebooks. Eight specific questions were asked to assist in determining the character of the possible relationships of the objectives and questions from the two sources (i.e. the teachers and guidebooks).

The first hypothesis which states that the questions teachers asked in primary reading classes will involve translation, interpretation, and application was rejected. Results showed that the majority of questions teachers asked involved memory. However, little variation was noted when different types of reading activities and materials were used. When the teachers were not using the basal readers, they seemed to use more questions requiring higher levels of thinking. The observers expressed doubt regarding the fact that they were classifying memory questions from the adult point of view when they were observing children whose way of thinking might be different from those of the adults.

The second hypothesis which states that there are no significant differences between the types of questions asked by the primary reading teachers and those listed in the guidebooks was rejected. The Z scores obtained showed significant differences
in the frequencies of use of the different categories by the teachers and the authors of guidebooks at the .01 and .05 levels of confidence. The authors of guidebooks posed more questions involving analysis and synthesis; and less questions involving memory, translation, interpretation and application than the teachers.

Collection of the data regarding the objectives intended to be accomplished by the teachers presented some problems. Most of the teachers' objectives were stated vaguely and generally—not in terms of the reading skills and attitudes to be developed but in terms of the content of the materials being read, such as "To learn how to be friendly," or "To understand why pioneers had to be thrifty." A large number of objectives stated by the teachers belong to the analysis and application category.

The null hypothesis which states that the types of objectives stated by the teachers will not differ significantly with the types of questions they used was rejected. Likewise, significant differences were found between the categories of objectives and questions suggested by the authors of the guidebooks.

Comparison of the frequencies of objectives from teachers and objectives from the guidebooks belonging to each category revealed significant differences in the following categories: (a) memory; (b) application and (c) synthesis. The null hypothesis of no difference between the categories of teachers' objectives and objectives from the guidebooks was rejected.
CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The purpose of the study

The purpose of this study was to investigate and compare the categories of questions asked by teachers in primary reading classes and the categories of questions listed in the guidebooks. These categories of questions were compared with the categories of objectives intended to be accomplished. Specifically, answers to the following questions were sought:

1. What types of questions do teachers ask in primary reading classes?
2. What types of questions are listed in the guidebooks?
3. Do the questions given by the teachers parallel those listed in the guidebooks?
4. What types of objectives do teachers try to accomplish?
5. What are the types of objectives listed in the guidebooks?
6. Do the categories of objectives stated by teachers differ with the objectives suggested in the guidebooks?
7. Do the categories of objectives teachers intend to accomplish differ with the categories of questions they present?

8. Do the categories of objectives and questions listed in the guidebooks differ?

**Methods of procedure**

In order to gather the date needed for the study, four students of education were trained to categorize the questions they heard while observing primary reading classes. From a sample of six teachers at each grade level, a total of 108 reading lessons were observed in the first, second, and third grade. The trained observers also categorized the questions and objectives listed in the guidebooks dealing with the particular lessons they observed.

The Question Analysis Record Sheet for Classroom Observation and the Question Analysis Record Sheet for Teachers' Manuals - descriptive rating scales of questions and objectives with seven categories were developed.

To test the significance of the findings, the frequencies belonging to the different categories were reduced to proportions and the significance of the difference between the proportions was determined through the Z test.

**Summary of Findings**

From the analysis of the data in this study, the following findings and observations may be asserted:
1. Majority of the questions asked by primary reading teachers were memory questions. The second frequently used category of questions was analysis.

2. Majority of the questions listed in the guidebooks involved memory, analysis and synthesis.

3. There were significant differences between the categories of questions used by the primary reading teachers and those suggested in the guidebooks.

4. Majority of the objectives stated by the teachers belong to the analysis and application categories.

5. The categories of objectives stated by the teachers differed significantly with the categories of questions asked.

6. Majority of the objectives suggested in the guidebooks belong to the analysis, synthesis and application categories.

7. The categories of questions suggested in the guidebooks differed significantly with the categories of objectives suggested.

8. The categories of objectives stated by the teachers and those suggested in the guidebooks differed significantly in the following categories: memory, application and synthesis.

Discussion and Conclusions

The findings of this investigation support the contention that despite the widespread agreement regarding the need to develop
higher intellectual skills among the students, the accomplishment of this goal is very insignificant.

Conceivably, the use of forty-eight out of a hundred questions in the memory category is justified for the recalling of facts is a necessary process not only in forming useful generalizations and conclusions but also in making wise choices and decisions. Unjustifiable, however, is the use of memory questions merely to recall the trivial facts of a story for this practice actually prevents the pupils from the basic understanding of the story plot, events of sequences, and main ideas found in the materials being read.

The results of the study showed that application and evaluation questions are rarely used in primary reading classes. If questions do influence the development of higher levels of thinking, the infrequent use of application and evaluation questions and the frequent use of memory questions, implies that the primary reading classes are contributing toward the development of the so-called "higher illiterates," persons who can only absorb and repeat the ideas found in books but cannot use those ideas in terms of his own personal needs and problems. Considering the demands of a highly complex technical society we are today, this practice is deplorable, for as Thorn pointed out, "As machines

1Francis Chase, op. cit., p. 11.
take over more and more of the menial tasks in our culture, the person with a low level of thinking and reading ability is rapidly becoming an unemployable misfit."²

It is, therefore, imperative for teachers to develop their skills in using teaching strategies that will induce higher levels of thinking, one of which is the asking of thought-provoking questions such as those involving application and evaluation. However, we cannot totally blame the teachers for asking a large number of literal comprehension questions because the current tests available to evaluate the reading achievements of children deal mostly with the mechanical aspects of recognizing symbols and literal comprehension of the materials being read. Taba pointed out that those aspects of the curriculum that are tested are taught best.³

Results of the study also indicate the wide gap existing between the categories of objectives purported to be accomplished and the categories of questions used to attain them. One of the difficulties encountered by the researcher was obtaining statements of specific objectives hoped to be accomplished by the teachers. This seems to support the contention of Fraenkel who stated that, "... 'right' questions are those which assist the teachers in achieving


a particular objective or set of objectives he considers important. Unfortunately, far too many teachers have no purpose in mind."  

The present controversies in the teaching of reading and the increasing non-significant results of research may well be the aftermath of this lack of clarity of purpose.

When transcripts of two different types of lessons - one based on the basal reader and one individualized reading - from the same teachers, were analyzed, results indicated that the teachers asked more questions requiring higher levels of thinking and longer verbal responses when using the individualized reading than when using the basal reader. This seems to concur with the findings of the study made by Wolf, Huck and King which indicated that special materials and instruction influence the kinds of questions teachers ask.

Nevertheless, while the results of the study indicate that using the basal readers tended to foster the use of questions requiring only recognition and recall of trivial facts, this practice may not have resulted from using the basal readers per se; but may have resulted from the traditional concepts that the teachers have regarding the nature of reading and the way in which the basal readers should be used. Teaching reading requires the use of literary materials which are different in contents, forms,


\footnote{Wolf, Huck and King, \textit{op. cit.}, p. 110.}
structure and style. These literary materials are also found in the basal readers. Furthermore, in one of her articles, Huck described the various improvements being made in the content and organization of the basal readers to be in-step with the times. 6

In his book, Creative Teaching in the Elementary School, Shumsky described the various ways in which the basal readers could be used to promote critical and creative reading. 7 Considering the high cost of education today, it might be more economical to start revitalizing the curriculum by helping the teachers to develop flexible and effective teaching techniques using the same readers through in-service training rather than discarding what books they now have and adopting new materials.

There was no significant difference between the categories of questions asked by the teachers and the categories of questions posed by the authors of the guidebooks. Likewise, there were no significant differences between the categories of objectives stated by the teachers and the objectives suggested in the guidebooks. It appears then, that the verbal behavior of teachers in the classroom is influenced by the guidebooks they use. Therefore, care must be taken in selecting the guidebooks for teachers' use.


In addition, since it is the teachers' way of posing questions and problems that influence the levels of thinking experiences the pupils will have, any effort to revise the curriculum should start with the teachers first. Introduction of new curriculum materials which purport to develop higher levels of thinking degenerate into the same pattern of being used to remember trivial and useless facts because of the teaching strategies the teachers use. Perchance, the non-significant results of research dealing with the pros and cons of using different curriculum materials is due to this factor. Furthermore, results of the research pertaining to the Critical Reading Ability of Elementary School Children proved that questioning on the part of the teachers and thinking on the part of the pupils improved through training. Therefore, the revision of the curriculum should start where it ought to be - the teachers.

Considering the vague and general manner in which teachers state the objectives they intend to accomplish in teaching reading implies that they need more information regarding the different skills and abilities needed to develop critical and creative reading abilities among their pupils abilities that extend from the mechanical aspects of recognizing written symbols to the more refined aspect of evaluating the materials being read. Results of research in critical reading have already refined and verified these

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\^8Wolf, Huck and King, op. cit., pp. 110-110.
abilities and skills but how much of this information trickles to the teachers for practical application is unknown. Since the teachers' manner of posing problems and questions plays a vital role in determining the qualities of thinking developed among the pupils, teacher training institutions should consider teaching the skills of questioning in relation to the attainment of the different objectives and goals of education. Developing attitudes, habits, skills and understanding require different strategies of teaching and ineffectiveness results when one is confused with the others. Making the future teachers aware of this phenomenon should not only be done in theory but in practice as well. When taking methods courses, the use of audio-visual aids such as the tape recorder and the television could help the future teacher develop the ability to pose problems and questions which will induce higher levels of thinking in theory with practice at the same time. Through the use of tape recorders, television and simulation techniques, it would be possible for them to observe themselves and other teachers pose problems and questions and the effects of those problems in inducing the type of thinking hoped to be developed among the pupils.

If the development of higher levels of thinking is one of the prime objectives of reading instruction today, testing materials to measure the children's achievement along these lines should be

9 Ibid., pp. 20-22
developed not only for research purposes but for general classroom application as well.

**Implications**

The findings and conclusions of this study have implications not only for the classroom teachers but also for those involved in the pre-service and in-service training of teachers and for those involved in the development and selection of curriculum materials. Among the implications are:

1. As teachers believe in the importance of teaching higher levels of reading-thinking skills, they will need to consciously direct their efforts towards developing skill in asking thought-provoking questions, especially application and evaluation types.

2. As purposes of teaching determine the kinds of questions that will be asked, the teachers will need more information about the skills and abilities needed to develop critical and creative reading as well as training in stating objectives in behavioral terms unique to reading.

3. As the development of higher levels of thinking is one of the prime objectives of teaching reading, curriculum makers should develop testing materials that will measure the pupils' achievement along these lines.

4. As there is a need for revising the curriculum to promote
the development of higher levels of thinking among the pupils, such revision should start with the teachers rather than with the materials for instruction.

5. As questioning does influence the types of thinking experiences the children will have in the classroom, teacher training institutions should pay more attention toward the development of this skill among the teachers in-training, not only in theory but also in practice along with their methods courses through the use of audio-visual aids, simulation techniques and interaction analysis.

**Recommendation for Further Research**

Because of the nature and scope of this investigation, the results can be regarded as suggestive only and indicate a need for more definitive types of research regarding the categories of questions and objectives teachers use as well as the relationship of such questions and objectives with the materials they are using for instruction. Some of the possibilities are:

1. In order to more accurately determine the relationship of the categories of objectives teachers intend to develop with the categories of questions they use, a research design should be devised and undertaken which will ascertain whether or not the teachers will vary their styles of questioning as the objectives intended to be attain vary.
2. Since the growth of creative and critical thinking is one of the main objectives of reading instruction, the development of a research design that will ascertain the measurement of these abilities not only for research purposes but for the purpose of helping the classroom teachers and school administrators ascertain whether or not they are accomplishing this goal, is imperative.

3. Since the questioning style of the teachers greatly influence the kinds of thinking experiences the children will have in the school, a study that will ascertain how to develop the skill of effective questioning among teachers in training and teachers in the service should be undertaken.
APPENDIXES
APPENDIX A

OBSERVATION RECORD SHEET
Question Analysis
Record Sheet
Classroom Observation

Teacher: ____________________ Observer: ____________________

Years of Experience: ______ Grade: ____________ Subject: ____________

Date of Observation: ______ No. of Pupils: ____________

Objective/objective of the lesson observed:

____________________________________________________

Questions

Categories: Memory
            Translation
            Interpretation
            Application
            Analysis
            Synthesis
            Evaluation

Objectives

Categories: Memory
            Translation
            Interpretation
            Application
            Analysis
            Synthesis
            Evaluation

SUMMARY

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### Question Analysis

**Record Sheet**

**Teachers' Manuals**

Title of the Book: ___________________________ Grade: ___________

Publisher and date of Publication: ___________________________

Pages: _____________________________________________

Objectives/objectives suggested:

_____________________________________________________

_____________________________________________________

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APPENDIX B

LESSONS FOR DEVELOPING SENSITIVITY IN

CLASSIFYING CATEGORIES OF QUESTIONS IN A HIERARCHY
Lessons for Developing Sensitivity In  
Classifying Categories of Questions In Hierarchy

**Lesson I** - Using Bloom's six major classes of cognitive skills, (knowledge, comprehension, application, analysis, synthesis and evaluation), students were asked to classify the following questions which were taken from the examples given by Raths:

1. Show a picture of someone at work. Ask the children to describe the work. Ask the children to tell what equipment the person needs for his job.

2. Compare two characters from a story which have been read by the teacher.

3. Ask the children to suggest captions or titles for a series of pictures.

4. Show the children a candy bar. You are going to divide this candy between Peter and Hildegarde. How much will each have? (If children say that both Peter and Hildegarde will have equal shares, you may break one-eighth and give it to Peter, giving the rest to Hildegarde. Ask them how they know that each child would have an equal share.)

5. We are going on a trip:
   
   (a) How shall we get there?
   
   (b) What shall we need to do before we go?
   
   (c) What will we have to take with us?
(d) What arrangements will we have to make?

6. What is the worst part of school? Why?

7. What would you do if you could fly?

8. Suppose everything were white, what do you think will happen?

9. Show a cartoon. Ask what the cartoon means to the child.

10. Two pencils cost 6¢. Therefore, each pencil costs 3¢. What assumption has been made? ¹

Lesson 2 - Using Rath's classification of thinking operations, (comparing, summarizing, observing, classifying, interpreting, criticizing, looking for assumptions, imagining, hypothesizing, applying facts and principles in new situations, decision-making, and designing projects or investigations), the students were asked to classify the following examples given by Bloom and Sanders:

1. (Show a map of the United States indicating the amount of rainfall each year.) Which two communities are most similar in the amount of rainfall?

2. Suppose a man is required by his boss to work until 2:00 a.m. to complete a job. While driving home from work, he falls asleep at the wheels and runs into a tree. What caused the accident?

¹Raths, et. al., op. cit.
3. Underline the words or phrases in the following proposition that is indefinite in meaning:

China is the largest nation on earth.

4. Which of the following are statements of facts and which are statements of values:

(a) Washington, D.C., is located on the Potomac River.
(b) A capital should be located near the centre of the nation.
(c) Philadelphia was our national capital before Washington, D.C.
(d) That government is best which governs least.

5. A group of examiners is engaged in the production of a taxonomy of educational objectives. In ordinary English, what are these persons doing?

(a) Evaluating the program of education
(b) Classifying teaching goals
(c) Preparing a curriculum
(d) Constructing learning exercises.

6. X and Y can do a piece of work together in 15 days. They work together for 6 days; then X quits and Y finishes the work in 30 days. In how many days can Y do the piece of work alone?

7. When a geyser first begins to erupt, hot water overflows at the orifice and this is followed by a rush of steam, mingled with hot water. The first overflow of hot water
aids in the production of steam because:

(a) less water needs to be heated
(b) more water can seep into the fissure from the surrounding rocks
(c) the higher the pressure, the greater the steam produced
(d) the lower the pressure, the lower the temperature at which steam is produced
(e) the water which overflows is necessarily below 212° F in temperature.

8. Add these lines to complete this verse:
   "I saw old autumn in the misty morn."

9. Jane is faced with the problem of selecting material for a school dress. The dress will receive lots of wear and will be laundered frequently. Which of the fabrics would be her best choice? (The test should include examples of fabrics, including some rayons. This would allow more reasons to be given below.) Check the fabric you choose possesses the qualities which make it superior for Jane's purpose.

   _____ (a) Material is colorfast to washing.
   _____ (b) Material is crease resistant.
   _____ (c) There is little or no sizing in the material.
   _____ (d) Material is easily cared for.
   _____ (e) Material is soft and will drape easily.
   _____ (f) Weave is firm, close and smooth.
(g) Material is colorfast to sunlight.
(h) Material will not show soil easily.
(i) Design is printed with the grain.

10. An engineer who designs houses is called:
   1. a carpenter  
   2. a civil engineer  
   3. an architect  
   4. a draftsman  
   5. a mechanical engineer

Lesson 3 - The two sets of questions were printed into a transparency and then projected onto a screen through the use of an overhead projector. Then the students were asked to pick out two questions which seem to be of the same kind, first by using Raths' categories, second, by using Bloom's six major classes of cognitive skills and third, by using Sanders Taxonomy of Questions. For example, using Raths' categories, question number 7 in Lesson One and question number 2 in Lesson Two are both hypothesizing questions. Using Bloom's classification, question number 6 in Lesson One and question number 9 in Lesson Two are both evaluation questions. Using Sanders' Taxonomy of Questions, question number 9 in Lesson One and question number 5 in Lesson Two involve interpretation.

2Bloom, et. al. op. cit.
APPENDIX C

TRANSCRIPT OF A THIRD GRADE READING LESSON

USING THE BASAL READER
Reading Lesson from the Basal Reader

TEACHER: Do you remember the first story that you read in your reader?

STUDENTS: Yes.

TEACHER: What was the title of that story?

STUDENTS: The Queer Noises.

TEACHER: That's right. What did that noise sound like?

A STUDENT: Somebody talking??

TEACHER: That's right. How did Tommy feel about that noise?

A STUDENT: Scared?

TEACHER: Today you are going to read about another noise. This wasn't a scary noise. It was an awful noise. Read the title of the story.

A STUDENT: The Big Long Honk.

TEACHER: What do you see in the picture, Janet?

JANET: A car with Mr. Hall and his boy -- his son.

TEACHER: What is his name, Ricky?

RICKY: Tommy?

TEACHER: Where are they going?

RICKY: Shopping?
TEACHER: Would you answer in sentences, please.

RICKY: They were going on an errand for Mother.

TEACHER: Was there anyone else in the car?

A STUDENT: John and Susan.

TEACHER: Where are they?

A STUDENT: In the back seat.

TEACHER: You can see just the front seat of the car, can't you, but you have read and you have found out that Susan and John were in the back seat. What did Tommy want to do?

Bonnie?

BONNIE: Honk the horn?

TEACHER: What do you suppose Tommy asked: What kind of a voice did he use when he asked Father to honk the horn, Janet?

JANET: I think he'd say, "Honk the horn."

TEACHER: Would you read it the way you think Tommy said it?

JANET: "Can I honk the horn?"

TEACHER: Yes, he might have said it that way. Shelley?

SHELLEY: "May I please honk the horn?"

TEACHER: Do you think he said it in sort of a coaxing way? Was he coaxing his father? ..

What did Father reply?

A STUDENT: "I'm sorry, Tommy, but people might get scared, you see."

TEACHER: Was that a good reason .. did Father give Tommy a
good reason for not honking the horn?

A STUDENT: No, he just ....

TEACHER: What does Tommy think he will do when he's older?

A STUDENT: When he gets bigger, he'll honk his horn.

TEACHER: Do you think that he will?

STUDENTS: No.

TEACHER: Why not?

A STUDENT: Because it will scare the people and they will think there has been an accident or something.

TEACHER: That could be..

A STUDENT: The horn will get stuck?

TEACHER: Any other reason? Wade?

.......

How old is Tommy?

A STUDENT: Eight -- no.

TEACHER: Do you think Tommy is seven or so? ?

A STUDENT: Four.

TEACHER: He is only about four ..

Yes, and he enjoys loud noises. Do you think that he will enjoy those loud noises when he gets older?

STUDENTS: No.

TEACHER: Do you think so, Wade?

WADE: No.

TEACHER: But he thinks so now. He says, "When I'm big, I'll drive my own car and I'll honk loudly all the time!" But I'm sure he'll change his mind.
What happened after Mr. Hall went inside?

A STUDENT: A truck passed and Tommy was looking at it and his elbow went on the wheel and the horn stuck and it kept on making these noises.

TEACHER: That's right.

What had Tommy said before that, Pat?

PAT: "I just want to honk the horn once."

TEACHER: In what sort of a voice do you think he said that, Janet?

JANET: "I want to honk the horn."

TEACHER: That's what he said -- what kind of a voice do you think he used?

A STUDENT: A little scarce voice?

TEACHER: What do you think Shelley?

SHELLEY: . . . . . an ordinary voice?

TEACHER: Just an ordinary voice?

A STUDENT: Scared -- I mean a loud voice?

TEACHER: Do you think it might have been a bit teasing?

Perhaps a bit mischievous? . . . I think so.

He said, "Maybe I'll even honk the horn twice" and John says to him, "Just look at the big truck passing us." What is John trying to do?

A STUDENT: Get Tommy . . . get Tommy not to honk the horn?

TEACHER: To make him . . .

A STUDENT: Forget about the horn.

TEACHER: Forget about the horn, that's right.
What sort of a voice do you think he is using?

A STUDENT: The same voice he always uses?
TEACHER: Do you think he is coaxing him just a little bit -- to forget about it?
A STUDENT: What makes you think this might have been an accident -- the horn starting to honk?

... . . . .

Well, when he turned to look, his arm sort of rested accidentally on the horn, didn't it? Yes, and it started to honk.

What did Tommy do?

A STUDENT: He let go of it as fast as he could?
TEACHER: Yes, but what about the horn?
A STUDENT: It kept on blowing.
TEACHER: It was . . .
STUDENTS: Stuck.
TEACHER: Stuck. Have you ever been in a car when the horn was stuck?
STUDENTS: Yes.
TEACHER: What did you do? What happened?
A STUDENT: Actually, we were on the street . . . and the horn kept on blowing and I plugged my ears.
... He banged into a tree. I mean, the car -- the blue car that the police car was chasing. The car turned the corner . . . and hit this other car . . . along there . . . and there was a party
at the house where he bumped into the tree, and
his nose was bleeding and he sounded the horn and
hit the other curb and went up and the horn
got stuck and it blew all the time.

TEACHER: Did you like the sound of it?

THE STUDENT: No.

TEACHER: What sort of a sound was it?

STUDENTS: A loud sound.

TEACHER: What did Tommy do to show that he wasn't honking
the horn?

A STUDENT: Lift his arms up?

TEACHER: Yes. Who tried to help?

A STUDENT: John.

TEACHER: What did he do?

A STUDENT: He went in the front seat and tried to stop it.

TEACHER: And what did he do to try to stop it?

A STUDENT: He patted on the horn.

TEACHER: Yes. Did it help?

STUDENTS: No.

TEACHER: The horn kept right on honking and soon there
was a crowd of people on the side walk beside the
car. What did a man say through to Tommy?

. . . . . .

Do you think you can still read . . .

A STUDENT: "Look at that big boy honking the horn."

TEACHER: Yes, what else did he say?
"You should know better."

John is the older boy, isn't he? He's about your age. ? ? In fact, he may be older than some of you. Now this man—thought Tommy -- John should know better. How do you suppose John felt?

Terrible?

Shy?

Shy.

Mad?

Unhappy?

Unhappy. That's better ? ? ?

Is there any other feeling that you think John would have?

Scared?

Do you think he would feel scared and frightened?

Scared or frightened. Happy?

How would you feel if someone said to you, "I think you should know better than to do something like that." How would you feel?

... ... Unhappy -- you mentioned unhappy, which was a good answer.

Sad?

Yes. Would you feel a little embarrassed?

?? ?? ?? ?

?? What did he do?
A STUDENT: He stopped from honking the horn?
A STUDENT: He lifted up his arms to show the people that he wasn't honking the horn.
TEACHER: Well that was Tommy, wasn't it? John has been trying to stop the horn from honking.
A STUDENT: He hopped into the back seat.
TEACHER: That's right. Yes.
And Tommy is enjoying this, isn't he? He laughed when the man spoke to Tommy -- to John. He thought it was funny.
Then what happened?
A STUDENT: A policeman came.
TEACHER: Even before the policeman came?
A STUDENT: His dad came out of the store.
TEACHER: Yes, before that.
A STUDENT: He said -- no he couldn't --
TEACHER: There is this awful honky sound in the street? What other sounds were there?
A STUDENT: Talking, and cars running and honking.
TEACHER: Yes, the horn was honking.
Babies crying? Didn't you hear babies crying in the street? What else?
A STUDENT: Dogs barking.
TEACHER: That's right.
A STUDENT: Cats meowing.
TEACHER: Yes. Any other sound that you heard? Did you
hear any windows being banged shut?

A STUDENT: Yes, they banged the window shut.

TEACHER: Yes, and then Mr. Hall came out, didn't he?

He heard the horn and he came hurrying out of the grocery store.

Behind him . . .

A STUDENT: Was the policeman.

TEACHER: Came the . . .

STUDENTS: Policeman.

TEACHER: No.

A STUDENT: Came the store man.

TEACHER: Yes.

A STUDENT: He had the groceries.

TEACHER: . . . carrying his groceries. . . to the car.

What tone of voice does Father use when he is speaking to Tommy?

STUDENTS: A loud and angry . .

Angry?

TEACHER: Angry.

A STUDENT: Mad.

TEACHER: Yes.

A STUDENT: Terrible.

TEACHER: Any other words you can think of for the voice he used?

A STUDENT: Awful.
TEACHER: What did he say? Read what he said, Reed.

REED: "Stop -"

TEACHER: ?? page 33.

REED: "Stop that awful noise! Stop honking that horn! Stop this minute!"

TEACHER: What tone of voice do you think he is using?

STUDENTS: Angry. Mad.

TEACHER: Yes, you mentioned that before. Can you think of another word? Do you think he used sort of a scolding voice as he spoke to Tommy? I think so. He wasn't polite as he was at the beginning of the story. Remember when he said to Tommy, "I'm sorry, Tommy, automobile horns often scare people and you wouldn't want to do that."

And Tommy had been polite too at the beginning, hadn't he, when he asked if he could honk the horn. He said, "Please" and now Father is speaking in a different tone of voice, but this time his voice was scolding.

Who fixed the horn?

A STUDENT: A gas station man. I mean the service station man.

TEACHER: What had Father done before that -- before the service station man came along?

A STUDENT: He tried to fix it.

TEACHER: Yes, what else did he do?
They phoned him.

No.

He got the boys out of the car?

No.

He pounded, don't you think? He tried to make the horn stop, but it wouldn't help.

It didn't help,

That's right. But still the horn was stuck and the awful honking kept on. He turned to the policeman and said how sorry he was that they couldn't do anything about it. How do you suppose that the service station man was able to stop the honking when Mr. Hall wasn't able to?

He knew more about cars and that and trucks.

... and he went into the service station.

... and motors.

Yes, he's been trained, hasn't he, to look after cars and to fix cars. What do you call a person who fixes cars -- who knows how to do it?

A gas station man?

That's what he was -- that's --

A service...

-- what he was called in the story.

A service man?

Yes. Wade?

An expert?
TEACHER: He'd be an expert in his line of work, yes...
A mechanic. He would be a mechanic and he would be trained.
The noise stopped and how did the street seem when that awful noise stopped?

A STUDENT: Quiet?

TEACHER: Yes.

A STUDENT: And all the people left.

TEACHER: That's right. Who was the only one who enjoyed this awful noise?

STUDENTS: Tommy.

TEACHER: What do we sometimes say to people who are making a lot of noise?

A STUDENT: Stop that noise.

TEACHER: Yes.

A STUDENT: Would you please stop that noise.

TEACHER: Yes. Just one word...

A STUDENT: Be quiet.

TEACHER: Yes.

A STUDENT: Quit that.

TEACHER: Yes, has anyone ever said to you - Sh?

STUDENTS: Oh!

TEACHER: I want to read to you a poem called "Sh!"
Sh! Says Mother,
Sh! Says Father,
Running in the hall
Is a very great bother.

Mrs. Grumpy Grundy
Who lives down below
Will come right up
First thing you know.

Sh! Says Father,
Sh! Says Mother,
Can't you play a quiet game
Of some kind or other?

TEACHER: And here's another one called "Automobile Mechanics."

Sometimes I help my dad
Work on our automobile.
We unscrew the radiator cap
And we let some water run
Swish! from a hose into the tank
And then we open the hood and feed in
Oil from a can with a long spout.
And then we take a lot of rags
And clean all about.
We clean the top and the doors
And the fenders and the wheels
And the windows and floors.
We work hard — my dad and I.

- END -
APPENDIX D

TRANSCRIPT OF A THIRD GRADE READING LESSON

USING INDIVIDUALIZED READING
SECOND OBSERVATION
THIRD GRADE

Conference from Individualized Reading

TEACHER: Michelle, what book are you reading this morning?

MICHELLE: "Pekoe and the Pirates."

TEACHER: Who is the author of that book?

MICHELLE: Alex Forest.

TEACHER: How would you evaluate that book? You have read it, have you Michelle?

MICHELLE: Yes.

TEACHER: How would you evaluate it? Would you say it's one of the best books that you have read?

MICHELLE: Yes, it is a very good book.

TEACHER: Would you like to tell us part of the book that you enjoyed most or would you like to read part of the book that you liked best?

MICHELLE: I think I'll read.

TEACHER: That's fine.

MICHELLE: "One day a pirate ship sailed into the lagoon. The pirates had come to capture the parrots and carry them away to sell. This was a black day for ? ?? Island. The pirates got every parrot they could find. Pekoe and their turtle friends
were safely out of reach on the tiny island. Peko and the turtles wanted to help the beautiful parrots but they did not want to be caught. Big people had no idea that the turtles were like that. Pekoe pulled out his three skimpy tail feathers and made a make-believe parrot from a coconut. The turtles disguised themselves as stepping stones and Pekoe crossed the water on their backs. The pirates soon spied the make-believe parrot in the palm tree on the tiny island and crossed the turtles backs. The greedy pirates grabbed to capture the parrot in the tree. When all the pirates were on the island, the turtles swam away...swam away leaving them marooned."

TEACHER: Very good. What is the main idea or thought of that story, Michelle?

MICHELLE: That he was trying to help.

TEACHER: Who was --

MICHELLE: Pekoe?

TEACHER: -- trying to help?

MICHELLE: Pekoe was trying to help the other parrots from being caught?

TEACHER: That's right. What was his plan?

MICHELLE: He would -- Once they had them all on the island, he would go and let the other people off the ship -- let the others off the ship.
TEACHER: Yes, go on.

MICHELLE: . . . . .

TEACHER: Who helped him with his plan?

MICHELLE: The turtles?

TEACHER: And how did he use the turtles in his plan?

MICHELLE: They were the stones so that they could walk to the island.

TEACHER: That's right. Thank you, Michelle.

And what book are you reading?

A STUDENT: "Wanted: A Baby Elephant." It is called "People and Places" except the story I'm reading is "Wanted: A Baby Elephant."

TEACHER: There are stories -- This is a book of stories.

A STUDENT: Yes.

TEACHER: And you will find stories in this book that you will read just for fun and there are stories that you would read to find important facts from.

What stories have you read?

A STUDENT: Well, I have read three stories from the whole book.

TEACHER: Have you read "Baby Blue?"

A STUDENT: Yes.

TEACHER: "Baby Blue -- "Baby Blue". "Baby Blue" is a story from Mr. Frank Buck's book.

A STUDENT: Yes.
And do you know what his book is called from which this story ?? ??

"On Jolly Trails".

Right. What facts have you learned from this story?

Well, this story is not really a story of facts. It just ...

It doesn't tell you any facts?

No.

Any facts at all? ,

No, not really.

What does it tell you about baby elephants?

That they have hair on their backs when they're babies?

Yes. Very good.

Now, would you read ...... from ....

"Ever since I can remember, I have liked birds and animals. When school days were over, I knew I was going to hunt wild animals and bring them back alive so that you could see them in the zoo and in the circus. During the last 25 years, I have spent most of my time in the jungle. From there I have brought many live animals to the United States. On one trip I had travelled through many countries when a call came from a man in Los Angeles. He wanted an elephant less than three feet
tall because a baby elephant was needed in a movie.

This was going to be a hard order to fill. An elephant less than three feet tall would be smaller than any that had been ever -- that had ever been captured alive. Wherever I am, natives came with animals they hoped to sell to me. I asked them all if they knew where I could find an elephant three feet high. I had gone to see at least a dozen little elephants but none of them were small enough. I had just about given up hope and was sure I should never find a baby elephant for the man in Los Angeles.

At last I reached a country where I had -- I often bought many animals. In the short time the news that I was there had reached the natives for miles about. They began to come in from the jungle with their animals to see."

**TEACHER:** Fine Anne.

Who was telling the story about "Baby Blue"?

**ANNE:** Frank Buck.

**TEACHER:** Yes. Why did Frank Buck want to capture the wild animals?

**ANNE:** Well, he liked doing it for the people -- well, it doesn't really tell and that . . but he liked doing it a lot.
Yes. Does it not give you a reason -- another reason...

? ? ?

? ? ?

ANNE: Birds and animals.

TEACHER: Yes.

? ? for the movie too. Yes.

Thank you, Anne.

Betty, what book are you reading this morning?

BETTY: I'm reading "Dr. Doolittle's Circus".

TEACHER: The author?

BETTY: He's called Hugh Lofting (?). I haven't read...

TEACHER: Hugh -

BETTY: Hugh Lofting (?). I haven't read it yet but I just started to read part of it -- just the first line...

? ? ?

I just started it...

TEACHER: You are just starting the book.

This is a book of adventure. Do you like adventure stories?

BETTY: Yes, I think they're quite interesting.

TEACHER: Have you read any other stories -- adventure stories?

BETTY: I don't know. I think maybe when we was at the library -- the Public Library -- I think I read about two of them. They were sort of thick books
and they were quite long. I think they were sort of nice adventure stories.

TEACHER: What other type of stories or books do you like to read?

BETTY: I like to read books of great composers, of history. I like to read about the moon sometimes.

TEACHER: That's very interesting, Betty. Have you read any of Dr. Doolittle's adventures?

BETTY: No, I just . . .

TEACHER: You just selected the book now.

BETTY: Uh. Huh.

TEACHER: Would you like to read the first paragraph to us?

BETTY: "This is the story of the plight of Dr. Doolittle's adventures which came about through his joining and travelling with a circus. He had not planned in the beginning to follow his life in any considerable time. His attention -- intention had only been to take the 'push-me, pull-me' out on shows long enough to make sufficient money to pay the sailor back for the boat which he had been borrowed and wrecked."

TEACHER: "which had been borrowed and wrecked."

BETTY: "which had been borrowed and wrecked."

TEACHER: Good. There are some difficult words in that paragraph, aren't there? And you did well to sound some of them when you hadn't read it before,
Betty, but you can go on now and find now about
"Dr. Doolittle's Circus" and some of the adventures
he had.
That's a very big book, isn't it?
Scott, what book are you reading?
SCOTT:  "Mr. Popper's Penguins".
TEACHER:  The author?
SCOTT:  Richard M. Florence .  .  Walter (?)
TEACHER:  Have you read part of the book?
SCOTT:  I have read up to this .  .
TEACHER:  Who is the main character in the book?
SCOTT:  Captain Cook and Mr. Popper.
TEACHER:  Who is Captain Cook?
SCOTT  Um .  .
TEACHER:  What does Mr. Popper do for a living?
SCOTT:  He paints and .  .  paints houses and decorates
houses.
TEACHER:  That's right .  .  . You haven't read to the end to
find out what he plans to do with the penguins?
Could you tell us just a little bit about what has
happened in the book so far, Scott?
SCOTT:  Well, um .  . at the start he wrote a letter to
some person at the Antarctic and they sent him
back a penguin, and so they didn't know what to do
with the penguin and they .  .  um .  . kept him for
a pet and they kept him in the icebox, and everybody
didn't know what it was. They thought it was
um .. The photographer thought it was a
pelican, and the other photographer said it
was a doo-doo. It goes on -- they go to the
barber shop when they were taking a walk and ..
um .. they left -- they took the back door and
.. um .. a penguin went up the stairs and when they
got to the last floor, he slid down and Mr. Popper
had to do it, too.
He took all of them down ? ? ?

TEACHER: Yes.
That was a lovely story.

SCOTT: Yes.

TEACHER: Are you enjoying it?

SCOTT: Yes.
And then they think that Captain Cook is sick
and he might not be able to live, but he did not —
die after all, and .. um .. I don't know the name
.. or I can't pronounce it right.

TEACHER: Preta (?)

SCOTT: Preta (?). Now they had two penguins and later
on in the book .. I have read some back here .. that
they get another penguin and then they get a lot
more penguins and they're performing ?? for ??
? ? ? ?
Thank you, Scott. That's fine.

Now Michelle, what assignment are you working on?

I think I am going to have a flannel board play.

Very good. You have your characters.

I wasn't going to do it. I didn't know which one I was going to do yet.

Are you going to think about it?

Yes.

Yes, I'll think about it.

I think I'll think about mine, too, cause I don't know which one I should do.

Have you done any projects before?

Well yes, I have made a great big book. I have made a book and I have made some poems before.

I think I'll make up that flannel board play.

Have you done this before?

No.

This is the first time?

Yes.

- END-
APPENDIX E

TRANSCRIPT OF A SECOND GRADE READING LESSON
USING THE BASAL READER
TEACHER: Boys and girls. I am going to read to you a poem by Nancy Turner called "Black and Gold".

Everything is black and gold, black and gold tonight, Yellow pumpkins, yellow moon, yellow candle light, Jet black cats with golden eyes, shadows black as ink, Fire light blinking in the dark, with a yellow blink, Black and gold, black and gold, nothing in between, When the world turns black and gold, then it's Halloween.

Now, certainly we all know without a doubt that tonight is Halloween. A night for fun, gaiety and laughter. What did you see in the poem boys and girls as I read that poem to you? Donnie.

DONNIE: Skeletons.

TEACHER: Skeletons. Valerie.

VALERIE: Pumpkins.

VOICE: Cats.

TEACHER: Yes. Tim

TIM: Owls.

TEACHER: Good. Jeff.

JEFF: Witches.

TEACHER: Witches.

VOICE: Pirates.
Pirates. Donnie, why do you suppose everything was black and gold? Yes?

It was Halloween.

Yes. Remember we were talking about black and gold or black and orange being the Halloween colors? Yes, that's why everything is black and gold. Close your eyes for a second. Imagine yourself out Halloween night and think of all the different sights you will see tonight. Open your eyes. What did you see? Tim.

Black cats.

Black cats. Good.

Skeletons.

Owls.

Good.

Skeletons rattling their bones.

Skeletons rattling their bones. Great. What did you see?

Witches and goblins.

Oh! Good.

Tramps.

Tramps

Creaking houses.

Creaking houses. Oh, my gosh.

Owls.

Owls. Good.
VOICE: Haunted houses.

TEACHER: As you were going around you heard an awful lot of different sounds. What were some of the sounds that you might have heard? Wendy.

WENDY: Boos.

TEACHER: Boos. Good.

VOICE: Boos and witches laughing.

TEACHER: Good.

VOICE: Black cats mewing.

TEACHER: Oh, good. We remembered the black cats. What else?

VOICE: Owls hooting.

TEACHER: Owls hooting. Good.

VOICE: Skeletons rattling their bones.

TEACHER: Oh, good, those skeletons will be rattling their bones something awful tonight. Yes?

VOICE: Creaking houses.

TEACHER: And the houses will be creaking. I shall hope your houses don't creak, don't you?

VOICES: Yes.

VOICE: And the wind blowing.

TEACHER: The wind blowing. I can think of another sound that I might hear if I were out tonight. What sounds do you suppose all the happy boys and girls will be making? Donnie.

DONNIE: Laughing.
TEACHER: They'll be laughing.

VOICE: Gay.

TEACHER: They'll be gay. They sure will be. And what might they be shouting?

VOICE: Halloween apples.

TEACHER: Halloween apples.

VOICE: Trick or treat.

TEACHER: Good.

VOICE: Ghosts and goblins.

TEACHER: Very good. What are you going to wear tonight when you go out Halloweening? Bobbie.

BOBBIE: Ghost suit.

TEACHER: Good. Donnie.

DONNIE: Ghost suit.

VOICES: Ghost suit, a pirate, a witch.

TEACHER: And Jill, what are you going to wear?

JILL: A tramp.

TEACHER: Well, isn't that going to be exciting. It certainly sounds as though each of you will look very scary, and certainly will be set to fool your friends.

Boys and girls, our story today is also about Halloween, but I think you will agree it's quite different than what you will be doing. Remember our three little girls from last days story, Honey, Bunny and Funny. Well, they're going to dress up just as you people will be doing tonight. They too
looked very, very scary dressed up. As they were
dressing up their little dog kept looking at them
and sniffing as though he were scared and didn't
know who they were. Another pet did something
strange and surprising also. Let's figure out what
happened to these girls on Halloween. Let's see if
it might just happen to you tonight. I don't know
if it will, but perhaps it might. Would you all
turn to page 109 please. 109. Who will read the
title for me? Jill.

JILL: Who Can Fool a Goat?

TEACHER: What do you suppose the title means?

JILL: They'll try to fool a goat.

TEACHER: You think maybe they'll try to fool a goat. Well,
perhaps they might. Look at the pictures on the
first page. Can you tell who the girls are? Who
is on the left side?

VOICE: Bunny.

TEACHER: Bunny. Good. Who is the girl in the middle?

VOICE: Funny.

TEACHER: Funny. And who is the little girl?

VOICE: Honey.

TEACHER: Honey. And there is the Puppy that Honey got for
her present, isn't it? Yes. How do you think the
little Puppy looks?

VOICE: Scared.
TEACHER: Scared. What do you suppose he's scared at? What are each of the girls wearing?

VOICE: Old things. And what is Mother doing?

TEACHER: Yes, it looks as though she's looking for old things they might be wearing tonight. See that big hat beside Mother. Do you think perhaps one of the girls might wear that?

VOICE: Yes.

TEACHER: What do you suppose the girls might be saying in this picture? What do you think they might be saying?

VOICE: Doggie doesn't know who we are.

TEACHER: They just might be saying that. And he might just not know.

VOICE: He's funny.

VOICE: Doggies barking.

TEACHER: Good, that sounds very interesting. You read this page silently to yourself to find out what the girls are saying. Pause. Why were the girls laughing at Puppy?

VOICE: Because he couldn't tell which was which.

TEACHER: He couldn't tell which was which. That's right. Who can read the part to me that tells what the girls were wearing? All right Donnie you read it.
DONNIE: Bunny and Funny had on old coats and hats of Father's ...

TEACHER: That's fine. You missed a line that told us what the girls were wearing. Jill can you read it?

JILL: Bunny and Funny had on old coats and hats of Father's ....

TEACHER: That's very good. That's exactly what they were wearing. Why do you suppose the girls didn't want to look like themselves? Bradley.

BRADLEY: To fool people.

TEACHER: Right. If you went out tonight in your everyday clothes no one would be fooled at all, would they?

VOICE: I know some kids that did that.

TEACHER: Did they? Now, would you read the next page to find out whether the girls did fool their Puppy and their Father. Read the next page. Pause.

How did the girls know that Puppy recognized them?

WENDY: All at once Puppy began to sniff ...

TEACHER: How did he know? How do you know that he knew?

VOICE: He sniffed the smell.

TEACHER: That's right. He sniffed. And then what did he do?

VOICE: He jumped up on her.

TEACHER: Good. He jumped up on her. So, of course, Honey knew that Puppy must know who she was. What could
you see and what sounds could you hear as you read this first part?

VOICE: Bow-wow.

TEACHER: Bow-wow. You could hear a bow-wow. What else could you hear?

VOICE: I couldn't fool him at all sound.

TEACHER: Well, I suppose. Could you hear sniffing sounds?

VOICES: Yes.

TEACHER: Yes. Imagine the Puppy sniffing at all these little girls and then with excitement saying bow-wow because he recognized them. How did you know that Father recognized the girls? Bradley.

BRADLEY: He knew the old clothes they had on.

TEACHER: Tim.

TIM: He walked up and said, "Hello, hello. Where are my three girls going on Halloween?"

TEACHER: Yes. Do you suppose the girls might have been a little bit disgusted at Father knowing them? I bet they were. How do you think the girls feel? Think of some words that might describe just how these girls feel now.

VOICE: Their feelings are hurt.

TEACHER: Their feelings would be hurt I am sure.

VOICE: Sad.

TEACHER: Sad.

VOICE: Miserable.
TEACHER: Miserable. Oh, they're just going to be so down and out about them not being able to surprise Father, aren't they? Father said something that changed their feelings quickly. What did he say or what do you think he's going to do?

VOICE: He's going to put make-up on them.

TEACHER: Do you think he's going to put make-up on them to make them look a little bit better? Well, he just might do that. Look at the next page. What change has taken place since you read the last page?

BRADLEY: Their faces look different.

TEACHER: They sure do. You read this page to find out just what Father did to make them look different. Pause. Just what did Father do? Wendy.

WENDY: He painted their faces.

TEACHER: He painted their faces. How do the girls feel now? Let's think of some words to describe the girls feelings. Donnie.

DONNIE: Happy.

TEACHER: Much happier.

VOICE: Proud.

TEACHER: Proud.

VOICE: Glad.

TEACHER: Glad. Can you think of anything else?

VOICE: Gay.
Gay. I'm sure they're much more excited now too about going out for Halloween, aren't they?

Excited.

Oh, yes, they'd be very excited. Who would like to read the part that tells what Father did to make the girls fool the people? Tim.

Father got some water and some paints ....

That was very good. That's exactly what Father did. Why do you suppose that the girls are going to wait until after dark before they go to Hill Farm? Neil.

Because they want to fool the people.

Certainly. You can certainly fool people better in the dark than you can in the daytime. Let's turn over to the next page. What time of day is it now? Wendy.

Night.

Night. It even looks a bit scarier doesn't it? Where do you think the girls are going? Donnie.

To Hill Farm.

To Hill Farm. Look at the Puppy. How does he look?

Scared.

Oh! He looks as though he's scared again at the girls doesn't he? Do you think he will be fooled this time?
VOICE: Yes.

TEACHER: Oh, it sure looks as though he is. You read this page to find out. Pause. What did Puppy do? Jill.

JILL: He barked, and he looked at Honey and he looked at Bunny and he looked at Funny.

TEACHER: Then what did he do.

JILL: He ran into the house as fast as he could go.

TEACHER: You're right. How do the girls feel now?

VOICES: Happy.


BRADLEY: Gay.


NEIL: Because they fooled somebody.

TEACHER: You're right. They fooled someone and that is exactly what they wanted to do. Boys and girls, who remembers what the title was?

VOICE: Who Can Fool a Goat?

TEACHER: So I'm wondering if they're going to fool some more pets now, or just what they're going to do. As you read the next page you'll hear some noises made by hungry pets. Be ready to tell how they sounded. Pause. What did the girls think the pets were trying to tell them? Bradley.
BRADLEY: That they weren't hungry. That they just wanted to see them.

TEACHER: Is that what you think? What do you think they were doing? Tim.

TIM: I think they were hungry and they were kicking the barn.

TEACHER: I think so too. The noises were coming from the barn, weren't they? Yes. Who can read the line that tells about the first noise that you heard? Wendy, would you like to read it.

WENDY: All at once the girls heard a loud noise in the barn ......

TEACHER: Fine. What could you see as you read this line? Jill.

JILL: The goat back-kicking the barn door.

TEACHER: You think it was the goat? What do you think it was, Donnie?

DONNIE: The pony.


NEIL: The pony.

TEACHER: All right. Who can read the next noise that you heard in this part? Valerie. Just the noise.

VALERIE: Then the girls hear another noise ....

TEACHER: Good. Why do you think the girls may have forgotten to feed their pets? Neil.

NEIL: 

TEACHER: Why do you think they may have forgotten to feed
their pets? Tim.

TIM: They were having so much fun.

TEACHER: That's right. They were having so much fun getting ready for Halloween that they forgot that they had pets.

VOICE: They were so excited about Halloween that they forgot about the pets.

TEACHER: You're right. They might have been too excited. Do you think they will go and feed their pets immediately?

VOICES: Yes.

TEACHER: What do you think might happen if they go to the barn? Neil.

NEIL: The goat and the horses might get scared.

TEACHER: They might get awfully scared. Wendy.

WENDY:

TEACHER: They might. Donnie.

DONNIE: They might get hurt.

TEACHER: They might get hurt. Let's look at the next page. What is the goat doing on this page? Tim.

TIM: He's going to push the girl that's looking in the door over.

TEACHER: Yes, he's running towards her with his head down, isn't he. Do you suppose you'd be scared?

VOICE: Yes.

TEACHER: Oh, she just might get hurt terribly. But you
remember the title "Who Can Fool a Goat". We'll see if Bunny can fool him or not. You read this page and find out. Pause. What happened to Bunny, Wendy?

WENDY: The goat hit her and she ..... 

TEACHER: Yes. What could you see the other girls doing as the goat was bunting Bunny?

VOICE: Climbing the fence.

TEACHER: Yes. They jumped on the fence so that the goat could not bump them. Now, remember the girls fooled the Puppy. How did they feel when they fooled him? Remember how they felt?

VOICE: Happy.

TEACHER: Happy and excited. Do you think they felt the same way when they fooled the goat?

VOICE: No.

TEACHER: Why do you suppose they didn't feel the same way?

TIM: 

TEACHER: How do you know that Bunny was not hurt? How do you know she wasn't hurt even though she might have gotten hurt?

VOICE: She laughed.

TEACHER: Sure. She laughed, but she said it was fun anyway to fool the goat. Why do you suppose the goat acted as he did?
He doesn't like being fooled.

Well, no. Imagine yourself being an animal. Don't you think you'd be awfully surprised if you saw some of the horrible faces looking in at you when you're hungry? I bet you all would be.

How did you enjoy the story?

Yes.

Tell me the part that you liked best. Donnie.

When the goat banged into the door and knocked Bunny down.

Yes, Timmy?

When the goat knocked Bunny down.

Oh, that was exciting. Jill.

When they were happy and gay and just going to get their faces painted.

What about you, Wendy?

Bradley.

When they fooled the Puppy.

When they fooled the goat.

When they fooled the Puppy.

Boys and girls, do you think the girls Halloween fun will stop now or what do you think they might do?

They'll go to the Hill Farm.

You think they'll still go to Hill Farm?
VOICE: I do too.

TEACHER: You do too. You don't think they'll be too scared and go home to bed?

VOICES: No.

TEACHER: Why wouldn't you? Wendy.

WENDY: Because I might get hurt.

TEACHER: You think you might get hurt. Has anyone else any other reasons why they wouldn't want to do this?

VOICE: Because we don't have pets.

VOICE: I do.

TEACHER: No. We don't have pets like they do out at the farm, do we? What were some things that made Halloween fun for the girls?

VOICE: Dressing up.

TEACHER: Dressing up. Certainly.

VOICE: Getting their faces painted.

TEACHER: They would have been pretty disgusted wouldn't they if Father hadn't come about with a good idea.

Yes.

VOICE: Fooling the Puppy.

VOICE: Fooling the goat.

TEACHER: Yes. Boys and girls, they sure did have a good time didn't they? I hope that each one of you has as good a time tonight.
APPENDIX G

TRANSCRIPT OF A SECOND GRADE READING LESSON USING INDIVIDUALIZED READING
FIRST OBSERVATION

SECOND GRADE

Conference from Individualized Reading

TEACHER: The following are interviews with some children from different reading levels in Grade two. These teacher-pupil interviews are held periodically to discover how much library reading the children are doing above their regular basic reader we use in our classroom. It is really a form of individualized reading. Now Donald, I see you have a very interesting book there. What is the name of it?

PUPIL: Thinking About Science.

TEACHER: Are you interested in science?

PUPIL: Yes.

TEACHER: What things about science do you like?

PUPIL: Experiments - and sometimes I go home and try out some and they are quite good.

TEACHER: Tell us about some experiments, Dean.

PUPIL: Well, one time I put something and I got some real real ... Once I did it with my mother, she was going to crack some marbels and I told her the way I thought she would do it and she did it about
the same way. She put them in the oven to cook for a long time and then she took them out and put them in freezing cold water and ice.

TEACHER: Oh, and did it work?
PUPIL: Yes.

TEACHER: I noticed in this book that the people who wrote this story are Ox and Bond, Guy Bond and Kay Dohl. What do you call those people?
PUPIL: People that read it and did pictures.

TEACHER: Well, what are the people who write the story. What are they called?
PUPIL: Authors.

TEACHER: Yes. And what do you call the people who do the pictures?
PUPIL: Printers.

TEACHER: No not printers. The people who draw all the very lovely pictures in your book. Can you remember the word illustrator. Can you say that word.
PUPIL: Illustrator.

TEACHER: Now what part of the story do you like the best. Is there any particular part that you were very interested in?
PUPIL: An experiment - Moving with Wheels.

TEACHER: Oh, is that the one you liked? Why did you pick that?
PUPIL: Because it shows the work a little bit better, I think.
TEACHER: Oh, it certainly does. Could you read that part and tell us a little bit about it?

PUPIL: Give a box have a very good into it. So the box was very better in it. Was it very hard to pull the box with the boy in it? Now put the box on a wagon. Let the boy get into the box again and pull the wagon. Are the boy and box as hard to pull now?

TEACHER: Would you say they were.

PUPIL: No.

TEACHER: Why?

PUPIL: Because the wheels turn around and you can move easier.

TEACHER: Yes. Now I know that you are interested in science and you have been reading different books on that. Are there any other books you've read in the library this year.

PUPIL: About turtles.

TEACHER: Why did you like the one about turtles?

PUPIL: Because they said what size turtles are. And how they grow all the way up to big turtles and they said all the different kinds of turtles there are. How much some of them weighed. The big turtles weigh quite a bit and the small turtles don't weigh very much.

TEACHER: Oh, I see. Well that is very good and I hope you continue to be interested in science things. Thank you very much.
Patricia, I see you have rather an interesting looking book here. What's the name of your book?

PUPIL: Five in a Family.

TEACHER: Did you notice who had written this book.

PUPIL: Yes.

TEACHER: What do you call the people who write the books?
What is the name of the people who write the book?
Do you call them writers or is there any other name.

PUPIL: Authors.

TEACHER: Alright. Are there any other things or people that you particular like?

PUPIL: Yes, there's Tommy?

TEACHER: Tommy. Why did you like Tommy?

PUPIL: Well he's sort of little and he does lots of funny things.

TEACHER: Oh, does he. What sort of things?

PUPIL: Well he can't talk very good and there is this one story and he got all the towels dirty because he was going to clean himself.

TEACHER: Oh, you like these stories about people. Do you like any other kinds of stories?

PUPIL: Yes.

TEACHER: What kinds have you read in the library? Something having to do with a family or people. Have you read quite a few books?
PUPIL: Yes.

TEACHER: Have you read any animal books?

PUPIL: Yes.

TEACHER: Can you remember any animal you read about.

PUPIL: I've read about birds.

TEACHER: Anything else.

PUPIL: I've read about squirrels.

TEACHER: And squirrels. Now maybe you can pick out a part of this book that you liked particularly well. Can you do that for us Patricia please?

PUPIL: O.K.

TEACHER: You can start reading. Is this the part you liked?

PUPIL: Yes.

Who Did It?

Boy said Tommy. Got hands dirty. Too dirty. Dirty all over. Have to wash. Then Tommy went to look for Mother. But he didn't see her anywhere. So he went upstairs. Tommy can do it, he said to himself. Tommy washed and washed. Then it was time to dry himself. The towel got very dirty. Then he used Jack's towel. This towel is dirty too, he said, and then he used Sue's towel. Dirty too, he said, and dirty, dirty, he said. All dry he said at last. All clean and dry.

TEACHER: Thanks very much, Patricia. That was rather funny. I wonder what would happen at your home if that
took place? Have you any sisters or brothers?

PUPIL: Yes.

TEACHER: What would you think if they did that?

PUPIL: I don't think Mom would allow that.

TEACHER: I don't think so either, because he really thinks he's doing something and I can see why you like that book. Thanks very much Patricia.

TEACHER: I see you have a rather funny looking book here. Who wrote it?

PUPIL: D. Havey.

TEACHER: I think it's Hamperd. Let's look at it. Hamperd, that's a good try though. What did you like about this book?

PUPIL: Well, because there is lots of silly things in it.

TEACHER: For instance, what?

PUPIL: Well.

TEACHER: Could you give me a sound illustration of something that's very silly?

PUPIL: talking to a boy.

TEACHER: Oh yes, anything else.

PUPIL: Oh, one other thing that you liked about the book, Billy?

PUPIL: It has riddles in it.

TEACHER: Oh, has it! Tell me one of the riddles that you read.
If mom eats a popsicle, what does dad eat?
A momsicle.

Oh, is that so dear. Could you pick out some part of your story that you liked particularly well so that we can enjoy it with you please? All right, could you read it for us please.

I once saw a man who was very good to me -- just like a pig but who wasn't a pig. I could tell by his feet and I knew he was right when he said too too.

That is funny, isn't it? What other books have you read besides the story book?
Animal Homes.

Was there anything you learned particularly in that?
Animals make their homes.

And can you name any animal and what kind he made.
The frog sits on ------ on the side of the hill.

Oh, is that right? Well, that's interesting. I notice there are some horses in there. Yes, that's this word, isn't it? Do you know where hamsters live?
In a cage.

And do you know anything about fish and how they live?
PUPIL: They live in water.

TEACHER: Is there anything you'd have to watch out for if you had fish?

PUPIL: 

TEACHER: On dry land or what do you have to have for them?

PUPIL: Water.

TEACHER: And do you have to look after it everyday or just leave it?

PUPIL: You have to give it water.
BIBLIOGRAPHY

BOOKS


**Articles**


Dale, Edgar. "Reading is Thinking," *Newsletter.* (October, 1962.)


Research Reports


Wolf, Willavene; Huck, Charlotte; and King, Martha L., Critical Reading Ability of Elementary School Children. Project No. 5-1040. Columbus: Ohio State University Research Foundation, 1967.