

A STUDY OF THE EFFECT OF SPECIFIC INSTRUCTION
ON THE DEVELOPMENT OF CERTAIN
CRITICAL READING SKILLS AT
THE GRADE FIVE LEVEL

A Thesis
Submitted to
the Faculty of Graduate Studies
University of Manitoba

In Partial Fulfillment
of the Requirements for the Degree
Master of Education

by
Anne Moroz
August 1973



ACKNOWLEDGEMENTS

The writer wishes to acknowledge the assistance of all the people involved in the various stages of this study.

To her adviser, Dr. Odarka Trosky, the writer extends her deepest appreciation for her encouragement and invaluable assistance throughout the course of the study; to Dr. Carl Braun for his interest and guidance in many phases of the writer's graduate program and for his constructive suggestions in the writing of this thesis; and to Dr. Doris Baker for her kind help and direction in the editing of the manuscript.

Special thanks are extended to Mr. Glenn H. Nicholls, Superintendent of Seven Oaks School Division, No. 10, and to the principals and teachers in the Seven Oaks public school system for their cooperation in the collection of data.

Thanks are also due to Dr. Peter Blahey and Mr. Mark Bishop for their patient and informed assistance on statistics.

Finally, a word of appreciation is given to the writer's husband, Paul, for his constant encouragement and patient cooperation, and to a dear friend and colleague, Norma Nevison, without whose assistance the data could not have been gathered.

ABSTRACT

The purpose of this study was to investigate the effect of specific instruction on the development of certain critical reading skills at the grade five level. A series of five lessons, developed by the investigator, was based on the following critical reading abilities: semantics, authenticity of writing, logic in writing, and propaganda devices. This treatment was measured by the pre- and post-tests of The Critical Reading Test, Intermediate Level.

A random sample of six classes of fifth-grade students was selected for the study from the Seven Oaks public school system. A total of 168 students were involved: 106 pupils were in the experimental program and 62 pupils comprised the control group. While the experimental group received five lessons in specific critical reading skills, the control classes were taught five lessons based on the regular reading program. Both groups were instructed by the investigator.

Analysis of variance procedures and the Scheffe' test for multiple comparisons were employed to determine the effect of the instruction. Treatment, sex, and intelligence were the variables examined in the study.

Mean score differences in critical reading favoured the experimental group by more than a chance level of significance. The study provides indirect evidence that there does exist a group of

abilities in critical reading which can be taught and tested over a short period. Further, the results of the study indicated that while sex did not seem to have any significant influence on critical reading performance, intelligence did appear to be significantly related. In general, children of higher intelligence levels performed better in critical reading than middle IQ children who in turn performed better than low IQ children.

Implications of the study suggest that the reading curriculum needs to consider the inclusion of instruction in specific areas of critical reading for a more balanced reading program at the elementary school level.

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CHAPTER I

INTRODUCTION

I. THE PROBLEM

Statement of the Problem. In an age of instant communication, the child is bombarded with a multitude of visual impressions from earliest infancy.¹ Newspapers, magazines, billboards, movies, television, electric signs, and comic books assail him with words and pictures of an infinite variety. The mass media in print have become our way of life.² It has been estimated that approximately seventy per cent of what we learn is obtained through visual means, and reading is one of the major avenues through which information is received.³ The effect of this mass culture is to make the reader a conformist rather than an individualist who can think for himself. Hence, the need to read critically is more vital today than at any other time in history.

¹Lynd Ward, "The Book Artist: Yesterday and Today," Illustrations of Children's Books, 1744-1945, comp. by Bertha Mahony, et al. (Boston: Horn Book, 1947), p. 254.

²Mariam M. Gray, "Research and Elementary School Critical Reading Instruction," The Reading Teacher, 22(February, 1969), p. 453.

³Robert Karlin, "Critical Reading is Critical Thinking," Critical Reading, ed. by Martha L. King, et al. (New York: J. B. Lippincott Company, 1967), p. 132.

However, knowledge and intelligence alone will not protect an individual against planned propaganda and systematic advertising.¹ What is needed is an open mind to evaluate the various points of view and the ability to form judgments on the basis of this critical appraisal. Further, a questioning attitude is not acquired automatically as a part of general mental growth; it is learned partly through imitation and partly through instruction.² Teachers have to work to develop this questioning attitude in the child. Herein lies one of the chief responsibilities of every teacher, at all levels, in all content areas.³

Some three hundred years ago Francis Bacon cautioned: "Read not to contradict and refute; nor to believe and take for granted . . . ; but to weigh and consider."⁴ The world's destiny is being shaped by words. What more challenging responsibility is there than training students, from kindergarten to college, to respond critically to what they read?

Thus, the problem appears to be that while critical reading skills can and must be taught at all levels, research indicates that

¹William Eller and Robert Dykstra, "Persuasion and Personality: Reader's Predispositions as a Factor in Critical Reading," Elementary English, XXXVI (March, 1959), p. 191.

Nila B. Smith, "The Good Reader Thinks Critically," The Reading Teacher, XV (December, 1961), p. 168.

²David H. Russell, "The Prerequisite: Knowing How to Read Critically," Elementary English, XL (October, 1963), p. 580.

³A. Sterl Artley, "Critical Reading in the Content Areas," Elementary English, XXXVI (January, 1959), p. 122.

⁴Ellen E. Thomas, "A Critical Reading Laboratory," The Reading Teacher, XIII (February, 1960), p. 205.

these skills are not being developed adequately, especially at the elementary school level.¹ Hence, the need to make contributions to this field was vital.

Importance of the Study. The study was concerned with the effect of specific instruction on the development of certain critical reading skills at the grade five level. Not only is it important to develop critical reading abilities for purposes of discriminating propaganda devices, but developing such abilities has implications for one's future behavior. Robinson pointed out: "Critical reading is basic to the appreciation of literature, to arriving at sound conclusions about personal and social problems, to scientific investigations, and ultimately to education in its broadest sense."²

Although there is an abundance of literature on the values of critical reading, very little research is available particularly pertaining to the elementary school level, on how to teach children to read critically or on how to evaluate their ability to do so. There is obviously a need for further studies designed to obtain data regarding the teaching of critical reading skills at the elementary school level.

¹Frank J. Guzak, "A Study of Teacher Solicitation and Student Response Interaction About Reading Content in Selected Second, Fourth, and Sixth Grades" (unpublished Ph.D. dissertation, University of Wisconsin, 1966).

Odarka S. Trosky, "Modifications in Teachers' Questioning Behavior in the Development of Reading Comprehension and a Series of Supervisory Conferences" (unpublished Ph.D. dissertation, University of Toronto, 1971).

²Mariam M. Gray, "Research and Elementary School Critical Reading Instruction," p. 453.

II. BACKGROUND OF THE STUDY

The rationale of this study is based upon certain assumptions: the principal goals of education do not concur with the practices of our educators; the materials and methods used by teachers are inappropriate for the development of critical reading skills; and there is a paucity of appropriate measures for the assessment of critical reading abilities.¹

Goals. Almost every thoughtful citizen will support the following general objectives as outlined in a recent Provincial Language Arts program of studies at the intermediate school level:

In a modern community, it is the teacher's privilege and responsibility to educate young minds to think clearly, to evaluate, to recognize and enjoy some of the finest and deepest experiences of mankind. To these ends all our efforts should be directed.²

Perhaps Piaget's goals of education, encompassing the following points of view, best typify the current thinking in education:

The principal goal of education is to create men who are capable of doing new things . . . men who are creative, inventive, and discoverers. The second goal of education is to form minds which can be critical, can verify, and not accept everything they are offered. The great danger today

¹Helen M. Robinson, "Developing Critical Readers," Critical Reading, ed. by Martha L. King, et al. (New York: J. B. Lippincott Company, 1967), pp. 40-41.

²Intermediate Language Arts Curriculum, Department of Education (Province of Manitoba, 1968), p. 4.

is of slogans, collective opinions, ready-made trends of thought So we need pupils who are active, . . . who learn early to tell what is verifiable and what is simply the first idea to come to them.¹

Assuming that critical reading is a subskill of critical thinking, Russell's point of view would then concur with that of Piaget. He maintained that training in critical reading skills should begin in the primary grades. Since these skills are not acquired automatically as a part of general mental growth, specific provision should be made for their development.²

Further, studies by Maney³ and Sochor⁴ showed that critical reading "ability" consists of several relatively separate abilities. These researchers suggested that, for optimum results, the best procedure for developing critical reading proficiency is to provide instruction in each specific skill.

Although it appears that educators support the premise that there is an urgent need for teaching children and youth to evaluate what they read, there is evidence of a wide discrepancy between

¹Eleanor Duckworth, "Piaget Rediscovered," Piaget Rediscovered, ed. by Richard E. Ripple and Verne A. Rockcastle (Washington, D. C.: United States Office of Education, 1964), p. 5.

²Russell, "The Prerequisite," pp. 579-582.

³Ethel E. Maney, "Literal and Critical Reading in Science," Journal of Experimental Education, XXVII (September, 1958), pp. 57-63.

⁴E. Elona Sochor, "Literal and Critical Reading in Social Studies," Journal of Experimental Education, XXVII (September, 1958), pp. 51-54.

theory and practice in most elementary schools.¹ Chase, in the following statement, reflected the consensus of researchers of critical reading: "Our schools are producing higher illiterates who can absorb and recall but cannot think."²

Reading Materials and Methods. Harvison's survey³ of published materials aimed at building critical reading skills revealed a serious deficiency: most available materials are written for the intermediate grades and above, and no program exists which could be relied upon to cover the full spectrum of critical reading skills at the elementary school level.

Further, Williams' findings⁴ showed that much of the reading material used in elementary schools is not well adapted to the purpose of developing critical reading. She made a study of the critical reading skills treated in the manuals and textbooks of certain basal series published or revised during a ten-year period prior to her study. Out of a total of ten sets (eighty books), only three of the

¹Guzak, "A Study of Teacher Solicitation and Student Response Interaction."

Trosky, "Modifications in Teachers' Questioning Behavior."

Willavene Wolf, et al., "Critical Reading Ability of Elementary School Children," Final Report, Ohio State University Research Foundation (Columbus, Ohio: Office of Education, 1967).

²Francis Chase, "Demands of the Reader in the Next Decade," Critical Reading, ed. by Martha L. King, et al. (New York: J. B. Lippincott Company, 1967), p. 14.

³Allan Harvison, "Critical Reading for Elementary Pupils," The Reading Teacher, XXI (December, 1967), 244-247, 252.

⁴Gertrude Williams, "Provisions for Critical Reading in Basic Readers," Elementary English, XXXVI (May, 1959), pp. 323-330.

skills were listed in all ten sets of basal readers: making inference, making judgments, and perceiving relationships.

Possibly even more important is the fact that many teachers are doing little to develop a variety of reading-thinking skills because they are not cognizant of what the skills are. They seem to equate critical reading with word recognition and recall.¹

Since the teacher's questions establish both the content topic under consideration and the cognitive operations to be performed, it is important that the teacher knows how to use questions effectively.² Raciti³ maintained that it is the open-end questions, "How" and "Why," that promote critical thinking. It follows that the more open-end questions the teacher asks, the greater the opportunity the learner has to practice critical thinking operations.

Stauffer⁴ too, is a proponent of the open-end question. He argued that the educated guess is the crux of effective critical thinking and reading because the student is no longer delimited by the "either-or" response.

¹Louis Rath, et al., Teaching for Thinking (Columbus, Ohio: Charles E. Merrill Publishing Company, 1967), pp. 1-5.

Trosky, "Modifications in Teachers' Questioning Behavior."

²Hilda Taba, "The Teaching of Thinking," Critical Reading, ed. by Martha L. King, et al. (New York: J. B. Lippincott Company, 1967), p. 148.

³Domenica G. Raciti, "Critical Reading Techniques in Elementary School," Reading and Realism, ed. by J. Allen Figurel (Newark, Delaware: International Reading Association, 1969), pp. 98-100.

⁴Russell G. Stauffer, Directing Reading Maturity As A Cognitive Process (New York: Harper and Row Publishers, 1969), pp. 35-84.

However, there is little evidence to suggest that teachers ask the right kind of questions or encourage their students to make educated assumptions.¹ The findings of Raths² and Hester³ concurred with the findings of Taba⁴ that teachers either fear original ideas from their students, or they worry about not completing a specified number of books on the course of study; telling the student the answer is less time-consuming than allowing him to form his own critical appraisal.

Evaluation. Although the testing of critical reading is important, it is neglected because appropriate measures are not yet available. Most widely used standardized tests in reading measure such skills as vocabulary, comprehension of ideas, recognition and recall of details, and dictionary skills. A student may do well in any of these skills, yet be unable to reason deductively and inductively.⁵ Many authorities in the field agree that an appropriate testing instrument is urgently needed for critical reading skills at

¹Amelia Melnik, "The Formulations of Questions As An Instructional-Diagnostic Tool," Reading and Inquiry, X (Newark, Delaware: International Reading Association, 1965), pp. 36-39.

Stauffer, Directing Reading Maturity, pp. 35-84.

²Raths, et al., Teaching for Thinking, pp. 1-5.

³Kathleen Hester, "Creative Reading: A Neglected Area." Critical Reading, ed. by Martha L. King, et al. (New York: J. B. Lippincott Company, 1967), pp. 90-91.

⁴Hilda Taba, "Teaching Strategies and Cognitive Functioning in Elementary School Children" (Cooperative Research Project No. 2404, San Francisco State College, 1966), p. 61.

⁵William Eller and Judith G. Wolf, "Developing Critical Reading Abilities," Journal of Reading, X (December, 1966), p. 193.

the elementary school level.¹

In summary, several observations can be made. One of the major problems facing the reader today is the impact of mass media. Since the power of the written word from trained propagandists and advertisers over untrained readers can no longer be minimized, skills in critical reading are imperative and cannot be assumed on the basis of literal comprehension. These skills must be taught specifically. Studies reveal a paucity of knowledge about teaching and testing critical reading abilities at the elementary school level. This study then, sought to determine the improvement, if any, in the ability of fifth-grade students to read critically following a series of lessons in specific critical reading skills.

III. PROCEDURE OF THE STUDY

The study examined the effect of specific instruction on the development of certain critical reading skills at the grade five level. In addition, the following problem was investigated: the relationship between the total mean scores in (1) critical reading and sex and (2) critical reading and intelligence as revealed in the pre- and post-test results.

Six classes from one urban area were randomly assigned; the experimental group was composed of four of the classes and a control

¹Dale Hendrickson, "Some Correlates in Critical Thinking of Fifth-Grade Children" (unpublished Ph.D. dissertation, Berkeley, California: University of California, 1960).

Wolf, et al., "Critical Reading Ability of Elementary School Children."

consisted of the remaining two classes. Next, both experimental and control groups were pre-tested on the first section of The Critical Reading Test, Intermediate Level.¹ The experimental group received five lessons in specific critical reading skills while the control group pursued the regular reading program. Both experimental and control groups were instructed by the investigator.

Following the instructional period, the six classes were post-tested on the second section of The Critical Reading Test, Intermediate Level. The data were statistically treated by analysis of variance procedures² and the Scheffé test of multiple comparisons.³

IV. DEFINITION OF TERMS

For the purpose of this study, the following terms were defined as stated below:

Reading Process - Complex organization consisting of patterns of higher mental processes. It embraces such thinking processes as evaluating, judging, imagining, reasoning, and problem solving.⁴

¹Ibid., pp. 26-27.

²W. James Popham, Educational Statistics: Use and Interpretation (New York: Harper and Row, Publishers, 1967), pp. 164-220.

³John T. Roscoe, Fundamental Research Statistics For the Behavioral Sciences (New York: Holt, Rinehart and Winston, Inc., 1969), pp. 238-242.

⁴Arthur Gates, "Nature of the Reading Process," Reading in the Elementary School, The Forty-eighth Yearbook of the National Society for the Study of Education, Part II (Chicago: University of Chicago Press, 1949), p. 3.

Critical Thinking - Form of inquiry attempting to evaluate and justify statements. It includes an attitude of questioning and suspended judgment, using methods of logical analysis, and a judgment factor of evaluating in terms of some norm or standard.¹

Critical Reading - Thoughtful reactions to ideas gleaned. To read critically is to recognize and judge vague and imprecise words and multiple meanings of words; to judge an author's viewpoint and competence; to identify, compare, and evaluate various sources in order to verify information; to analyze and judge arguments; and to analyze and judge propaganda devices.²

Literal Comprehension - Skill of obtaining the obvious and direct meanings from symbols as they appear on the printed page. It varies with the materials and the reader's need to understand what is stated.³

Propaganda - Deliberate attempt on the part of individuals or groups to influence the opinion or action of others with reference to predetermined ends.

Semantics - Study of language symbols which involves the realization of the multiplicity of word meanings for determining the denotative and connotative meanings of words.

¹Russell, "The Prerequisite," pp. 579-582.

²Wolf, et al., "Critical Reading Ability of Elementary School Children," pp. 20-21.

³Nila Banton Smith, Reading Instruction for Today's Children (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963), pp. 262-263.

Authenticity - Quality or state of being trustworthy and reliable with respect to printed materials.

Logic - Process of reasoning to determine the validity and reliability of an argument.

V. GENERAL HYPOTHESIS OF THE STUDY

The following hypotheses were tested:

1. There is a significant difference in the mean scores in critical reading between the pre- and post-tests for the experimental group as a result of specific instruction in certain critical reading skills.
2. There is a significant difference in the mean scores in critical reading between the pre- and post-tests for the control group as a result of five lessons in the regular reading program.
3. There is a relationship between the pre- and post-test mean scores in critical reading and sex for both the experimental and the control group.
4. There is a relationship between the pre- and post-test mean scores in critical reading and intelligence for both the experimental and the control group.

VI. LIMITATIONS OF THE STUDY

Several limitations of this study were necessary. These were:

1. Critical reading abilities were investigated only at the grade five level, and only those critical reading skills

that are defined in this study were assessed. Further, comparisons were limited to the growth in certain critical reading skills as a result of specific instruction.

2. The sample was limited to one urban area. Six classes were randomly assigned to the study: four classes to the experimental group and two classes to the control group. These limitations place restrictions on the degree to which conclusions from this study can be generalized to the larger populations.
3. Total time devoted to each group was only seven teaching days. It is acknowledged that due to the short interval of seven days between the pre- and post-testing periods, the findings are less free from the "practice effect" than they would be had the interval been longer.

VII. OVERVIEW OF THE STUDY

Chapter II reviews the literature related to the major aspects of the study. The general design, sampling, experimental materials, evaluative instrument, and procedures are contained in Chapter III. Chapter IV presents the data and statistical analysis. The findings, conclusions, and implications of the study are outlined in Chapter V.

CHAPTER II

REVIEW OF LITERATURE RELATED TO THE STUDY

An examination of the literature related to critical reading revealed a lack of research evidence regarding both the abilities underlying reading skills and critical thinking and the factors associated with such competencies. The literature frequently interchanges "critical reading" and "critical thinking" which may be due to insufficient research in this area. Another feature discovered through investigation of the literature is that studies in critical thinking relating to both the elementary and secondary levels are readily available, but research in critical reading, especially as it applies to the elementary school level, is limited. Thus, this chapter investigates (1) the relationship of critical thinking and critical reading, (2) evidence of instruction upon the development of critical reading, and (3) the relationship between critical thinking and reading and sex and mental ability variables.

I. NATURE OF THE CRITICAL THINKING - CRITICAL READING CONSTRUCT

Before studies in critical reading can be reviewed, the relationship between critical thinking and critical reading must be established. From an examination of a number of studies in this area it would seem that the judgment factor of "evaluating" is the basic ingredient of the critical thinking process. Russell placed critical

thinking among the higher thought processes of intellectual functioning; he defined the process as being a form of evaluation or categorization involving attitude, knowledge of facts, and thinking skills.¹ Bloom described critical thinking as a process whereby a reader brings specific technical information and skills to bear on a particular problem. He arranged the mental processes in hierarchical order with evaluation as the most demanding skill.² In Guilford's structure of the intellect, evaluation is the fifth and uppermost class of cognition and is synonymous with critical thinking. His reasoning was that a reader must continually evaluate by way of conclusions what he knows, what he recalls and what he produces.³ Thus, evaluation appears to be not only the common element in critical thinking but also the challenging skill.

Turning to literature specifically related to the process of reading revealed a general consensus that reading is a thinking process. Karlin maintained that the two abilities, critical thinking and critical reading, have much in common because they both involve discrimination and evaluation; he stated that critical reading is an extension of critical thinking in that it provides a source for ideas

¹David H. Russell, "Higher Mental Processes," in C. W. Harris, ed., Encyclopedia of Educational Research (New York: Macmillan Company, 1960), pp. 651-652.

²Benjamin S. Bloom, ed., Taxonomy of Educational Objectives: Handbook I: Cognitive Domain (New York: David McKay Company, Inc., 1956), pp. 38-39.

³J. P. Guilford, "Frontiers in Thinking that Teachers Should Know About," The Reading Teacher, XIII (February, 1960), pp. 176-182.

and triggers reactions to the material read.¹ Maw too, supported the premise that reading is a thinking process. She argued that when the processes involved in critical thinking, evaluation and judgment, are applied to written material, the result is critical reading because the reader is actively engaged in thinking about what he is reading and not merely word-calling.² Huus reasoned that critical reading, as an aspect of comprehension, requires the reader to judge and evaluate the worth, validity, and quality of what is read against some norm or standard, presuming that the reader has the necessary background to provide him with an adequate norm or standard to serve as a basis for judging.³ Stauffer defined critical thinking and reading as a cognitive interaction between facts and values, hence critical thinking and critical reading are synonymous. The reader takes information from the printed page, makes conjectures about it, extrapolates from it, makes educated guesses, and checks those guesses with the original. He evaluates and judges the authenticity of what he reads in the light of his own experience.⁴ In a recent paper Follman, et al. presented empirical evidence to demonstrate that these

¹Robert Karlin, "Sequence in Thoughtful and Critical Reaction to What is Read," Sequential Development of Reading Abilities, ed. by Helen Robinson (Chicago: University of Chicago Press, 1960), pp. 74-79.

²Ethel W. Maw, "Teaching Critical Thinking Through Reading," Dimensions of Critical Reading, comp. by Russell G. Stauffer (Newark, Delaware: University of Delaware, 1964), pp. 75-87.

³Helen Huus, "Critical Aspects of Comprehension" (paper presented at the National Council of Teachers of English Conference, Honolulu, Nov. 23-25, 1967).

⁴Russell G. Stauffer, "Reading and Thinking," Grade Teacher, LXXXVII (March, 1970), p. 27.

two abilities share a very large verbal component as well as a number of reasoning and classifying activities.¹

On the basis of the investigation into the literature, it can be concluded that critical reading involves critical thinking. Thus an examination of the skills inherent in this construct was then undertaken.

II. DEVELOPMENT OF SPECIFIC CRITICAL READING ABILITIES

Since 1950 a number of studies have been undertaken to measure the effect of instruction in critical thinking and critical reading skills of elementary and high school students. Using a pre- and post-test design, Nardelli² measured the gains of 127 elementary school students who were instructed in three dimensions of reading: interpretation of an author's suggestions, interpretation of feelings, and recognition of propaganda devices. The lesson units designed to improve the tested abilities were prepared by the investigator and taught by him to the experimental group. After approximately ten hours of instruction, the post-test was administered. A significant mean gain at the .01 level was found on the total creative reading score for the experimental group over the control group, with the major gains in the area of recognizing propaganda devices.

¹John Follman, et al., "Correlational and Factor Analysis of Critical Reading and Critical Thinking, Twelfth Grade" (paper presented at the National Reading Conference, Florida, Dec. 3-5, 1970).

²Robert N. Nardelli, "Some Aspects of Creative Reading," Journal of Educational Research, L (March, 1957), pp. 495-507.

A study by Maw¹ utilized similar techniques to assess gains in critical thinking skills following specific instruction in these abilities. Forty-two classes from grades four, five, and six were evenly divided between the experimental and the control groups. The researcher devised twenty-four lessons aimed at developing the following skills: (1) selecting relevant facts, (2) judging the reliability of data, (3) making generalizations and inferences, (4) recognizing situations in which evidence is insufficient for a conclusion, (5) determining cause and effect, and (6) evaluating arguments. The Davis-Eells Games test and the Test of Critical Thinking designed by the investigator were administered to all classes. Following the testing, the control classes continued regular school work while the experimental classes added lessons in critical thinking to their regular program. After eight weeks, during which the twenty-four lessons were completed at a rate of three lessons a week, the experimental and the control groups were retested. Using analysis of variance to compare the final means of the groups on the Test of Critical Thinking, Maw found in all groups a significant difference at the .001 level favoring the experimental group. There was also a mean increase from level to level up through the grades. On the other hand, the Davis-Eells Games test of general intelligence and problem solving showed no significant gain for either group. Thus, the results appeared to verify the effectiveness of the lessons in improving the thinking

¹Ethel W. Maw, "An Experiment in Teaching Critical Thinking in the Intermediate Grades," Dissertation Abstracts, XX (1959-60), p. 2179.

skills required by Maw's Test of Critical Thinking. In addition to the significant difference in mean gains of the experimental group on the Test of Critical Thinking, a significant change in the attitude of the students was also noted. The teachers reported that their pupils showed improvement in general disposition to consider problems thoughtfully, to suspend judgment, and to demand evidence in support of conclusions.

Defining critical thinking as being a careful examination and evaluation of a product of thought evolving from inductive discovery and/or deductive proof, Saadeh¹ investigated the effectiveness of teaching for critical thinking at the elementary school level. The investigation dealt with (1) analogy evaluation, (2) inference evaluation, (3) generalization evaluation, and (4) reasons evaluation. Thirty classes at the grade six level were randomly assigned to control and experimental groups. After the pre-test, the experimental classes received four weeks of instruction, one skill being dealt with each week. The findings showed a significant difference at the .01 level in favour of the experimental classes. The results of this study indicated that a sixth-grade child was able to engage in critical thinking activities when the instruction was presented at his level of understanding and when the activities were different from the

¹Ibrahim I. Saadeh, "The Teacher and the Development of Critical Thinking," Journal of Research and Development in Education, III (Fall, 1969), p. 89.

Sara W. Lundsteen, "Teaching Abilities in Critical Listening in the Fifth and Sixth Grades" (unpublished Ph.D. dissertation, Berkeley, California: University of California, 1963), pp. 55-56.

regular school program, that is, developing principles of logic.

Mason¹ reported a study assessing the direct teaching of critical thinking using science units with fourth-, fifth-, and sixth-grade students. There were three groups in the experiment: research, experimental, and control. Teachers in the research group were free to modify the presentation strategies within the prepared units; teachers in the experimental group were to use the materials as printed; and teachers in the control group were to teach for the same concepts as in the units for the experimental pupils, but they were to employ their usual methods and procedures. All but the fifth-grade control group made significant gains in critical thinking skills. It was noted however, that the group making the greatest gains in critical thinking skills was different for each grade level: in grade four the research group made the most gains in critical thinking skills; in grade five the experimental group was significantly higher; and in grade six the mean gains were the same for each group. Mason concluded that the teacher was the determining factor in producing significant change in the pupils' ability to think critically and that critical thinking can be taught more effectively when students are given direct training, regardless of method.

Directing two studies concerning critical thinking of elementary

¹John M. Mason, "The Direct Teaching of Critical Thinking in Grades Four Through Six," Journal of Research in Science Teaching, I (December, 1963), pp. 319-328.

school children, Taba¹ appraised certain ideas about the development of thinking in an experimental situation and examined the effect of planned teaching strategies on the development of children's thought. Students from grades four, five, and six were the subjects in both studies. The experimental treatment included the teaching of such skills as interpreting, inferring, and generalizing using social studies units. The findings supported the hypothesis that children can learn to make logical assumptions if they receive systematic training in thinking. Moreover, the results corroborated Mason's findings: the teacher is the key factor in producing significant change in a child's ability to think, and the determining factors are the nature of the teacher's questions and the teacher's confidence that children are capable of a higher level of thought than they ordinarily exhibit.

Covington's research² in creative understanding was similar in purpose to Taba's studies in that his prime concern was the development of curriculum programs to foster creative thinking among elementary school children. The basic intent of the project was to identify and teach directly for a number of cognitive skills, attitudes, and dispositions which are considered central to creative understanding,

¹Hilda Taba, Thinking in Elementary School Children (Cooperative Research Project No. 1574, San Francisco State College, 1964).

_____, Teaching Strategies and Cognitive Functioning in Elementary School Children.

²Martin V. Covington, "Some Experimental Evidence in Teaching for Creative Understanding," The Reading Teacher, XX (February, 1967), pp. 390-396.

irrespective of the particular subject matter. The assumption was that the student would improve substantially in creative understanding if instruction were given to strengthen these specific skills and if the child resolved to use them. Covington developed a set of sixteen lessons of programmed instructional material for grade five pupils. Research evidence¹ from the two major studies seemed to support the investigator's hypothesis that a child could be taught how to think critically. The general consensus was that the pupils in the experimental groups were more willing and able than the children in the control groups to make use of cognitive skills and strategies common to creative problem solving and to reflective reading.

Interested in the teaching of mathematical logic as it affects general reasoning ability and the transfer to other subject areas such as reading and English, Suppes and Binford² designed a different study at the elementary level. The experimental group sample comprised gifted fifth- and sixth-grade students while students attending logic classes at Stanford University and matching in ability were the control. A series of tests administered whenever the required amount of work had been completed was used to measure the achievement of each group. The authors found that the achievement level of the upper quartile of elementary school students was 85 to 90 per cent of that achieved by

¹Ibid., pp. 395-396.

²Patrick Suppes and Frederick Binford, "Experimental Teaching of Mathematical Logic in the Elementary School," Arithmetic Teacher, XII (March, 1965), pp. 187-195.

comparable university students. Two implications of this study were that bright students at the elementary level could master the simpler forms of mathematical logic, and that there is some carry-over in critical thinking and attitudes into the fields of reading and English as indicated by their teachers.

Hiram¹ studied grade seven pupils using specifically designed procedures to improve their ability "to think logically and therefore critically". The investigation involved two paired and equated groups of thirty-three children each; the experimental instruction covered a period of four months of 250 minutes per week. The following concepts of logical thinking were developed: (1) nature of thinking in general, (2) tools of thinking, (3) nature of definition, (4) nature of inductive inference, (5) nature of deductive inference, (6) nature of experimentation, and (7) common errors in reasoning. At the beginning of the study, the two groups were equal in reasoning ability. The results indicated that upper grade pupils can be taught to think critically and therefore logically and that critical thinking, like the ability to read, spell, write and use numbers, is a tool skill and cannot be left to develop only through incidental learning experiences.

Other studies appear to lend further support to the premise that critical thinking can be taught. In a report to the Junior High School Association of Illinois, Baughman² reviewed a series of papers whose

¹George H. Hiram, "An Experiment in Developing Critical Thinking in Children," Journal of Experimental Education, XXVI (December, 1957), pp. 125-132.

²M. Dale Baughman, ed., "Teaching Early Adolescents to Think" (Report from the Junior High School Association of Illinois, University of Illinois, 1964).

major concern was the teaching of critical thinking to adolescents. The general consensus was that critical thinking and problem-solving abilities of most students can be improved, that the students must be actively involved in this learning process, and that the teacher remains the key person in the program.

Very few studies have been reported in which an attempt was made to teach critical reading per se to elementary or high school students. Only four studies conducted within the past decade have come to the attention of this investigator.

Wolf, et al.¹ completed a project at the elementary level to determine whether critical reading can be taught while maintaining progress in other basic reading skills. The authors hypothesized that since critical reading is one manifestation of the critical thinking process, it follows that critical thinking is occurring in the act of reading. They reasoned that since elementary school children can think critically at an early age,² it can be assumed that they can be taught to read critically. The investigators employed a sample of 651 children from grades one through six, with two control and two experimental classes at each grade level. Both the tests and

¹Wolf, et al., "Critical Reading Ability of Elementary School Children."

²David H. Russell, Children's Thinking (Boston: Ginn and Company, 1956).

E. Elona Sochor, "The Nature of Critical Reading," Elementary English, XXXVI (January, 1959), p. 48.

Lev Semenovich Vygotsky, Thought and Language (Cambridge, Mass.: The Massachusetts Institute of Technology, 1962).

the lesson plans were devised by the research team. Their definition of critical reading consisted of 46 items, while the three critical reading tests, two for primary children and one for the intermediate students, were grouped into three sections: logic, general abilities, and literature. The content was classed as argumentative, informational, and literary. For one school year the experimental classes received instruction in critical reading while the control classes were instructed in children's literature. A test-retest design was used to measure changes in performance. Results were impressive. At every grade level the mean scores of the experimental classes were significantly higher than those of the control groups on all critical reading tests, yet no significant differences appeared between the groups on the general reading test. Two implications were drawn from this study: elementary school children can be taught to read critically even in the primary grades, and the study of logic may begin in the first grade and continue throughout the elementary grades.

Investigating the ability of fourth-, fifth-, and sixth-grade pupils in distinguishing fact from opinion, Davis¹ used a fact-opinion test of ten paragraphs selected from reading, social studies, and science textbooks. The students were required to determine whether individual sentences were statements of fact or of opinion. The results indicated that generally, students were not capable of

¹John E. Davis, "The Ability of Intermediate Grade Pupils to Distinguish Between Fact and Opinion," The Reading Teacher, XXII (February, 1969), pp. 419-422.

distinguishing between fact and opinion. Pupils in grade four were least capable and there was no significant difference between grades five and six. The more difficult task proved to be identifying statements of opinion. One implication in the research findings was that specific instruction should be given to all pupils to develop ability in distinguishing between fact and opinion.

Using an experimental reading course for their study, Denberg and Jones¹ employed seventh- and eighth-grade students from two schools for one academic year. The purpose of the experiment was to test the hypothesis that the structure of thinking and the structure of reading coincide, hence improving and extending the structures of logical and critical thinking must result directly in improving critical and integrative reading ability. Half the course work was devoted to instruction in study skills and the other half to critical reading instruction which covered the following principles: precision with word meanings, structure of thought, and recognition of implicit assumptions. Since no suitable standardized test was available to measure improvement in critical reading ability, the only evaluation used was the criterion "improvement--non-improvement". Results were positive. Not only was improvement noted in critical reading ability but also in writing and speaking abilities; moreover, transfer of learning was evident following the termination of the course.

¹Robert Denberg and Charles Jones, "Critical Reading in a Developmental Reading Course," Developing Comprehension Including Critical Reading, comp. by Mildred A. Dawson (Newark, Delaware: International Reading Association, 1968), pp. 201-205.

Six classes in English at the grade ten level served as subjects for Livingston's study¹ in which he assessed the effect of instruction in general semantics. Lessons were conducted twice a week for five weeks. The Watson-Glaser Critical Thinking Appraisal was administered to measure critical reading ability; the YM and the ZM forms served as the pre-test and the post-test, respectively. The research findings indicated a significant gain at the .01 level in favour of the experimental group. Since it was highly improbable that this gain could be attributed to any other variable, the investigator assumed that the students' critical reading ability improved as a result of instruction in general semantics.

The next two studies investigated various correlates of critical thinking-critical reading abilities. Hendrickson² working with grade five students found correlations of .60 and .61 respectively, between his test of critical thinking and vocabulary and critical thinking and comprehension. Using ninth-grade students, Trela³ obtained the following correlations between the Watson-Glaser Critical Thinking Appraisal and current reading tests: Gates Reading Survey (comprehension) .64; Stanford Advanced Reading Test (comprehension) .63;

¹Howard Livingston, "An Investigation of the Effect of Instruction in General Semantics on Critical Reading Ability," Critical Reading, ed. by Martha L. King, et al. (New York: J. B. Lippincott Company, 1967), pp. 389-393.

²Dale Hendrickson, "Some Correlates in Critical Thinking of Fifth-Grade Children."

³Thaddeus M. Trela, "A Comparison of Ninth Grade Achievement on Selected Measures of General Reading Comprehension, Critical Thinking, and General Educational Development," Dissertation Abstracts, XXIII (1962-1963), pp. 2382-2383.

Iowa Test of Educational Development (a test of critical reading) .66; and STEP Reading (a test of critical reading) .67. The results confirmed the assumptions of both researchers: tests of thinking appear to measure certain elements which are different from those being measured by current tests of reading, and critical thinking is a specialized ability requiring specific training for its development.

In summary, it has been established that reading must involve thinking if the reader is to derive meaning from the printed page. Since reading is a special form of thinking, then critical thinking is considered to be a special form of reading, and conversely, critical reading is conceived to be an aspect of critical thinking.¹ Further, unless a child can think critically, he cannot read critically. Research evidence appears to support the premise that critical reading skills can be taught. High intelligence and/or knowledge about a subject will not ensure ability to read critically. The pupil requires specific instruction in becoming a critical reader.

Several investigations related to critical reading have been conducted specifically in the content field. Maney² and Sochor³ doubted whether there was much credence in the assumption that critical reading skills develop as a concomitant of intelligence and maturation

¹Ruth K. Flamond, "Critical Reading," Critical Reading, ed. by Martha L. King, et al. (New York: J. B. Lippincott, 1967), pp. 162-163.

²Maney, "Literal and Critical Reading in Science," pp. 57-63.

³Sochor, "Literal and Critical Reading in Social Studies," pp. 49-55.

and normal school progress. Using fifth-grade students as subjects, Maney examined the relationship between general reading ability and critical reading ability of science material. With intelligence held constant, the correlation between literal reading and critical reading comprehension in science was .34; between general reading ability and critical reading of science, the correlation was only .11.

Sochor investigated the relationship between general reading ability and the ability to read critically in social studies. Her sample consisted of the same students Maney had used in her study. The author's findings were similar to the results in the previous study. With intelligence held constant, the relationship between literal reading and critical reading comprehension in social studies was .23; between general reading ability and critical reading comprehension in social studies the relationship was a low .17. The conclusion reached by the investigators was that critical reading comprehension in social studies and in science appears to be virtually independent of general reading ability when intelligence is held constant.

In the light of these findings, the researchers were justified in making the following recommendations: critical reading should be recognized as encompassing a number of separate abilities which require specific instruction for their development, and a new measure should be devised in order to assess the relatively independent abilities inherent in critical reading comprehension of a particular content at the elementary school level.

Shores and Saupe¹ investigated the relationship between general reading ability and the reading ability required for problem solving in science. Their sample consisted of 214 fourth-, fifth-, and sixth-grade students. The test analyzed was the newly constructed Test of Reading for Problem-Solving in Science. The authors' findings corroborated the results of Maney and Sochor that study skills in content areas involve reading critically. They maintained that critical reading ability is a specific ability apart from mental ability and general achievement but is related to them through a common factor, and a new measure is urgently needed to identify the differences between the various abilities.

In summary, the studies showed that skills required for judging and evaluating what is read are different from the skills used for literal comprehension. Thus, specific instruction is required to develop the skills that comprise critical reading ability, and a new type of reading test is needed to examine these different skills of critical reading ability.

III. FACTORS RELATED TO CRITICAL READING ABILITY

The foregoing studies relating to critical thinking and critical reading also investigated various factors that affect the reader's ability to think and to read critically. Factors that appeared to have the greatest influence upon performance in critical reading were

¹J. Harlan Shores and J. L. Saupe, "Reading for Problem-Solving in Science", Journal of Educational Psychology, XLIV (January, 1953), pp. 149-157.

attitudes, general reading ability, intelligence, sex, and social class. Of these, the present study examines only the relationship between critical reading performance and factors of intelligence and sex.

Relationship of Critical Reading to the Factor of Intelligence.

Research findings did not agree on the relationship between critical reading and mental ability. Authors of several studies presented very low correlations, while others recorded high ones. No significant relationship between mental ability and critical reading was revealed in studies by Hendrickson,¹ Covington,² Maw,³ and Groff.⁴ Saadeh⁵ found a correlation of .58 before instruction and .57 after instruction using his test of critical thinking and the Kuhlman-Anderson test of mental ability. Davis⁶ also questioned this relationship since his analysis of the pattern of scores for individual subjects revealed that students with low-average to below average IQ scores in the

¹Hendrickson, "Some Correlates of Critical Thinking in Fifth-Grade Children".

²Covington, "Some Experimental Evidence on Teaching for Creative Understanding".

³Maw, "An Experiment in Teaching Critical Thinking in the Intermediate Grades."

⁴Patrick J. Groff, "Children's Attitudes Toward Reading and Their Critical Reading Abilities in Four Content-Type Materials," Journal of Educational Research, LV (April, 1962), p. 314.

⁵Lundsteen, "Teaching Abilities in Critical Listening in the Fifth and Sixth Grades," p. 41.

⁶Davis, "The Ability of Intermediate Grade Pupils to Distinguish Between Fact and Opinion."

experimental group had better scores than did students in the control group whose IQ scores were average or above average. In examining tests of intelligence and tests of critical ability, Furst¹ found that critical thinking seemed to be independent of intelligence. His hypothesis was supported by an analysis of research in critical reading by Durrell and Chambers² who concluded that the ability to think and read critically appears to rest upon specific training rather than upon intelligence.

On the other hand, some studies did report a positive relationship between critical reading and intelligence. Nardelli³ found a high degree of relationship between intelligence test scores, reading achievement, and critical reading. Studies by Maney⁴ and Sochor⁵ revealed that verbal intelligence appeared to be "substantially" related to critical reading ability in science and social studies. Wolf, et al.⁶ also concluded that intelligence and critical reading

¹Edward J. Furst, "Relationship Between Tests of Intelligence and Tests of Critical Thinking and of Knowledge," Journal of Educational Research, XLIII (April, 1950), pp. 614-625.

²Donald D. Durrell and J. Richard Chambers, "Research in Thinking Abilities Related to Reading," The Reading Teacher, XII (December, 1958) pp. 89-91.

³Nardelli, "Some Aspects of Creative Reading."

⁴Maney, "Literal and Critical Reading in Science."

⁵Sochor, "Literal and Critical Reading in Social Studies."

⁶Wolf, et al., "Critical Reading Ability of Elementary School Children."

were related; in their study in critical reading at the elementary school level, the highest correlation of intelligence and critical reading scores was .792. Despite this apparently conclusive evidence, the authors believed that children of all intelligence levels can benefit from instruction in critical reading.

On the basis of these findings, it would appear that the relationship between intelligence and critical reading has not been clearly established. Although subject matter, knowledge, and intelligence may help in acquiring critical reading abilities, they are not enough. The studies reviewed seem to indicate that the determining factors are direct instruction in critical reading and appropriate standardized measures to assess a child's ability to read critically.

Relationship of Critical Reading to the Factor of Sex. As in the relationship of critical reading to intelligence, there is no agreement among researchers on the relationship of sex and the ability to read critically. Saadeh,¹ Maw,² and Wolf, et al.³ reported no significant difference in ability between girls and boys to read critically. Other studies revealed a difference. Both Groff⁴ and

¹Lundsteen, "Teaching Abilities in Critical Listening in the Fifth and Sixth Grades," p. 60.

²Maw, "An Experiment in Teaching Critical Thinking in the Intermediate Grades."

³Wolf, et al., "Critical Reading Ability of Elementary School Children."

⁴Groff, "Children's Attitudes Toward Reading and Their Critical Reading Abilities in Four Content-Type Materials."

Hendrickson¹ reported significant differences in attitude in favour of the girls. While t - ratios in Davis' study² revealed no statistically significant difference between girls and boys to distinguish between fact and opinion within any of the three grades, differences between the mean scores did favour the girls.

As Saadeh³ suggested, findings on the relationship of critical reading to the factor of sex should be accepted with reservations. The content of the reading material as well as the statistical methods employed to determine the correlations are factors that should be taken into consideration when discussing a possible variance due to sex.

IV. SUMMARY

Although investigation of the literature revealed only a few studies examining the nature of the critical thinking-critical reading construct, findings of these studies indicated that critical reading includes critical thinking and that it is an ability distinct from general reading ability. Consequently, the ability to read well literally does not ensure the ability to read well critically.

The few available studies on the effect of instruction on the ability to read critically appeared to dispell the myth that critical

¹Hendrickson, "Some Correlates of Critical Thinking in Fifth-Grade Children."

²Davis, "The Ability of Intermediate Grade Pupils to Distinguish Between Fact and Opinion."

³Lundsteen, "Teaching Abilities in Critical Listening in the Fifth and Sixth Grades," p. 60.

reading develops naturally as a result of intelligence and maturation. Research evidence pointed to a need for further studies into specific instruction in critical reading abilities, especially at the elementary school level.

Investigation into the relationship of factors of intelligence and sex to critical reading found inconclusive evidence. Further research is needed before any definite conclusions can be reached.

The present investigation was aimed at meeting some of these needs: the effect of specific instruction on the development of certain critical reading skills at the fifth-grade level, and the relationship of such factors as intelligence and sex to the ability to read critically.

CHAPTER III

DESIGN AND PROCEDURE

The study examined the effects of instruction in specific dimensions of critical reading on a group of fifth-grade pupils. This chapter presents the design of the study and a description of the instructional procedures used. Because the development of the instructional materials required the investigation of related literature, an account of the investigation is presented first. The pilot and experimental phases of the project are then described and the chapter is concluded with a description of how the data were analyzed.

I. RATIONALE FOR INSTRUCTIONAL MATERIALS

Preliminary to the development of materials for the experimental treatment, an investigation was conducted of the available literature concerning the abilities associated with critical reading. This research was essential in determining those abilities, among the many abilities associated with critical reading, which were relevant to the present study.

Judging by the number of articles in the literature on critical reading, it would appear that one of the important goals

of reading instruction is to teach children to read critically.¹ However, a major deterrent to greater accomplishments in teaching critical reading has been the lack of agreement among educators as to what specific skills are encompassed in the term "critical reading". From a survey of the literature published during the past decade, a list was formed of the areas commonly found to be concerned with critical reading abilities: semantics, authenticity of writing, logic in writing, and propaganda devices.² Hence, this is the list that was adopted for the present study.

In choosing appropriate materials and methods of presentation, investigation was also made of some of the recent literature on the psychology of learning. From Bruner were culled two essential

¹Martha L. King, Bernice D. Ellinger, and Willavene Wolf, Critical Reading (New York: J. B. Lippincott Company, 1967).

Mildred A. Dawson, comp., Developing Comprehension Including Critical Reading (Newark, Delaware: International Reading Association, 1968), pp. 163-259.

Russell G. Stauffer, comp., Dimensions of Critical Reading (Newark, Delaware: University of Delaware, 1964).

²Dawson, Developing Comprehension, pp. 163-259.

Robert H. Ennis, "A Concept of Critical Thinking," Harvard Educational Review, XXXII (Winter, 1962), pp. 81-111.

King, et al., Critical Reading, pp. 159-444.

Richard D. Altick, Preface to Critical Reading (Toronto: Holt, Rinehart and Winston, Inc., 1969).

Stauffer, Dimensions of Critical Reading.

Wolf, et al., "Critical Reading Ability of Elementary School Children."

concepts for successful learning: readiness and structure.¹ Bruner contends that the foundations of any subject could be taught to anybody at any age in some form and that children, on the whole, could learn quite readily if the presentation was made at their level of understanding. With regard to structure, Bruner argued that unless detail is structured, it is rapidly forgotten. Structure enables the student to generalize from the data he has collected and sorted, analyzed and synthesized.

Gagné supported Bruner in the necessity for structure in learning.² He maintained that unless the newly acquired skills are related both to previously learned skills and to future situations, the probability of retention of what is learned and the transfer of this learning to new situations is doubtful.

The second area of investigation was in the efficacy in learning. In her study of children's learning, Strang employed the concepts of motivation and feedback in the learning situation. She cautioned that unless learning has functional significance for the individual, efficient learning will not take place.³ Dale, in supporting Strang, emphasized that the key to learning is in the presentation of one main

¹Jerome S. Bruner, The Process of Education (Cambridge, Massachusetts: Harvard University Press, 1965).

²Robert M. Gagné, The Conditions of Learning (Toronto: Holt, Rinehart and Winston, Inc., 1970), pp. 318-319.

³Ruth Strang, An Introduction to Child Study (New York: The Macmillan Company, 1959), pp. 416-435.

point or generalization per lesson.¹ Too many ideas presented at one time may be too difficult to absorb because the learner may not have sufficient time to reflect on what has been presented. Thus, the main idea with two or three sub-points should generate sufficient motivation for the learner to become involved in the lesson, whether it be in reflection or in group discussion.

In summary, it would appear that successful learning takes place if the learner is ready and the material is structured from the simple to the complex and from the concrete to the abstract. Further, the learner must be provided with ample opportunities to collect sufficient data from which he can reason deductively and inductively. Finally, the application of the learner's newly acquired skills must be meaningful to him, that is, he must be able to apply the skills immediately.

A third area to be investigated was that of the child's cognitive development. From the work of Gesell, Ilg, and Ames on the preadolescent,² it was noted that the spans of attention for this age tend to be short, but that the child's zeal for learning more than compensates for his short interest span. The preadolescent wants to be kept interested and motivated. The writers also observed that there is a definite advance in the critical and abstract thinking abilities consistent with age.

¹Edgar Dale, "Why Don't We Listen?" The Newsletter of the Bureau of Educational Research, XXVIII (March, 1963), pp. 1-4.

²Arnold Gesell, Frances Ilg, and Louise Ames, Youth, the Years from Ten to Sixteen (New York: Harper and Row, Publishers, 1956), pp. 60-62.

Strang noted that this age group generally has an avid interest in facts.¹ The children are becoming more aware of, and concerned about other people's ideas and beliefs. The intelligence of the pre-adolescent is shown by his ability to detect absurdities, by his sensible answers to questions, by his power to make generalizations, and by his use of language to delve more deeply into community life.

From these investigations into the areas of psychology of learning, efficacy in learning, and cognitive development, the lessons for the experimental treatment incorporated the following principles: (1) children around the age of ten (preadolescent) are capable of critical reading, (2) the instructional procedures must take into account the degree of readiness of the child, and (3) the instructional procedures and materials must reflect a structure of essential concepts.

II. PILOT STUDY

The purpose of the pilot study was two-fold: to refine a set of lessons aimed at developing certain critical reading skills at the fifth-grade level, and to determine the reliability of the split-half sections of The Critical Reading Test, Intermediate Level.

Instructional Procedures. Each of the three lessons studied one of the following topics: semantics, authenticity in writing, and logic in writing.² The instructional plan for each lesson included an

¹Strang, An Introduction to Child Study, pp. 394-396.

²See Appendix A for a list of the sources for the lessons.

introduction with a clearly-stated purpose of the lesson, the development of the topic by examples and questions aimed at developing the criteria for evaluation, and a short individual assignment aimed at application and reinforcement.

Test. The Critical Reading Test, Intermediate Level was developed and refined by Bernice Ellinger, Ohio State University, 1967.¹ It is a power test, assessing the following critical reading abilities:

1. Recognition and judgment of vague and imprecise words and multiple meanings of words.
2. Judgment of an author's viewpoint and competence.
3. Identification, comparison, and evaluation of various sources in order to verify information.
4. Analysis and judgment of arguments.
5. Analysis and judgment of propaganda devices.

Fall and spring norms were established for the test. In the fall the test was administered to a sample of 3,017 children in ten elementary schools in a four-state area. Following the item analysis, a final form was constructed on the basis of these criteria: the discrimination power and the difficulty of the test items. The reliability coefficients ranged from .72 to .86. Although these coefficients were not exceptionally high, they were considered adequate

¹Martha L. King, "Evaluating Critical Reading," Developing Comprehension Including Critical Reading, comp. by Mildred A. Dawson (Newark, Delaware: International Reading Association, 1968), pp. 206-213.

Wolf, et al., "Critical Reading Ability of Elementary School Children," pp. 26-29.

for the purpose of assessing the growth of pupils in specific critical reading skills.

In the spring the revised form of the test was administered to a second sample for norming purposes. Forty-six school systems from eight states in four geographical regions provided data from 3,537 students. The reliability coefficients at the grade five level ranged from .82 to .84.

Before the test could be used in the present study, some modifications were necessary. The wording was changed in three of the items to conform to the Canadian milieu, and the test was divided into two sections; each question of one section was matched with another question of equal difficulty in the other section. The test was then administered to two classes of grade six students to determine the reliability of the two sections of the test. A resulting correlation coefficient of + .85 assured the investigator that the internal consistency of the split halves was fairly reliable.¹

Sample. Although The Critical Reading Test, Intermediate Level was developed to test critical reading abilities at the fourth-, fifth-, and sixth-grade levels, its estimated readability--5th -6th grade--justified the investigator's choice of fifth-grade subjects for this study. The sample for the pilot study consisted of two classrooms totalling fifty-two children selected at random from one large urban area in Metropolitan Winnipeg. To control the teacher variable and to minimize the Hawthorne effect, the investigator did all the testing

¹See Appendix B for sample copies of the two sections of The Critical Reading Test, Intermediate Level.

and instructing in both the experimental and the control group.¹

Teaching Program. The investigator met with each teacher and her principal to discuss the purpose and design of the study. It was agreed to conduct the experiment over a period of five consecutive days: two days for testing and three days for teaching. The investigator worked with one class of students from 9:00 to 9:45 A.M. and with the second class of students from 1:30 to 2:15 P.M.²

Results. The consensus of the students and of the teachers was that the lessons should be extended over a longer period and that the lessons were interesting but too few in number.

An analysis of the data showed a difference of four points in median scores between the pre- and post-tests. However, since both the students and the instructor felt pressed for time, the decision was made to increase the number of lessons from three to five in the experimental study. Thus, one lesson was developed for each critical reading ability in the following sequence:

1. Recognition and judgment of vague and imprecise words and multiple meanings of words.
2. Judgment of an author's viewpoint and competence.
3. Identification, comparison, and evaluation of various sources in order to verify information.
4. Analysis and judgment of arguments.
5. Analysis and judgment of propaganda devices.

¹Walter R. Borg, Educational Research, An Introduction (New York: David McKay, Inc., 1963), pp. 331, 338-339.

²See Appendix C for schedule.

Summary. The purposes of the pilot study were (1) to refine a set of lessons aimed at developing certain critical reading abilities and (2) to determine the reliability of the split-half sections of The Critical Reading Test, Intermediate Level. Three lessons in specific critical reading skills were taught to two grade five classes. Although a difference of four points in median scores between the pre- and post-tests was realized in both classes, the decision was made to increase the number of lessons in critical reading from three to five. This revision enabled the instructor to devote one lesson to each critical reading skill.

III. EXPERIMENTAL STUDY

Instructional Procedures. A series of five lessons was written verbatim by the investigator.¹ The lessons were approximately forty-five minutes in length. Each lesson was accompanied by an outline serving as an overview and providing a list of required materials. The introduction gave the purpose of the lesson, and the subsequent lessons contained a brief review of the concepts presented in previous lessons. The development of each lesson included establishing the criteria for evaluating through discussions, illustrations, and questions, and providing short practice sessions to enable each student to use the criteria in evaluating specific printed materials. For application and reinforcement the pupils were given a short assignment.

¹See Appendix D for the lessons in critical reading.

The five lessons in critical reading abilities were given on five consecutive days. No extra time was allowed for practice. The five lessons in the regular reading program were also given on five consecutive days. These lessons were taught by the investigator according to the lesson plans provided by the classroom teacher.

Sample. Six classes of fifth-grade students were randomly chosen from one metropolitan area of Winnipeg. This population is assumed to be representative of the suburban school systems in Greater Winnipeg in social stratification, mental ability, and reading ability. The six classes were assigned to experimental and control groups; four classes comprised the experimental group and two classes constituted the control group. A total of 168 pupils were involved: 106 pupils were in the experimental program while 62 pupils were in the control group. This number represents all the students who were in the treatment throughout the study.

Schedule for Instruction. The lessons were presented within seven school days to all classes involved in the study. Three of the experimental classes and one control class were instructed in the morning. The remaining two classes were taught in the afternoon.¹ After the pre-test, the control group continued to follow their regular reading program. The experimental group received the lessons described earlier. The design of the experiment was as follows:

¹See Appendix E for the schedule.

| | Pre-test | Treatment ¹ | Post-test |
|-------------------------|----------|------------------------|-----------|
| Experimental Classes | x | x | x |
| Control Classes | x | x | x |

IV. ANALYSIS OF THE DATA

Primarily, the investigation was organized to reveal growth in those critical reading abilities developed during the five lessons. Analysis of variance procedures were employed to determine whether the variable of exposure to the lessons was associated with score changes for the two groups. In order to investigate the influence, if any, of the factors of sex and intelligence on critical reading performance, a three 2x2x3 factorial design was employed where the factors were, respectively: treatment (experimental, control), sex (male, female), and intelligence (low, middle, high). Added to this procedure was the Scheffé test of multiple comparisons. Its use is recommended when it is desirable to make all possible comparisons between pairs of means.² The factors of sex and intelligence were selected for investigation in this study because they had been reported by other researchers to be related to critical reading.³

¹Five lessons in specific critical reading skills for the experimental classes. Five lessons in the regular reading program for the control classes.

²John T. Roscoe, Fundamental Research Statistics, p. 239.

³See Chapter II, pp. 30-34.

The hypotheses were the following:

1. There is a significant difference in the mean scores in critical reading between the pre- and post-tests for the experimental group as a result of five lessons in specific critical reading skills.
2. There is a significant difference in the mean scores in critical reading between the pre- and post-tests for the control group as a result of five lessons in the regular reading program.
3. There is a relationship between the pre- and post-test mean scores in critical reading and sex for both the experimental and the control group.
4. There is a relationship between the pre- and post-test mean scores in critical reading and intelligence for both the experimental and the control group.

The data used to test for the main hypothesis and the relationship between mean scores in critical reading and factors of sex and intelligence are presented in statistical form in Chapter IV.

CHAPTER IV

ANALYSIS OF THE DATA

This chapter contains the presentation and discussion of the data gathered for the research study concerning the improvement, if any, in the ability of fifth-grade students to read critically following a series of lessons in specific critical reading skills. The basic design is given first, followed by procedures and analyses of the data.

The major purpose of this study was to investigate the effect of instruction in specific critical reading abilities through a series of lessons. To test the main hypothesis, a one-way analysis of variance between the experimental and control group was employed. Accordingly, between-group comparisons were made by noting differences between the experimental and control group scores.

To answer the question as to whether a relationship exists between critical reading ability and the variables of sex and intelligence, a three factorial 2x2x3 design was employed. The factors were, respectively: treatment (experimental, control), sex (male, female), and intelligence (low, middle, high). Added to this procedure was the Scheffé test for multiple comparisons.

Intelligence scores were derived from the Quick-Scoring Mental Ability Test, Alpha Short Form, which had been administered by the

school division to each student in grade two. Subjects were divided into tertiles--low, middle, high--on the following basis: the low level ranged from the lowest IQ to 99; the middle level range was from an IQ of 100 to 112; and the high level ranged from an IQ of 113 to the highest IQ.

Pre- and post-test scores on The Critical Reading Test, Intermediate Level were available for 168 pupils. Of these, 62 students formed the control group, while 106 pupils constituted the experimental group. The randomly assigned control and experimental groups also met Bartlett's test for homogeneity of variance.¹ The obtained F-value of 1.72 on the pre-test was non-significant. Hence, the assumption of homogeneity was accepted. It was also assumed that the population data from which the sample was drawn is normally distributed.² Since the experimental and control groups were assessed to be of approximate equality, it follows that any differences found at the close of the experiment could in part, be attributed to the experimental factor of the lessons.

I. EXAMINATION OF TREATMENT MEANS

In examining the effects of the treatment, the mean differences are first presented. Table 4:01 summarizes the data of mean differences on the pre- and post-tests of critical reading by treatment. This table

¹Helen M. Walker and Joseph Lev, Statistical Inference (New York: Holt, Rinehart and Winston, Inc., 1953), pp. 193-194.

²See Chapter III, p. 45.

indicates differences in mean scores in critical reading for both treatments, but the greater variation occurs in the experimental group (Treatment₁); on a test of 19 items there is a difference of 3.06 points in favour of this group. Two further observations to be noted are: the difference between the IQ mean scores is .5 in favour of the experimental group, and the pre-test mean score of the control group exceeded the pre-test mean score of the experimental group by .49.

TABLE 4:01

MEAN DIFFERENCES ON PRE- AND POST-TESTS OF CRITICAL
READING BY TREATMENT FOR GRADE FIVE PUPILS

| Source | Experimental (Treatment ₁) | | | | | Control (Treatment ₂) | | | | |
|-----------|--|------|-----|--------------|-------|-----------------------------------|------|----|--------------|-------|
| | \bar{x} | S.D. | N. | IQ \bar{x} | S.D. | \bar{x} | S.D. | N. | IQ \bar{x} | S.D. |
| Pre-Test | 6.58 | 2.43 | 106 | 106.3 | 13.34 | 7.07 | 2.76 | 62 | 105.8 | 12.37 |
| Post-Test | 10.33 | 3.47 | 106 | | | 7.76 | 3.00 | 62 | | |
| Gain | 3.75 | | | | | .69 | | | | |

Table 4:02 presents the mean differences on the pre- and post-tests of critical reading among sub-groups. The table reveals that the girls surpassed the boys in gains made regardless of treatment, with the experimental group showing again the greater gain of the two. The other observation made is in the relationship of the four IQ means: the boys have identical IQ means, while the girls in the experimental group have the higher IQ mean.

TABLE 4:02
 MEAN DIFFERENCES AMONG SUB-GROUPS ON PRE- AND POST-TESTS
 OF CRITICAL READING FOR GRADE FIVE PUPILS

| Source | Experimental (Treatment ₁) | | | | | Control (Treatment ₂) | | | | |
|---------------|--|------|----|--------------|-------|-----------------------------------|------|----|--------------|-------|
| | \bar{x} | S.D. | N. | IQ \bar{x} | S.D. | \bar{x} | S.D. | N. | IQ \bar{x} | S.D. |
| <u>Male</u> | | | | | | | | | | |
| Pre-Test | 6.85 | 2.47 | 47 | 105 | 13.86 | 6.73 | 2.90 | 24 | 105 | 11.7 |
| Post-Test | 10.28 | 3.39 | 47 | | | 7.36 | 2.93 | 24 | | |
| Gain | 3.43 | | | | | .63 | | | | |
| <u>Female</u> | | | | | | | | | | |
| Pre-Test | 6.31 | 2.41 | 59 | 107.4 | 12.8 | 7.42 | 2.65 | 38 | 106.3 | 12.29 |
| Post-Test | 10.38 | 3.53 | 59 | | | 8.17 | 3.04 | 38 | | |
| Gain | 4.07 | | | | | .75 | | | | |

Table 4:03 shows the mean differences on the pre- and post-tests of critical reading across ability levels. A gradual increase in mean scores across levels is noted for both treatments, with one exception: the middle level gain in the control group is much larger than the high level gain of that same group. The differential at each level is much greater for the experimental group than for the control group.

TABLE 4:03
 MEAN DIFFERENCES ON PRE- AND POST-TESTS OF CRITICAL READING
 ACROSS ABILITY LEVELS FOR GRADE FIVE PUPILS

| Source | A B I L I T Y L E V E L S | | | | | | | | |
|---|---------------------------|------|----|-------------|------|----|-----------|------|----|
| | L o w | | | M i d d l e | | | H i g h | | |
| | \bar{x} | S.D. | N. | \bar{x} | S.D. | N. | \bar{x} | S.D. | N. |
| <u>Experimental (Treatment₁)</u> | | | | | | | | | |
| Pre-Test | 5.15 | 1.97 | 35 | 6.65 | 2.22 | 36 | 7.94 | 2.41 | 35 |
| Post-Test | 8.21 | 2.58 | 35 | 10.57 | 3.15 | 36 | 12.22 | 3.42 | 35 |
| Gain | 3.06 | | | 3.92 | | | 4.28 | | |
| <u>Control (Treatment₂)</u> | | | | | | | | | |
| Pre-Test | 6.13 | 2.87 | 22 | 6.59 | 2.34 | 22 | 8.50 | 2.62 | 18 |
| Post-Test | 6.42 | 2.51 | 22 | 7.88 | 2.40 | 22 | 9.00 | 3.35 | 18 |
| Gain | .29 | | | 1.29 | | | .50 | | |

Table 4:04 presents the mean differences on the pre- and post-tests of critical reading across ability levels and among sub-groups. Across the sample there is a fairly uniform increase in mean scores from level to level in ascending order. The differential among sub-samples is slight for the control group but much more pronounced for the experimental group. There are some exceptions: Female-Low and Male-High in Treatment₂ dropped markedly in the post-test, while Male-High gain in Treatment₁ is not in proportion to gains made by Male-Low and Male-Middle. Another observation is that in Treatment₁ the Male-Middle surpass Female-Low and Female-Middle groups in critical reading growth.

TABLE 4:04
MEAN DIFFERENCES ON PRE- AND POST-TESTS OF CRITICAL READING
ACROSS ABILITY LEVELS AMONG SUB-GROUPS FOR
GRADE FIVE PUPILS

| Source | A B I L I T Y L E V E L S | | | | | | | | |
|--|-----------------------------|------|----|-------------|------|----|-----------|------|----|
| | L o w | | | M i d d l e | | | H i g h | | |
| | \bar{x} | S.D. | N. | \bar{x} | S.D. | N. | \bar{x} | S.D. | N. |
| Experimental (Treatment ₁) | | | | | | | | | |
| Male | | | | | | | | | |
| Pre-Test | 5.06 | 1.92 | 18 | 6.82 | 2.43 | 17 | 8.67 | 1.61 | 12 |
| Post-Test | 8.00 | 2.40 | 18 | 10.76 | 3.47 | 17 | 12.08 | 3.09 | 12 |
| Gain | 2.94 | | | 3.94 | | | 3.41 | | |
| Female | | | | | | | | | |
| Pre-Test | 5.24 | 2.08 | 17 | 6.47 | 2.06 | 19 | 7.22 | 2.63 | 23 |
| Post-Test | 8.41 | 2.81 | 17 | 10.37 | 2.91 | 19 | 12.35 | 3.65 | 23 |
| Gain | 3.17 | | | 3.90 | | | 5.13 | | |
| Control (Treatment ₂) | | | | | | | | | |
| Male | | | | | | | | | |
| Pre-Test | 6.10 | 3.00 | 10 | 5.75 | 1.91 | 8 | 8.33 | 3.50 | 6 |
| Post-Test | 7.50 | 2.80 | 10 | 7.25 | 2.76 | 8 | 7.33 | 3.83 | 6 |
| Gain | 1.40 | | | 1.50 | | | -1.00 | | |
| Female | | | | | | | | | |
| Pre-Test | 6.17 | 2.89 | 12 | 7.43 | 2.41 | 14 | 8.67 | 2.23 | 12 |
| Post-Test | 5.33 | 1.83 | 12 | 8.50 | 2.14 | 14 | 10.67 | 2.57 | 12 |
| Gain | -.84 | | | 1.07 | | | 2.00 | | |

II. ANALYSIS OF TREATMENT MEANS

The statistical design of this study was aimed at testing the specific hypothesis noted in Chapter III. After the critical reading performance of both groups on the pre- and post-tests is examined, each hypothesis is stated and tested.

A comparison of performance of the control and experimental groups on The Critical Reading Test, Intermediate Level is given in Table 4:05. The results on the pre-test support the assumption of homogeneity of variance of both groups: the F-value is non-significant. On the other hand, the F-value on the post-test is far beyond the .01 level of significance.

TABLE 4:05

ANALYSIS OF VARIANCE OF PERFORMANCE ON PRE- AND POST-TESTS
OF CRITICAL READING FOR GRADE FIVE PUPILS

| Source of Variation | P R E - T E S T | | | | P O S T - T E S T | | | |
|----------------------------|-----------------|----------------|-------------|---------|-------------------|----------------|-------------|---------|
| | DF | Sum of Squares | Mean Square | F-Ratio | DF | Sum of Squares | Mean Square | F-Ratio |
| Treatment | 1 | 9.6065 | 9.6065 | 1.72 | 1 | 257.4636 | 257.4636 | 30.11** |
| Within Cells | 166 | 873.2852 | 5.598 | | 166 | 1333.8975 | 8.5506 | |
| Error due to Approximation | | -16.6895 | | | | 24.3371 | | |
| Total | 167 | 1096.2859 | | | 167 | 2049.1428 | | |

SS Adjusted For Unequal Subclass Numbers By The Use of Harmonic Means of N (SNEDECOR).

** Significance at .01 Level. [For $\alpha = .01$, $F(1,166) = 6.81$. Calculated $F = 30.11$].

Hypothesis Related to Treatment₁ (5 lessons in specific critical reading skills).

Hypothesis 1.

There is a significant difference in the mean scores in critical reading between the pre- and post-tests for the experimental group as a result of specific instruction in certain critical reading skills.

Table 4:06 summarizes the analysis relevant to the results of Treatment₁. The significant F-value of 87.30 at .01 level justifies the acceptance of the hypothesis.

TABLE 4:06

ANALYSIS OF VARIANCE OF PERFORMANCE ON PRE- AND POST-TESTS
OF CRITICAL READING FOR THE EXPERIMENTAL GROUP

| Source of Variation | DF | Sum of Squares | Mean Square | F-Ratio |
|---------------------|-----|----------------|-------------|---------|
| Between Groups | 1 | 781.37 | 781.37 | 87.30** |
| Within Groups | 210 | 1880.27 | 8.95 | |
| Total | 211 | | | |

** Significance at .01 level. [For $\alpha = .01$ $F(1,210) = 6.76$. Calculated $F = 87.30$].

Hypothesis Related to Treatment₂ (5 lessons in regular reading program).

Hypothesis 2.

There is a significant difference in the mean scores in critical reading between the pre- and post-tests for the control group as a result of five lessons in the regular reading program.

The analysis of the means attained by the control group is found in Table 4:07. The results show that the F-value is not statistically significant. The low F-value is consistent with the minimal gain of .69 points achieved by the control group. Therefore, the hypothesis is not accepted.

TABLE 4:07

ANALYSIS OF VARIANCE OF PERFORMANCE ON PRE- AND POST-TESTS
OF CRITICAL READING FOR THE CONTROL GROUP

| Source of Variation | DF | Sum of Squares | Mean Square | F-Ratio |
|---------------------|-----|----------------|-------------|---------|
| Between Groups | 1 | 19.36 | 19.36 | 2.33 |
| Within Groups | 122 | 1013.57 | 8.31 | |
| Total | 123 | | | |

Table 4:08 presents the F-value from the analysis of variance for the mean scores on The Critical Reading Test, Intermediate Level for the total sample. A significant difference at the .01 level resulted from the performance difference of the experimental and control groups on the post-test, but a non-significant F-value is noted for the treatment variable on the pre-test. Further inspection of the data revealed that the intelligence variable was significant beyond the .01 level on both tests reflecting considerable difference among the mean scores of the ability level sub-groups (Tables 4:03 and 4:04). Only one statistically significant interaction occurred in the analysis: a three-way interaction of Treatment by Sex by Intelligence.

TABLE 4:08

F-RATIOS FROM ANALYSIS OF VARIANCE OF PERFORMANCE ON CRITICAL
READING TEST CLASSIFIED ACCORDING TO TREATMENT, SEX,
AND INTELLIGENCE FOR GRADE FIVE PUPILS

| Source of Variation | CRITICAL READING TEST | |
|---------------------|-----------------------|-----------|
| | Pre-Test | Post-Test |
| Reading | 1.72 | 30.11** |
| Sex | 0.04 | 0.97 |
| Intelligence | 16.97** | 17.91** |
| Reading x Sex | 2.56 | 0.56 |
| Reading x IQ | 0.64 | 0.79 |
| Sex x IQ | 0.89 | 2.80 |
| Reading x Sex x IQ | 0.75 | 3.08* |

** Significant at .01 level. [For $\alpha = .01$ $F(1,156) = 6.81$.
Calculated $F = 30.11, 17.91, \text{ and } 16.97$].

* Significant at .05 level. [For $\alpha = .05$ $F(2,156) = 3.06$.
Calculated $F = 3.08$].

The presence of significant interactions among the independent variables and the dependent variable, necessitates the joint presentation of the hypotheses pertinent to the sex and intelligence variables.

Hypotheses Related to Treatment₁ (5 lessons in specific critical reading skills).

Hypothesis 3.

There is a relationship between the pre- and post-test scores in critical reading and sex for both the experimental and the control group.

Hypothesis 4.

There is a relationship between the pre- and post-test scores in critical reading and intelligence for both the

experimental and the control group.

That significant differences exist among a number of the variables is clear from the analysis of variance summarized in Table 4:08. This information concerns the nature of this effect. Tables 4:09 to 4:12 employ the Scheffé test which indicates the level of significance between pairs of means for the intelligence variable and for the interaction of Treatment by Sex by Intelligence.

Table 4:09 examines comparisons for the intelligence variable. The two tests are similar in one respect: High Ability versus Low Ability realized an F-value beyond the .01 level of significance. On the pre-test High Ability versus Middle Ability, an F-value of .01 level of confidence was achieved; on the post-test the level of confidence was .05. The post-test has an additional comparison significant at the .01 level: Middle Ability versus Low Ability. These findings are consistent with the results obtained in Table 4:03. This may be interpreted to indicate that intelligence is a statistically significant variable in the present study.

TABLE 4:09
SCHEFFÉ TEST OF MULTIPLE COMPARISONS FOR
INTELLIGENCE VARIABLE

| Source of Comparisons | F-Ratio | Required | |
|--------------------------------|---------|----------|--------|
| | | .05 | .01 |
| Pre-Test | | | |
| High Ability vs Low Ability | 16.33** | 3.06* | 4.75** |
| High Ability vs Middle Ability | 6.33** | | |
| Post-Test | | | |
| High Ability vs Low Ability | 17.49** | 3.06* | 4.75** |
| High Ability vs Middle Ability | 3.10* | | |
| Middle Ability vs Low Ability | 6.14** | | |

** Significant at .01 level.

* Significant at .05 level.

Table 4:10 presents comparisons of the interaction of Treatment by Sex by Intelligence. The significant differences at the .01 and .05 levels favour both male and female subjects of superior intelligence in the experimental group. The interaction is caused by the two variables: treatment and intelligence.

TABLE 4:10
SCHEFFÉ TEST OF MULTIPLE COMPARISONS OF INTERACTION
OF TREATMENT BY SEX BY INTELLIGENCE

| Source of Comparisons | F-Ratio | Required | |
|---------------------------------------|---------|----------|--------|
| | | .05 | .01 |
| Post-Test | | 1.85* | 2.37** |
| Exp.-Female-High vs Con.-Female-Low | 4.10** | | |
| Exp.-Female-Middle vs Con.-Female-Low | 1.99* | | |
| Exp.-Male-High vs Con.-Female-Low | 2.91** | | |
| Exp.-Male-Middle vs Con.-Female-Low | 2.21* | | |

** Significant at .01 level.

* Significant at .05 level.

It must be noted that the Scheffé procedure tends to yield non-significant findings when the test of the over-all hypothesis provided by the analysis of variance is significant.¹ However, the summaries in Tables 4:11 and 4:12 tend to support the over-all hypothesis of the present study. These findings are included in this analysis because they aid in minimizing the effect of the sex variable on critical reading performance and in confirming the influence of the intelligence variable on performance in critical reading.

In Table 4:11 differences ascribed to the sex variable reach the

¹John T. Roscoe, Fundamental Research Statistics, p. 239.

.01 level of confidence favouring the experimental group, but neither sex has priority. It would appear that the treatment variable determines the significance level.

TABLE 4:11

SCHEFFE TEST OF MULTIPLE COMPARISONS OF
INTERACTION OF TREATMENT BY SEX

| Source of Comparisons | F-Ratio | Required | |
|----------------------------|---------|----------|--------|
| | | .05 | .01 |
| Post-Test | | 2.67* | 3.91** |
| Exp.-Female vs Con.-Male | 6.07** | | |
| Exp.-Female vs Con.-Female | 4.40** | | |
| Exp.-Male vs Con.-Male | 5.28** | | |
| Exp.-Male vs Con.-Female | 3.98** | | |

** Significant at .01 level.

Table 4:12 examines the comparisons of the interaction of Treatment by Intelligence. A definite trend is evident favouring the middle and high ability levels of the experimental group. These findings aid in confirming the assumption made (Table 4:09) regarding the significance of the intelligence variable in this study.

TABLE 4:12

SCHEFFE TEST OF MULTIPLE COMPARISONS OF INTERACTION
OF TREATMENT BY INTELLIGENCE

| Source of Comparisons | F-Ratio | Required | |
|----------------------------|---------|----------|--------|
| | | .05 | .01 |
| Post-Test | | 2.27* | 3.14** |
| Exp.-High vs Con.-High | 2.88* | | |
| Exp.-High vs Con.-Middle | 5.95** | | |
| Exp.-High vs Con.-Low | 10.63** | | |
| Exp.-Middle vs Con.-Middle | 2.31* | | |
| Exp.-Middle vs Con.-Low | 5.50** | | |
| Exp.-High vs Exp.-Low | 6.62** | | |
| Exp.-Middle vs Exp.-Low | 2.31* | | |

** Significant at .01 level.

* Significant at .05 level.

Thus, the analyses from Tables 4:09 to 4:12 indicate that IQ differences and treatment are the two variables responsible for the statistical significance of the mean scores in the present study. Higher ability students exposed to Treatment₁ (five lessons in critical reading skills) tended to perform better on the criterion measure than students of lower ability in Treatment₁ and students in Treatment₂ (five lessons in the regular reading program). In the light of the evidence from the analysis of the data presented, Hypothesis 3 is untenable, whereas Hypothesis 4 is tenable.

III. SUMMARY OF FINDINGS OF THE STUDY

This study was designed to investigate the effect of instruction in specific critical reading skills on the performance of a randomly assigned sample of fifth-grade students; tentative answers to specific issues are presented.

On the pre-test of The Critical Reading Test, Intermediate Level the control and experimental groups were found to be fairly equal. On measures of ability, only a minimal difference was noted between the two treatment groups. Further, a non-significant F-value on the pre-test supported the assumption of homogeneity of variance of the sample. On the post-test, a significant F-value was found for the experimental group and a non-significant F-value was noted for the control group.

The data also indicate that sex does not make an appreciable difference in critical reading performance; nowhere is the interaction of the sex variable statistically significant.

Intelligence, on the other hand, did have an influence in this study. The variable under consideration was significantly related to test performance with a general increase in the mean scores from level to level on both tests favouring the experimental group.

CHAPTER V

SUMMARY AND CONCLUSIONS

The main purpose of the study was to determine the effect of specific instruction on the development of certain critical reading skills at the grade five level. Thus, the analysis of data was organized primarily to reveal any significant change in these critical reading abilities. To a lesser degree, the study was concerned with describing the extent of relationship between certain critical reading skills and the factors of sex and intelligence. This chapter presents the findings and conclusions followed by the limitations. The chapter concludes with implications for the classroom and suggestions for further research.

Six classes from one urban area in Metropolitan Winnipeg were randomly assigned to experimental and control groups. Appropriate data were collected in order to describe the sample. Both groups were pre-tested on the first section of The Critical Reading Test, Intermediate Level. Then the four experimental classes were taught five lessons in specific critical reading skills, while the two control classes received five lessons in the regular reading program. All classes were instructed by the investigator. After the lessons, both groups were post-tested on the second section of The Critical Reading Test, Intermediate Level. The analysis of variance and the Scheffé procedures were employed in the statistical analysis of the data.

I. SUMMARY OF FINDINGS

The findings in the study are:

1. Mean score differences in critical reading favoured the experimental group by more than a chance level of significance. The difference in means between the initial and final scores on The Critical Reading Test, Intermediate Level for the experimental group was 3.75 out of a possible score of 19; the difference in means between the initial and final scores for the control group on the same test was .69.

2. Children of both sexes benefited equally from instruction in critical reading. The analysis revealed no statistically significant difference between the sexes.

3. The results indicated that intelligence was significantly related to test performance. In general, children of higher intelligence levels performed better in critical reading than middle IQ children who in turn performed better than low IQ children.

II. CONCLUSIONS

Certain conclusions may be drawn from the analysis of the data:

1. The findings of this investigation indicate that the lessons in specific critical reading skills were effective in promoting growth in certain critical reading abilities. The study provides indirect evidence that there does exist a group of abilities in critical reading which can be taught and tested over a short period.

The analysis of variance for final performance on the test

indicated an F-value of 30.11 which is statistically significant beyond the .01 level in favour of the experimental group. Further, an analysis of variance on total performance for the experimental group realized an F-value of 87.30 which exceeds the .01 level of significance, whereas the F-value of 2.33 for the control group does not approach the .05 level of confidence. This high level of confidence in favour of the experimental group may be interpreted to mean that the amount of growth in certain critical reading skills achieved by the students in Treatment₁ exceeded that of the pupils in Treatment₂. On the other hand, the low F-value for the control group may be interpreted to indicate that students in Treatment₂ did not improve significantly in critical reading skills as a result of five lessons in the regular reading program. Moreover, it would appear that the Hawthorne effect had no bearing on the total performance of the control group in this study.

2. The non-significant interaction of Treatment by Sex may be interpreted to mean that in this study the boys and girls in the experimental classes benefited equally from the critical reading lessons. The data from the Scheffé procedure confirm this assumption. This finding corroborates the findings of Saadeh, Maw, and Wolf, et al.¹ on the relationship of critical reading performance and the factor of sex.

3. Data from the analysis of variance procedures indicate that the intelligence variable was found to be positively related to critical

¹See Chapter II, p. 33.

reading performance; a .01 level of confidence was realized on both tests. This relationship reveals mean scores of the high intelligence group being higher than the middle group which are in turn higher than the low IQ group. These findings are consistent with the results from the Scheffé test of multiple comparisons. The fact that no interaction of Treatment by Intelligence occurred in this study indicates that treatment effects were the same at each level of intelligence, that children of all intelligence levels in the experimental group did better than their counterparts in the control group. Thus, in the present study performance in critical reading was commensurate with ability. These findings confirm results obtained in related research reported by Nardelli, Maney, Sochor, and Wolf, et al.¹ In effect, children of all intelligence levels in the regular classroom who receive instruction can learn to read critically, but the higher the IQ of the child being taught critical reading, the more successful is his performance.

III. LIMITATIONS OF THE STUDY

Before implications can be drawn for the classroom, certain limitations of this study need to be noted:

1. Critical reading abilities were investigated only at the grade five level, and only those critical reading skills that are defined in this study were assessed. Further, comparisons were limited to the growth in certain critical reading abilities as a result of specific instruction.

¹See Chapter II, pp. 32-33.

2. Total teaching time devoted to each group was only seven days. According to comments from the students and their teachers, the concepts presented in the lessons were relatively new. Consequently, the brief time devoted to each concept may have affected the scores on the final test.

3. The sample was limited to one urban area. Only six classes were randomly assigned to the study: four classes to the experimental group and two classes to the control group. It was assumed that this sample was appropriate from which to generalize; however, factors such as attitudes, general reading ability, and social class were not examined. Hence, the sample must be considered a limitation.

4. Since some of the experimental and control classes were located in the same school, there was a possibility of "leaking" of instruction from the experimental to the control groups.

5. The Critical Reading Test, Intermediate Level was divided into two parts of equal difficulty and served as the pre- and post-tests, respectively. It is acknowledged that due to the short interval of seven days between the pre- and post-testing periods, the findings are less free from the "practice effect" than they would be had the interval been longer. This could account in part for some of the gains made by the control group.

6. In view of the fact that the reliability of a test is partly determined by the number of items on the test, the length of each section of The Critical Reading Test, Intermediate Level may have affected the scores.

7. Since the investigator was also the instructor in both reading programs, the results may have been affected by unconscious bias.

IV. IMPLICATIONS FOR THE CLASSROOM

In the light of the results of this study and its limitations, the following implications are offered:

1. Children at the grade five level can be taught certain critical reading skills. They can learn to be more sensitive to subtle meanings of words as they are used in persuasive communication, to recognize statements of fact and of opinion, to detect generalizations, to evaluate the competence and skill of a writer and his source of information, and to detect fallacious reasoning in selected advertisements and commercials. Therefore, a curriculum must incorporate the teaching of such critical reading skills.

2. The present study confirms research findings that children of all intelligence levels in the regular classroom can benefit from instruction in critical reading, provided that the reading level of the materials is adjusted accordingly. Therefore, teachers must develop and make provision for its application a flexible program that incorporates definite planning and direct teaching strategy as well as incidental teaching.

3. Researchers appear to be divided on the question of the relationship of critical reading and the factor of sex. This study indicates that boys and girls can profit equally by instruction in critical reading skills.

4. In view of the impact of persuasive communication on the reader through mass media, teachers should provide students with more opportunities for critical evaluation. This could take the form of a

developmental program initiated in the early primary grades, with the focus on reading specific articles followed by total class or small group participation in problem-solving situations through oral discussions, role playing, and debating.

V. SUGGESTIONS FOR FURTHER RESEARCH

Due to the limitations of the present study, the following suggestions are submitted for further research:

1. To help the child develop a deeper and more insightful view of specific critical reading processes, a study is recommended similar to the present one with a time period of a full school year.
2. A replication of the current study using samples from different populations is suggested to facilitate possible implementation of a critical reading program in the reading curriculum in such grades as three, four, and six.
3. A replication of the present study is desirable using a design that employs the chi-square test to determine the differences in mean scores between the two treatment groups as well as the number of children who benefited more from the experimental treatment.
4. Since the ultimate aim of a reading program is the development of a critical reader regardless of the content being read, studies are recommended which examine long term effects of instruction in critical reading skills in the various content areas.
5. Finally, to examine and to evaluate more thoroughly the various critical reading abilities, tests must be developed which will measure, for example, a student's ability to select the best of several logical suggestions for the solution of a problem.

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APPENDIX A

Sources For Instructional Materials

SOURCES FOR INSTRUCTIONAL MATERIALS

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APPENDIX B

Sample Copies Of Critical Reading

Test And Answer Sheet

THE CRITICAL READING TEST, INTERMEDIATE LEVEL

PRE-TEST

SAMPLE QUESTIONS

Directions

Read each story and question carefully.
Select the best answer to each question.

1. Betty catches measles or mumps very quickly when she is around people who are sick with measles or mumps. Betty played with her friend Mary. Next day she had the mumps. She told her mother, "Mary gave me mumps."

What was Betty's mistake?

1. She should not have played with Mary.
 2. She may not have caught mumps from Mary.
 3. She should not have gone to play.
 4. She should have told her mother.
-

2. A very old man was having a hard time pushing a bicycle up a hill. A girl in a Girl Guide uniform saw that he was having trouble and helped him get to the top of the hill.

What conclusion can you draw from this paragraph?

1. One Girl Guide helps old men push their bicycles up a hill.
2. One Girl Guide helped an old man push a bicycle up a hill.
3. Girl Guides always help old men push their bicycles up a hill.
4. Girl Guides never help old men push their bicycles up a hill.

DIRECTIONS

Each of the questions follow a short story.
Read the story carefully, then choose what
you think is the best answer to the question.

1. Once a little boy who was out walking with his collie wandered away from home and fell into a well. His collie went for help, and led the boy's father to the well. Another time a collie helped a lost boy find his way back to his home.

What conclusion can be drawn from these statements?

1. Collies are the best pets children can have.
 2. Collies are helpful in saving all children.
 3. Collies are good pets because they always bring people to help you.
 4. Collies were helpful in saving two children.
-

2. A well-known proverb says, "If you open an umbrella in a house, someone there will get sick." John's mother believed this saying and often warned him never to open his umbrella in the house. One day he forgot, and opened his umbrella in the house. The next day his sister Susie became sick.

How was Susie's illness related to John's raising the umbrella?

1. Susie's illness related to John's raising the umbrella.
2. Susie's illness was not caused by John's raising the umbrella but by germs.
3. Susie's illness was caused by some disease and by John's raising the umbrella.
4. Susie's illness was not caused by John's raising the umbrella.

3. Jackie is Joan's older sister. Their mother gave Jackie a beautiful blue sweater for her birthday. Jackie liked it so much that her mother decided to get one for Joan's birthday, too.

Is this a good decision?

1. No, their mother should buy a different color for Joan.
 2. Yes, Joan could never wear Jackie's sweater.
 3. No, Joan might not like the same things as Jackie.
 4. Yes, a sweater is a very nice gift.
-

THE AUTOBIOGRAPHY OF BENJAMIN FRANKLIN

"I was put in grammar school at eight years of age, my father intending to devote me . . . to the service of the church. My early readiness in learning to read (which must have been very early as I do not remember when I could not read), and the opinion of his friends, that I should make a good scholar, encouraged him in this purpose . . . I continued at the grammar school not quite a year, though I had risen gradually from the middle of the class of that year to the head of it But my father, in the meantime, thinking of the expense of a college education, which having so large a family he could not well afford . . . took me from the grammar school and sent me to a school for writing and arithmetic I acquired fair writing pretty soon, but failed in the arithmetic. At ten years old I was taken home to assist in my father's business, which was that of tallow candle maker and soap-boiler."

BENJAMIN FRANKLIN

"When Benjamin was eight years old, his father sent him to grammar school. He rose to the head of his class in reading and writing, and he read every book he could lay his hands on. But he was poor in arithmetic. His father began to think that perhaps Benjamin should be a trademan like his brothers. So, when Benjamin was ten years old, he was taken out of school to learn the trade of candlemaking."

4. How are the two stories different?
 1. The second story gives more information about Franklin than the first story.
 2. The second story is a second-hand report, the first story is a first-hand report.
 3. The second story is more accurate than the first one.
 4. The second story is better than the first one because it was written by a more experienced novelist.
5. How do the two stories describe the reasons for Ben's removal from grammar school?
 1. In the first story his father wanted Ben to be a writer; in the second story he wanted him to be a tradesman like his brothers.
 2. The first story and the second story both say that his father removed Ben from grammar school because he was poor in arithmetic.
 3. The first story says that his father wanted Ben to work at soap-boiling; the second story says he wanted Ben to be a candle-maker.

4. The first one says that Ben's education was too expensive and the second says his father wanted Ben to be a tradesman.
 6. Which of the following sources would you choose if you wanted the best account of Franklin's thinking?
 1. An encyclopedia
 2. The second story
 3. The first story
 4. A history book
-

7. A candidate for public office had his picture taken to be used in his campaign. When he posed for the picture he wanted the Canadian flag hanging in the background.

What was the candidate trying to achieve by having the Canadian flag in the background of his picture?

1. He wanted to show a picture of the Canadian flag at every opportunity.
 2. He wanted voters to transfer their respect for the flag to him.
 3. He wanted the flag because other candidates used it in their pictures.
 4. He wanted to have an attractive background for his picture.
-
8. Hawaii's warm weather allows people of all ages to enjoy water sports all year round. The long stretches of beach on the islands are convenient to everybody. The most exciting water sport is surf-riding. Many Hawaiians have practiced surf-riding since they were children. They are so skillful that they make this difficult

sport seem easy. I took surf-riding lessons and found it was not as easy as it looks.

Which of the following statements is opinion?

1. The most exciting water sport is surf-riding.
 2. Hawaii has warm weather.
 3. Many Hawaiians are skillful at surf-riding.
 4. Many Hawaiians have practiced surf-riding since they were children.
-

9. Mike says that musicians are sad people.

What is the correct way to describe this sentence?

1. Some musicians are sad.
 2. All musicians are sad.
 3. Some musicians are not sad.
 4. Many musicians are not sad.
-

Taken from a political article :

10. My purpose in this campaign is not to seek profit for myself by getting a political office. It is to keep wild rabble-rousers out of our government. Every office that we can fill with an honest, peace-loving man prevents the radicals from gaining power in our country.

What is the speaker doing in this paragraph?

1. He is using the best words possible to describe his opponents.
2. He is describing some office seekers with words which suggest

something bad to the reader.

3. He is telling the truth in the best way it can be told.
 4. He is describing all office seekers with words which suggest something good to the reader.
-

11. Anyone who has the interest of our country at heart will fight against Communism. Mr. Smith has the interest of our country at heart.

If the above statements are true, what conclusion must be drawn?

1. Anyone in our country might fight against Communism.
 2. Anyone in our country will fight against Communism.
 3. Mr. Smith might fight against Communism.
 4. Mr. Smith will fight against Communism.
-

12. Your teacher tells you that a special program about football will be on television this week.

Where would you most quickly find information about the correct channel and time of the program?

1. Sports Illustrated
 2. Your local newspaper
 3. Last week's T.V. Guide
 4. Football Today
-

13. Bob came to Grand Avenue School in December and started playing on Room 101's basketball team. In January his team lost only one game. In February they won every game.

Which among the following best explains the success of Room 101's basketball team?

1. The team members practiced more in January and February.
 2. Bob was a good player and helped the team win.
 3. It is difficult to tell from the paragraph.
 4. Room 101 must have had many tall boys.
-

14. A person is like a lovely flower. If he is given proper nourishment and sunshine he will become a beautiful human being.

Is this a good comparison?

1. Yes, people and flowers need the same things.
 2. Yes, people are as lovely as flowers.
 3. No, people are not as lovely as flowers.
 4. No, people and flowers are different in many ways.
-

15. John said, "Patty's father is rich."

What is the meaning of rich in this sentence?

1. The meaning is unclear.
 2. Patty's father must be a banker or an oilman.
 3. Patty's father is a millionaire.
 4. Patty's father will give many things to Patty.
-

16. In October, Bill found two magazine articles which forecast the players for the season's "All Canadian Team." One article was written by Jack Matheson, the chief sports writer for The Winnipeg Tribune. The other one was written by Don Whitman, who was a television sports commentator and knew many football players

through guest appearances on his program.

In making a report to the class about the "All Canadian Team," what should Bill use?

1. He should give information from the person who knew the players personally.
 2. He should give only the information from the sports writer.
 3. He should give information from both articles but tell who wrote them.
 4. He should give information from the magazine article which gave the better forecast.
-

SOME FACTS ABOUT THE SHREW

The shrew is a tiny mouse-like creature with a long, tapering snout, small unfolded ears, and a velvety grayish-brown fur. His eyes, the size of pinheads, can see only a few feet. Our smallest mammal, the shrew has one of the biggest appetites in proportion to his size. Every three hours, he devours his own weight in insects, earthworms, small lizards and snails, sometimes even other shrews. Aggressive as a leopard, he will clamp his sharp, yellow teeth on anything smaller than a chipmunk that runs, crawls, swims, or flies. The bite of one species of shrew injects a drug-like poison into its victim, making its meal very easy to manage!

THE SHREWD SHREW

Once upon a time there was a tiny, velvety, grayish-brown shrew, with a long pointed snout and very tiny ears. He looked like a little

bird mouse, his eyes were no bigger than the point of a pin. This little shrew lived in my garden, and whenever I went to work in my garden, there he would be, scurrying about in search of food.

Once I asked him why he was such a busy fellow. He stopped only long enough to answer my question. Apparently a shrew has an enormous appetite. It is so great, that every three hours the shrew eats his own weight, from everything that flies, swims, runs, or crawls.

Just as he turned to go, he pounced upon a juicy grasshopper, injected it with his special brand of poison, and proceeded to enjoy his meal. As I looked on, he winked at me and remarked, "Nothing to it!"

17. In what way are the stories alike?
 1. They both tell what shrews eat.
 2. They both describe shrews that talk.
 3. They both tell where shrews live.
 4. They both say that shrews are mammals.
18. If you wanted to know how much shrews eat, which sentence would you select?
 1. Every three hours he eats his own weight.
 2. He eats anything that crawls, runs, swims, or flies.
 3. He will clamp his small sharp teeth on anything smaller than a chipmunk.
 4. He eats insects, earthworms, lizards, and even other shrews.
19. Both of these stories are about shrews. What source would you use if you were making a report for a science club?
 1. The first story.

2. The second story and part of the first.
 3. Both of the stories.
 4. Parts of each story.
-

THE CRITICAL READING TEST, INTERMEDIATE LEVEL

POST-TEST

SAMPLE QUESTIONS

Directions

Read each story and question carefully.
Select the best answer to each question.

1. Jane catches a cold easily when she is around another person who has a cold. Jane walked past John and began to sneeze. She told her mother that night, "John gave me a cold."

What was Jane's mistake?

1. She shouldn't have walked past John.
 2. She may not have caught the cold from John.
 3. She shouldn't have gone to school.
 4. She should have told the teacher.
-

2. A very old lady was standing on the sidewalk by a busy street. A boy in a boy scout uniform walked up to her and helped her across the street.

What conclusion can you draw from this paragraph?

1. One boy scout always helps ladies across streets.
2. One boy scout helped a lady across a street.
3. Boy scouts always help people across the street.
4. Boy scouts never help ladies across streets.

DIRECTIONS

Each of the questions follow a short story.
Read the story carefully, then choose what
you think is the best answer to the question.

1. Mr. Clark said that all women are bad drivers. However, Mrs. Clark said "Official records show that men have twice as many accidents as women do. So women drivers are really twice as safe as men."

What must you know before you could agree with Mrs. Clark?

1. How many women have taken driving lessons.
 2. How many drivers are men and how many are women.
 3. Do men drive faster than women?
 4. How many bad drivers have stopped driving.
-

2. Jack cannot decide what to do. All of his friends are going to the movies Saturday afternoon, and they want Jack to go along. Jack doesn't want to go because he has seen the movie and didn't like it. However, he doesn't want to stay home alone Saturday because he would be bored.

What has Jack not considered?

1. Whether all of his friends are really going to the movie.
 2. Whether he would like the movie if he saw it again.
 3. Whether he should consider doing something else.
 4. Whether his friends want him along.
-

3. The principal of State Street Elementary decided that the Tiger Club would have to disband. "It is not a good club," he said.

"The club is not fair in selecting its members." John and Bill were members of the Tiger Club, so many children decided that John and Bill were unfair.

Were the children correct?

1. No, John and Bill were probably nice boys who were forced to join the club.
2. No, just because the club as a whole was unfair doesn't mean each member was.
3. Yes, John and Bill wouldn't have been in the club if they were not unfair.
4. Yes, if the club was unfair, then all its members must have been unfair.

The following paragraph was found in John's fifth grade geography book:

The Pilgrim leaders said, "Why don't we go to America? There we can worship as we please." It was not easy to get the farm tools, furniture, chickens, hogs, and other supplies needed to start a colony. It wasn't easy to pay for a ship to carry people across the sea. But after three long years, the 102 Pilgrims set sail on the Mayflower. After nine weeks they saw land.

A diary written by one of the Pilgrim leaders describes the journey as follows:

" . . . the fifty Pilgrims left the goodly and pleasant city of Leyden, which had been their resting place for nearly two years

In England they were joined by the rest of the company: thirteen families and seven single men. Some of the newcomers were Pilgrims, like themselves, but others such as John Billington, who was eventually hanged for murder, were bad actors and troublesome citizens. The Pilgrims called these people 'the strangers.'"

4. In what way are the two stories alike?
 1. They both tell why the Pilgrims left England.
 2. They both tell about troublesome citizens.
 3. They both tell how long the journey took.
 4. They both tell how many Pilgrims sailed for America.

 5. Which of the following sentences about the number of Pilgrims sailing for America is most accurate?
 1. 102 Pilgrims came to America.
 2. Between fifty to 100 pilgrims sailed for America.
 3. Thirteen families and seven single men came to America.
 4. Fifty Pilgrims sailed for America.

 6. Which of the following sources should have the most accurate information about the Pilgrims?
 1. The diary written by a Pilgrim leader.
 2. John's fifth-grade geography book.
 3. The Pilgrim's Progress.
 4. History of the Modern World.
-

The following is an excerpt from a political speech:

7. Now, folks, I'm not going to try and fool you. I know I can't

change the whole government when I get elected, but there's some durn good things I can do. I can talk and I intend to talk plenty. I mean to tell them fancy lawyers that they can't pull the wool over our eyes. No siree, us folks have a right to be heard.

What is the candidate trying to do in his speech?

1. He is trying to tell the voters that politicians fool the people.
 2. He is trying to tell the voters that lawyers are bad.
 3. He is trying to tell the voters he is just like them and that he will take care of their rights.
 4. He is trying to tell the voters that he can't change the government.
-

8. He had an unhappy childhood and little formal education. His ambition to become an artist was bitterly opposed by his father. Although self-educated, he became the author of a book, the sales of which in his country ranked next to those of the Bible. Obstacles did not discourage him. People would say, "Why, you can't do that," but he hurdled one barrier after another. He placed a great deal of emphasis upon improving the health of young people, and he was known throughout the world as a good speaker. One of his closest associates said of him: "He accomplishes great deeds out of the greatness of his heart, the passion of his will, and the goodness of his soul." The man: Adolf Hitler.

What conclusion could you draw from this paragraph which would be true?

1. That one of Hitler's close associates thought he was a great man.
 2. That all of Hitler's close associates thought he was a great man.
 3. That people all over the world thought Hitler was a great man.
 4. That Hitler was the greatest speaker and the greatest man of all time.
-

9. Mary exclaimed, "I have gotten A's in all of my subjects so far this year." She knocked on wood so she would continue to receive A's. Mary received straight A's for the rest of the year. She decided to continue knocking on wood so that she would always receive straight A's.

Was Mary correct in her decision?

1. No, some school subjects are more difficult than others.
 2. Yes, knocking on wood always means good luck.
 3. No, the wood had nothing to do with her grades.
 4. Yes, Mary was a very good student.
-

Taken from a newspaper editorial:

10. The ministers who are urging all movie theaters to be closed on Sunday are a dedicated group of men. These honest, unselfish servants of God and man have the best interests of our children at heart. They want all children to be in church instead of in a movie every Sunday.

What is the writer doing in this paragraph?

1. He is describing the ministers who want the movie theaters closed with the best descriptive words possible.
 2. He is describing all ministers with words that readers like to hear.
 3. He is describing the ministers who want movie theaters closed on Sunday with words that suggest something good to the reader.
 4. He is describing some ministers with words that suggest something bad to the reader.
-

11. John received an A in Science. He must be smart.

If these statements are true, what is taken for granted?

1. All children who get A's in science must be smart.
 2. Some children who get A's in science must be smart.
 3. A child receiving an A in any subject must be smart.
 4. Other children in the class may not be smart.
-

12. Mike and Dennis were watching television. "Here comes a man in a white hat," said Mike. "He'll save the pioneers." Dennis asked, "How do you know the man in the white hat is good?" Mike answered, "This man will be good because he is wearing a white hat. A man is either all good or all bad."

What should Dennis answer?

1. "Mike, you're wrong. A man is good sometimes and bad at other times."
2. "You're right, Mike. That man is all good, and that white hat is there to show it."

3. "Mike, you're wrong. All men are good and it doesn't matter what color hat they wear."

4. "You're right, Mike, a man is either all good or all bad."

13. Scott O'Dell was born in Los Angeles. While he was still in grade school his family moved to the port town of San Pedro, California. There he grew up among the fishermen, sailors, and their rough-and-ready sons. He went to school in Long Beach, attended college in California and later worked in the motion picture industry. He knew California and its seacoast well; he loved to hear stories about the "early days." Several times during his life, he had heard a story of the lost woman of San Nicholas Islands. When he had time he carefully traced the story and collected all of the facts he could. Finally, when he began to write The Island of the Blue Dolphins, he told the story so realistically that the reader is magically transported to the "Island of the Blue Dolphin."

Why do you think Scott O'Dell was able to write about the islands off the coast of California and the sea about them?

1. Because he had spent most of his life living along the California seacoast.
2. Because he studied geography and oceanography in college.
3. Because he had unusual writing ability.
4. Because he was a good story teller.

14. Some people who study language believe that all language is based upon particular sounds of animals, such as the bow-wow of the dog and the meow of the cat.

What is the best way to describe this statement?

1. It is a theory.
 2. It is a fact.
 3. It can be proved.
 4. It is incorrect.
-

15. Refrigerator freight cars, refrigerated trucks and airplanes transport quantities of fruits and fresh vegetables. In winter, produce from gardens on the West Coast and in the South appears in our markets. All year around, we can have a diet which is high in health-giving fruits and vegetables.

This story shows how transportation promotes:

1. Travel
 2. Safety
 3. Sales
 4. Health
-

16. Even in a democracy where a free society is defined by its people, there comes a time when absolute freedom is impossible.

As used in the sentence, the underlined word means:

- | | |
|---------|-------------|
| 1. All | 3. Most |
| 2. Some | 4. Complete |

THE BAT POET

Once upon a time there was a little light brown bat, the color of coffee with cream in it. He looked like a furry mouse with wings. When I'd go in and out my front door in the daytime, I'd look up over my head and see him hanging upside down from the roof of the porch. He and the others hung there in a bunch all snuggled together with their wings folded, fast asleep. One little brown bat said, "Don't go away. I'll be homesick."

WINTER-SLEEPING WILDLIFE

One of North America's hibernating mammals is most unusual. This unique hibernator, a bat, is the only mammal of the world's 2,000 mammals that can fly. North America has many of the world's known and named bats. One type is called the little brown bat. Usually the little brown bat selects a cave in which to pass the winter. He hangs upside down by one foot, then another, or perhaps all four to sleep during the day.

17. In what way are the stories alike?
 1. They both tell that bats hibernate.
 2. They both describe bats that talk.
 3. They both tell how the bats sleep.
 4. They both say that bats are mammals.

18. If you wanted to know to what class of animals a bat belongs, which sentence would you select?

1. The unique hibernator is a bat.
 2. One of North America's hibernators is a bat.
 3. He looked like a furry mouse with wings.
 4. The bat is the only mammal that can fly.
19. Both of the stories are about bats. What sources would you use if you were making a report to a science class?
1. The second story.
 2. The first story and part of the second.
 3. Both of the stories.
 4. Parts of each story.

Name _____ Date of Birth _____ Age _____

Date of Testing _____ Name of School _____

Sample: 1. 1 2 3 4
2. 1 2 3 4

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

APPENDIX C

Pilot Study Schedule For Instruction

SCHEDULE FOR PILOT STUDY

| Period ¹ | Activity |
|---------------------|---|
| 1 | Introduction: Tape and discussion on power of words and purpose of Study. Pre-test: One section of <u>The Critical Reading Test, Intermediate Level.</u> |
| 2 | Lesson 1: Semantics |
| 3 | Lesson 2: Authenticity in Writing |
| 4 | Lesson 3: Logic in Writing |
| 5 | Post-test: Second section of <u>The Critical Reading Test, Intermediate Level.</u> Written evaluation of lessons by teacher and pupils. |

¹Each period is approximately forty-five minutes.

APPENDIX D

Sample Lessons In Critical Reading

DEVELOPMENT OF STUDY: INTRODUCTION AND
ADMINISTRATION OF PRE-TEST

TIME: Approximately 45 minutes: 15 minutes for the introduction and
30 minutes for the administration of the test.

- MATERIALS:
1. Label "POWER OF WORDS" (either written on blackboard or on manila tag).
 2. Tape of "The Beef Tongue of Orulá"¹ and tape recorder.
 3. Pencil and dictionary for each student.
 4. Copies of first section of The Critical Reading Test, Intermediate Level.
 5. Mimeographed answer sheets.

PURPOSE OF INTRODUCTION: To develop the pupils' attitudes as to the
importance of how words are used in daily communication.

DEVELOPMENT OF INTRODUCTION: The label "POWER OF WORDS" is put on
the blackboard. The definition of the term "folktale" is
elicited from the students. All suggestions are acknowledged
followed by students checking their answers with the dictionary
definition. The outcome is that a folktale is a story about the
life of a group of people usually handed down by word of mouth.

The tape is played with two pre-listening questions
written on the board for the children to consider: (1) What

¹Harold Courlander, "The Beef Tongue of Orulá," The World of Language, Book 6 (Teacher's Edition), ed. by Muriel Crosby (Chicago: Follett Educational Corporation, 1970), pp. T93-94.

message is Orula trying to convey to Obatalá? and (2) How does Orula's message apply to people today?

Discussion follows on the power of language. Desired concepts to be brought forth during the course of the discussion are: (1) Words are a powerful tool; (2) Words can either "make" or "break" a person; and (3) Words come at us through various channels--newspapers, magazines, books, brochures, billboards, signs, television, and radio--either as a source of information or as a form of persuasion.

OVERVIEW OF RESEARCH STUDY: The overview is presented with the students being informed that the test will indicate how well they can evaluate the use of language by writers and advertisers, and that following the test, there will be lessons to improve their skills in reading critically, such as determining how words are used to influence people and detecting some of the methods employed by writers of books, magazines, and newspaper reports to change the reader's thinking. When the lessons are finished, a second test will be given to determine how much better they have become in evaluating what they read.

ADMINISTRATION OF PRE-TEST: Copies of the answer sheet are distributed and the pertinent data is filled in. After the two sample questions are done with the class, the teacher instructs the pupils to turn to the second page of the test booklet where the test begins. As each student completes the test, the teacher

collects the test materials. Caution children that this is not a speed test. Each student is given all the time he requires to complete the test.

THE BEEF TONGUE OF ORULA

The great god Obatalá had as his helper another god by the name of Orula. When Obatalá determined one day to appoint a ruler of the world, he thought first of Orula. But he was hesitant and undecided, for he feared that perhaps Orula was too young and inexperienced for such a task. And so Obatalá decided to test Orula's wisdom. He sent for Orula and asked him to prepare the finest possible meal.

Orula went off to the public market and looked at every thing that was for sale. At last he bought a beef tongue and brought it home. He cooked it with great care, preparing it with all kinds of herbs and spices. When it was done, he carried it to Obatalá, and Obatalá tasted it. Never had Obatalá eaten anything so good. When the food was gone, he complimented Orula and said to him, "Tell me, Orula, when you had the choice of all the different meats in the market, why did you choose a tongue?"

"Great Obatalá," Orula replied, "the tongue is a very significant thing. With a tongue you can praise good works and compliment those who do good deeds. You can tell good news and influence people in the way they should go. You can even promote people to high rank," he added, smiling at Obatalá.

"All you have said is very true," Obatalá replied, thinking to himself: "Orula is indeed filled with knowledge."

But Obatalá decided to test Orula further, and he said to him:

"You have prepared for me the best of all dishes. Now I want you to prepare for me the worst food you can imagine."

So once again Orula went to the market. After looking at everything there, he again bought a beef tongue. He brought it home and prepared it with spices and herbs, and when it was cooked he carried it to Obatalá and put it before him.

Obatalá was astonished. He said, "First you brought me this dish and represented it as the best of good things. Now you again bring tongue and represent it as the worst of bad things. How can you explain this?"

Orula replied, "Great Obatalá, the tongue is a very significant thing. With a tongue you can belittle a man's endeavors and destroy his good reputation. You can influence people to their disadvantage, and with an evil word you can deprive them of their livelihood. With a tongue you can betray a country and sell its people into slavery."

When Obatalá heard this, he said, "All that you have said is true. You are wise beyond your years."

And then and there he made Orula master of the world.

DESCRIPTION OF LESSON 1

SEMANTICS: MEANING OF WORDS

- MATERIALS:
1. Two charts (20" x 30" manila paper): a chart with samples of advertisements illustrating double meanings and a chart of examples of captions for advertisements, e.g. "Luxurious Living!"
 2. Tape recorder and tape of "The Trouble With Jenny's Ear."¹
 3. Overhead projector and prepared practice exercises on transparent acetate sheets.
 4. For the student--pencil, dictionary, and a page of advertisements.

INTRODUCTION: By using examples the students are encouraged to suggest examples themselves and from this give a definition or form a standard. When words come up whose meanings are unknown, the child should either raise his hand at the time or jot the word down and later check the dictionary definition.

The significance of language on the reader's thoughts and actions is reemphasized. The importance of reading as a

¹Oliver Butterworth, "The Trouble With Jenny's Ear," The World of Language, Book 5 (Teacher's Edition), ed. by Marion Crammore and Veltajeon Olson (Chicago: Follett Educational Corporation, 1970), pp. 81-84.

channel of communication is established, that is, while information is received through all the senses, seventy per cent is learned visually and reading is one of the major avenues through which messages are received.

The children are encouraged to offer their interpretation of the term "double meaning." The definition desired is that many of our words have more than one meaning depending on the experience the person has had with the word. The discussion concludes with a statement of the object of the day's lesson: to learn the meaning of "denotation" and "connotation" of words, and to examine the use of connotation in books, newspapers, magazines, and advertisements, or what is sometimes referred to as "persuasive communication."

DEVELOPMENT OF LESSON: The tape is played of "The Trouble With Jenny's Ear" with three pre-listening questions set before the children: (1) What did the lawyer and judge think the word "sucker" meant? (2) What did Doc Pulsifer intend it to mean? and (3) How many meanings are given in the dictionary for the word "sucker"? The concept to evolve out of the discussion is that the meaning we attach to a word has to fit the situation.

Next, through the inductive method, the meaning of the terms "denotation" and "connotation" are established. Students are encouraged to use their dictionaries to confirm their answers. The concepts to be drawn out are that denotation refers to the dictionary meaning while connotation is the meaning

suggested by the word. If a person's experience with the word has been pleasant, his connotation will also be pleasant, but if his experience has been unhappy, then the connotation, too, will be an unfavourable one.

To reinforce the concepts of denotation and connotation, a prepared list with the dictionary meanings is presented on the overhead projector. Different students are chosen to supply the connotative meaning for each example.

To help the children recognize how connotation is employed to suit the situation, several examples are presented on the overhead projector, such as: (1) I am plain, you are attractive, your enemy is ugly; (2) I am thrifty, you are frugal, he is a tightwad; and (3) I am imaginative, you are fanciful, she is a liar. Utilizing the same pattern, different students are directed to make up their own series. From the group is then drawn the generalization that the words become progressively more degrading in meaning--from high opinion of a person to low opinion depending on the situation in which they are used.

Through the inductive method, an attempt is made to elicit from the group the meaning of "mass media." The definition given, after it has been confirmed with the dictionary definition, is that "mass media" refers to ways of communicating with large numbers of people.

Next, all the various channels of communication that constitute "mass media" are elicited from the students. Suggestions given are movies, television, radio, books, newspapers,

magazines, comics and cartoons, billboards and signs. A discussion follows on how mass media influences people in entertainment, dress, food, homes, travel and recreation. The desired generalization that ensues is that everybody desires to be like the next person, that no one wishes to be different.

Finally, students are asked to analyze the two charts:

- (1) "Power of Words" (a collection of advertisements) and
- (2) "Captions for Ads" to determine whether advertisers employ denotation or connotation in describing their products. The generalization to be drawn from this analysis is that advertisers use very specific connotative meanings often referred to as "loaded and coloured words" in order to appeal to the reader's vanity and to his fear of being different.

ASSIGNMENT: Each student is supplied with a sheet of sample advertisements--four or five--from two or three different newspapers. The purpose of the assignment is to determine which newspaper relies most heavily on connotation as a means of persuasion and influence.

SUMMARY AND EVALUATION: Students are asked to summarize the concepts developed during the lesson and to establish a standard for judging the use of language in advertisements. The concepts that are elicited are that denotation is the dictionary meaning; connotation is the meaning determined by a person's experiences

with the word. Further, connotation is used chiefly when appealing to the reader's emotions; mass media relies heavily on connotative meanings.

THE TROUBLE WITH JENNY'S EAR

"All right," the lawyer said. "Mr. Pulsifer, we want you to think about this question: What chance does anyone have of catching a fish when using your Fish Whistle?"

Jenny listened. The courtroom was perfectly quiet and everybody looked at her. At first she didn't hear anything at all, and a frown passed over her face. When she finally did hear something, she was surprised how faint it was. Doc Pulsifer must be a very quiet thinker, she thought.

"Well," the lawyer said at last, "did you hear anything?"

"Yes," Jenny said. "What I heard was, 'You can always catch suckers if you fish deep enough.' That's all there was."

"There!" the lawyer said, turning to the judge behind the high desk. "That ought to be evidence enough of the intent of the defendant. His motives were obviously to deceive the unsuspecting public, whom he likes to think of as 'suckers!'"

The judge peered down from his high desk at Jenny and then at Doc Pulsifer. After a while he folded his hands and nodded. The man in the black suit rapped once on his desk with a wooden mallet. The lawyers all stopped talking among themselves and looked up at the judge.

The judge was short and had a round pink face, and a wisp of his white hair came down over his forehead. Jenny noticed that when he spoke, his cheeks puffed in and out. "In the light of the evidence

just produced," the judge said, "it is the opinion of this court that the defendant is guilty of using the United States mails to defraud the public. Therefore, pursuant to an Act of Congress of September 19, 1890, we request the Postmaster General to forbid the use of the mails for distribution of any literature pertaining to the defendant's Fish Whistle. We would like to express the appreciation of this court to the young lady"--and here he looked down at Jenny--"for her help in what might have been a very difficult case. And now has the defendant any remarks to make before we adjourn the court?"

Doc Pulsifer got up slowly and stood with his weather-tanned hands on the back of his chair. "Your Honor, I would like to say just a few words. I've got to hand it to that little girl for her mind reading. She said exactly what I was thinking. The only trouble is that you folks didn't understand what I meant. What I meant was that you can always catch some kind of fish if you know how to go about it. And a sucker is a well-known American fish. Not much of a fish for fighting, of course, but they're good eating in the spring, and you can take them with a worm most anytime in April and in May, so long as the water runs good and cold. But what I mean to say is, you folks got me all wrong about this sucker business, because down where I come from a sucker is a fish, but here in Boston--and in other cities too, I shouldn't wonder--I guess you think a sucker is a human being."

The judge raised his white eyebrows but he didn't say anything.

Doc Pulsifer took a deep breath. "Now that's all I want to say about fish, but I've got something else that's got to be said before you adjourn this court, and that is that this case wasn't a proper

case, and I'll tell you why. When you go to poke around in a man's mind, and to take his thoughts out of his head without his say-so, you're doing something that isn't right. And not only it isn't right, but it's plumb against the Constitution, where it says the right of the people to be sure in their persons against unreasonable searches shall not be violated. And the Constitution also says that private property shall not be taken for public use without just compensation. And where I come from we hold that a man's thoughts are his private property, and I don't recollect that anybody in this court compensated me for my thought, and it was a pretty average good thought too. Not that I blame this little girl here, 'cause she was just doing what she was told and probably didn't know any better. But I want to tell this court that the way I look at it they have accepted evidence here that is contrary to the Constitution, and I'm going to appeal this case and even take it to the Supreme Court if I have to, and we'll see what they've got to say about it."

DESCRIPTION OF LESSON 2

AUTHENTICITY: JUDGE AN AUTHOR'S VIEWPOINT AND COMPETENCE

- MATERIALS:
1. Overhead projector and prepared lesson on transparent acetate sheets.
 2. For each student:
 - a) Pencil and dictionary.
 - b) One short editorial and one news report.
 - c) Mimeographed practice exercises detecting fact and opinion and determining a writer's ability and skill.
 - d) Mimeographed assignment.

INTRODUCTION: The general purpose of the lessons is reviewed and the concepts developed up to this point are summarized. Suggestions are invited for judging the reliability or dependability of a news report and an editorial. All replies are acknowledged but students are asked to evaluate their own answers during the course of the lesson. The purpose of the day's lesson is presented: setting up a standard for judging a writer's viewpoint and his ability to write.

DEVELOPMENT OF LESSON: The pupils are requested to define the term "viewpoint" or "point of view" which has been written on the

blackboard. When the suggestion "a person's evaluation of a certain problem" is confirmed by the dictionary definition, the two terms "fact" and "opinion" are written on the blackboard and the children are asked to define them. Pupils are encouraged to check their ideas with the dictionary meaning; the resulting concepts are that a fact is a statement that is true, whereas an opinion is a belief not based on absolute certainty but on what the person thinks about the subject.

To help children distinguish between fact and opinion and to establish the concepts introduced, students are required to read statements presented on the overhead projector and to determine if the statement is a fact or simply the writer's own opinion, for example: (1) Canada is one of the largest countries in the world; (2) Anyone living in Canada is happy; and (3) People on the Atlantic coast eat a lot of fish. Each statement is discussed and the concept that ensues is that a fact can be supported with proof, an opinion cannot. As soon as the class has set up this standard for judging whether a statement is a fact or an opinion, the pupils are given the mimeographed paragraphs on the owl and Colonel Stapp as additional practice in distinguishing between fact and opinion.

After reading the short editorial and news report, students are required to elicit the difference between these two forms of written communication. Desired generalization to be drawn from the suggestions is that an editorial is the writer's own opinion, while a news report is generally stated

the way the news happened.

Two lists of connotative words, one for the news report and the other for the editorial, are written on the blackboard and the children are asked to compare the two lists for persuasive qualities. The generalization to be drawn from this discussion is that an editorial consists of more persuasive language than a news report because the editor is trying to persuade the reader to think as he does about the problem under discussion. At this point the class sets up a standard for judging this form of newspaper writing, the standard being that an editorial is not dependable from the standpoint of factual information because it is chiefly the writer's opinion written to influence the reader.

The last part of the lesson is concerned with a writer's competence and skill. The children are asked to analyze two short selections, one by Farley Mowat and the other by the D'Aulaires, to determine which article is based more on real experiences and less on imaginary situations. The generalization made is that Owls in the Family by Farley Mowat is the better choice because the writer had first-hand experience with owls when he was a boy, whereas the D'Aulaires had to get their information for the book Benjamin Franklin from books and conversations with people who in turn had received their information from other sources. Hence, Benjamin Franklin is based on second-hand information.

After students complete the exercises on Sid Fleishman and Helen Griffiths, they set up a standard for judging the competence and skill of a writer. The desired concept to be

brought forth is that the most capable writer is one who has sufficient training for the position, interest in the subject, and first-hand information about the subject.

ASSIGNMENT: Students are required to choose the best answer on the basis of the three standards for judging the dependability of what a person reads. The exercise helps to reinforce the concepts developed in the lesson.

SUMMARY AND EVALUATION: Different students are called upon to summarize the purpose of the lesson and to review the standards that have been formulated for judging a writer's viewpoint and competence. The three concepts thus elicited are: a fact can be supported, an opinion cannot; an editorial is less reliable than a news report because it is not based on facts but consists chiefly of the editor's personal opinion written to influence the reader; and the most genuine story is written by a writer who has training, interest, and practical experience pertinent to the subject.

Lesson 2:

FACT AND OPINION

No one can see in complete darkness. But the owl is called "lord of the night" because he can see to hunt in almost no light. Owls can see a hundred times better than we can. Some owls catch mice when the light is no stronger than that made by a single candle half a mile away. This light is so dim, that we could see nothing.

An owl's eye is much larger than a human eye. It does not move as our eye does. Each eye is fixed, like the headlight of a car. To see in different directions, the owl turns his whole head.

Which of these statements is opinion?

1. An owl's eye is much larger than a human eye.
2. To see in different directions, the owl turns his whole head.
3. Owls can see a hundred times better than we can.
4. No animal can see in complete darkness.

An Air Force doctor, Colonel Stapp, was strapped tightly in a cab on a low steel sled. Beneath the sled was a straight rail track. That sled travelled 632 miles an hour; in 1954 this was the fastest any man had travelled on land.

At a speed above 400 miles an hour, winds can break bones in a

man's arms and legs. Colonel Stapp received only minor injuries. He got two black eyes because his eyeballs shot forward in their sockets.

Colonel Stapp endangered his life for a very good cause. He wanted to measure the effects on man of slowing down suddenly from high speeds. His dangerous work listed just how much stress the human body can stand. Such experiments make trips into space possible. Our country will always be grateful to Colonel Stapp and men like him.

What conclusion could you draw from this paragraph which could be true?

1. Colonel Stapp's friends think that he is a brave man.
2. One of the Colonel's friends thinks that he is brave.
3. The whole country thinks that Colonel Stapp is a brave man.
4. The whole world thinks that Colonel Stapp is a brave man.

Lesson 2:

Farley Mowat, well-known author of children's books, was born in Belleville, Ontario in 1921. Soon after his birth, his parents moved to Saskatoon, Saskatchewan. This is where Mr. Mowat spent his boyhood years. Having an inquisitive nature, Mr. Mowat soon got to know the countryside and all the wild animals living there. Like all boys who are fond of animals, he had many pets. His home was a typical zoo. And in this zoo was a pair of owls. His experiences with his pet owls gave Mr. Mowat material for the amusing story Owls In The Family.

Ingri and Edgar Parin D'Aulaire are best known for their picture biographies. They study the lives of their subjects very carefully. Before writing the story Benjamin Franklin, they explored Boston and Philadelphia where Franklin made his home when he lived. In this way they tried to capture the spirit of the times in which Franklin lived in order to make the story more real to the reader.

Lesson 2:

Sid Fleishman, a New Yorker by birth and a Californian by upbringing, became interested in magic when he was in the fifth grade. He learned everything he could about it, mostly from library books, and he even travelled as a professional magician. This interest, knowledge, and practice made the subject of Mr. Mysterious and Company a good choice for him.

Why do you think Mr. Fleishman was able to write this absorbing story about magic?

1. Because he is a good story teller.
2. Because he can write exciting stories.
3. Because of his knowledge, interest, and practice in magic.
4. Because he travelled once as a professional magician.

Helen Griffiths was born in a big city, but she spent much of her childhood on a farm where she learned to love and know the farm animals. When forced to live in the city, the zoo and Natural History Museum were her favourite places.

When a young woman, Miss Griffiths took up horseback riding. This was another opportunity for learning about horses.

Although Miss Griffiths was living in England, South America seemed to fascinate her, particularly Argentina, so she learned Spanish.

Since her marriage, Miss Griffiths has lived in Spain, Switzerland, and London. Most of her stories are about horses. Of the seven animal tales, The Wild Heart about a young orphaned horse on the grasslands of Argentina, is her favorite.

Why do you think Miss Griffiths was able to write this truly heart-warming story of an orphaned horse?

1. Because she is a good writer of animal tales.
2. Because of her great love for horses and of her understanding of their feelings.
3. Because she loves horseback riding.
4. Because of her knowledge of Spanish and of the Spanish customs and habits with horses.

ASSIGNMENT FOR LESSON 2

I. As a member of the Detroit Police Department and as a traffic engineer, William L. Potts was faced with the problem of helping people cross the street without any traffic lights. In 1920, Mr. Potts set up the world's first four-way traffic-signal tower in Detroit. The tower had twelve lamps--three lamps on each of the four sides of the tower. One year later, Mr. Potts saw another of his dreams come true. The first automatic traffic signal was built. Today the original idea of traffic lights developed by William Potts is still being used.

William Potts made many important changes in motoring safety. He helped dozens of communities solve their traffic problems. He is also known as one of the first men to try using two-way radios in police cars. Now, nearly every police car has a two-way radio.

"Old Mr. Traffic Tower," as Mr. Potts was respectfully and affectionately named by all his friends of the Detroit Police Department, did much to make our world a safer place in which to live.

What conclusion could you draw from this paragraph which would be true?

1. That his friends thought he was a great man.
2. That one of his friends thought he was a great man.
3. That people all over the world thought he was a great man.
4. That William Potts was one of the greatest inventors of all time.

II. An Italian scientist, Volta, used to watch another scientist, Galvani, make a dead frog's leg jump by touching a nerve in the dead frog's leg with a knife. He reasoned that electricity was made when the knife touched the frog's leg.

Volta tried the experiment on himself. He placed a piece of tin on top of his tongue and a silver coin under his tongue. Then he let a copper wire touch both pieces of metal at the same time. He got a sour taste in his mouth. This showed that there was a flow of electricity from one place to another.

Volta repeated the experiment, but this time he used a piece of cardboard soaked in salt water. Again an electric current was made.

From these and other experiments like it, Volta reasoned that the metals not only acted as conductors of electricity, but were actually making their own electricity. And if two pieces of different metals and a piece of cardboard could produce a little electricity, then many pieces of metal and soaked cardboard would produce a great deal more electricity. He later built the "pile" which was the first electric battery.

Volta had discovered how to use chemicals to create a mild but steady flow of electric current. His discovery made it possible for electric current to be supplied for many of man's needs. His invention opened the way for other scientists to invent the telegraph, the telephone, the radio, and thousands of other machines.

This story shows how Volta's experiments:

1. Showed how to produce electricity chemically.

2. Showed how to make a telegraph.
3. Showed what makes a frog's leg jump.
4. Showed how to conduct electric current along a wire.

III. The people of Iceland gave the name "ski" to the long pieces of wood which we strap on our shoes to glide over the snow. "Ski" is the Icelandic word for "piece of wood". The first skis had curved tips like the prows of Viking ships. Perhaps that is the reason early Viking poets called a ship "the ski of the sea". Our skis of today curl up at the toe, but not nearly so much as in the days of the Vikings. The best skis are cut by hand out of tough yet light-weight wood. Some of the best ski makers are those of Norway and Sweden.

Which of the following statements is opinion?

1. Some of the best ski makers are those of Norway and Sweden.
2. Our skis curl up at the toe, but not nearly as much as in Viking times.
3. Perhaps that is the reason early Viking poets called a ship "the ski of the sea."
4. "Ski" is the Icelandic word for "Piece of Wood."

IV. Jean George explains that My Side of the Mountain had its roots in her early life. As she writes: "When I was a child, my naturalist father took my brothers and me to the islands of the Potomac River and taught us how to make lunch and supper off the land. We often had turtle soup or cattail tubers, or he would bring us a dogtooth-violet

bulb to try. It gave me a great sense of independence to think that I could live with nothing more than a knife and a fire."

Years later, with the help of college courses in writing and art, zoology, botany, and geology, Mrs. George helped her doctor-brothers prepare a survival manual for Navy pilots downed in the wilderness. She ate food her brothers brought in, slept in the lean-tos they constructed, and did illustrations for them.

In the years that followed, a story kept growing in her mind of a modern boy who could survive off the land. Careful research made My Side of the Mountain a story that could have happened and might still happen.

Why do you think Jean George was able to write this story that could happen to any normal boy who is not afraid to live off the land, to give up the comforts of city life, and to live by himself in a home he made for himself on the side of a mountain?

1. Because she now has three children of her own.
2. Because she took many courses in college in zoology, botany and geology.
3. Because she helped her brothers prepare a survival manual for pilots forced to land in the wilderness.
4. Because her father taught her how to live off the land when she was a little girl, and when she was attending college, she helped her brothers prepare a manual for pilots whose planes were forced to land in the wilderness in time of trouble.

DESCRIPTION OF LESSON 3

AUTHENTICITY: IDENTIFY, COMPARE, AND EVALUATE VARIOUS SOURCES IN ORDER TO VERIFY INFORMATION

- MATERIALS:
1. Pencil and dictionary for each student.
 2. Copies of two versions of the same news event.
 3. Mimeographed practice exercises and assignment sheets.

INTRODUCTION: The purpose of the lessons is reexamined and standards set up in preceding lessons for judging what is read are reviewed. Students are invited to make suggestions for further standards for judging written communication as well as to outline some of the reader's responsibilities in what is being written. All replies are acknowledged, but pupils are asked to evaluate their own answers during the course of the lesson.

DEVELOPMENT OF LESSON: The pupils are requested to read the two articles on the beaver, one from a fiction book and the other from a nature study textbook. During the discussion, the desired generalization to be drawn is that the selection from the nature study textbook is more reliable than the excerpt from the fiction book because the latter is a fantasy and therefore does not contain genuine facts.

Next, the class is asked to examine the two selections on Saskatchewan. The origin of one article is a travel brochure;

the second selection is an excerpt from a geography text. Connotative words are selected and analyzed from each story to determine which selection tends to influence the reader most by its use of colored words. The two generalizations drawn from this discussion are: (1) The least reliable information comes from sources such as books of fiction and travel brochures written by people whose sole interest is to sell their product. With this view in mind, the writers take a few facts and dress them up with colored words to make the story more appealing and attractive, and (2) The most reliable sources of information are Books of Knowledge, encyclopedia, and school textbooks because they are written for the purpose of disseminating information that is based on facts.

The next pair of articles to be analyzed is on volcanoes taken from two different sources--a scientific report and a book of interesting facts--published several years apart. The desired generalization that should ensue from the discussion is that the most reliable source of information is the source that has the most recent date of publication and that has been written by an expert in the field.

After the two news events are discussed concerning the lost teen-ager, elicit from the children some of the very obvious differences in the two reports (length and contradiction of facts) and the possible reasons for these differences. The desired concept to be developed during the course of the discussion is that first-hand information (the reporter of the

longer selection must have been at the scene) is more reliable than second-hand information (the second reporter must have obtained his information from someone else).

Finally, students are invited to define some of the differences between "autobiography" and "biography." The suggestions are acknowledged followed by students checking their answers with the dictionary definitions. After the reading and discussion of the two selections on Walt Disney, one an autobiography and the other a biography, the class elicits the generalization that an autobiography is more reliable than a biography as a source of information because it is first-hand information, whereas a biography consists of second-hand information.

ASSIGNMENT: The purpose of the assignment is to give the pupils additional practice in distinguishing between reliable and non-reliable sources of information.

SUMMARY AND EVALUATION: The three concepts developed during the course of the lesson are elicited from the children. These same concepts can be employed by the reader in judging the reliability of the sources of information. The desired concepts are: the most reliable sources of information are Books of Knowledge, encyclopedia, and school textbooks; the most recent publication is a source of up-to-date information; and first-hand information is more reliable than second-hand information.

Lesson 3:

THE HAPPY BEAVER

Michael was a carefree, happy beaver who liked to tap with his tail. He thought he was making music. With the other young beavers he carried sticks to the dam near the lodge. Then he would dive to the bottom of the pool, pick up some mud, and cement the sticks into place, using his front feet.

One day he forgot himself. Not only did he tap his feet, but he also slapped the water with his flat, scaly tail. Now in beaver language, a slap of the tail means danger is near. To Michael's surprise, every beaver dived into the water as fast as possible. Then his father pushed his head above the water.

"Didn't you hear the signal, Michael?" he asked.

"Oh yes, Dad, for it was I who slapped the water," answered Michael.

"What danger did you see?" said his father.

Michael explained sadly, "I was only making music with my tail." You can imagine how angry the grown-up beavers were with poor Michael.

THE BEAVER

We admire the beavers for their habits of hard work and for their ability to do difficult things. The beavers are stout, strong animals, with webbed feet, a scaly tail, and thick, rich brown fur. These

mammals are swimmers and are much more at home in the water than on land. When danger threatens, beavers dive, but before doing so, give the water a loud slap with their tails as a warning to others.

Their homes are usually built in ponds which they have formed by damming back the water of a slow-moving stream. Both the dams and their dome-shaped homes are built of branches, roots, sod, and mud. The beavers' strong, chisel-shaped front teeth enable them to cut down quite large trees. Their food consists chiefly of water plants and of the bark, twigs, leaves, and even the wood of trees, particularly poplars and willows. A supply of food is usually stored away for winter use.

In what way are the stories alike?

1. They both say that beavers are mammals.
2. They both describe beavers that talk.
3. They both tell how beavers build homes.
4. They both tell what beavers do when danger is near.

If you wanted to know to what class of animals a beaver belongs, which sentence would you choose?

1. The beavers are strong animals with webbed feet, a scaly tail, and rich brown fur.
2. In beaver language, a slap of the tail means that danger is near.
3. A supply of food is usually stored for winter.
4. These mammals are excellent swimmers.

Both of these stories are about beavers. What sources would you use if you were making a report for a talk in science class?

1. The first story.
2. The second story.
3. Both of the stories.
4. Parts of each story.

Lesson 3:

Saskatchewan is the prairie province "Par Excellence." Around its two large cities, Regina (93,000) the capital, and Saskatoon (73,000), the university town, the wheat fields in September are a single sheet of gold, unbelievable in their beauty. Like all prairie towns, Regina and Saskatoon are huge for their population. The spaciousness of the landscape is reflected in the layout of the towns and the way the people think. [Source--Canada by the American Geographical Society]

Saskatchewan, called "A Land of Surprises," combines urban living with many recreational opportunities prairies, parkland, and pine forests. There are rushing rivers and fresh water lakes for fishing, cozy parks for camping, and uncrowded beaches for swimming.

While the countryside is a complete vacationland, the exciting progressive cities of Regina and Saskatoon boast of a wide variety of things to see and do, good hotels, excellent restaurants, and nightlife.

[Source--Canadian Travel Folder]

In what way are the stories alike?

1. They both tell about the province of Saskatchewan.
2. They both tell about holidaying in Saskatchewan.
3. They both tell about the population in Saskatchewan.
4. They both say that Saskatchewan is a province of surprises.

If you wanted to know if Saskatchewan had room for more farmers, which sentence would you choose?

1. Saskatchewan has many recreational opportunities, in prairie, parkland, and pine.
2. Like all prairie towns, Regina and Saskatoon are huge for their population.
3. The spaciousness of the countryside is reflected in the layout of the towns and in the way the people think.
4. The wheat fields in September are a single sheet of gold.

In making a report to the class about living in Saskatchewan, what would Tom use?

1. He should take information from both articles, to include the cities, the farmlands, and the vacation opportunities.
2. He should use information from the first report only.
3. He should use information only from the second report.
4. He should not use either of these articles because they do not have the right information.

Lesson 3:

Most volcanoes lie within a belt called the "ring of fire," which loops around the Pacific Ocean and its shorelands. Why the fire mountains are strung across the world in this way, and why they exist in the first place, is still not fully understood.

Volcanoes are made of magma. Magma is the raw material of all volcanoes. It is orange-red molten (melted) paste of rock which wells up in the throat of a volcano during an eruption. It may be like thin paste or thin soup; and it may be supercharged with steam and other gases. All magmas are very hot (1,800 to 2,200 degrees) as they boil up from within the earth's surface.

This superheated paste pushes to the surface through openings or cracks in the center of the earth. Just how far they go no one really knows, but most scientists believe that magma comes from the upper region of the earth's cover. About 1,800 miles thick, this layer of hot rock underlies the earth's surface crust which is from 22 to 37 miles thick under the continents, but as thin as 2 miles under the oceans.

No one really knows when a cone is "dead" and will not erupt again. According to history, the first time Vesuvius erupted was in 79 A.D. Since then, it has had 18 major eruptions, and many minor ones. Each time a volcano erupts, the surface of the earth is changed. Mountains can be built up from the hot lava, and whole cities can be

covered. In 1885 the island of Krakatoa in the East Indies was completely destroyed and all its inhabitants were killed. [Source--Life Nature Library, 1965, (Scientific Reports)].

A volcano is an opening in the earth out of which come melted rock and ashes. The openings go far down into the earth. They go into places where there is melted rock.

Rock has to be very hot before it melts. No one knows how rock down in the earth is heated. People know that melted rock comes from the earth through volcanoes.

Volcanoes do not send out melted rock all the time. Sometimes a volcano "sleeps" for hundreds of years. Then it wakes up and sends out melted rock and ashes again.

Every time a volcano wakes up, the hot rock coming from it changes the earth. Mountains have been made by volcanoes. The melted rock changes the land around volcanoes. Sometimes cities and towns are covered by the melted rock. Volcanoes, with their rivers of melted rock and ashes, are giants that have helped to change the earth.

[Source--A Book of Interesting Facts, 1964].

How are the two stories different?

1. The second story is a shorter story than the first one so it is less accurate.
2. The second story gives more information about volcanoes.
3. The first story is more accurate than the second one.
4. The second story is less accurate than the first one because it was not written by a scientist.

What statement describes how volcanoes change the earth?

1. The hot rock coming from a volcano changes the earth.
2. Mountains have been made by volcanoes.
3. When it wakes up, a volcano sends out melted rock again.
4. The fire mountains are strung across the world in a loop.

Which of the following sources would you use if you wanted the best account of volcanoes?

1. An encyclopedia published before 1965.
2. A science text published after 1965.
3. The first story.
4. The second story.

Lesson 3:

BOY FOUND IN OLD CABIN AFTER A NIGHT IN BUSH

St. Labre, Man.--Martin Poiron, at 15, is considered an experienced bushman by family and neighbors. But Monday, he managed to get lost in the swamp and bushland near his home here.

Experience, however, paid off and Martin was found, tired and hungry but otherwise all right, Tuesday night.

About 8:30 P.M. Tuesday, Rene Thomas, a neighbor in a search party, remembered an old bush camp, and he and members of the search party decided to check it out.

There, on a ridge, about seven miles from his hamlet 60 miles southeast of Winnipeg, they found Martin in a cabin in the camp, which he had stumbled upon.

The search Tuesday involved about 25 neighbors and members of the RCMP, including a tracking dog, and an RCMP Beaver aircraft used to scan the watery terrain.

Martin's problems began Monday afternoon when he and his father Joachim, a 41-year-old dairy farmer, were hauling hay for the cattle.

They spotted a brush fire, and Martin went to check if some cedar fence poles they had been preparing were in danger, while his father returned to the farm.

The check revealed that all 500 poles had been burned, but that was the least of Martin's problems, since he lost his bearings.

Search party members said Martin told them he hadn't been scared at the prospect of being lost, and he slept some through the night, despite temperatures which dipped to 36 degrees.

At sunup Tuesday, Martin tried to walk out of his predicament. Searchers said he walked through several miles of water ending up about three miles from the point where he and his father separated.

From the ground, it is evident there is a lot of water in this area, so much so that the RCMP tracking dog was not able to be an effective part of the search team.

From the air, an RCMP spokesman said, the area appears to be a virtual swamp. Moreover, from that vantage point, it appeared the fire which destroyed the cedar posts, also burned about 30 or more acres of grass.

Martin did not have a jacket with him, nor did he have any matches. But the weather, comparatively speaking, was on his side.

Some recalled that seven years ago, 250 men had tramped this region for two days, in a cold, heavy drizzle, searching for nine-year-old Theresa Adam.

Army helicopters and RCMP tracking dogs also were involved in the search, and after 48 anxious hours Theresa was found alive, although she had to spend several days in hospital recovering from her ordeal.

Lesson 3:

LOST BOY WALKS OUT OF WOODS

St. Labre--A 15-year-old boy, missing since 2 P.M. Monday, walked out of a densely-wooded section of the Sandilands Provincial Forest near here Tuesday night and, according to his mother, Martin Poiron was "little the worse for wear."

The youth was unharmed, except for a bruised knee and swollen feet. One of nine children of Mr. and Mrs. Joachim Poiron of St. Labre, about 80 miles southeast of Winnipeg, the boy disappeared while checking some burning timberland with his father.

He was wearing only a light sweater, tan pants, hat and rubber boots at the time of his disappearance. Tuesday night the boots were holed and soggy from walking through muskeg and swamps, the pants and sweater were tattered and torn from crawling through bushes, and the boy was hungry enough to help himself to three servings of a late-night dinner laid on for his benefit.

He had been without food for the 31 hours he spent wandering through the desolate terrain. He had only swamp water to drink.

For the brief period he spent asleep Monday night he used moss for a mattress and dried grass and twigs for a blanket.

His story: "I went with my dad Monday afternoon to check some burning brush," he said in an interview Tuesday night. Smoke had been seen rising in the direction of the family's 160-acre patch of woodland,

and Martin and his father set out at about 1:30 P.M. Monday to see if the fire was endangering a stand of red cedar on the land.

"We went there and built a firebreak around the trees," he said, "and then my father went to the truck while I went to check the other end of the patch to see if there was any fire there." The boy was familiar with the land--about five miles east of St. Labre, where the family lives--because he had helped cut lumber in the area last winter, his father said. But he wasn't familiar with the terrain beyond.

"I started walking down this trail," Martin said, "and I guess I must have taken the wrong turn at the fork, because I kept walking and walking and getting nowhere." After he had been gone for about 45 minutes his father set out to find him. Mr. Poiron said he circled the stand of red cedar, but could find no trace of the boy. "He was gone--there was nothing," he recalled Tuesday night.

He then returned to his truck, drove home, picked up his two eldest sons--Leon, 19; and Paul, 18--and returned, accompanied by several neighbors, to look for the boy. When the group returned to the field, it was about 5 P.M.

Meanwhile, Martin continued walking. "I kept walking and it wasn't until I got to the muskeg that I realized I was lost," he said. "I hadn't been in that area before, and I didn't know how to find my way back. I just kept walking until after the stars were out. I was all mixed up--lonely--I didn't know which way to go."

"Eventually, I guess it must have been around ten or eleven o'clock at night, I lay on some moss, covered myself with some hay and twigs, and went to sleep," Martin said, "I woke up before the sun was up. And my

feet were sore. I took off my boots, and crawled with them through the bush to a rock, where I lay until after the sun came up. I guess I was lying there, awake, for about an hour or two with the sun shining. Then I got up and started walking again."

Meanwhile, the father, brothers and neighbors had searched the bush until 1:30 A.M., Tuesday. They were back looking at 4 A.M. An RCMP spotter plane from Winnipeg was called in, and started an air search at about 11 A.M. The civilian searchers were withdrawn from the bush, Cpl. Ed Henderson of the Sprague RCMP detachment said, so the pilot and spotter wouldn't be confused. "This way they only had to look for one person, and not worry about being confused by civilian searchers on the ground," he said. The air search was cut off at 3 P.M., and an RCMP tracker dog from Brandon went into the bush.

Neither the air search nor the tracker dog were able to turn up any trace of the missing boy. The ground search was resumed about 5 P.M. Tuesday, when the dog was taken off the search, but the 25 area residents involved were also unable to come up with any sign of the youth.

"There was nothing--absolutely nothing to show that he was in there," said Jean Gerardy of St. Labre. Mr. Gerardy was one of the men who had been in the bush since 6 A.M. "And the bad thing is that the land doesn't show many tracks, unless he just happened to have stepped in a mud puddle or a sandy patch," he said.

Martin said he kept walking all day Tuesday. "My feet were sore. I had holes in my boots from the twigs, and the water was in them, and I had hurt my knee," he said, "but I knew I had to keep walking. I eventually hit one trail, and I figured if I stayed on it I would

come out on a road. I stopped and rested for maybe one or two minutes a couple of times, but the rest of the time I walked," he said.

At 9:20 P.M. Tuesday, Martin reached a road close to the area being searched. One of his older brothers had been firing a rifle into the air throughout the day in the hopes the sound would attract the boy, "but I only heard the last one he fired before he saw me," Martin said. The boy didn't hear the search plane either.

"But he was probably scared--more than he's willing to admit--and making a lot of noise trampling through the bush and splashing through the water," his mother said. "And I guess that would prevent him from hearing the airplane, or the gun." Mrs. Poiron, following her son's return, said she feared he had been hurt in the woods. "I didn't say anything," she said later, "but I was afraid that maybe he was hurt and couldn't walk out. Because he knows the area fairly well. But I guess he was in deeper than any of us thought."

The area, in the extreme southeast corner of the province, is virtually without roads or human habitation. It consists of heavy forest, a few dry ridges and large expanses of muskeg and swamp.

Martin, who quit school halfway through the eighth grade at Christmas, was taken home immediately after he was discovered on the road. "Boy, was he a welcome sight," his mother said. "He looked a mess, but still looked great."

Lesson 3:

WALT DISNEY

When Walt's older brother, Roy, finished school at the age of nineteen, he decided to run away from home as his two elder brothers had done. Before he left, however, he told Walt that he did not have to stand for any more beatings from his father.

The old man's habit had been, whenever he imagined that Walt needed a beating, to order the boy to the basement for a strapping. And there he would beat the boy until he was satisfied that he had enough.

Walt took Roy's advice. He went ahead of his father to the basement and waited. When Elias began to work him over with the leather strap, his son seized his hands in a grip the father could not break. They struggled briefly, and then the old man began to cry. He never again raised his hand to his son.

THE AUTOBIOGRAPHY OF WALT DISNEY

My father was furious at Roy's leaving and he wanted to get back at him, so he took it out on me. He shouted at me, "You need a whipping, Walter. Go down to the basement."

Although I had done nothing wrong, I obeyed. Father followed me.

"I'll teach you to be impudent and disobedient," Father bellowed, raising his strap.

But I had had enough of Father's ragings. I was not going to give him the pleasure of beating me again for nothing. So I grabbed his arm and held fast.

"Let me go," screamed Father. "Let me go, you young rascal." But I did not let go. For a few minutes my father struggled, then he gave up and dropped the strap. It was then that I let go of his arm. I knew that he would never again try to whip me.

How are the two stories different?

1. The second story gives more information about Walt Disney than the first.
2. The first story is a second-hand report; the second story is a first-hand report.
3. The first story is more accurate than the second one.
4. The first story is more accurate because it was written by a writer.

How do the two stories describe the reason for Walt's beatings by his father?

1. In the first story, Walt's father beat him whenever the boy was bad; in the second story, the father beat him because Walt disobeyed him.
2. In the first story, the father beat him because he liked beating people; in the second story he beat Walt because the boy had been rude.

3. In the first story, the father beat his son to show the boy who was boss; in the second story he beat Walt because he was angry that Walt's older brother had run away from home.
4. The reason for Walt's beatings in both stories is that the boy was bad and had to be kept in line.

Which of the following sources would you choose if you wanted the best account of Walt's thinking?

1. A fiction of Walt Disney.
2. A Book of Knowledge.
3. The first story.
4. The second story.

ASSIGNMENT FOR LESSON 3

Mr. Skunk was a nice little fellow, with a fine furry coat and a handsome stripe running down the middle of his back. And all in all he was so good looking, frisky and happy, you wouldn't think he had a care in the world.

But he was sad indeed! "I'm unhappy," said Mr. Skunk, "and I know why. It is because I sometimes have a funny smell, which other folks do not like." This was absolutely true. Mr. Skunk did have a funny smell, which he used to protect himself when he was attacked by enemies. So off he went one day to Owl, who was the wisest old bird in the forest.

"Well, well," said Owl, setting his spectacles carefully on his beak. "Smells, hey? Soon get rid of them, my boy! Easy as winking, or even easier."

"Oh, good," said Mr. Skunk. "What do I do, Owl?"

"Simple," said Owl. "What you need is SOAP. My own invention. Here, take a lump; one good dose of soap and all will be over."

Off went Mr. Skunk with his lump of soap under his arm. And when he got home he ate the lot. But he still had the funny smell, and a most uncomfortable feeling in his inside as well. How sad! And if only Owl had told him to wash with the soap and not eat it, skunks might be as popular today as pet rabbits! As it is, they are just as unpopular as before.

The skunk is a gentle and intelligent animal and easily tamed. It is a mammal; the babies drink the mother's milk.

The skunk has two strikes against him. The first is his chemical weapon which he uses only when frightened. If the liquid touches the eye, severe pain follows, even blindness. The second strike against the friendly skunk is his appetite for chickens and chickens' eggs. As a result, he is often trapped and shot.

This is unfortunate because the skunk does man a great service by eating pests such as mice, rats, grubs, cutworms, grasshoppers, and beetles.

A skunk's family life is close. In the summer the young follow the mother in a long file, as do baby ducklings. In the winter, they stay together in a den until the next spring when the mother makes them leave the den to make room for the new family.

In what way are the stories alike?

1. They both tell that skunks have a handsome stripe running down the middle of the back.
2. They both describe what skunks eat.
3. They both tell how skunks protect themselves.
4. They both say that skunks are mammals.

If you wanted to know to what class of animals a skunk belongs, which sentence would you select?

1. The skunk is a gentle and intelligent animal.
2. The skunk has two strikes against him.
3. The skunk is a mammal because the mother feeds her babies milk.

4. The skunk is a nice fellow with a fine furry coat and a handsome stripe down its back.

What sources would you use if you wanted to write a report about a skunk for your science class?

1. The first and second story.
2. Only the second story.
3. Parts of both stories.
4. Part of the first story and all of the second story.

Again it seemed as if the colony was beaten, but again help was to arrive, Selkirk himself had come to Montreal and hired a party of over a hundred professional soldiers, the de Meurons. With one hundred of these Swiss soldiers, he started West when news of Seven Oaks at Red River reached him. [Source--Travel Folder].

Selkirk spent some time in Montreal trying to get the Canadian Government to give him protection for his people at Red River. Failing in this, he asked to be allowed to take with him some of the soldiers of regiments which had been disbanded. These soldiers would act as bodyguards for him on his journey and would, he hoped, become settlers themselves. His request was granted and he set out with a party of two hundred and fifty men in canoes. When he reached Sault Saint Marie, he heard about the tragedy of Seven Oaks at Red River. [Source--Pages From Canada's Story (history book)].

In what way are these two paragraphs alike?

1. They both tell about why Selkirk came to Red River.
2. They both tell about the tragedy at Seven Oaks.
3. They both tell about Selkirk hiring soldiers.
4. They both tell about the poor support Selkirk received for his people at Red River from the Canadian Government.

Which of the following sentences about the number of soldiers Selkirk took with him is most accurate?

1. A party of over a hundred professional soldiers.
2. One hundred of these Swiss soldiers.
3. Some of the soldiers.
4. A party of two hundred and fifty men.

Which of the sources would you use for a report if you wanted the most accurate information about Selkirk and his trip to the Red River Colony?

1. Travel Folder.
2. Pages from Canada's Story (history text).
3. A diary written by Lord Selkirk himself.
4. A story book about the colony at Red River.

DESCRIPTION OF LESSON 4

LOGIC: ANALYZE AND JUDGE ARGUMENTS

- MATERIALS:
1. Overhead projector.
 2. Five prepared exercises on transparent acetate sheets.
 3. Pencil and dictionary for each student.
 4. Three mimeographed practice sheets and assignment sheets.

INTRODUCTION: Following a brief overview of the concepts developed thus far, the instructor introduces the purpose of the day's lesson: to analyze argumentative type statements and to determine the logic of such statements as they are used by writers and advertisers. Since arguments abound in newspapers, magazines and other materials which inevitably children will read later in life, such awareness is essential. Without it, readers are often at the mercy of the authors.

DEVELOPMENT OF LESSON: Because the area of logic was a relatively new concept to these elementary school children, it was found that the teacher had to define for the children the term "argument" as it is employed by mass media. The general background of this lesson is that the thought in books and in speech always has a structure, and the ability to

find this structure is vital to understanding. The technical term for this line of reasoning is "syllogism," but in this lesson it is referred to as "argument." The two terms are written on the blackboard while the class checks the dictionary definition for the term "argument." The meaning selected for the lesson is that an argument is an idea or thought in a clearly structured form wherein the relationship of the parts to each other and to the whole are immediately evident. A statement thus formed is said to have validity and reliability.

Next, the students check their dictionaries for the definition of "validity." The meaning selected as it applies to the lesson is: An argument that has validity is valid or sound because one statement follows another in logical order and the conclusion follows from the statements made. The children then examine the argument that has been written on the blackboard to determine whether it is sound, for example:

Dogs have sharp teeth.

My pet is a dog.

Therefore my pet has sharp teeth.

Students are given practice analyzing arguments and formulating their own logical statements (acetate Sheet #1 and mimeographed Sheet #1).

The next concept which the class is asked to analyze is the improperly structured thought or illogical argument, for example:

All dogs are animals.

All cats are animals.

Therefore all dogs are cats.

The decision reached by the class is that the conclusion makes the argument illogical because dogs are not cats. Students are then given an opportunity to examine and to complete illogical arguments, that is, arguments wherein the conclusion does not follow from the statements made (acetate Sheet #2 and mimeographed Sheet #2).

The children are introduced next to arguments that are valid but untrue, for example:

All students who have an A in social studies are smart.

Amy has an A in social studies.

Therefore Amy is smart.

From them are elicited the reasons why the statement is valid but untrue; the reasoning being that although the statements follow in logical order and the conclusion is derived from the statements made, it cannot be proven that Amy is smart on the basis of one A in social studies. Similarly, students analyze the remaining examples on mimeographed Sheet #3.

Finally, children are asked to examine arguments where the reader has to "infer" or "read between the lines" because the writer deliberately omits a statement, for example:

Tim is short-sighted.

Therefore he cannot drive without glasses.

Unstated premise: All people who are short-sighted
cannot drive without glasses.

Students are directed to supply the inferred statements for the remaining arguments on acetate Sheet #3.

To help establish the concept of the validity of an argument, the group is asked to formulate a standard for judging whether the reasoning in a statement is sound or valid. The desired concept to evolve from the review is that an argument is valid or sound when one statement follows another in logical order and the conclusion follows from the statements that have been made.

Before the reliability of an argument is examined, the meaning of the term "reliability" is first established. The pupils are invited to make suggestions and to check their ideas with the dictionary definition. The generalization that is drawn from the group is that a reliable statement or argument can be proven to be true because it is based on facts. The children are then given an opportunity to apply this criterion in analyzing the reliability of the arguments on acetate Sheet #1, for example:

People who smoke spend a lot of money on cigarettes.

My father smokes.

Therefore he spends a lot of money on cigarettes.

The generalization that ensues is that the pertinent facts are stated: cigarettes are expensive and the father smokes; it follows that smoking costs the father money.

To help students distinguish between a generalization

(as it is employed by advertisers) and a specific fact, they are asked to discuss the statements on acetate Sheet #4, for example:

Bill wears glasses.

People who wear glasses have poor eyes.

The desired concept to evolve from the analysis is that when a writer generalizes, he gives information about a group rather than a specific person or object.

Finally, the class is given an opportunity to analyze generalizations, unsound arguments, and colored generalities (acetate Sheet #5), for example: Blue Ribbon Coffee is the best coffee for its freshness, its taste, and its aroma. The generalization to be drawn from the discussion is that the arguments are unreliable because the statements are not based on facts.

Before the assignment is presented, pupils are asked to formulate the criterion for judging the reliability of an argument. The concept defined is that an argument is reliable if it is based on facts.

ASSIGNMENT: Students are given an additional opportunity to apply in judging the validity and reliability of arguments that criteria that was developed in the lesson.

SUMMARY AND EVALUATION: The object of the lesson is summarized. The generalization to be drawn out is that the lesson established

the validity and reliability of an argument and helped the children apply this criteria to the printed page.

Lesson 4:

Acetate Sheet #1

1. People who smoke spend a lot of money on cigarettes.
My father smokes.
Therefore my father spends a lot of money on cigarettes.
2. Liquids flow.
Water is a liquid.
Therefore water flows.
3. People who drive recklessly usually cause accidents.
John drives recklessly.
John usually causes accidents.
4. Tall people need special clothes.
Betty is tall.
Therefore Betty needs special clothes.
5. Good readers can read difficult books.
Philip is a good reader.
Therefore Philip can read difficult books.
6. Cats meow.
My pet is a cat.
Therefore my pet meows.
7. Dogs are animals.
Rover is a dog.
Therefore Rover is an animal.

Lesson 4:

Mimeographed Sheet #1

1. Some snakes are dangerous.
The cobra is a snake.
Therefore _____.
2. Men who drive big cars use a lot of gas.
My uncle drives a big car.
Therefore _____.
3. Pets without licenses should be impounded.
My pet rabbit has no license.
Therefore _____.
4. Unpainted fences should be painted.
My fence is unpainted.
Therefore _____.
5. Musicians need to be paid well.
My friend is a musician.
Therefore _____.
6. All cows eat grass.
My pet is a cow.
Therefore _____.
7. Most animals prepare for winter.
The rabbit is an animal.
Therefore _____.

Lesson 4:

Acetate Sheet #2

1. People who eat Cheerios for breakfast are strong.
Jack eats Cheerios for breakfast.
Therefore Jack is strong.
2. Smart people drive a Datsun.
Fred drives a Datsun.
Fred is smart!
3. All Canadians are peace-loving.
Bill is a Canadian.
Bill is peace-loving.
4. Be one of the crowd! Drink Coke.
I drink Coke.
I am one of the crowd.
5. Kangaroos are animals.
Cats are animals.
Therefore cats are kangaroos.
6. Students watch TV.
TV watchers are easily fooled.
Therefore students are easily fooled.

Lesson 4:

Mimeographed Sheet #2

1. All animals are afraid.
My dog is an animal.
Therefore _____.
2. All mules are lazy.
Some small animals are lazy.
Therefore _____.
3. All dogs have fleas.
Spot has fleas.
Therefore _____.
4. All detergents cause pollution.
Sunlight is a detergent.
Therefore _____.
5. All short people talk too quickly.
My grandmother is short.
Therefore _____.
6. All candy causes tooth decay and should be banned.
Bars are candy.
Therefore _____.
7. All young girls giggle.
Betty is a young girl.
Therefore _____.

Lesson 4:

Mimeographed Sheet #3

1. All students who have an A in social studies are smart.
Amy has an A in social studies.
Therefore Amy is smart.
2. All colors are bright.
Brown is a color.
Therefore brown is bright.
3. All lake water is polluted.
Our pond has lake water.
Therefore our pond is polluted.
4. All blond-haired people are boys.
Vivian is blond-haired.
Therefore Vivian is a boy.
5. All people who smoke will die of cancer.
My father smokes.
Therefore my father will die of cancer.
6. All boys who pass out leaflets are Communists.
Ted passes out leaflets.
Therefore Ted is a Communist.
7. All students watch too much TV.
I am a student.
Therefore _____.

8. All grade five students talk too much.

I am in grade five.

Therefore _____.

9. Insects eat plants.

A fly is an insect.

Therefore _____.

10. Boys like to play baseball.

Tim is a boy.

Therefore _____.

11. All men are brave.

Mr. Green is a man.

Therefore _____.

Lesson 4:

Acetate Sheet #3

1. Tim is short-sighted.
Therefore he cannot drive without glasses.
Unstated Premise: All people who are short-sighted
cannot drive without glasses.
2. Terry got an A in English.
Terry is smart.
Unstated Premise: All students who got an A in
English are smart.
3. That fish comes from Lake Winnipeg.
Therefore that fish is polluted.
Unstated Premise:
4. That story comes from the Free Press.
That story is not true.
Unstated Premise:
5. Bobby Orr is a member of the Boston team.
Bobby Orr is an excellent player.
Unstated Premise:
6. The mosquito is an insect.
Therefore the mosquito is a pest.
Unstated premise:
7. Many people attend the races.
Many people win money.
Unstated Premise:

Lesson 4:

Acetate Sheet #4

1. Bill wears glasses.
People who wear glasses have poor eyes.
2. Nancy has on a pink dress.
All girls like to wear pink dresses.
3. Jim likes to fish.
Most boys like to fish.
4. Winnipeg has many poor houses.
All big cities have many poor houses.
5. I like to drink coffee.
Most people like to drink coffee.
6. He is popular because he has a new car.
All men are popular who have new cars.
7. Tom's favorite sport is swimming.
All boys consider swimming their favorite sport.

Lesson 4:

Acetate Sheet #5

1. Blue Ribbon Coffee is the best coffee for its freshness, its taste, and its aroma.
2. There are more automobile accidents at dusk than at any other time of day.
3. Sea Foam is the best detergent. It gives more thick, creamy suds than any other detergent!
4. It rained because you killed a spider.
5. You will be "One of the Crowd" because you drink Coke!
6. You have a stomach ache because you ate a big meal.
7. You failed your examination because you don't carry a good-luck charm in your pocket.

ASSIGNMENT FOR LESSON 4

1. All cities in Canada have slums.

Winnipeg is a city in Canada.

What conclusion would you make from the preceding statements?

1. Therefore Winnipeg does not have slums.
2. Therefore Winnipeg may have slums.
3. Therefore Winnipeg has slums.
4. Therefore Winnipeg has many slum areas.

2. That animal is a wolf. Therefore he is dangerous.

If these statements are true, what is taken for granted?

1. Some wolves are dangerous.
2. All animals are dangerous.
3. A wolf is a dangerous animal.
4. All wolves are dangerous.

3. More students watch more TV than ever before in history.

Reading is becoming a forgotten art.

What conclusion does the writer want the reader to draw from this paragraph?

1. All students enjoy watching television.
2. Very few students are reading books today.
3. Many students watch television today.
4. Television is replacing reading among our young people today.

4. This box of apples has to be thrown out. I found two rotten apples. Fruit in boxes is so poor today.

Is this a fair statement?

1. No, two rotten apples do not make a whole box of rotten apples.
 2. No, the rest of the apples in the box are good.
 3. Yes, once one apple begins to rot, all the apples are bad.
 4. Yes, if the apples had been good to begin with, none would have rotted.
5. Tom believed in the proverb, "Haste makes waste." So he took his time during his test in social studies. He did not watch the clock. When the two hours were up, only half the questions were done. He received a low mark because he had not completed the test.

How would you interpret this proverb?

1. The proverb means that one should do one's test carefully but slowly.
 2. The proverb means that one should do one's test carefully and quickly.
 3. The proverb does not apply to school tests.
 4. The proverb means that careless practices waste a person's time.
6. Tim came to Mountain School in April and was chosen for the baseball team. In May they lost four games. In June they lost one game.

Which of these statements best explains their success?

1. Tim was a good baseball player.

2. The team won more games in June because they practised more.
 3. The team has good baseball players.
 4. It could be a combination of these reasons.
7. Father knew that Bill loved all sports, so he bought him a book on sports. He bought a book about sports for Bill's friend, too.

Should Father have bought a book about sports for Bill's friend?

1. Yes. A book is always a good gift.
 2. Yes. If the boy is Bill's friend, he must like to read books on sports.
 3. No. Father does not know if Bill's friend likes books.
 4. No. It cannot be assumed that because Bill likes to read about sports, his friend does, too.
8. It is believed that the pig is more intelligent than the cow.

What is the best way to describe this statement?

1. It is an opinion.
2. It is a fact.
3. It is a theory.
4. It can be proved.

DESCRIPTION OF LESSON 5

ANALYZE AND JUDGE PROPAGANDA DEVICES

- MATERIALS:
1. Seven charts of advertisements illustrating seven propaganda devices: Name Calling, Glad Names, Transfer, Testimonial, Band Wagon, Plain Folks, and Card Stacking.
 2. Pencil and dictionary for each student.
 3. Mimeographed assignment.

INTRODUCTION: Since the pupils will be applying the criteria they acquired in the previous lesson to propaganda devices, it is essential that they reexamine this criteria in order to make certain that they really comprehend the underlying principles. The desired concepts to be brought forth during the course of the discussion are: an argument is an idea or thought in a clearly structured form; an argument must be sound and must be based on facts; and many writers and advertisers present their ideas disguised by inconsistencies and the critical reader must be able to read between the lines to determine what is really being said.

The class is asked to define the term "propaganda." The responses are acknowledged and pupils are directed to check the dictionary definition. The definition employed in the lesson is that propaganda is a deliberate attempt on the part of individuals

or groups to influence the opinion or action of others.

The teacher then tells the children what she hopes to achieve in the lesson, that is, develop criteria that students will use in detecting and analyzing seven propaganda tricks and provide opportunities to apply this criteria to advertisements.

DEVELOPMENT OF LESSON: Depending on time, the teacher or the pupils read the captions in each advertisement.

The first technique "Name Calling" is introduced and the captions are read aloud: (1) "Where does a wrinkle come from? Once if you got a wrinkle, you had it for life. Until 2nd Debut, can smooth out deep ugly lines; (2) The naked sausage clothed at last! and (3) Ecology, the issues behind the science--a batch of life and death problems."

Students are required to analyze each advertisement and to state in their own words the significance of the "Name Calling" device. From the discussion the following generalization should ensue: Because unpleasant words are used to describe things that are disliked, the writer employs unpleasant words hoping that the reader will transfer this feeling to the person or object (ugly wrinkles) which the propagandist wants him to dislike resulting in the need to purchase the product being advertised.

The "Glad Names" technique is presented next and the captions are read: (1) "Lennox! Is natural freshness indoors,

from gentle warmth to sparkling coolness; (2) New! Try new Rose Lotion Vel for your dishes and feel rose petal softness on your hands; and (3) Of all sterling silver gifts only one carries the 'White Dot.' The Sheaffer 'White Dot' makes a special gift for special people."

During the discussion students are asked to compare the two tricks, Name Calling and Glad Names, and to determine the action that is suggested in each advertisement on the Glad Names chart. The generalization that is drawn from the students is that soft and gentle words pleasing to the ear are employed in describing the product in order to build a halo around it. The reader is then moved to buy that particular product and enjoy all the desirable qualities mentioned.

The third propaganda trick, that of "Transfer," is examined next and the captions from the various advertisements are presented orally: (1) "This is Kelly. She has rheumatoid arthritis . . . Arthritis Control--the Immediate Goal; (2) Run with the wolf. The motor oil for people who care about their cars; and (3) Dinah Shore's new Needlepoint Kits by Dorothy Lambert Brightbill--Dinah is working the Swan design."

The desired analysis of this propaganda device is: The advertiser tells the reader about something which the reader already likes or for which he has compassion and presents it with the product he wants the reader to buy or support. By putting the two things together the advertiser hopes that the feeling the reader has for the first object will transfer to

the second object that is being advertised. There is no connection between the picture and the product. The former merely acts as a decoy for the latter.

Before presenting the fourth technique, students are asked to define the term "testimonial." Suggestions are acknowledged and responses are checked with the dictionary definition. The meaning most relevant to the lesson is: a statement of recommendation. The fourth chart "Testimonial" is then introduced and the captions are read aloud: (1) "The world's record fishing champion reports: Caught more fish because my Folbot skims over water fast and quiet Will revolutionize fishing entirely; (2) Arthur Godfrey states: I've always been impressed by Chryslers. The way they look, the way they're built. I drive a Chrysler Town and Country Wagon; and (3) Steve Petrasek, Tire Engineer, could put any tire we've got on his camper. Here's why he's switched to Firestone They work! Take it from Steve."

The generalization drawn from the children following their appraisal of each advertisement is that the person pictured with the product reports that he really uses the product being advertised. The writer hopes that the reader will be influenced by the "testimony" given by the famous person and that he will purchase the product advertised. If Arthur Godfrey drives a Chrysler, it must be good.

Suggestions are invited for the interpretation of the statement, "Everyone is getting on the bandwagon." The replies are

acknowledged but students are asked to evaluate their own answers during the course of the discussion. The fifth technique, that of "Bandwagon," is introduced and the captions are read: (1) "Everyone's hurrying to Eaton's Warehouse clearance of men's wear; (2) Millions trust their lives to our puncture-proof tires Make it better. That's our credo at General Tire; and (3) Ladies' Home Journal, the Magazine Women Believe In."

The desired generalization that should ensue from the discussion is that the propagandist is trying to make the reader think that everybody is buying his product and that unless the reader does what everyone else is doing, he will be different.

The "Plain Folks" propaganda trick is presented next and the captions are read orally: (1) "On a tour of Toronto yesterday, Premier William Davis talked to students at Malcolm Collegiate Institute and in Trenton he had lunch with a number of elderly people; (2) the Prime Minister and his family attended a church picnic in one of the Party's Ridings; and (3) Gordie Howe gave up his whole Saturday to coach the local team in preparation for their all-important game."

Each advertisement is analyzed to determine what is being implied; the question, "What group or groups might utilize the 'Plain Folk' technique" is deliberated; and the propaganda technique is defined. The following principle underlying the technique is agreed upon: The propagandist tries to win the confidence of the-man-on-the-street by picturing his candidate

or sports figure as an ordinary person doing the things the reader might do. In this way he hopes to gain public votes or promote ticket sales.

The last propaganda device "Card Stacking" is introduced and the captions are read: (1) "Try this test and see Comet get out stains other cleaners leave behind; (2) Us Tareyton smokers would rather fight than switch. Tareyton is better. Charcoal is why! and (3) Bring out the best in your floor, coat it with instant protection, and keep its beauty forever."

During the discussion of the advertisements, the generalization is drawn out that card stacking is a device in which only part of the story is told. While the good points are built up, the bad points are omitted deliberately.

Remind the children of the obligations of a critical reader: to judge according to a standard every form of written communication. Through the inductive method, elicit the two standards for judging propaganda techniques. The desired concepts to be formulated are that propaganda is bad if it does not tell the whole truth (the ad on Tareyton cigarettes), and propaganda is good if it tells the truth and the idea helps people (the ads on ecology and arthritis).

ASSIGNMENT: The object of the assignment is to give students an opportunity to use the criteria developed during the course of the lesson in analyzing what the writer is implying in different forms of propaganda devices. Before the assignment is started,

children are cautioned that it is often difficult to discern what technique is being employed because advertisers tend to combine many of the tricks instead of just using one at a time.

SUMMARY AND EVALUATION: The generalization is elicited that there are criteria for detecting and analyzing different forms of propaganda devices and that a student can be made to realize that he, as a critical reader, must decide what is good and bad propaganda.

ASSIGNMENT FOR LESSON 5

1. Fresh from the place where fragrance is born--Field Flowers. A fragrance of freshness, sunshine, and all the flowers of the field. A new and beautifully delicate fragrance, borrowing its name from nature's favorite blossoms.

Surround yourself with Field Flowers--a woman's garden of fragrance perfume--by Avon.

What is the writer of this ad doing?

1. He is telling the reader the source of the perfume.
 2. He is telling the reader that the perfume comes only from fresh flowers.
 3. He is telling the truth in the best way it can be told.
 4. He is trying to use pleasant sounding words to sell his product.
2. Come alive! You're in the Pepsi generation! Today's kind of living calls for two kinds of Pepsi-Cola: Famous regular Pepsi for the clean, bold taste . . . plus energy to living your pace. Enjoy new Diet Pepsi-Cola when you want honest-to-Pepsi taste. Either way, it's the official drink of today's generation!

What is the message that is being conveyed in this ad?

1. The writer is informing the reader about the two kinds of Pepsi that are available on the market.
2. The writer is using "colored" words to advertise Pepsi-Cola.

3. The writer is telling the reader how refreshing Pepsi-Cola is.
 4. The writer is trying to persuade the reader to be "one of the crowd" and buy Pepsi-Cola.
3. If you are travelling to Saskatchewan in the near future, you should be staying at the Hotel Bessborough in Saskatoon. Why? Free indoor parking, comfortable fully-equipped bedrooms, color TV, a huge swimming pool, a swinging night club, and a staff that really cares about the travelling business man.

Choose the best interpretation of this ad.

1. The advertiser tells the reader that Hotel Bessborough is the finest hotel in Saskatoon.
 2. The advertiser tells the reader to visit Saskatchewan.
 3. The advertiser uses "colored" words to describe Hotel Bessborough.
 4. The advertiser tries to convince the reader that the "best" place to stay in Saskatoon is the Hotel Bessborough.
4. A well-known department store in the city "invites" Bobby Hull to come for a couple of days so that boys will have an opportunity to meet Bobby and to get his autograph.

Choose the best interpretation of the store's actions:

1. The manager wants to do his customers a favour.
2. The manager hopes to attract more people to his store.
3. The manager wants Bobby Hull to meet the young hockey players.
4. Bobby Hull likes meeting boys who are interested in hockey.

5. Why put up with dirt and grime in your drapes and carpets? Why let old dust irritate your nose, throat, and lungs? Get Power Vac to clean all the pipes in your home today.

Choose the most appropriate interpretation.

1. The writer uses the best words possible to describe his product.
 2. The writer tells the reader what harm is caused by dust.
 3. The writer tells the truth in the best way it can be told.
 4. The writer tries to persuade the reader to use his product.
6. A candidate for public office travelled about the countryside chatting with the old people, shaking hands with prominent members of the community, kissing babies, and lunching with women's groups.

What is implied in this ad?

1. The writer is telling the people that the candidate should be chosen for office because he is just like one of them.
 2. The writer is telling the people to beware of candidates who kiss babies and shake hands.
 3. The writer isn't implying anything. The candidate kisses babies and shakes people's hands because he is a friendly person.
 4. The writer is telling the people that they should choose the candidate who can kiss babies and shake people's hands.
7. Dominion Stores have prominent people like Julliette and Gordon Sinclair advertising their products on the radio and in the newspapers.

What is the purpose in using well-known people to advertise a store's products?

1. To show customers that important people shop for food at Dominion.
 2. To persuade the public to shop at Dominion for food.
 3. To give Juliette and Gordon Sinclair a job advertising food.
 4. To show the public how good their products are. Only important people will advertise them.
8. The manager of one of the city's pizza restaurants hired a well-known quarterback to advertise the restaurant's special brand of pizzas. The quarterback encouraged fans to visit the restaurant after the "game" because the pizzas were really special . . . he had tried them.

Why did the manager hire the quarterback to advertise his pizzas?

1. The quarterback had a good voice.
 2. The quarterback needed the money.
 3. The manager wanted to assure the public that his pizzas were the best. Even a famous football star said so.
 4. The manager wished to attract more customers in order to expand his business.
9. The best tobacco makes the best smoke. It's as true today as ever before. It's why millions of smokers proudly say, "Camel, please." Make it Camel Time right now!

What is the real message in this ad?

1. The writer is telling the reader that the best tobacco makes the best smoke.
 2. The writer is trying to convince the reader that Camel cigarettes are the best cigarettes to buy.
 3. The writer is telling the reader that millions of people smoke Camel cigarettes.
 4. The writer is telling the truth in the best way it can be told.
10. Magnovax! The finest color TV. Brilliant true color . . . automatically! Just turn it on. Magnovax Automatic Color tunes itself--gives you perfectly tuned pictures that stay precise. Every Channel! Every time! Automatically!

Choose the best interpretation of this ad.

1. The advertiser is telling the reader that Magnovax is the finest color TV.
2. The advertiser is trying to convince the reader that Magnovax is the only color TV worth buying.
3. The advertiser is using connotative words to trick the reader.
4. The advertiser is using the best words possible to advertise his product.

ADMINISTRATION OF POST-TEST

TIME: Approximately 45 minutes: 35 minutes for introduction and administration of test and 10 minutes for evaluation of the lessons.

- MATERIALS:
1. Pencil and eraser for each student.
 2. Copies of second section of The Critical Reading Test, Intermediate Level.
 3. Mimeographed answer sheets.

INTRODUCTION: Elicit from the class the underlying theme of the five lessons. Desired generalization to be drawn is that a critical reader has certain obligations to the printed page. Whatever he reads--news report, travel brochure, advertisement, book of fiction--he must consciously evaluate what the writer is saying in accordance with the standards defined during the course of the lessons.

Remind students that this second test they are about to write is to evaluate the effect of the lessons in critical reading.

ADMINISTRATION OF POST-TEST: Copies of the answer sheet are distributed and the pertinent data is filled in. After the two sample questions are completed with the class, the teacher instructs the students to turn to the second page of the test booklet

where the test begins. As each child finishes the test, the teacher collects the test materials. Caution students that this is not a speed test; each child is given all the time he requires to complete the test.

EVALUATION OF CRITICAL READING LESSONS: The teacher discusses briefly the object of the evaluation; half-scap is distributed; and students are directed to answer the two questions that have been written on the blackboard. The questions are: (1) Did you gain anything from the lessons? If you did, explain how the lessons helped you. If you did not, explain why you think the lessons were a waste of your time; and (2) Do you think other students in grade five would profit from the lessons? Give reasons why a) they would profit or b) they would not profit.

APPENDIX E

Experimental Study Schedule For Instruction

SCHEDULE FOR EXPERIMENTAL STUDY

| Period ¹ | Activity |
|---------------------|---|
| 1 | Introduction: Tape and discussion on power of words and purpose of Study. Pre-test: One section of <u>The Critical Reading Test, Intermediate Level.</u> |
| 2 | Lesson 1: Recognition and judgment of vague and imprecise words and multiple meanings of words. |
| 3 | Lesson 2: Judgment of author's viewpoint and competence. |
| 4 | Lesson 3: Identification, comparison, and evaluation of various sources in order to verify information. |
| 5 | Lesson 4: Analysis and judgment of arguments. |
| 6 | Lesson 5: Analysis and judgment of propaganda devices. |
| 7 | Post-test: Second section of <u>The Critical Reading Test, Intermediate Level.</u> Written evaluation of lessons by teacher and pupils. |

¹Each period is approximately forty-five minutes.