

THE UNIVERSITY OF CALGARY

THE RELATIONSHIP OF VOCABULARY INSTRUCTION AND
STUDENT EXPRESSION

by

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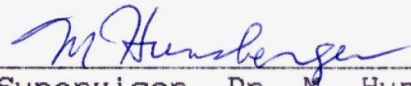
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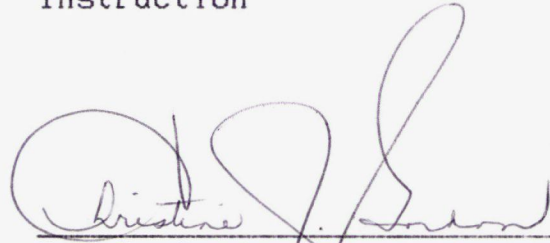
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "The Relationship of Vocabulary Instruction and Student Expression," submitted by Sylvia Joyce Pantaleo in partial fulfillment of the requirements for the degree of Master of Arts.



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ABSTRACT

Research on vocabulary has examined the relationships of vocabulary instruction to word learning, comprehension and written expression. This study extended the research on the relationship of vocabulary instruction and students' written expression. The research also investigated the students' abilities to explain the instructed words, the teachers' utilization of the students' background knowledge before and during instruction, and the teachers' selection of vocabulary words.

Naturalistic research procedures of taking field notes, recording classroom interactions, interviewing the teachers and the students and examining the students' written expression were utilized to gather data in two grade four classrooms. Information was gathered on the vocabulary instruction by the teachers and the students' ability to explain the meanings of the instructed vocabulary words.

A qualitative categorization scheme was utilized to analyze the data of the vocabulary instruction and the student interviews. The written expression of the students was examined to determine how frequently and how appropriately the instructed vocabulary words were incorporated into the students' writing.

The analyses of the data revealed the following about

both classrooms: the teachers directly taught vocabulary, the instructed vocabulary words came from a variety of sources, the teachers predominantly utilized limited instructional techniques during vocabulary instruction, the teachers were the dominant source of information during the instruction, the teachers verbalized more concrete than abstract information during vocabulary instruction, the background knowledge of the students was used to a minimal extent prior to and during the vocabulary instruction, the students articulated a small number of conventional responses for the words which the researcher asked, the students predominantly verbalized more concrete than abstract information in their responses to the words which the researcher asked, the students incorporated very few of the instructed vocabulary words into their writing, and the incorporated instructed words were generally used appropriately.

The integrity of this research project lies in its effort to conserve ecological validity by observing and recording the interactions of classrooms where the teachers were aware of the general, but not the specific, purpose of the research.

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The administration of the school jurisdiction where the research took place deserve recognition as they allowed me to conduct the study within the school system.

DEDICATION

To Paul Pantaleo, my husband and best friend

To Leonard Rout, my late father

To Eph and Ruth Rout, my Uncle and Aunt

And to Terry Pearson, a colleague and good friend

TABLE OF CONTENTS

	Page
APPROVAL PAGE.....	ii
ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	v
DEDICATION.....	vii
LIST OF TABLES.....	xii
 CHAPTER	
1 Overview of the Study.....	1
Introduction.....	1
Theoretical Framework.....	1
Organization.....	4
Research Questions.....	6
Definition of Terms.....	7
Limitations.....	7
Significance of the Research.....	9
Overview of the Thesis.....	10
2 Review of the Literature.....	12
Introduction.....	12
Theoretical Bases of Vocabulary Instruction.....	13
Research on Vocabulary Instruction.....	18
Vocabulary Instruction Utilizing Background	
Knowledge.....	19
Other Methods of Vocabulary Instruction.....	34

Strategies Proposed for Vocabulary Instruction but not yet Tested.....	41
Guidelines for Effective Vocabulary Instruction.....	42
Vocabulary Instruction and Writing.....	49
Chapter Summary.....	55
3 Research Methodology.....	57
Introduction.....	57
Selection and Description of Participants.....	57
Procedure.....	59
The Teacher Interviews.....	60
Classroom A.....	60
Classroom B.....	61
The Student Interviews.....	62
The Written Expression of the Students.....	64
Analyzing the Data.....	64
Type of Instruction.....	64
Vocabulary Words.....	66
The Written Expression of the Students.....	71
Chapter Summary.....	71
4 Analysis of the Data.....	72
Introduction.....	72
Classroom A.....	72
The Language Arts Program.....	72
Vocabulary Instruction.....	78

Whole Class Instruction.....	78
Spelling Group Instruction.....	84
Individualized Instruction.....	86
Summary and Discussion of the Instruction...	88
Analysis of Classroom A Student Interviews....	91
Conventional Vocabulary Responses.....	92
Whole Class Instruction.....	92
Spelling Group Instruction.....	94
Imprecise Vocabulary Responses.....	96
Non-Attempts.....	97
Errors.....	98
Whole Class Instruction.....	98
Spelling Group Instruction.....	99
Student Responses and the Type of	
Instruction	101
An Explanation of the Vocabulary Response	
Data.....	103
Student Responses to Research Questions.....	106
Summary of the Student Interviews.....	115
The Written Expression of the Students.....	116
Classroom B.....	121
The Language Arts Program.....	121
Vocabulary Instruction.....	128
Whole Class Instruction.....	128

Individual Instruction.....	133
Summary and Discussion of the Instruction...	133
Analysis of Classroom B Student Interviews....	134
Conventional Vocabulary Responses.....	136
Whole Class Instruction.....	136
Dictionary Words.....	137
Imprecise Vocabulary Responses.....	139
Non-Attempts.....	139
Errors.....	140
Student Responses and the Type of	
Instruction	141
An Explanation of the Vocabulary Response	
Data.....	143
Student Responses to Research Questions.....	145
Summary of the Student Interviews.....	159
The Written Expression of the Students.....	162
Chapter Summary.....	171
5 Conclusions and Implications.....	175
Introduction.....	175
Review of the Study.....	175
The Findings of the Research.....	176
Implications for Instruction.....	181
Implications for Further Research.....	184
Concluding Statement.....	186
REFERENCES.....	187
APPENDICES.....	200

LIST OF TABLES

TABLES	Page
1. Source, Frequency and Type of Instruction of Vocabulary Words in Classroom A.....	79
2. Categorization of Classroom A Vocabulary Instruction.....	82
3. Source, Frequency and Type of Instruction of Vocabulary Words in the Spelling Group.....	84
4. Categorization of Spelling Group Vocabulary Instruction.....	85
5. Categorization of Individualized Vocabulary Instruction.....	87
6. Categorization of Student Responses to Vocabulary Words Instructed in Classroom A.....	93
7. Categorization of Student Responses to Vocabulary Words Instructed in the Spelling Group.....	95
8. Type and Number of Errors for Vocabulary Words Instructed in Classroom A.....	99
9. Type and Number of Errors for Vocabulary Words Instructed in the Spelling Group.....	100
10. The Relationship of the Categorized Student Responses and the Type of Vocabulary Instruction in Classroom A.....	102

11.	Source, Frequency and Type of Instruction of Vocabulary Words of Classroom B.....	129
12.	Categorization of Classroom B Vocabulary Instruction.....	130
13.	Categorization of Student Responses to Vocabulary Words Instructed in Classroom B.....	136
14.	Categorization of Student Responses to the Dictionary Words.....	138
15.	Type and Number of Total Vocabulary Errors of Classroom B Students.....	141
16.	The Relationship of the Categorized Student Responses and the Type of Vocabulary Instruction in Classroom B.....	142
17.	Source and Frequency of Instructed Vocabulary Words in the Written Expression of Classroom B Students.....	165

CHAPTER 1

Overview of the Study

Introduction

Research on vocabulary instruction has been concerned with identifying methodologies which improve actual word learning and reading comprehension. A limited amount of research has addressed the relationship of vocabulary instruction to students' written expression of taught vocabulary. The present study has attempted to extend the knowledge which exists on the relationship of vocabulary instruction to individuals' written expression. Naturalistic research techniques were utilized to gather data in two elementary classrooms.

Theoretical Framework

"Knowledge of vocabulary, along with basic comprehension strategies, is the key to understanding both spoken and written language" (Johnson & Pearson, 1984, p. 1). "Words embody power, words embrace action, and words enable us to speak, read and write with clarity, confidence, and charm" (Duin & Graves, 1987, p. 312). A reading interaction involves a reader understanding word meanings. Similarly, when an author writes, he/she selects specific words which will communicate the desired meaning or message to his/her readers. Vocabulary is an inherent part of both the reading and the writing process.

The current view of the relationship between reading and writing is that these two processes are similar and connected. Theorists supporting this view state that both reading and writing involve planning, composing and revising (Pearson & Tierney, 1984), that an awareness of authorship and audience is necessary in both reading and writing (Tierney & LaZansky, 1980), that "both reading and writing involve transactions between a reader and a text" (Duin & Graves, 1987, p. 312), that reading is involved in the writing process (Tierney & LaZansky, 1980) and "that reading and writing are constructive processes involving similar choices, errors and skills" (Duin & Graves, 1987, p. 312).

Stotsky (1983) has summarized some of the research which has addressed the relationships between reading and writing. Duin and Graves (1987) have condensed Stotsky's findings into the following correlations: between writing ability and reading achievement, "between writing quality and reading experience, between reading ability and measures of syntactic complexity, and between reading and writing behaviours during the actual reading or composing process" (p. 313). As well, researchers "have examined the influence of writing instruction on learning to read and on comprehension and the influence of reading instruction on learning how to write" (Duin & Graves, 1987, pp. 312-313).

Although a great deal of research exists on the relationship between reading and writing, Stotsky points out

that "the exact nature of these relationships, as well as the influence of specific teaching methods and curricular activities upon their development, has not yet been determined" (1983, p. 627).

This study addresses Stotsky's concern about the influence of specific methods of instruction and their effects. The aspect of language arts instruction which was examined in this study was vocabulary instruction. There exists an abundance of research on vocabulary. Some of the studies deal with the relationships between methods of vocabulary instruction and vocabulary learning, while other studies have examined the relationships of vocabulary instruction techniques and reading comprehension. Regardless of the focus of the study, the implicit purpose of research which has been conducted on vocabulary was to discover superior techniques of instruction which would positively affect word knowledge and/or comprehension.

However, there has been very little research which has addressed the relationship of vocabulary instruction to the students' written expression of taught vocabulary. Grobe (1981), in examining the factors that influence teachers when marking students' writing, concluded that what teachers considered as 'good' narrative writing tended to include vocabulary diversity.

Thibodeau (as reported by Duin & Graves, 1987) examined the effects of vocabulary instruction on students' writing

and found a positive effect on writing ability and vocabulary knowledge.

By contrast, Wolfe (cited by Graves, 1986) found that vocabulary taught to college students did not appear to any significant extent in their writing. But Wolfe, unlike Thibodeau or Duin and Graves (1986, 1987), did not attempt to induce use of the vocabulary.

In two consecutive studies, Duin and Graves (1986, 1987), examined the effects of vocabulary instruction on students' writing. They found that students were more likely to use the taught words in their writing if they had received intensive vocabulary and writing instruction.

The purpose of this naturalistic research was to look at the relationships between vocabulary instructional methods and the expression of the taught vocabulary words in the students' written language in the language arts classes, and between the instruction and the students' ability to explain the meanings of the instructed words. Two inherent components of vocabulary instruction which were also examined were teacher selection of vocabulary words and teacher utilization of student background knowledge.

Organization

In order to examine the vocabulary instruction in ecologically valid contexts, the research was conducted utilizing naturalistic techniques. The researcher observed

the language arts classes of two classrooms and described the techniques used to select and teach vocabulary in each. Past research findings have demonstrated a relationship between the type of instruction utilized to teach vocabulary and the degree to which the taught vocabulary is learned (Beck & McKeown, 1982-83; Blachowicz, 1985, 1986; Bruland, 1974; Carr, 1985; Duffelmeyer, 1979, 1981, 1984, 1985; Eeds & Cockrum, 1985; Gipe, 1978-79, 1980; Kameenui, Carnine & Freschi, 1981-82; Marzano, 1984; McKeown, Beck, Omanson & Perfetti, 1983; McKeown, Beck, Omanson & Pople, 1985; Schwartz & Raphael, 1985; Stahl, 1985, 1986; Stahl & Vancil, 1986; Stieglitz & Stieglitz, 1981; Thelen, 1986; and Wilson, 1983). Further, a limited amount of research has addressed the relationship between vocabulary instruction and students' expression of taught vocabulary (Thibodeau, 1963; Wolfe, 1975; and Duin & Graves, 1986, 1987).

Data were collected by observing and audio-taping the language arts classes, interviewing the teachers and selected students (an academically diverse representation) and collecting the written expression of the students. A description of the methods utilized to teach vocabulary was obtained by observing the classes. Interviews with the teachers provided insights into their practises and beliefs. The classes were tape recorded to assist in describing the vocabulary instruction techniques. The written work of the students was examined to discern if the taught vocabulary

was being incorporated into the children's written expression. As well, the appropriateness of the incorporation of the vocabulary in the written work was examined. Finally, the individual student interviews were conducted to determine the students' ability to explain the meanings of a random sample of the words which had been taught in class.

Research Questions

The specific questions which guided this research project were:

1. If vocabulary is being directly taught, how are the words generated and what are the methodologies used to teach the vocabulary?
2. Is background knowledge assessed and accessed both before and during vocabulary instruction? If so, how?
3. To what extent are the students able to explain the meanings of the taught vocabulary words during the student interviews?
4. To what extent (i.e. how frequently and how appropriately) do the students voluntarily incorporate the taught vocabulary words in their written language in the language arts classes?

Definition of Terms

For the purposes of this study, it is necessary to define the following terms:

Background knowledge - Background knowledge refers to an individual's whole range of experiences and knowledge (schemata).

Highlighted instruction - This term was used to describe teaching situations, in either a group or an individual context, where effort was concentrated on teaching specific words by the teacher directing attention to a word or phrase and investing time and energy in the discussion.

Limited instruction - This term referred to vocabulary teaching, in either a group or an individual context, where a brief mention of a meaning or a definition or an example of a word/phrase was given and/or elicited. Neither time nor energy was invested in the articulation of the meaning. Also included in this category were those instances where the teacher seemed to be briefly 'checking' or assessing whether the students remembered or knew specific words or concepts.

Student written expression - Any/all of the written language of the students.

Limitations

There exist certain factors which may limit the findings of the research. The presence of the researcher in

the classrooms may have influenced the classroom proceedings in some manner. As well, the presence of the tape recorder in the rooms may have initially disrupted the regular interactions. Further, the classroom observations were conducted during the language arts classes. Any instances of reinforcing and/or applying the taught vocabulary or teaching new vocabulary (either by highlighted or limited instructional techniques) in other subject areas were not available to the researcher.

Further, the language arts periods of the two classes overlapped and thus, the researcher could not be present for all of the language arts classes. However, a tape recorder was in the room recording the interactions of the lessons.

Although every effort was made to carefully word the questions asked by the researcher in the teacher interviews, inadvertently the teachers may have been cued into the specific purpose of the research and consequently, the teachers may have altered their styles, procedures and answers to fit what they thought the research was addressing.

With regard to the student interviews, no measure of the students' knowledge of the words which received either highlighted or limited attention was obtained prior to the instruction. However, considering the age level of the children and the specific words which were asked, some predictions can be made. For example, it would seem

probable that a grade four student would be more familiar with the words 'tickle', 'sparkle', 'tie' and 'beginner' than the words 'derogatory', 'calamitous', 'ecumenical' and 'copious'.

Another limitation of the research deals with the breadth and depth of the research. Two classrooms were observed for a time period of approximately seven weeks. A greater number of classrooms observed for a greater period of time would substantiate the transferability of the findings.

Significance of the Research

There has been very little research conducted which has examined the relationship between vocabulary instruction and the students' expression of taught vocabulary. Those studies which have been carried out, utilized experimental procedures. In this study, naturalistic research methods were employed to preserve ecological validity. By describing actual classroom practises, the findings of this endeavour can add to the literature on the subject and spark further research in this area.

The results of this study may support or differ from past research which has examined the instruction of vocabulary in the language arts area. As vocabulary methods which result in both the learning of the words and the utilizing of the words in oral and written language are

sought, this project may provide some insights into achieving the latter.

The results of the project may add to the literature on the role of vocabulary instruction in language arts programs. Ideally, students are to take ownership of words, possess an adequate understanding of them and use them in their language. This study may provide additional knowledge regarding the structuring of programs which can better achieve these goals.

Naturalistic research, because it is carried out in the context of the classroom, may be more appealing to teachers when they are considering implementing or modifying research findings and implications.

Overview of the Thesis

The second chapter of the thesis contains a review of the literature on methods of vocabulary instruction and their relationships to word learning and reading comprehension. Literature on other strategies for vocabulary instruction which have not yet been tested and on the guidelines for effective vocabulary instruction are discussed. As well, the findings of recent classroom observations of vocabulary instruction are presented. Further, research on the relationship of vocabulary instruction and written expression is reviewed.

The naturalistic methods of observing the classrooms, taking field notes, recording classroom interactions, interviewing the teachers and the students and examining the students' written expression are explained in the third chapter. This section also includes information on the setting of the research and on the gathering and the analyzing of the data in the project.

The fourth chapter of the thesis contains a qualitative analysis of the vocabulary instruction, the student interviews and the students' written expression. As well, interpretations of the accumulated data are presented.

In the fifth chapter, conclusions and implications of the study are discussed. The linkage of this study to past and future research is examined.

CHAPTER 2

Review of the Literature

Introduction

The literature review will be divided into sections dealing with the areas of research relevant to the thesis topic. Firstly, a discussion of the theoretical bases of vocabulary instruction will be outlined, followed by a brief discussion of assessment of word knowledge. Secondly, research on various techniques of vocabulary instruction and the results of these methodologies with regard to actual word learning (and sometimes comprehension) will be discussed. The section on methods of vocabulary instruction will be divided into two subsections. The first part will examine those studies which have utilized background knowledge in their methods of vocabulary instruction and the second part will discuss research which has employed other methods of vocabulary instruction. Thirdly, other strategies for vocabulary instruction which have been proposed by researchers and theorists, but not yet tested, will be presented. The discussion of guidelines for effective vocabulary instruction will include the findings and recommendations of recent observations of vocabulary instruction. Finally, the literature review will examine the limited research which addresses the topic of vocabulary instruction and its relationship to writing.

Theoretical Bases of Vocabulary Instruction

"Teaching vocabulary is teaching the meaning of a word..." (Calfee & Drum, 1986, p. 825). But what does it mean to 'know' a word? A distinction between 'breadth' and 'depth' of word knowledge will be made. "The number of words for which a person knows at least some of the significant aspects of meaning" (Anderson & Freebody, 1985, p. 354) is called breadth of knowledge. Depth of knowledge, in contrast, is assumed to exist if in understanding a word, it conveys to an individual "all of the distinctions that would be understood by an ordinary adult under normal circumstances" (Anderson & Freebody, 1985, p. 354). Understanding depth of word knowledge in vocabulary development requires "information on the quality of the information students possess about words, as well as information on the number of words they know" (Graves, 1986, pp. 53-54).

Anderson and Freebody outline three different hypotheses about vocabulary knowledge and the instructional implications of these. The instrumentalist position posits that knowing words, i.e. automaticity of word meanings, enables comprehension of text. Therefore, instructional implications of this view would involve rote learning of individual word meanings and their synonyms in isolated contexts. Nagy and Herman state that teaching words does not necessarily increase reading comprehension. They state

that "...different approaches to vocabulary instruction differ widely in the extent to which they lead to an increase in the comprehension of texts containing the instructed words" (1987, p. 28).

The second position deals with verbal aptitude. The assumption of this hypothesis is that "persons with large vocabularies are better at discourse comprehension because they possess superior mental ability" (Anderson & Freebody, 1985, p. 346). Sternberg states that, "vocabulary is probably the best single indicator of a person's overall level of intelligence" (1987, p. 90). There is a high correlation between an individual's scores on tests measuring vocabulary knowledge and reading comprehension (Sternberg, 1987, p. 90). However, a major unresolved issue is the direction of influence of these correlations, "...i.e. whether vocabulary knowledge affects IQ and reading comprehension, or vice versa..." (Jenkins, Stein & Wysocki, 1984, p. 768). Recommendations of this hypothesis are that "...educators try to maximize the amount of reading children do...beginning readers and poor readers receive extensive drill and practice on 'fundamentals' of reading...more practice in speeded word recognition and more practice in immediate memory for the literal content of text" (Anderson & Freebody, 1985, p. 349).

The third view, the knowledge position, suggests that conceptual knowledge is crucial for text understanding.

Instructional implications for this position would be to "present words and concepts in relational categories to reflect models of memory stressing (deepest levels of) semantic networking for storage and retrieval" (Blachowicz, 1985, p. 877). Generally, "...new vocabulary ought to be learned in the context of acquiring new knowledge" as "...concepts come in clusters that are systematically interrelated" (Anderson & Freebody, 1985, p. 350).

The knowledge position is reflected in both the interactive model of reading, which postulates that reading is an active process, where the reader is involved in making meaning by "generating a hypothesis about meaning and by simultaneously initiating letter and word identification" (Pearson & Kamil, 1978, p. 6) and schema theory, which "...extends the interactive model by attempting to explain how information from the text becomes integrated with the reader's prior knowledge about the world" (Jones, 1982, p. 774).

The interactive model of reading is based on the assumption that readers are not passive consumers as they read. Rather, they formulate meaning by utilizing bottom-up processes, semantic and syntactic information from the text, as well as bringing personal information and experience to the passage. The latter are orchestrated in concert to produce 'meaning' by the reader.

Schema theorists also view readers as active in making meaning as they read and/or process oral language. Rumelhart defined schema as "...a data structure for representing the generic concepts stored in memory" (1981, p. 5). These abstract knowledge structures contain a network of interrelations, including information on how to utilize the knowledge embedded. An individual's background knowledge is stored in these structures. Schemata provide a framework of expectations for a concept as well as interrelate knowledge of various topics or events. According to McNeill, comprehension of a message "involves constructing a correspondence between an existing schema and the elements in the message" (1984, p. 3). Vocabulary is an inherent component of an individual's background knowledge and experiences. Thus, it plays an integral role in an individual's comprehension and expression of both oral and written language.

Obtaining information about an individual's vocabulary requires the assessment of word knowledge. The literature reveals that multiple choice tests have generally been utilized to assess word knowledge. Multiple choice tests have been criticized by Anderson and Freebody because performance on this type of test depends on the distractor set, an individual's knowledge of the words being tested and an individual's test-taking strategies or skills abilities (1981, pp. 362-363). Curtis states that an "...analysis of

the kind of word knowledge assessed by standardized reading vocabulary tests suggests that only a moderate amount of information about a word's meaning is required to answer an item correctly" (1987, p. 44).

There exist qualitative differences in students' knowledge of words (Feifel & Lorge, 1950; Kruglov, 1953; Russell & Saadeh, 1962; and Curtis, 1987). If students are to formulate word meanings by thinking "(1) What is it? (2) What is it like? (3) What are some examples?" (Schwartz & Raphael, 1985, p. 200), then oral tests structured such that an individual was able to tell all that he/she knew about a word would seem more consistent with how students formulate word meanings. As well, the depth and precision of word knowledge would be more accurately assessed by this oral method.

A multiple choice test "that minimizes the unpredictable and confounding effect of distractors and provides information about the depth of word knowledge" (Graves, 1986, p. 56) was constructed by Nagy, Herman & Anderson (1985). Individual interviews were conducted as well to assess the individual's level of word knowledge. The results of their study showed that the difficulty levels established in the interviews correlated well with the levels of word knowledge measured by the multiple choice test. Oral tests structured such that an individual was

able to tell all that he/she knew about a word would seem more accurate in assessing word knowledge.

In a review conducted by Graves (1986), he found few studies which utilized interviews to probe vocabulary knowledge. Although there were a limited number of studies, the procedures employed in the research projects he reviewed provided reasonably "...reliable methods of scaling the quality of students' knowledge of word meanings" (p. 57).

The methods utilized to assess word knowledge have varied. However, measuring depth of word knowledge has received little attention in research. In his review of vocabulary learning and instruction, Graves points out that there has been very little research conducted on depth of word knowledge in school age children (1986, pp. 54-55). By accessing students' background knowledge prior to and during vocabulary instruction, information about the students' depth of word knowledge can be obtained.

Research on Vocabulary Instruction

An essential part of any language arts program is vocabulary instruction. Various methods of teaching vocabulary have been attempted, some employing instructional techniques which involve the activating of background knowledge. Other studies have utilized dictionary, contextual and/or synonym activities as methods of vocabulary instruction. The underlying drive of studies

which have examined vocabulary is to identify techniques of vocabulary instruction which will positively affect word knowledge and/or comprehension of text.

Vocabulary Instruction Utilizing Background Knowledge

A study dealing with the accessing of background knowledge during vocabulary instruction was carried out by Eeds and Cockrum in 1985. They examined the effectiveness of three methods of teaching vocabulary with fifth grade students. The target words were selected from the novel to be dealt with while the research was in progress. The words selected were those the researchers felt an average grade five student would not know.

Two of the vocabulary instructional techniques consisted of dictionary and contextual activities. The third method, called the teacher interaction method, involved teaching the target words by fitting them into an already existing network by activating common experiences, personally hooking up the target words to an individual's experiences, thinking of and/or writing a non-example and finally, expressing in their own words, the meanings of the particular words. A multiple choice posttest demonstrated that the interaction method of instruction resulted in significant gains of word meaning knowledge over a dictionary method (copying the correct definition) and reading words in context (incidental vocabulary learning).

Following a three week period, retention of word meanings was retested by the same multiple choice posttest and significant effects were found for the expansion of schemata method of instruction (teacher interaction method). Those students identified as 'low-ability' in the teacher interaction group, outperformed or equalled those 'high-ability' students in the dictionary and reading in context methods. The activities involved in the teacher interaction method of instruction reflect deeper processing as described by Stahl. Stahl states that deep processing "can be defined as either making more connections between new and known information (or relating the word to more information than the student already knows) or spending more of one's mental effort on learning" (1986, p. 664).

Joan Gipe (1979) also examined the use of background knowledge in comparing the effectiveness of various vocabulary teaching techniques. The target words for the study were selected from three external resources. The four methods compared in Gipe's study were the following: an association technique where target words were paired with a synonym or phrase, a categorizing method, a context method, and a dictionary exercise. The context method embedded the target word in three context-rich sentences, the last being a definition. The person was then required to write an example, a situation or some other response, from his/her personal background experiences at the end of the passage

about the word. The results of her study indicated that the context method was the superior technique of instruction, for both good and poor readers at both the grade three and grade five levels.

Most important, in terms of the context method used in Gipe's study was the fact that the students had to apply their own personal knowledge about the meaning of the target word. An underlying purpose of Gipe's study was to interpret the results in terms of cognitive process theories. Her results support the interactive model where the context "...guided each learner to the 'old information' present in his/her conceptual base" (1978-79, p. 640). Each target word could be assimilated into a conceptual system based upon the background experiences of the individual. As McKeown and Curtis state "...rich ties between the new words that students are learning and what they already know must occur for optimal vocabulary learning" (1987, p. 2).

Based upon Gipe's description of the context method, the appropriateness of the label assigned to the method is questionable. It was not a technique which was solely dependent upon context. Rather, the method seems consistent with what Steven Stahl has deemed the 'mixed method' of vocabulary instruction. He states that a mixed method of vocabulary instruction provides both definitional knowledge ("...the knowledge of the relationships...between a word and other known words," 1985, p. 17) and contextual knowledge

("...knowledge of a core concept and how that concept is realized in correct contexts," 1985, p. 17).

In 1983, Stahl completed a study which investigated the effects of two vocabulary instructional methods, one being the mixed method of instruction. The target words were chosen from the eighth-grade level in The Living Word of Vocabulary by Dale and O'Rourke (1976). The first procedure involved looking up target words in the dictionary, writing down the correct definition, discussing the definitions and later on in the week, requiring the students to write synonyms and generate their own definitions for the words. The alternate method, which Stahl called the mixed method of instruction, entailed the students being given the definitions, discussing the meanings, using the words in two different sentences and generating their own sentences.

Stahl found that both methods resulted in gains in vocabulary knowledge (as measured by a multiple choice test) and that there were no significant differences in the scores of the two methods. A careful scrutiny of the description of each treatment results in the realization that these two methods were not significantly different. They both required definitional and contextual knowledge and the depth of processing and effort demanded by each was similar. The discussion and generative assignments of both methods, which would involve the students accessing their background information and experiences, would allow the "...new words

to be learned...to be related to and integrated into larger meaningful concepts" (Bruland, 1974, p. 213). Both methods improved comprehension as measured by tests of passage comprehension, sentence anomaly and sentence closure. The mixed treatment produced marginally higher gains, but not significantly.

Stahl reviewed the literature comparing different vocabulary methods and concluded that those methods which required students to generate their own definition or context of a target word were more effective than either an association method (synonym or selected definitions) or a comprehension process where an association is applied (matching, filling in the blank, etc.). He attributed the results to the generative process requirement which demands a deeper depth of processing, i.e. "...making a larger number of associations between new and known information" (1985, p. 19), or the exertion of greater amounts of cognitive energy.

In a recent review by Stahl and Fairbanks, a meta-analysis approach was employed to report on studies dealing "...with the effects of vocabulary instruction on the learning of word meanings and on comprehension" (1986, p. 72). The results of their analysis of many studies suggested the following: "...the most effective vocabulary teaching methods included both definitional and contextual information in their programs, involved the students in

deeper processing, and gave the students more than one or two exposures to the to-be-learned words" (1986, p. 72).

Kameenui, Carnine and Freschi (1982) utilized a similar method of vocabulary instruction as Gipe's previously mentioned context method. In addition, they required the students to verbally provide a meaning for the word and to answer a question that taxed their knowledge of the word. They discovered that this method increased the students' knowledge of the target words as well as their comprehension of text which contained these words. The authors state "...that vocabulary training must be extended to include instruction on multiple meanings of words and on using contextual information to select the appropriate meaning of a polysemous word" (p. 387).

Jiganti and Tindall completed a study which addressed the comparison of different vocabulary instructional techniques which required different levels of processing. The researchers started from the premise that research "...suggests that knowledge of word meaning increases if the new word is incorporated into the students' existing cognitive schemes" (1986, p. 444). The two methods of vocabulary instruction used with the grade five students were: a categorization technique, where exercises were designed "...to help students tie new words into their existing framework of knowledge..." (1986, p. 444); and a drama technique, which involved active student involvement

in the dramatic interpretations of the new words. They contrasted these two methods with the traditional method of having students find the correct definitions of the words in the dictionary and using the words in sentences, demonstrating knowledge of the words. This dictionary technique was assigned as homework. The researchers chose words at the eighth-grade level.

Both the categorization and dramatic methods produced superior results over the homework method in number of words learned. The results were both short and long term for both good and poor readers. There were no significant differences between the classroom techniques. The authors suggest that "...their common ingredients (eg. group interaction and enthusiasm, use of new words in correct context, and exploration of word relationships" 1986, p. 447) may account for the similar results.

Beck and colleagues completed three other studies which required students to draw upon their background knowledge. The first was carried out by Beck, Perfetti and McKeown in 1982. The target words were selected from fourth-grade materials of the Ginn 720 Reading series. "Words judged as likely to be unknown, yet useful and interesting for fourth graders to learn, were chosen from Ginn's target vocabulary" (p. 509). Fourth grade children were taught vocabulary words using a method which required them to access their background knowledge, practice and apply the words in

various contexts, generate novel contexts and justify and explain their answers, i.e. the students explored and extended concepts in a setting where manipulation and interaction of ideas were promoted.

Those students taught in the manner described above scored significantly better on a vocabulary test than the control subjects, who had been "...matched on preinstruction vocabulary knowledge and comprehension" (p. 506) and who had received traditional textbook language arts instruction. As well, there appeared to be some transfer effect to general word learning, but Beck et al. hypothesized other factors such as classroom effects, motivation and improvement in test-taking ability, as possible influential factors (p. 520). They noted that further research is needed to explore these effects. Another result of the study was that the experimental groups scored better on two comprehension measures administered, supporting the notion that text comprehension is enhanced by deep and fluent word knowledge. The latter apparently occurred as a result of instructional methods which focused on providing depth and facility in word knowledge.

A replication of the above study took place in 1983 by McKeown, Beck, Omanson and Perfetti. Grade four students were presented with sets of words grouped according to some semantic relationship. The target words were selected on the same basis as in the original study. "Two frequency

conditions were designed within the instruction to explore whether differential exposure to target words would produce differential learning outcomes" (p. 6). In the study, the instruction "...was designed to include a range of task requirements such as matching words and definitions, associating a word with a context, creating contexts for words, and comparing and contrasting words to discover relationships. The rationale here was that requiring students to manipulate words in rich ways should produce a deeper understanding of the words and more flexibility in using the words" (p. 6). As well, the program contained "...a motivational device to promote the students' use of the words outside of vocabulary class" (p. 7). Students could become 'Word Wizards' if they used or recognized the use of the target words outside the class.

The results of the study were as follows: the instruction was successful in enhancing accuracy of knowledge of the instructed words as measured by a multiple choice posttest; the experimental group scored higher on 'many' and 'some' exposures than no exposures, whereas, the frequency of exposures did not affect the scores of the control group; the instruction was successful in enhancing lexical access of instructed words as measured by performance on a semantic decision task; and the instruction enhanced comprehension of stories containing the instructed words. Gains were obtained by the instructed group for both

the many and some conditions. "However, the many words did show an advantage over the some in the vocabulary knowledge test, in speed of lexical access, and on the comprehension questions asked about stories containing taught words" (p. 18).

The type of instruction in this study was "...designed to provide a deep and fluent knowledge of words...children were asked to justify and explain their responses...the instruction provided a variety of opportunities for children to learn new words and challenged them to explore and extend the newly learned concepts in a lively, verbal environment" (p. 18).

In 1983, Beck and McKeown conducted another study which examined the instructional implications of their 1982 work. The researchers investigated semantic relationships. Words were divided into semantic categories and a variety of instructional tasks such as "...defining, sentence generation, oral production and game-like tasks involving speed of response" were designed to promote "...a richer understanding of the words and more flexibility in using them" (p. 623). Students were required to use personal examples from their own experiences, create novel situations incorporating the words and justify their responses, thus prompting deeper processing of the words. One technique utilized was semantic feature analysis where the students

differentiated "...critical features of words and generalized a word to similar words" (p. 624).

The results of the study were as follows: the students learned the instructed words; on tasks measuring response time in making semantic decisions, the instructed children were faster and more accurate; the children used the words outside of their class; the treatment group obtained greater scores in comprehension than the control group; and finally, on a standardized measure of reading comprehension and vocabulary, the children made significant gains, suggesting that learning beyond the target words had occurred (p. 624). Beck and McKeown feel that "...specific vocabulary instruction can successfully teach word meanings, improve comprehension, get children to use the words outside of class and perhaps improve general comprehension" (p. 625).

A third study by Beck and colleagues investigated the use of semantic links in vocabulary instruction. They examined three types of instructional methods to teach vocabulary and the frequency of encounters with instructed words. The target words "...were selected to correspond to vocabulary words introduced in basal reading programs during the intermediate grades" (McKeown, Beck, Omanson & Pople, 1985, p. 525). Some words were taken from the Beck, Perfetti and McKeown (1982) study. The three types of instructional techniques were: traditional instruction, where the children were required to make a simple association between

a word and its definition or synonym; rich instruction, where the children were "...asked to identify the relationship between words, respond to words affectively as well as cognitively and apply words to various contexts" (p. 526); and extended/rich instruction, which "...consisted of rich instruction combined with a motivational activity called 'Word Wizard' that promoted the students' use of words outside of vocabulary class" (p. 526). (The activities in the rich and extended/rich instructional methods closely resembled activities in the original Beck et al. study in 1982.) The frequency manipulation consisted of four or 12 encounters with the target words.

The measured outcomes of the study were: definitional knowledge, fluency of access to word meanings, context interpretation and story comprehension. The extended/rich method showed an advantage over the rich method in the semantic decision task and the story recall. In the other two measures, knowledge and context interpretation, the extended/rich instruction equalled the rich instruction. High frequency encounters of words yielded better results for all of the instructional methods.

The researchers suggested that certain qualities of the rich and extended/rich methods accounted for their superiority over the traditional method.

The rich instruction developed elaborated word meanings and presented diverse contexts, which apparently resulted in the development of semantic

networks around the learned words. These networks of interrelated meanings and concepts could then be drawn upon to understand a word's relationship to a given context and to develop an integrated representation of meaning from the context (p. 533).

With regard to the extended/rich technique, the use of the words outside the class, "...may have allowed the establishment of a wider variety of semantic links to the new words, which in turn made the new words more readily accessible" (p. 533). Essentially, these two methods dealt with accessing background knowledge and experiences and linking new information with already existing information.

Consistent with the research of Beck and colleagues was a study conducted by Raphael and Schwartz in 1985. They proposed a vocabulary instructional method called context of definition, which was based on semantic mapping. This technique provided a general schema or structure for word meaning. Students selected and evaluated "...different sources of information available for determining the meaning of a word, combining the new information with their prior knowledge into an organized definition and recalled previously learned vocabulary" (p. 198).

For the word map, three categories of relationships were used. Firstly, the general class; secondly, "...the primary properties of the concept that distinguish it from other members of the class" (p. 200); and thirdly, examples of the concept. Students taught this concept of definition method were more likely to use context correctly to

interpret a word, could write more elaborate definitions of words and had a greater awareness of a strategy to use when determining word meanings than those students not taught this method (p. 201).

Stahl and Vancil (1986) examined semantic links in vocabulary instruction as well by teaching grade six students vocabulary through the use of semantic maps. The target words were taken from a content area text and were words which the teachers felt the students would have difficulties understanding. Three treatment groups were established: in the first group, a semantic map was constructed and the students engaged in extensive discussion about the map; in a second group, "...the relationships between the words were discussed...but no physical map was generated" (p. 65); and in a third group, the students constructed the semantic map but no discussion of the relationships between the words occurred. The students in this group were "...directed to study the meanings of the words using the map as a guide" (p. 65). The usefulness of this third approach would depend heavily upon the students' study skills and metacognitive strategies.

The grade six students were tested for their vocabulary knowledge of the target words through a cloze and a synonym test. The groups which participated in discussion, scored higher than the group who only constructed a semantic map. The two groups which engaged in discussion did not differ

significantly on their scores on the two measures. Therefore, the authors concluded that discussion "...seems to be the crucial factor in semantic mapping" (p. 65). The discussion allowed the students to link new information to their already existing knowledge structures. Through verbalizing the relationships between the words, the processing of information was enhanced. Each child was encouraged to think "...about the relations between the target words and the student's own experiences. It is this active thinking that leads to effective vocabulary learning" (p. 66).

A method developed by Carr (1985) called 'The Vocabulary Overview Guide' focuses on semantic links as students are trained "...to establish a network of relationships among words and relate these words to personal experiences" (p. 684). This method utilizes strategies which are consistent with the interactive view of reading, as background information is activated to comprehend and assimilate new information, a framework is established to organize and relate the new information and self-monitoring activities to check the understanding of what is being learned are employed (p. 685). Carr's method has been successfully used with adults, junior college and high school students to teach vocabulary. Research implementing this technique (perhaps a somewhat modified version) at the elementary levels would be worthwhile, as her method is

founded upon solid theoretical grounds and has proved effective with older individuals.

From the studies which have been reviewed, it is clear that the role of background knowledge in vocabulary development has been firmly established in the literature.

Other Methods of Vocabulary Instruction

In the literature on vocabulary development, there exist alternative views of instructional methods. One such method is the keyword method. Levin, Pressley and colleagues have demonstrated through their research that the keyword method of teaching vocabulary is both efficient and quick. The keyword method is a mnemonic strategy which involves the students constructing visual images of the definition of a word interacting with the keyword (Pressley, Levin & McDaniel, 1987, p. 109). In repeated experimental studies, keyword subjects recalled more definitions than control individuals who were not taught the keyword method or who were taught a contextual-analysis strategy (Levin, Johnson, Pittelman, Levin, Shriberg, Toms-Bronowski & Hayes, 1984). It should be noted that the keyword method is a strategy which focuses on facilitating the acquisition of vocabulary definitions.

Sternberg states that "most vocabulary is learned through context" (1987, p. 89.) He writes that neither memorizing words or forming keywords are "...practical

strategies for learning a language as a whole" (1987, p. 90). Sternberg acknowledges that learning from context is not the most efficient or quickest method of learning vocabulary but he states that learning from context best explains how individuals learn their vast vocabularies. He promotes the independence of students in using context to teach themselves. Sternberg outlines three principles for teaching learning from context: the instruction in how to use context must be based in theory, the instruction must be made relevant to the students' lives and the instruction must "...teach students to use context to teach themselves" (1987, p. 97). In their research, Sternberg and colleagues have found that instruction of decontextualization skills, "... particularly in processes of knowledge acquisition, contextual cues and moderating variables - is an effective way to foster..." (1987, p. 103) the development of vocabulary-learning skills. He acknowledges that the "learning-from-context method is at its best for teaching learning-to-learn skills, not for teaching specific vocabulary" (1987, p. 104).

A study in 1984, by Frederick Duffelmeyer dealt with using a context method to teach vocabulary. The students were exposed to context-rich sentences containing the target words (taken from the Gates-MacGinitie Reading Test Level E) and a definition/synonym was to be selected, based upon the way the word was used in the sentence. He demonstrated that

good and poor eighth grade readers, who were exposed to context-rich sentences, as opposed to an isolation method, scored better on vocabulary measures. Duffelmeyer stated that "...strategies for teaching word meanings should incorporate some sort of contextual component" (p. 107).

Duffelmeyer's study examined a simplistic issue and the results were not surprising, as any information which will assist a reader in ascertaining meaning is superior to presenting words in isolation. Further, the methods used to evaluate vocabulary learning were more of a recognition task than a production task. Thus, the depth of processing of the words engaged in by the students is questionable.

There have been mixed results in the research with regards to the effectiveness of contextual methods of vocabulary instruction (Gipe, 1979; Jenkins & Dixon, 1983; Jenkins, Stein & Wysocki, 1984; McKeown, 1985; and Nagy, Herman & Anderson, 1985). Experimental studies "...have often found that inferring meanings from context is less effective than more intensive or explicit forms of instruction... (and) in instruction, a combination of context and definitions is more effective than context alone..." (Nagy & Herman, 1987, p. 25). A study carried out by Omanson, Beck, McKeown and Perfetti (1984) found that "...the presence of unfamiliar words impaired recall (and therefore, they) caution against an over reliance on contextual methods" (p. 1266). The results of research on

contextual methods of vocabulary instruction have been influenced by the age of the students, the academic ability of the students, the form of the context clues, the location of the context clues in the text and both the amount and the type of training students received in contextual analysis strategies.

Not all researchers agree that specific in-school vocabulary instruction is necessary or beneficial. Nagy and Herman state that "...explicit vocabulary instruction...cannot produce substantial gains in overall vocabulary size...Major progress toward these goals can be attained only by increasing incidental vocabulary learning" (1987, p. 19). Research has revealed that very little explicit vocabulary instruction occurs in classrooms (Durkin, 1978-79; and Jenkins & Dixon, 1983). Nagy and Herman argue that children are acquiring their vast vocabulary knowledge via other methods, mainly incidentally. They state that sustained reading (approximately 25 minutes/day) is the method whereby students will increase their vocabularies. "Incidental learning of words during reading may be the easiest and single most powerful means of promoting large-scale vocabulary growth" (1987, p. 27). Nagy and Herman clarify their position about the status of vocabulary instruction in classrooms by stating that the limitations and the strengths of methods of vocabulary

instruction must be understood for effective development and implementation.

Joyce Castle (1986) agrees with Nagy and Herman about the importance of students becoming independent word learners. She stresses the imperativeness of students engaging in extensive reading but notes that in order to ensure vocabulary growth, teachers must do more than have their pupils read widely (p. 13). Castle emphasizes that students must: read from a variety of contexts, relate their experiences to the materials which they read and practise skills which assist them in learning from context. Two other points Castle mentions as necessary in an effective vocabulary program are teachers modeling strategies which use context and teachers including interest and motivational factors for the students.

A cautionary note to the over reliance on wide reading as the primary method for vocabulary development is necessary. The research available on the use of context in vocabulary demonstrates that "...incidental learning of vocabulary is not an automatic by-product of wide reading" (Marzano & Marzano, 1988, p. 10). Less able readers are "...less likely to read extensively (and) evidence shows that they are not particularly facile in deriving word meaning information from context...Thus, the power of increasing vocabulary through reading is significantly diminished for less able readers" (Beck, McKeown & Omanson,

1987, p. 156). As well, the research on the amount of time which students actually read in classrooms is discouraging (Durkin, 1979).

Jean Chall (1987) and Marzano and Marzano (1988) have taken a logical middle position which incorporates both diametric views of vocabulary development. Chall states that "...both direct teaching and contextual learning are needed. Students need to learn words through reading, and they need to learn words directly, apart from the context" (p. 15). Marzano and Marzano echo Chall's view by stating that "...wide reading should be the primary vehicle for vocabulary learning, yet some selected words can be the focus of direct instruction" (p. 11). Being cognizant of both current theory and research on vocabulary, the Marzanos have developed some guidelines with regard to direct vocabulary instruction. They believe direct instruction should focus on words which are "...important to a given content area or to general background" and that this instruction should "...include many ways of knowing a word...provide for the development of a complex level of word knowledge...(and) include a structure by which new words not taught directly can be learned easily" (pp. 11-12).

Utilizing relationships between words to teach vocabulary was a recommendation arising from Mezynski's (1983) findings of the effects of vocabulary training on

reading comprehension. She suggested presenting vocabulary words in clusters which would assist the students in depicting relationships among words and relating new concepts to a general semantic cluster. Marzano (1984), took a corpus of words (7 230) from various reputable sources, categorized the words into semantically related groups and had elementary teachers review his categorization scheme. Three hierarchical clusters surfaced. Using this method to teach vocabulary, Marzano found significant gains in those students with whom he implemented this technique. Further research utilizing this method needs to be carried out, as Marzano made no mention of assessing students' prior knowledge before instruction (which could confound the results); he did not state the age of the students involved in the study and he worked with small groups.

In their book, A Cluster Approach to Elementary Vocabulary Instruction, the Marzanos list the instructional clusters which they have organized and outline strategies which practitioners can utilize to foster vocabulary knowledge in their students.

In summary, the research reveals that very little vocabulary instruction actually occurs in classrooms (Durkin, 1979) and that "...vocabulary learning does occur in the absence of instruction" (Kameenui, Dixon & Carnine, 1987, p. 140). As evidenced by the extensive literature, research exists on the value of direct teaching of

vocabulary as well as on the value of contextual learning and wide reading, although researchers differ in their opinions. However, despite a difference in opinions about the usefulness or the positive effects of direct vocabulary instruction, the strong benefits for teaching word meanings directly have existed for over five decades (Chall, 1987, p. 12).

Strategies Proposed for Vocabulary Instruction but not yet Tested

Duffelmeyer (1985) outlines four strategies which are based upon firm theoretical arguments and past research findings to utilize when teaching vocabulary. He argues that schemata "...enable the reader to integrate what s/he knows with the text. The extent to which new information is incorporated into a reader's existing schemata is largely dependent on the integrity of each schema. The more firmly rooted in experience each schema is, the more integrity it has" (p. 7). The four strategies Duffelmeyer suggests are as follows: synonyms and examples, positive and negative instances, example and definition, and definition and use. The common element to all of the strategies is that they capitalize on using students' prior experiences, examples students can relate to and/or student generated examples. As he states, "...experience is the cornerstone to vocabulary development" (p. 6). These strategies need to be

field tested and researched, whether the latter consists of a comparison of each method or a comparison of a combination of the four strategies to some other method(s). As well, the effects of these strategies on other aspects of reading, such as comprehension, could be examined.

Wood and Robinson state that they are cognizant of the importance of prereading activities where "...background information is provided, new information is related to existing knowledge, purposes for reading are determined and significant vocabulary terms are pretaught" (1982-83, p. 392). Their 'VLP' ('Vocabulary, Language and Prediction') approach provides a means whereby vocabulary words are pretaught, via language activities (synonyms, antonyms, categories, context, structural analysis, etc.) which access students' prior knowledge. They feel that this vocabulary knowledge can predict what may happen in the reading selection and set purposes for reading. A seven step strategy, open to modification, is outlined by Wood and Robinson. As no research or evidence is cited by the authors to support their theory-based strategy, it remains a method to be researched.

Guidelines for Effective Vocabulary Instruction

A central issue which arises from the research on vocabulary instruction is the effectiveness of methods utilized. Carr and Wixson (1986) have "...developed a set

of guidelines based on current research to help educators evaluate vocabulary instruction" (p. 588). The following are the four guidelines which they propose:

- (1) Instruction should help students relate new vocabulary to their background knowledge. (2) Instruction should help students develop elaborated word knowledge. (3) Instruction should provide for active student involvement in learning new vocabulary. (4) Instruction should develop students' strategies for acquiring new vocabulary independently (p. 588).

Consistent with Carr and Wixson's four guidelines, are some of Nelson-Herber's (1986) generalizations of the findings of the research on vocabulary instruction. She states that the research illustrates that "...direct instruction that engages students in construction of word meaning using context and prior knowledge is effective for learning specific vocabulary" (p. 627).

Stahl has proposed three principles of effective vocabulary instruction which further support the generalizations of Nelson-Herber (1986). Stahl's first principle is that both definitional (relations with other words) and contextual information ("...knowledge of the core concept the word represents and how that core concept is changed in different contexts" 1986, p. 663) are needed for a word to be 'known'. His second principle is that vocabulary methods which involve deep processing, where students are made to "...think 'deeply' about a word and its relationships are more likely to be effective" (1986, p. 664). It is necessary for the learners to interact with the

word by creating sentences, writing their own definitions, generating a semantic map, devising a semantic feature analysis, or generating imagery in order to make the word their own (1986, p. 665). Stahl's third principle which is imperative in effective vocabulary instruction is multiple exposures of the words. Further, Stahl stresses the importance of class discussion in vocabulary learning. These interactions require the students to process the meanings of the words more deeply, to clarify or to add to their knowledge and to spark other vocabulary learning (1986, p. 667).

The active role of the learner in vocabulary learning is a concern of Thelen (1986) as well. Thelen states that meaningful learning "occurs when the learner attempts to relate new information to what he or she already knows..." (p. 603). She cites Pearson's concern that educators should be asking how they can use or access the students' existing background knowledge to fit in the new word/concept (p. 606). Thelen states that vocabulary instruction is meaningful when it is "...taught in conjunction with the learner's preexisting vocabulary" (p. 607).

Pearson (1985) states that it is necessary to "...emphasize where a word fits in children's semantic repertoires rather than what it means or how it is used in sentences. That's what it means to own a word - to know what it is like and how it differs from other words that a

child knows" (p. 729). He stresses the need for recognition of "...primacy of meaning of vocabulary over word recognition...(and) ownership of a word's meaning over facility at defining the word" (p. 728).

Blachowicz (1985) also states the need for student involvement in vocabulary instruction. She outlines some practical guidelines for instruction, based upon the research on vocabulary. She suggests the following: the building of a conceptual base for word learning (semantic feature analysis, semantic mapping and brainstorming); the active involvement of the learner; the focusing on usable vocabulary; the creation of opportunities to use vocabulary; instruction which is long-term and consistently followed-up; the introduction of student resources for word learning; and the development of transferable skills (pp. 879-880). As well, Blachowicz emphasizes the complex, provocative interaction between vocabulary instruction and reading comprehension.

Blachowicz, like Stahl, stresses the importance of student discussions in vocabulary instruction. She recommends to "always use discussion in presenting new words. When possible, the students themselves should define new words rather than using a reference tool or the teacher as a source" (1985, p. 879). Blachowicz also recommends that students "...use the word in writing and additional reading. Students should develop the strategic notion 'To

make a word mine, I must read it and use it'" (1986, p. 644). She notes that in vocabulary instruction, "a final step should be to use the new vocabulary in writing" (1986, p. 649).

The proposed guidelines for effective vocabulary instruction and the studies which have examined methods of vocabulary instruction support the interactive view of reading and schema theory in that students should be taught vocabulary in ways which activate their background knowledge, integrate what they know with new information and develop networks of relationships. "Students should be active in creating semantic connections between what is already known and also in using new vocabulary words in contextual situations" (Blachowicz, 1986, p. 644). Consequently, the depth of processing of a word will affect the knowledge and recall of the word. Blachowicz contends that the quality or effort of processing affects what is remembered and that the memory trace will be more permanent with deeper processing (1985, pp. 877-878).

Two recent observational research endeavours (Blachowicz, 1987; and Shake, Allington, Gaskins & Marr, 1987) described vocabulary instructional practises occurring in classrooms and consequently recorded the degree of adherence to the proposed guidelines for effective vocabulary instruction and identified areas of need in vocabulary development.

In 1987, Blachowicz observed six fourth grade classes of average readers at the beginning, middle and end of the school year. (The total time in the classrooms amounted to 10-15 days of 20-40 minute time blocks.) The purposes of Blachowicz's observations were to answer questions about the following: the priority of vocabulary instruction, the kinds of vocabulary instruction and the factors which affected instructional decisions of teachers (p. 133).

The researchers coded types of vocabulary instruction. Strict vocabulary instruction was coded as "...only the instruction that took place when the teacher highlighted a word, phrase or list of words as needing attention" (p. 134). Loose vocabulary instruction occurred when "...words related to central concepts of the selection and occurring in the selection were discussed without highlighting" (p. 134). The coding of teacher evaluation of vocabulary instruction occurred during the post instruction interviews where teachers "...indicated which parts of the lesson constituted vocabulary" (p. 134). Regardless of the coding criteria employed, the observations revealed that vocabulary instruction was a priority (15-20% of instructional time).

Nearly all of the instruction of vocabulary occurred before the reading of a selection. Context was the major instructional strategy used to determine the meanings of the words. However, "...the relatedness of the vocabulary to the upcoming selection was not stressed" and there was

little "...attention (given) to the development of independence in gaining word meaning or towards generalized strategies for figuring out words..." (p. 135). Thus, the author points out that the observations of the research suggest "...that the major vocabulary goal in the observed fourth grade classrooms was to develop discrete word meanings" (p. 135).

Teachers' decisions about the amount of time devoted to vocabulary instruction and the use of contextual evaluation for instruction were influenced by the teachers' manuals. The teachers labelled activities as vocabulary instruction only if they were suggested by the manual.

From the interviews with the teachers, Blachowicz realized that the educators were aware of the literature on vocabulary development and strategies, but they found these difficult to implement with a basal series. Further, the teachers felt that the manuals presented "...strategies for independent word learning...as skills, routines to be learned by rote..." (p. 137).

Blachowicz concluded that teachers need "...more explicit ideas for modeling strategies and for developing lessons which used these strategies with the basal selections" (p. 137). As well, she stated that these ideas and techniques need to be included in commercial materials because of the influence of these resources on teacher decisions.

A similar recommendation was made by Shake, Allington, Gaskins and Marr (1987). They suggested that vocabulary instruction strategies which "...encourage higher levels of conceptual development" (p. 13) be included in reading method courses. This recommendation arose after the researchers analyzed audiotapes of vocabulary lessons, implemented with individual students, by 20 experienced teachers who were graduate students as well. The curricular material used was trade books and the instruction occurred in a tutorial setting. The analysis of the tapes revealed that in "...vocabulary lessons which participating teachers designed as exemplary, statements focused, generally on both pronunciation and concept development, although conceptual development statements were in the majority in over half of the lessons" (pp. 7-8). The researchers noted that

in most cases, vocabulary instruction aimed at conceptual development was shallow. That is, the instruction was frequently dominated by teacher talk, and the students were given comparatively few opportunities to use the words in ways which would encourage deep processing (Stahl, 1986) or ownership (Pearson, 1985) of the words. Rarely were Carr and Wixson's (1986) guidelines followed. We found little evidence of instruction which actively involved students in word learning, helped them relate new vocabulary to their background knowledge, or aided them in developing strategies for independent vocabulary acquisition (p. 12).

Vocabulary Instruction and Writing

Does vocabulary affect the quality of an individual's writing? If so, how? Shanahan states that "...writing

experiences could provide an important opportunity for students to experiment with new words, to test their understanding of words in a communicative setting, and to make their usage of these words more precise..." (1980, p. 362).

In 1981, Grobe conducted a study to examine the factors that influence a teacher when marking a piece of writing using a holistic marking scheme and "...to explore the relationship between specific vocabulary characteristics and teacher quality ratings" (p. 75).

Students in grades five, eight and eleven were asked to respond to test items which resulted in them writing a story. "Holistically derived writing scores were regressed in a step-wise fashion on fourteen syntax, usage and mechanics variables...Ten variables, containing vocabulary information, were added to the existing fourteen variable prediction system, and the step-wise regressions were repeated" (p. 75). In all three grades, the results showed "...that markers tend to award higher scores to longer compositions which were free of simple mechanical errors, especially spelling errors" (p. 82). Once vocabulary information was included in the regression analysis, vocabulary characteristics became the 'best' predictor of an individual's score. The analyses of the data indicated that what teachers perceived as 'good' narrative writing was "...closely associated with vocabulary diversity" (p. 85).

There is a limited amount of research on the effects of vocabulary instruction on writing. In 1963, Thibodeau (as reported by Duin and Graves, 1987) "...investigated the effect of instruction in elaborative thinking and vocabulary enrichment on sixth-grade students' composition" (p. 314). The vocabulary exercises involved students "...working with synonyms and antonyms, prefixes and suffixes, matching words, context clues, and descriptive words" (p. 314). After eight weeks of daily instruction of 30 minutes, it was found that the experimental group "...scored significantly higher than the control group on measures of writing ability, elaborative thinking and vocabulary knowledge" (p. 314).

In 1975, Wolfe (cited by Graves, 1986) taught reading vocabulary to college students "...without attempting to induce the students to use the words in their writing and then examined the words appearing in their writing" (p. 62). The students either wrote or read sentences which contained the new words, or identified the meanings of the words on multiple choice exercises. The study took place over a six week span with the students receiving 20 minutes of instruction daily. Compared to a control group, the results indicated that "...students who received the vocabulary instruction did not include more of the taught words in their writing or use generally more complex vocabulary in their writing" (p. 62).

Duin and Graves "investigated the effects of intensive vocabulary instruction on students' use of the taught words in their writing and on the quality of their writing" (1987, p. 315). Instructional procedures similar to Beck and McKeown (1982, 1983) were used to teach grade four and grade six students "...a set of 10 words that lent themselves to writing about a particular topic" (1986, p. 9). Over a period of four days, the students in the experimental group "...received vocabulary instruction in which words were taught as a form of concept learning, taught in terms of the relationships they hold with other words, and taught so that a student achieved automaticity in recognizing them" (1986, p. 7). Further, the students wrote "mini-stories" which incorporated the target vocabulary words.

The results of the study revealed the following about those students who received vocabulary instruction compared to those who did not receive instruction: they showed a large increase in their quality of writing scores (compared to a pretest), they used the words in their writing, they learned the taught words, and they responded favourably to the activities.

In 1987, Duin and Graves completed another study on vocabulary instruction and writing. This study differed from their initial study. Three methods of vocabulary instruction were compared. One of the methods involved intensive vocabulary and writing instruction which employed

"...a variety of instructional strategies in order to allow students to inquire about and manipulate words in various ways...to produce greater understanding of the words and greater ability and flexibility in using the words in the targeted writing assignment" (p. 317). A second method involved only intensive vocabulary instruction, where the vocabulary activities were the same as the first treatment except that no specific writing activities were included. The third method was traditional vocabulary instruction where students were required to look words up in the dictionary, write the definition and complete open-ended sentences. As well, the subjects in this study were grade seven students and they wrote expository compositions as opposed to narratives.

Publications on the frontier of space were the sources of the words used for the study. The topic of space was chosen because the authors felt that the subject had appeal to the students. Words were chosen which "...were not unique to the topic of space but rather could be used in several contexts..." (p. 316). Thirteen target words were selected and they were taught over a six day period.

On a pretest of vocabulary, there was no significant difference between the three groups. As a result of the treatments, all three groups made significant gains and the "...vocabulary and writing and the vocabulary-alone groups scored significantly higher than the traditional group on

the posttest" (p. 321). With regard to the number of target words used in the essays, the quality of writing scores and the attitude inventories about the treatments, the vocabulary and writing group outperformed the vocabulary-alone group and the vocabulary-alone group outperformed the traditional group.

The authors offered two explanations for the superior performance of the vocabulary and writing group. They felt that the students in the latter mentioned group "...were more accustomed to using the words in their writing, and therefore could easily begin such a task as the posttreatment writing task (and)...could use their time to concentrate on imaginative and accurate ways to use the words" (p. 325). Secondly, the authors state that "...the larger gains made by this group might stem from their greater involvement with the unit...(as) the vocabulary and writing students had repeatedly been motivated to use the words in writing" (p. 325).

Duin and Graves list five factors to explain the effectiveness of the vocabulary instruction: the target words "...were chosen for and taught around a common topic" (p. 325), the students were encouraged to use and notice the use of the target words outside of their class, the vocabulary instructional methods provided both contextual and definitional information about each word's meaning, the multiple and rich exposures of the target words, and "...the

activities were a direct extension of the teacher's instruction" (p. 326).

Accounting for the effectiveness of the writing tasks, the authors feel that "...writers who are encouraged to jot down ideas prior to writing generally produce better texts (and)...students who have been given specific criteria by which to judge their own or other writers' text have been shown to write compositions of significantly higher quality than those who have not" (p. 327). The authors feel that direct teaching vocabulary and encouraging the use of this vocabulary in the students' writing can improve the quality of their writing.

Chapter Summary

The research on vocabulary instruction which has been extensive and prolonged, has demonstrated that methods which access an individual's prior knowledge and require the individual to be actively involved with the learning of words are superior to contextual, dictionary, synonym and other more passive vocabulary instructional activities. The results of these studies are consistent with the characteristics of effective vocabulary instruction which have been suggested by many researchers. Alternative opinions of vocabulary development exist and the evidence and the implications of these views are an important part of the literature.

A review of the literature on the relationship of vocabulary instruction and writing revealed that little work has been carried out in this area. The studies which have been conducted found that vocabulary words were used in the students' compositions if the words had been directly taught and the students had been encouraged to use them in their work.

This naturalistic research project grew out of the literature as it investigated the relationships between methods of vocabulary instruction and the expression of the taught vocabulary in the students' written language and between the instruction and the students' ability to explain the meanings of the instructed words. Qualitative methods were used to gather the data for this study and these techniques are described in the following chapter.

CHAPTER 3

Research Methodology

Introduction

A review of the literature revealed that a vast amount of information exists on vocabulary instruction. However, there are few studies which have investigated the relationship of vocabulary instruction and students' written expression of the vocabulary. Further, the existing studies which have addressed this relationship have collected data by utilizing experimental research techniques. The data of this study were gathered by employing naturalistic research methods.

Selection and Description of Participants

Two grade four classes from a school approximately 70 kilometres from Calgary, Alberta, Canada were involved in the study. The school's population of 280 is composed of students in grades one to four, who generally are from working class families. The agricultural and oil based town in which the school is located has a population of approximately 3 500. The school's population is composed of approximately 70% town students and 30% rural students.

The researcher contacted the principal of the school and permission was obtained to carry out the project in the school, providing that two teachers were interested. A brief explanation of the purpose of the study, of the

involvement required by the teachers and of the teacher consent form was given by the researcher to the grade three and four teachers of the school. Two grade four teachers volunteered to participate in the project. Hereafter, the two classes will be called Classroom A and Classroom B and the teachers will be called Mr. Jones and Mrs. Smith respectively.

The principal stated that the grade four classes were heterogeneous in academic make-up. Independently, the teachers of the two classes stated that they felt their classrooms were academically heterogeneous.

At the time of the research, Classroom A had 23 students and Classroom B had 25 students. A brief explanation of the researcher's purpose and of the involvement required by the students was orally presented by the researcher to each class. As well, a consent letter which described the project and the role of the students was sent home with each pupil in each class. All of the students in Classroom A were permitted to take part in the project. In Classroom B, one student was not allowed to participate in the study.

The teacher of Classroom A had 11 years of teaching experience and had taught various elementary grades at the time of the research project. Mr. Jones had been involved in some professional updating but stated that very little of his course work had been applicable to the classroom.

At the time of the research, the teacher of Classroom B had been teaching for 10 years and had taught a variety of grades. Mrs. Smith stated that she had attended some workshops dealing with language arts and had engaged in some professional reading in the area.

Procedure

The study used naturalistic research procedures to gather data to examine the relationship between vocabulary instructional methods and the students' expression of the taught vocabulary in their written language and between the instruction and the students' ability to explain the meanings of the instructed words.

The researcher obtained classroom timetables from the two teachers involved in order to determine the periods in which language arts was scheduled to be taught. Upon examining the timetables, an overlap of language arts periods of Classroom A and B was noted. It had been proposed that the researcher be present in all of the language arts classes but this conflict could not be avoided. Consequently, in the periods of overlap, the classroom interactions for one class were only recorded on tape.

The research took place from January 12, 1988 to February 26, 1988 in Classroom A and from January 11, 1988 to March 2, 1988 in Classroom B. The research was extended

a few days in Classroom B as Mrs. Smith was finishing a unit. During the language arts classes of this time period, the researcher took field notes and tape recorded the classes.

The Teacher Interviews

The teachers were interviewed weekly (approximately) to discuss the researcher's questions which grew out of the classroom observations and the tape recordings. The data obtained from these interviews were not analyzed independently but rather the information was used to assist the researcher in understanding the teachers' classroom practises and procedures.

Classroom A

In Classroom A, the students were divided into groups during spelling and some of the children left the classroom to work with an aide or to work on their own at this time. During these periods, the tape recorder was left in the room where the teacher was working with a small group on spelling exercises. As well, when the students were involved in writing on work from their writing folders, the teacher conferenced with individual students. The tape recorder was placed by the teacher when the conferencing was occurring in order to tape the interaction of Mr. Jones and the students. During the conferencing times and the other writing activities (eg. answering questions about a story) the

researcher traveled about the room, observing the students and interacting with them.

Classroom B

In Classroom B, the teacher had organized centers for the students to work at during a portion of the unit on snakes. The center work occurred twice a week and lasted for approximately three weeks. At the culmination of the center work, other whole class activities on snakes occurred.

On a rotational basis, groups of children were sent from Classroom B to the library to work on projects assigned by the librarian for half an hour while the rest of the class remained in the room doing handwriting and/or journal writing. The researcher spoke with individual students and the librarian and briefly dropped in on these sessions in order to discover the types of activities the children were involved in.

The tape recorder always remained in the class with Mrs. Smith. When the students were working at the centers, the tape recorder was placed between center two and center three, as the researcher judged these two activities to be the most relevant to the purpose of the study.

While the children worked at the centers in Classroom B, the researcher interacted with students at the various centers. When the center work was completed and other

writing and/or oral activities were assigned, the researcher continued to monitor the students by traveling about the room. During both the center work and the other activities, it was extremely difficult to follow the teacher and listen to her comments.

The Student Interviews

The individual semi-structured interviews occurred near the end of the observational period and in a context where the researcher was alone with each student. Based upon the researcher's observations of the students, two students from each academic ability group of above average, average or below average were identified by the researcher. The student selections were discussed with the teachers and changes were made where necessary. In Classroom A, the students were chosen such that half of them were from the spelling group the teacher worked with.

A separate random list of words which had received either highlighted or limited instruction was compiled for each classroom. The words were written on a piece of paper so that the students could look at them as well as hear the researcher speak them. The other words on the paper were covered in order that only one word at a time was visible to the children. The six students from both classrooms were asked to tell the researcher all they could about the meanings of the words. As well, the children were told that

they could use sentences and/or examples or whatever method they chose to assist their verbalizations of the meanings of the words. Further, the students were assured that the exercise they were completing was not an instrument of evaluation that would influence their marks. Throughout the interviews, the researcher asked probing questions to draw out the children's understanding of the words (eg. asking for more information or an example, repeating a student's answer in the form of a question).

Following the completion of the word lists, specific questions about vocabulary strategies and exercises which were relevant to each class were asked. Patterns and commonalities were looked for when the students' answers to these questions were analyzed.

In Classroom A, there were 27 words on the list to which all of the students were asked to respond. The main source of the words was a "calendar" in the room which had a different word on it for everyday. As well, three members of the spelling group with which the teacher worked were asked an additional 10 words which had received highlighted or limited instruction during the spelling exercises.

The word list for Classroom B contained 26 words which had received either highlighted or limited instruction in the class and an arbitrary sample of six words which the students had been required to look up in the dictionary. The students were also asked to explain their thinking or

reasoning when they had completed a vocabulary test and vocabulary questions on two other reading tests. Two of these tests were associated with the language arts unit which the students were involved in. The other vocabulary question was part of a cross grade reading test.

The Written Expression of the Students

In both classrooms, the children's written work (eg. journal entries, poems, letters, free topic choice writing, etc.) was collected. If the writing activity was uniform with a standard format then only random examples were gathered. Spelling tests and the students' handwriting were not collected. The teacher of Classroom B taught formal handwriting to Classroom A as well as to her own class. The handwriting of neither class was collected as the words were usually prescribed or elicited from the students.

Analyzing the Data

In order to assist the researcher in analyzing the data which were collected, categorization schemes were adapted from Camille L. Z. Blachowicz (1987) and Herman Feifel and Irving Lorge (1950).

Type of Instruction

In a recent observational study, Blachowicz (1987) wanted to discover if vocabulary instruction was a priority in classrooms. The vocabulary instruction which she

observed was coded into three categories. The first category was called strict where instruction "...highlighted a word, phrase, or list of words as needing attention" (p. 134). Loose instruction occurred when "...words related to central concepts of the selection and occurring in the selection were discussed without highlighting" (p. 134). Teacher evaluation was the third code. This category surfaced in the teacher interviews where the teachers identified the parts of the lessons which constituted vocabulary.

The researcher adapted and modified Blachowicz's categories of strict and loose instruction to be called highlighted and limited instruction respectively. As defined in Chapter 1, highlighted instruction was used to describe teaching situations where effort, time and energy were concentrated on teaching a specific word/phrase. Limited instruction referred to those instances where a brief mention of the meaning or a definition or an example was given and/or elicited. The essential difference between the two types of vocabulary instruction was the amount of time and effort invested in the discussion of the word/phrase being addressed.

Vocabulary Words

Upon examination of the data from the teachers' vocabulary instruction and from the students' responses to

consisted of demonstrations, and errors of all types were slotted into the eighth category. Examples for each of the eight categories are listed below. Often, the teachers' articulations and the students' responses were not exclusive to one category, i.e. the discourse was categorized into more than one category.

Synonym: alibi - an excuse

Example: fancy - a snake has fancy scales

Uses: principal - someone who makes sure that nobody gets hurt or nobody is mean

Feature: fledgling - a bird that can't fly, it has no feathers and not necessarily a baby but it just can't fly

Explanation: serpent - a large snake thought to be a sea monster sometimes

Background knowledge: dismantle - I've taken apart my trucks to get the engines inside - I've dismantled them.

Demonstration: gape - (student gapes)

Errors: ambitious - when you act like an animal or something

Once the researcher categorized the data, a check was performed to determine the degree of consistency of interpretation. The qualitative classification scheme was explained and demonstrated to two educators. Following the

the words asked by the researcher, patterns emerged and a categorization scheme was needed to analyze the information. Feifel and Lorge (1950) had previously developed a qualitative classification scheme to categorize student responses given to a vocabulary test. A fivefold categorization system was developed by Feifel and Lorge. The first category consisted of synonyms and the second category combined use and description types of definitions. The third category contained explanations and the fourth category included illustrations, demonstrations, repetitions and inferior explanations. The fifth "...category was composed of all types of error response" (p. 4).

The researcher adapted and modified the classification scheme of Feifel and Lorge to categorize the data of the vocabulary instruction as well as the responses of the students to the words asked during the interviews. Eight categories were utilized by the researcher to analyze the qualitative differences in the data. The first category, similar to Feifel and Lorge's, was synonyms. The second category consisted of examples, the third category included responses classified as uses and the fourth category contained features or characteristics. Responses which were classified as explanations composed the fifth category and the sixth category contained instances where it was evident by their responses that the students had activated their background knowledge. The seventh category

explanation and demonstration, each individual practised scoring examples of the data in the presence of the researcher. Then each individual independently scored the responses of two students, one from each class, and a sample of Mrs. Smith's vocabulary instruction. In totality, the two educators scored 88 words to establish the reliability of the qualitative categorization scheme.

Once the educators scored the data, the researcher met separately with each individual and discussed their categorizations. Throughout the discussion of the scoring of the data with both individuals, it became evident that each had "read into" the data to some extent. Once this pattern was identified and reconciled, a percentage of agreement was calculated. The formula used for calculating the range of the percent of agreement for the words was the Arrington formula which was also utilized by Feifel and Lorge (1950). A score was arrived at by doubling the responses in each observer's scoring that agreed with the other's and dividing this by the total agreements plus the disagreements. i.e.

$$\frac{2 \times \text{agreements}}{2 \times \text{agreements} + \text{disagreements}}$$

By employing this formula, scores ranging from 97 to 99 percent were calculated, indicating that the qualitative scoring system was highly consistent.

Following the scoring of the vocabulary data into categories which represented various points on a continuum of abstractness/concreteness, the students' responses to the word lists were also examined in terms of precision of information. The data were analyzed and organized into four sections. Conventional responses, those which were appropriate and acceptable, were included in the first section.

The second section of the analysis of the students' responses to the words contained information which was vague or incomplete. The responses in this category were not wrong but rather they contained both conventional and nonconventional information. Research has demonstrated the students' knowledge about words differs qualitatively (Feifel & Lorge, 1950); Kruglov, 1953; Russell & Saadeh, 1962; and Curtis, 1987) and that "people often possess partial knowledge of words" (Anderson & Freebody, 1981, p. 362). An individual's knowledge of words can be thought to be on a continuum where some words are known with great depth and precision and for other words, a person's understanding is vague and general. For example, when asked what the word 'blurt' meant, Jody responded, "When you blurt it out...Um, you shout it out, like say I shouted out real loud that means you blurt...In a classroom maybe...Put up your hand." Jody possessed a partial understanding of what

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The third section of the analysis of the student vocabulary data contained information on the number of words which the students did not attempt to explain.

The fourth section of the analysis of the students' responses to the word lists contained a categorization of the errors made by the students in their responses. Three categories of errors surfaced. The researcher called the first category fictitious, where student responses which seemed to be totally imaginative and untrue were placed. For example, when asked what 'ambitious' meant, Brenda responded, "Um, when you act like an animal or something." When asked the word 'prop', Jody replied, "Um, you eat supper and you have lots left and you save it for supper maybe the next day."

Errors were classified into the second category of malapropisms if the student was confusing one of the words asked by the researcher with another word which was similar in sound. When asked what the word 'blunt' meant, Russell responded, "Fat...When something is dead and lying in the sun they get fatter and it's called blunt." This was categorized as a malapropism as it seemed clear that the student was describing the word 'bloat'.

Errors categorized as homophones (i.e. words with the same pronunciation) were placed in the third category. For

example, when asked what 'tern' meant, Jody replied, "When you do a sharp turn." When asked the word 'poll', Karen responded, "Your flag can hold like, a flag can be on a pole." It should be noted that the children both saw and heard the words which they were asked.

The Written Expression of the Students

The students' written expression was examined to determine how frequently and how appropriately the instructed vocabulary words were incorporated into the students' writing.

Chapter Summary

In summary, this research project utilized naturalistic methodologies to collect the data. The classroom observations, the tape recordings, the teacher interviews and the student interviews provided the researcher a rich source of data to analyze. The analysis of the data examined the relationship of methods of vocabulary instruction and the students' expression of the vocabulary.

In the following chapter, the data are analyzed by utilizing the categorization and error schemes described above. As well, an interpretation of the analysis of the data is presented.

CHAPTER 4

Analysis of the Data

Introduction

The fourth chapter has been divided into two major sections, each dealing with one classroom. Each of these sections has four subsections which contain an analysis and a discussion of the following areas: the language arts program, the vocabulary instruction by the teacher, the student interviews and the written expression of the students. Following the two major sections, common elements of the two classrooms are presented.

CLASSROOM A

The Language Arts Program

The research in Classroom A took place from January 12, 1988 to February 26, 1988. During this time period, the teacher was absent seven days. The researcher did not observe the class on those days but noted the language arts plans which Mr. Jones left for the substitute teachers. As well, on January 26th, the three classes of grade fours went on a field trip. Further, the students did not attend school on February 1st and 2nd as it was semester break.

The school was involved in an Olympic unit while the research was being conducted. Each teacher worked with a multi-grade group of children from grades one to four. Each group was assigned a country and banners and bulletin boards

were created. The school worked on the Olympic unit on one Tuesday and four Thursdays while the researcher was present. As well, time was scheduled for Olympic-related events to occur (i.e. bobsleigh, luge, etc.). Mr. Jones was absent one day when the student groups worked on the activities for their country. The scheduled language arts time of that day was subtracted from the total time devoted to the Olympic unit. Consequently, 330 minutes of the scheduled language arts time of Classroom A were consumed by Olympic activities.

According to the timetable of Mr. Jones, language arts was scheduled for 510 minutes a week. During this time, spelling, writing, reading and handwriting occurred (two library classes were excluded from this calculation). Mrs. Smith taught Mr. Jones's class formal handwriting and read to them as well. This exchange of classes occurred twice a week and took up 60 of the 510 minutes. Therefore, during the observational period, 2 130 (2 460 - 330) minutes of language arts classes would be expected to occur. However, from the researcher's notes, a calculation of actual time spent on language arts yielded 1 496 minutes - 70.2% of the scheduled time. Mrs. Smith utilized 16.8% (251 minutes) of this language arts time. Activities and instruction in Mr. Jones's classroom accounted for the remaining 53.4% of the actual time spent on language arts. The lost language arts instructional time (29.8% of the expected time) was due to a

number of factors: transition times, class exchanges, timetable schedules demanding teachers to be in two places simultaneously and the major reason, teacher decision to schedule other subjects during language arts time.

Mr. Jones was aware of time problems and expressed his concern about the lack of time in language arts. During two separate interviews he stated, "...I think it's important but I find that they've got so much to do, there's no time to do it!" and "But, I don't know, what bothers me the most is just the lack of time. It just seems like there's no time to really do anything or to get into a lot of detail with the kids."

When asked to describe his approach to teaching language arts, Mr. Jones communicated his dissatisfaction with his program. His reply to the researcher's question about his language arts program was, "Confused...But I suppose in a way it's disjointed...You know I'm not a 100% happy with it." He stated that he tried to adhere to the curriculum. "...Well, I suppose what a person tries to do is as much of the stuff out of the curriculum guide as you can." He also stated that he was cognizant of current approaches to language arts instruction. "...You know, if you don't kind of teach it the whole language way, I suppose to a certain extent it's disjointed."

For his spelling program, Mr. Jones used the textbook Spelling in the Language Arts by Nelson. The students were

divided into academic ability groups and the weaker students worked with the teacher. A very low ability group of spellers worked with an aide. The assigned weekly exercises from the text were posted. Those students not working with the teacher were free to work wherever they wished. Mr. Jones stated, "As far as I am concerned, the other kids are superior spellers so they can work by themselves because they're working at a different rate."

During the last two weeks of the research, a computer program dealing with the weekly word list was used. The students were on a weekly rotational system in order that each group received a chance to work through the computer program.

A pretest of the spelling unit list words was usually given on Monday. The words were read in isolation and in sentences by Mr. Jones. For example, "Cloak. He wore a long cloak. Built. They built their own house." Immediately after the test, the words were spelled properly on the board by the teacher. Sometimes the teacher elicited the spellings of the words from the students. The students marked their own work and they were to write the correct spelling underneath or beside any word(s) they misspelled. On Friday, the posttest occurred. Mr. Jones dictated sentences (from the teachers' manual) which contained the list words and the students wrote the complete sentences.

For reading, the teacher used the Impression series by Holt, Rinehart and Winston. The reader was followed sequentially. During the observational time, the class read two poems, a two page excerpt from a story and four stories; also the students listened to one story and one poem on tape. Two of the stories were read silently and the other readings were read orally in groups. As well, two cross grade reading tests were administered. In an interview, Mr. Jones and the researcher discussed silent reading of text, and he later indicated that this discussion affected his decision to have the students read two stories silently. Following the reading of the stories, the children completed assigned tasks (eg. answering questions, writing questions) without intervening discussion of the texts.

During the time the research was conducted, the students had 50 minutes of sustained silent reading. Some students spent the time looking at illustrations or searching for material to read. Mr. Jones marked student work or focused his attention on other matters at his desk during the silent reading times. Rarely did a student choose to silent read when finished with his/her work. Rather, they went out of the room to engage in some type of activity on the computer.

The teacher indicated his interest in following the 'Graves' approach with regards to writing. The students had writing folders which contained their work on self-selected

topics. Inside their folders, the students had interest sheets upon which they had listed possible subjects to write about. As well, the students had dictionaries which contained common words given them by the teacher who did not recall the source of the list. The students added to their dictionaries words that they used in their writing, but did not know how to spell. There was a conference sheet for the students to sign when they were ready for, or in need of, a conference. When conferencing with the students, the teacher dealt with mechanical aspects of the work eg. paragraphing and spelling. The teacher (or aide) corrected misspelled words. The teacher readily accepted and praised the students' work. In a few instances, the issues of editing content or considering the reader/writer relationship were addressed in the conferences. During the sessions of free writing, the teacher usually remained at his desk, directing his attention to other matters and waiting for the children to come forward to conference.

Three other language arts activities which occurred in Classroom A were poetry recitals, 'news' and a library activity with a grade one class. For the two poetry recitals, the children were to choose a poem (from a selection handed out by the teacher), memorize the poem and recite it in front of the class. Daily, after opening exercises, the students could come forward and tell the class any 'news' which they had (usually, it was personal

information). As well, the class weekly went to the library with a group of grade ones and helped them select books. While the researcher was present, this library activity took up 120 minutes or 8% of the total time (1 496 minutes) devoted to language arts. The grade four students also read to the younger students and listened to them read.

Vocabulary Instruction

In Classroom A, vocabulary instruction occurred in three different contexts: the whole class, the spelling group the teacher worked with, and with individual students. The analysis of the data includes: the source and frequency of the vocabulary words for each context, the type and frequency of instruction utilized by the teacher and the categorized articulations of the teacher. Finally, a summary and a discussion of the vocabulary instruction in Classroom A are presented.

Whole Class Instruction

In the whole class context, 38 instances of vocabulary instruction occurred during the observational period. Table 1 presents a breakdown of the number of words from each source and the type of instruction, either highlighted (H) or limited (L), for each.

Table 1

Source, Frequency and Type of Instruction of VocabularyWords in Classroom A

Source	Number	%	Instruction			
			H	%	L	%
Story read by teacher	2	5.2	0	0	2	5.2
Spelling tests	4	10.5	0	0	4	10.5
Language arts exercises	6	15.7	0	0	6	15.7
Thesaurus explanation	5	13.1	1	3	4	10.5
Teacher instruction	4	10.5	0	0	4	10.5
Calendar	17	44.7	12	31.5	5	13.1
Total	38	99.7	13	34.5	25	65.5

For the whole class context, the major type of vocabulary instruction was limited, that is, as defined in Chapter 1, a brief mention of a meaning or a definition or an example of a word/phrase with little time or energy invested. Also included were those instances where the teacher seemed to be 'checking' if the students remembered or knew specific words or concepts. For the whole class, 34.5% of the vocabulary instruction was highlighted instruction which involved both time and effort being invested into the discussion of the word. However, 31.5% of the 34.5% highlighted instruction occurred with the calendar words. The nature of the calendar words (i.e. level of difficulty and student familiarity) and the purpose of the

instruction may account for the utilization of highlighted instructional procedures.

Mr. Jones had a special calendar, designed for vocabulary development, with a different word for each day. Each calendar page gave: the word, the phonetic spelling of the word for enunciation, the meaning(s) of the word written in definition form and a sentence containing the word. The calendar pages were torn off and displayed on a bulletin board at the back of the room. During the last week of the research, the sheets were removed due to the quantity of them.

Usually, the calendar word was discussed by the teacher with the class. This would occur at the beginning of the morning, following 'news'. The standard procedure followed by Mr. Jones was to show the word to the students and encourage them to attempt to pronounce it. Once the word was pronounced properly, either by the students or by the teacher, Mr. Jones would ask the students if they knew the meaning of the word. If they did not know, Mr. Jones would proceed to explain the meaning of the word and read the definition(s) and the sentence on the calendar sheet. Often the teacher would ask the students to try to use the word in a sentence or he would give other examples to further illustrate the word. Mr. Jones did not do the calendar activity everyday. He stated, "It depends on whether I

remember but usually we do." The teacher's purpose for doing this activity was to expose the students to new words.

From the table depicting whole class vocabulary instruction, it is apparent that no words came from stories or poems dealt with in class. Mr. Jones may be unaware of the research that indicates instruction of unfamiliar words in text can affect an individual's comprehension (Mezynski, 1983; McKeown, Beck, Omanson & Perfetti, 1983; Stahl, 1983; and Jenkins, Stein & Wysocki, 1984) or perhaps he may have decided that there were no words in the texts which would have an adverse affect upon the students' comprehension.

The verbalizations of the teacher and the students during highlighted or limited vocabulary instruction were categorized according to the scheme described in Chapter 3. The discourse of the teacher and the students often contained various types of information and the articulations for one word may have been categorized into a number of categories. A 'response' is each categorical entry. The percentages in Table 2 are expressed in terms of the total number of responses categorized, i.e. 115.

Table 2

Categorization of Classroom A Vocabulary Instruction

Category	Number of Responses	%
Synonyms	12	10.4
Examples	21	18.3
Use	7	6.1
Features	31	27.0
Explanations	24	20.9
Background knowledge	17	14.8
Demonstrations	3	2.6
Total	115	100

By categorizing the interactions which occurred during the whole class vocabulary instruction, it became evident that features was the category most frequently utilized. When combined, the categories of features, examples and explanations accounted for two-thirds of the information. The categories of use and demonstrations contained minimal occurrences.

For the synonym, feature and explanation categories, the teacher was the source of over one-half of the responses. Mr. Jones was the dominant source of information for the use, background knowledge and demonstration categories as well. For the example category, there was a more even distribution of information from the teacher, the students and the text.

In categorizing the interactions which were recorded on tape, the researcher also noted the discussions of multiple meanings of words as research has found that instructional methods which focus on multiple or elaborated meanings of words result in a deeper understanding of the words (Kameenui, Carnine & Freschi, 1982; Stahl, 1983; Beck, Perfetti & McKeown, 1982; and McKeown, Beck, Omanson & Pople, 1985). The researcher wanted to see if the data from this study would support or differ from past research findings. Multiple meanings were mentioned for five words, three of which received highlighted instruction (calendar words). It should be noted that many of the words which received highlighted or limited instruction in the whole class context were not conducive to discussing multiple meanings (eg. 'ecumenical', 'adjectives', 'lissome'). For the three highlighted instructed calendar words, the source of the multiple meanings was information on the calendar page. The other two words for which multiple meanings were mentioned received limited instruction.

Repeated exposures of words were also recorded as research has shown that multiple exposures to words has a positive affect on the learning of word meanings (McKeown, Beck, Omanson & Perfetti, 1983; and Stahl & Fairbanks, 1986). In the whole class context, one word, 'adjective', was mentioned twice.

Spelling Group Instruction

When Mr. Jones was working with his spelling group, which consisted of 10-12 students, 28 other instances of vocabulary instruction occurred. Table 3 illustrates the number of words from particular sources and the type of instruction for each. The category of 'spelling exercises' refers to words which arose when the group was completing the exercises in the textbook. 'Rhyming words' were those words which the students thought of when they were to brainstorm for words which rhymed with a particular word assigned by the teacher.

Table 3

Source, Frequency and Type of Instruction of Vocabulary Words in the Spelling Group

Source	Number	%	Instruction			
			H	%	L	%
Spelling exercises	12	42.8	2	7.1	10	35.7
Rhyming words	12	42.8	1	3.6	11	39.2
Students	2	7.1	0	0	2	7.1
Teacher	2	7.1	0	0	2	7.1
Total	28	99.8	3	10.7	25	89.1

The table illustrates that overwhelmingly, the vocabulary words received limited instruction. As well, the spelling unit was the main source of the vocabulary words as two of the four initial rhyming words given by the teacher were from the spelling list.

The interactions which occurred during the vocabulary instruction in the spelling group were categorized as well. The percentages in Table 4 are expressed in terms of the total number of responses categorized, i.e. 74.

Table 4

Categorization of Spelling Group Vocabulary Instruction

Category	Number of Responses	%
Synonyms	14	18.9
Examples	17	23.0
Use	4	5.4
Features	21	28.4
Explanations	13	17.6
Background knowledge	5	6.8
Demonstrations	0	0
Total	74	100

Again, features was the dominant category into which the information was classified. When combined, the categories of features and examples accounted for approximately one-half of the total responses, indicating that more concrete than abstract information was verbalized by the instructor. As with the whole class instruction, the number of responses categorized as use and demonstrations were very low.

For the synonym, feature, explanation and background knowledge categories, the teacher was the source of over

one-half of the responses. Mr. Jones provided all of the information in the use and example categories.

During the spelling instruction, there was one word which was discussed twice and the multiple meanings of one other word were mentioned. The words in the spelling group were more conducive to discussing multiple meanings (eg. 'slick', 'stowing', 'prop' and 'sop').

Individualized Instruction

When Mr. Jones was conferencing with individual students about their writing, nine other instances of vocabulary instruction occurred. The students' writing was the source of seven of the words and the other two words came from the teacher. Seven of the nine vocabulary words received limited instruction.

The nine instances of vocabulary instruction which occurred in the individualized conference situations are categorized in Table 5. Again, the percentages are expressed in terms of the total number of responses categorized, i.e. 19.

Table 5

Categorization of Individualized Vocabulary Instruction

Category	Number of Responses	%
Synonyms	2	10.5
Examples	5	26.3
Use	1	5.3
Features	7	36.8
Explanations	2	10.5
Background knowledge	1	5.3
Demonstrations	1	5.3
Total	19	100

It is important to note that the number of responses in the individualized instruction was much smaller than in the other two situations and consequently, caution is advised when interpreting the percentages. As in the whole class and spelling group vocabulary instruction, features was the major category into which the verbalizations were classified.

The teacher was the source of the information for all of the categories, except synonyms, in the individualized situations.

Six of the words which were dealt with in the individual situations were calendar words to which the children had previously been exposed. There were no instances of discussion of multiple meanings of the words.

Summary and Discussion of the Instruction

The calendar was the main source of words for vocabulary instruction in the whole class situation. For the spelling group, the spelling text was the main source of vocabulary words.

Mr. Jones predominantly utilized limited instructional techniques in the three contexts of the whole class, the spelling group he worked with, and the individualized conferences. In the whole class situation, the majority of the instances of highlighted instruction occurred with words from the calendar.

When the interactions from the three teaching situations were categorized, the data revealed that Mr. Jones articulated features the most frequently in his vocabulary instruction in all three contexts. For both the spelling group and the individual conferences, the second highest category was examples. In the whole class context, explanations was the second most frequent category into which the interactions were categorized. Overall, Mr. Jones was the primary source of the information in the discussions of the words, i.e. he did a lot of 'telling'.

The predominance of features in the vocabulary instruction warrants discussion. Qualitative differences in responses of students to vocabulary items have been established in various studies. Feifel and Lorge (1950) found that younger children aged six to nine employed

responses categorized as use, demonstration, illustration, description, inferior explanations and repetition much more frequently than older children aged 11 to 14 years. To a greater extent, the older children more often employed responses categorized as synonyms and explanations when responding to a standardized word list (p. 17). The researchers concluded that the younger children "...perceive words as 'concrete' ideas and emphasize their isolated or particular aspects, whereas older children stress the abstract or 'class' features of the word meanings" (p. 17).

In Kruglov's study (1953), he found that "...even though a definition of a higher conceptual level (was) presented to the young child he tend(ed) to choose the response characteristic of the lower conceptual level - his own conceptual level" (p. 242). Russell and Saadeh (1962) found that third grade students selected more concrete definitions than sixth and ninth grade students and that the sixth and ninth grade children selected more functional and abstract definitions than the third grade children (p. 172). Chall (1987) found that "children and adults who are low-vocabulary scorers tend to define words in terms of the contexts in which they can occur, whereas high scorers define these same words in a more abstract, decontextualized manner" (p. 45).

The research indicates that synonyms and explanations are on a higher cognitive level than responses categorized

as demonstrations, use, examples and features. Mr. Jones predominantly verbalized information which, according to the cited research, would be concrete and at a lower cognitive level in his vocabulary instruction. For the grade level, the use of features seems appropriate, especially if this was the students' initial exposure to the word(s). The purpose for teaching the words may have affected the types of information which were verbalized by Mr. Jones. The data indicated that Mr. Jones seemed to briefly expose the children to the vocabulary words (i.e. the purpose of instruction was not to teach the words to an automatic level of recognition). The purpose of instruction would affect the "...depth or precision of meaning that need(ed) to be developed" (Graves, 1987, p. 170). As well, the relationships amongst the concept/word to be taught, the presumed students' familiarity with the concept/word and the purposes of the word-learning task would affect the types of information articulated. For example, teaching grade six students that "...fascism is 'a type of dictatorship' is certainly radically easier than teaching the full blown concept of fascism, and teaching students this brief and incomplete meaning of fascism would be a relatively easy task. Such an incomplete meaning, however, would be sufficient for many purposes" (Graves, 1987, p. 170).

Thus, it seems that the articulations which occurred during the instruction were a result of the relationships of

the nature of the word/concept, the word-learning task, the teacher's teaching style and the teacher's purpose for instruction. It is logical that the categories of features and examples would be predominant in appearance as the instruction was brief. Even the instances of highlighted instruction lacked depth and breadth in explanation.

Analysis of Classroom A Student Interviews

The six students selected to be interviewed were an academically representative sample of the class. The semi-structured interviews were conducted individually with each student. The students were asked to respond to a sample of vocabulary words which had been instructed by the teacher and to other vocabulary-related questions.

The analysis of the data of the student interviews is divided into seven sections. The first four sections are classifications of the appropriateness of the student responses to the words asked: conventional answers, vague or imprecise responses, non-attempts and errors. Following these four sections, the relationship of the categorized student responses and the type of instruction is examined. Next, the findings of the analysis of the students' vocabulary responses are explored with reference to the literature presented in Chapter 2. The seventh section is an analysis and a discussion of the students' answers to the vocabulary-related questions asked by the researcher.

The six students were asked the meanings of 27 words which had received highlighted or limited instruction in a whole class context. Three students who were in the spelling group the teacher worked with were each asked an additional 10 word meanings which had received highlighted or limited instruction in the spelling group. Generally, the data of the two word lists are analyzed separately.

Conventional Vocabulary Responses

Whole Class Instruction

Of a possible 162 words (27 words x 6 students), the children attempted to explain 98 (60.5%). Based upon the words which were attempted by the students, it would seem probable that the students had been exposed to these words previously ('amnesia', 'expert', 'numb', 'blunt', 'gruff').

The information verbalized by the students was categorized according to the scheme described in Chapter 3. As well, the data were classified in terms of information which was given voluntarily by the students and that which was probed by the researcher. In Table 6, V refers to volunteered information, P refers to information which resulted from the researcher probing the students and VP refers to those instances where information was both volunteered and probed. Further, the percentages are expressed in terms of the total number of categorized responses, i.e. 292.

Table 6

Categorization of Student Responses to Vocabulary WordsInstructed in Classroom A

Category	Number	%	V	P	VP
Synonyms	24	8.2	23	1	0
Examples	72	24.7	26	33	13
Use	14	4.8	10	2	2
Features	85	29.1	66	12	7
Explanations	55	18.8	43	11	1
Background knowledge	38	13.0	36	2	0
Demonstrations	4	1.4	4	0	0
Total	292	100	208	61	23

Features was the category into which the greatest number of responses were categorized and examples was second. When combined, features, examples and explanations accounted for nearly three-quarters of the responses which were categorized. Use and demonstration were the categories into which the least amount of information was classified. The children articulated a greater amount of concrete than abstract information in their responses. The relationship of the type of instruction and the nature of the instructed words may have influenced the students' responses.

With regard to volunteered versus probed information, 71.2% of the responses of the students were volunteered, 20.9% of the responses were probed by the researcher and 7.9% of the responses were both volunteered and probed.

Although the number of examples given by the students was high, only 36.1% of those examples were volunteered by the students. In many instances, in an attempt to extract more information from the students, the researcher asked the children if they could provide an example. This information probing by the researcher may account for the high number of probed examples.

When categorizing the data, the researcher was also interested in those instances where the students articulated multiple meanings for the vocabulary words. There were no multiple meanings given by the students for any of the words which were taken from the whole class context.

Spelling Group Instruction

The three children from the spelling group responded to 19/30 or 63.3% of the words asked by the researcher. The responses of the students were categorized and Table 7 illustrates the occurrence of the specific categories. The percentages are expressed in terms of the total number of responses categorized, i.e. 50.

Table 7

Categorization of Student Responses to Vocabulary WordsInstructed in the Spelling Group

Category	Number	%	V	P	VP
Synonyms	7	14.0	7	0	0
Examples	15	30.0	10	5	0
Use	4	8.0	3	1	0
Features	11	22.0	8	2	1
Explanations	8	16.0	6	2	0
Background knowledge	3	6.0	3	0	0
Demonstrations	2	4.0	2	0	0
Total	50	100	39	10	1

It is important to remember that the number of responses being classified from the spelling group were much smaller than those from the whole class list. Consequently, the percentages must be viewed accordingly. The three largest categories were examples, features, and explanations and when these categories were combined, they accounted for over two-thirds of the responses. The least amount of responses were categorized into the demonstrations, background knowledge and use categories. Again, these numbers reveal information about the cognitive level of the students' vocabulary knowledge.

The students volunteered 78% of the responses and 10% of the responses were probed by the researcher. Although examples was the category with the most responses, one-third

of the examples were probed by the researcher in an attempt to extract more information from the students.

There were two words for which a student articulated multiple meanings.

The students were not asked any words which received highlighted or limited instruction in the individualized conference situations.

Imprecise Vocabulary Responses

As described in Chapter 3, responses by the students which contained imprecise information were not categorized as errors due to the conceptual notion of an individual's knowledge of words being on a continuum of precision or accuracy.

For the words which had been instructed in the whole class context, vague or imprecise information was given by the students for 22 of the 98 words (22.4%) which were attempted. Nineteen of the spelling words were attempted by the students and imprecise information was present in two or 10.5% of their responses.

When an individual's word knowledge is thought of as being on a continuum of depth, breadth and precision, then it is logical that vague information would exist as an individual refined/modified/sharpened his/her knowledge of word meanings.

Non-Attempts

Of a possible 162 words, the students did not attempt 64 or 39.5% of the words. Of the 64 non-attempts, 41 (64%) occurred on the calendar words. For the 30 instances where the students were asked spelling words, 11 or 36.7% of the words were not attempted by the children.

The amount of non-attempts is noteworthy as on each word list, the children did not try approximately 40% of the words. The large number of non-attempts suggests that the students' knowledge of many of the vocabulary words (if in fact knowledge existed) was not at a sufficient depth level to enable the students to explain the words. Nearly two-thirds of the non-attempts in the whole class context occurred on the calendar words. The required word-learning task may assist in the explanation of the non-attempts. Graves states that, "learning new words that represent new concepts, is the most difficult word-learning task" (1987, p. 169). Based upon the word list, it would seem probable that the children would be unfamiliar with many of the calendar words. The instruction, although highlighted, may have been insufficient in duration or elaboration for the children to develop a deep enough understanding which they could later articulate.

Errors

Whole Class Instruction

The students made some errors in their responses to the words that were asked by the researcher. As described in Chapter 3, there were three categories of errors. The first category, fictitious, contained those responses which seemed to be totally imaginative and untrue. The second category was composed of those responses by the students which were malapropisms, i.e. the students were confusing one of the words asked by the researcher with another word which was similar in sound. Errors classified as homophones, i.e. words with the same pronunciation, were placed in the third category.

Table 8 presents the errors made by the students on the words which were taught in the whole class context. The errors are presented in two percentages, the first depicting the errors in terms of the total number of words to which the students gave responses (i.e. the total number of words asked - no attempts = 64), and the second illustrating the errors in terms of the total number of responses which were categorized, i.e. 292.

Table 8

Type and Number of Errors for Vocabulary Words Instructed in
Classroom A

Type of Error	Number	% of Words	% of Responses
Fictitious	18	18.4	6.2
Malapropisms	11	11.2	3.8
Homophones	0	0	0
Total	29	29.6	10.0

Errors were made on 10% of the children's responses and this percentage does not seem significant in terms of the total responses. However, it is important to note that the table also illustrates that errors were made on 29.6% of the words which the students answered. Approximately two-thirds of the errors were due to fictitious information. Of the 27 words which were asked, errors were made on 16 words (59.3%). These numbers are indicative of the students' levels of vocabulary knowledge of the words.

Spelling Group Instruction

Thirteen errors were made on the words which were taken from the spelling group. The first percentage on Table 9 illustrates the number of errors which were made on the spelling words in terms of the total words which the students attempted (total number of words asked - no attempts = 19). The second column depicts the percentage of

errors in terms of the total number of categorized student responses, i.e. 50.

Table 9

Type and Number of Errors for Vocabulary Words Instructed in
the Spelling Group

Type of Error	Number	% of Words	% of Responses
Fictitious	5	26.3	10.0
Malapropisms	2	10.5	4.0
Homophones	6	31.6	12.0
Total	13	68.4	26.0

When the spelling errors were separated from the total errors, it was evident that all of the homophone errors occurred in the spelling list words. As well, nearly one-half of the total errors on the spelling words were due to the students confusing the list words with homophones. Considering the words which were asked, the fact that all of the homophone errors occurred with the spelling list words is logical (eg. 'tern', 'pall', 'poll'), although the children both saw and heard the words.

It should be noted that of the 19 instances where the students gave responses to the spelling words, errors were made on 13 or 68.4% of these words. Of the 10 different words which the students were asked, errors were made on eight words and the word 'feeble' was not attempted by any of the children. The word 'mowing' was defined appropriately by two of the three children and the other

child did not attempt to explain the word. It would seem logical that the students would have encountered the word 'mowing' previous to the spelling group discussion.

Some type of error was made on approximately one-quarter (26%) of the total number of responses given by the students for the spelling list words.

Thus, the number of errors was salient as errors were made on 35.9% of the total words (whole class + spelling lists = total words attempted) to which the students responded. For the whole class words, errors were made on 29.6% of the words, and for the spelling words, errors were made on 68.4% of the words. Most of the errors which were made by the students were classified as fictitious.

Student Responses and the Type of Instruction

After categorizing the data into the four response categories, it is important to look at the responses in terms of the type of instruction which the words received. On the whole class instruction list, there were 15 words which received highlighted instruction and 12 words which received limited instruction. There was only one highlighted word for which all of the students gave conventional responses. There were two limited instructed words for which all of the responses were conventional.

The spelling words were combined with the whole class list as only two of the spelling words which were asked had

received highlighted instruction and no conventional responses were articulated for either word. Eight of the spelling words received limited instruction and none of the words were solely answered with conventional responses. The percentages are expressed in terms of the total number of words, i.e. whole class words + spelling words = 192.

Table 10

The Relationship of the Categorized Student Responses and the Type of Vocabulary Instruction in Classroom A

	H	%	L	%
Type of Response				
Conventional	25	13.0	26	13.5
Imprecise information	7	3.6	17	8.9
Non-attempts	47	24.5	28	14.6
Errors	17	8.9	25	13.0
Total	96	50	96	50

For the words which had received highlighted instruction, one-third of the responses verbalized by the students contained some acceptable information. Approximately one-half of the words which were taught by highlighted instruction were not attempted by the students. This seems odd as it would be expected that words which received greater instructional attention would more easily be remembered. The majority of the words which received highlighted instruction were words from the calendar. As stated previously, many of these words were difficult and

consequently, the children may have encountered problems developing an understanding of the words.

For the limited instructed words, nearly one-half of the responses contained some acceptable information. The other half of the words were either not attempted or lacked acceptable information. The latter percentage is large but seems to be more understandable for words which received limited attention. As well, there was not a central theme or idea around which the words were taught and this may have affected the students' understanding of the words for both highlighted and limited instruction.

An Explanation of the Vocabulary Response Data

An analysis of the student responses to the words from the whole class context and the spelling group revealed that the children responded to 60.9% of the total words asked. Thus, they did not attempt 39.1% of the words. Imprecise information was given for 12.5% and errors were made on 21.9% of the total words attempted. Therefore, conventional responses were verbalized for only 26.6% of the words.

The above results demonstrate that the children did not possess a very rich or deep understanding of the words which received highlighted or limited instruction in Classroom A. Two-thirds of the vocabulary words taught in Classroom A received limited instruction. This brief discussion may have been insufficient for many of the students to form some

notion of the meanings of the words. For the words which had been taught by highlighted or limited instruction in the whole class context, approximately 30% of the student responses were conventional. For the spelling words taught by highlighted instruction, there were no conventional responses and for the spelling words which had received limited attention, 16.7% of the responses were categorized as conventional.

In the whole class context and the individual instructional situations, the students participated in approximately 45% of the discussions of the target words and in the spelling group, the children were active in 50% of the discourse. In Chapter 2, research was cited which stressed the importance of students deeply processing and actively discussing vocabulary words. An abundance of research has demonstrated the significance of children being actively involved in developing word meanings as well as the children utilizing their background knowledge to facilitate word learning (Gipe, 1979; Beck, Perfetti & McKeown, 1982; Raphael & Schwartz, 1985; and Jiganti & Tindall, 1986). In the whole class context, the teacher related the target words to the students' background knowledge 12 times. For example, when the calendar word 'latent' was being discussed, the teacher gave an example which the students could relate to. After reading the definition from the sheet, Mr. Jones stated, "Let me think of another example

that might be easier for you to understand. What would happen if someone in the classroom was really smart in math but they didn't do their work carefully. They might be really smart and have a talent in math but they don't show it. So it might be there but we don't really know. Then we would say that that person has a latent ability in math. It might be there but we don't know it's there because they don't show it."

The students volunteered information from their background experiences twice. When the calendar word 'ecumenical' was being discussed, the following dialogue took place between the teacher and a student.

Mr. Jones: ...It just means all sorts of Christian churches getting together and participating in something.

Student: There was one on Christmas Eve at the _____ church.

Mr. Jones: Was there? An ecumenical service?

Student: Well, anybody from any church came.

Mr. Jones: Well, that's exactly what it would have been then - an ecumenical service.

In three instances, both the teacher related the word to the students' prior knowledge and the students volunteered information. In the spelling and individual instructional situations, there were minimal occurrences of the use of the students' background knowledge.

In the literature review, numerous studies were cited which demonstrated the effectiveness of students accessing their background knowledge when actively developing word meanings. These two components of effective vocabulary instruction, the active participation by the students and the involvement of background knowledge of the students, are complimentary. Effective instruction of vocabulary requires students to process the words such that the new information is connected to old information and novel contexts are generated (Gipe, 1979; Kameenui, Carnine & Freschi, 1982; Beck & McKeown, 1982; Beck, Perfetti & McKeown, 1982; McKeown, Beck, Omanson & Perfetti, 1983; Stahl, 1983, 1985; Eeds & Cockrum, 1985; Raphael & Schwartz, 1985; Stahl & Vancil, 1986; and Jiganti & Tindall, 1986).

Student Responses to Research Questions

Following the presentation of the word list in the interviews, the researcher posed other questions to the students which were relevant to the study.

- 1) Do you remember some of the calendar words better than others? If so, why? If not, why?

One student responded that she did not remember some of the calendar words because the words were long and hard to pronounce. The other five students replied that they did remember some of the calendar words better than others, citing factors such as length, pronunciation, and

familiarity as reasons which affected their memory of the words. Two students indicated that their emotional feelings about the words affected their memory of the calendar words.

Russell: It's just a word that I liked...I didn't really like them at the time so I just didn't pick them up that easy.

Brenda: Well, maybe I'm determined to remember it... Considering the age of the students, some of the calendar words would seem to be above their level in terms of understanding and familiarity (eg. 'ecumenical', 'derogatory', 'calamitous', 'lissome').

Two students indicated that the passing of time was a factor which affected their memory of the words. The greatest amount of time which would have elapsed from the time of discussion of a word to the student interviews would be five weeks. Another student (below average) asserted that learning a new word everyday was overwhelming.

The reasons articulated by the students as factors which affected their memory of the words were sound and logical considering the words on the calendar.

Sixteen of the words which all of the students were asked were from the calendar. Two words, 'derogatory' and 'ecumenical' were not attempted by any of the students. On only two of the calendar words, 'sparkle' and 'ticklish', did all of the students articulate conventional responses. However, it would seem probable that the students would have

had contact with these two words previous to the calendar exposure.

The children stated that they did remember some of the calendar words. However, the data seemed to indicate that the students remembered less than what they thought as the students did not attempt 42.7% of the calendar words and verbalized conventional responses for 35.4% of the words to which they responded.

2) Do you ever try to use some of the calendar words in your writing? Why or why not?

When asked this question, five students responded, "Yes" and one of the five students (above average) answered, "Sometimes".

Four students stated that receiving extrinsic rewards from the teacher was an incentive to use the calendar words in their writing.

Norma: Yes, because Mr. Jones gives you a sticker...

Two students felt that it was novel to include words from the calendar in their writing.

Brenda: I just think it's nice to have new words that you haven't heard of before.

Russell: They're neat words. It makes me feel older.

Three students stated that they didn't use some of the calendar words as they were inappropriate for their writing topics (free writing).

Norma: I don't use some of them because they're not about what I'm writing about.

Karen: Some are like really hard and you can't use them. They're so difficult that you can't really put them into your story.

The analysis of the written expression of the students revealed that three of the six children had used at least one calendar word in their free choice writing. Brenda used the same calendar word twice, once in a poem and once in a story. Steve incorporated two different calendar words into a sports report, one which had received instruction and one which had not. Jody used seven different words in a story, two of which had been instructed by the teacher. The researcher observed Jody writing the story with another student and the girls were attempting to use as many calendar words as possible.

3) Do you feel that the calendar has helped you learn some new words? Why or why not?

All of the students responded positively to the question, several indicating that they had not heard of many of the words before.

Steve: Yes, because I haven't heard of at least three-quarters of those words.

Karen: Well, some of them I had no idea what they were. They were so big and long and everything, I didn't know what they were.

The analysis of the data revealed that the students did not attempt to explain 41 of the 96 (42.7%) calendar words and of the 55 instances which were attempted, errors of some form were made on 14 words (25.4%). The data seemed to indicate that the children's learning of the words was not as complete as what they thought.

Imprecise information was given for 10.9% of the 55 words which the students attempted to answer. If the words were previously unknown, then the imprecise information verbalized by the students would in fact represent a 'gain' in word knowledge.

4) Do you like doing the calendar? Why or why not?

Four of the students were asked if they liked the calendar activity and they all responded positively. All of the students felt that the calendar had helped them learn some new words. Two students stated that the calendar gave them more words to use in their writing.

Steve: Yeah, I guess 'cause it gives me a few more words I can get in my writing so I can get more stickers.

Russell: Yep. Well it helps me learn more - it helps me put words into my story - it describes my stories better.

However, the data on the amount of non-attempts, the imprecise information and the errors illustrated that the children's understanding of the instructed calendar words was minimal.

5) Do you ever try to use other bigger or new words in your writing? Why or why not?

The researcher neglected to ask one of the above average students this question. Of the five students who were asked, four responded that they tried to use other bigger or new words in their writing.

Two students indicated in their responses that they used these other words in their writing as they felt the words were novel and the words made their work sound better.

Norma: Yes, because like using 'helpful', is just normal and using 'advantageous' is a sort of a new word and it sounds better and neater. Because it's bigger and it's not just an everyday word.

Karen: Yeah. It puts more room into it if you can, and I like to try because it makes me feel older if you put bigger words in...

One student (below average) stated that he just liked the words and that was why he used them.

The one student (average) who responded negatively to the question did not give a reason why she did not use other words in her writing.

The analysis of the written expression of the students revealed very few occurrences where complex vocabulary had been incorporated into the students' writing. The free topic choice writing would seem more conducive for utilizing new or bigger words than the prescribed topic writing assignments.

6) How else do you learn new words other than at school?

All six students responded that they learned words from other people (parents, siblings, other people) and that they asked these people the meanings of the unknown words.

Steve: At home when my mom says something, I ask her why what that means.

Three students stated that they encountered new words in books and that they asked their parents the meanings of these unknown words.

Three students responded that they learned new words from media sources (movies, tapes, radio and T.V.).

Two children (below average) mentioned using the dictionary as a vehicle to discover word meanings of unknown words that they encountered.

7) What do you do when you are reading and you come to a word and you don't know what it means?

All of the students mentioned that they would ask another person (parents, teacher, another individual) for assistance with the meaning of a word which was unfamiliar.

For four students (two average and two below average), this method was their first response to the question.

Karen: Well, if if my mom's around or if whoever's around, I'll ask them...

It is interesting that these students verbalized seeking assistance as their initial answer to the question as it indicates that perhaps they had not yet developed independent strategies for obtaining word meanings. For the below average students, this indication is not surprising. Beck, McKeown and Omanson (1987) cite research which shows that less able readers, "...are not particularly facile in deriving word meaning information from context" (p. 156).

Half of the students answered that they would use the dictionary to discover the meaning(s) of the unknown word(s).

Steve: I look it up in the dictionary. If I was at school, I would get the thesaurus and see what it means...

While the researcher was present in the class, the strategy modeled by the teacher was, on two occasions, consulting the dictionary. However, there is evidence that looking up words in a dictionary is of limited value in learning vocabulary (Gipe, 1979; Eeds & Cockrum, 1985; Jiganti & Tindall, 1986; and Duin & Graves, 1987). As well, Mr. Jones demonstrated to the class how to use a thesaurus.

Three of the students spoke of sounding out the word, apparently paralleling word identification with word meaning.

Only the two above average students gave independent strategies, one phonetic and one structural, as their first response to the question.

The two average and two below average students were asked by the researcher if they ever used the words around the unknown word to assist them with word meanings. All four indicated that they employed this strategy as it provided context clues.

Karen: ...and you're reading the sentence you try and think of what word could go in there with the beginning sound.

Jody: So, I read the sentence and I skip it and then I read it again and I can figure out what it means.

The students acknowledged utilizing contextual information when probed by the researcher but they did not voluntarily verbalize this strategy. Perhaps using context was not the major strategy which these students employed when dealing with unknown word meanings. The students may not feel adept at using context clues, or perhaps they use context clues unconsciously and did not think of this strategy until probed by the researcher.

Summary of the Student Interviews

For the list of words taken from the whole class context and the spelling group, the students attempted to explain less than two-thirds of the words. The three categories into which most of the responses were classified were features, examples and explanations. There was a small number of demonstrations for both word lists and the low amount may be explained by the words which were asked or the teaching style of the instructor. Most of the responses were volunteered by the students and many of the example responses classified as 'probed' were a result of the researcher attempting to extract more information from the students. Imprecise information was verbalized by the students for both groups of words, although twice as much for the words which had been taught in the whole class context. Over one-third of the words from both lists were not attempted by the students. Errors were verbalized by the students for both lists of words, with over twice as many errors for the spelling group words.

The data analyses revealed that five of the six students stated that they remembered some of the calendar words better than others and all of the students felt that the calendar had helped them learn some new words. However, the data analyses seemed to indicate that the students' remembered less than what they thought as the students only attempted 55 of a possible 96 words. For the

attempted words, misinformation and unacceptable responses were articulated for approximately 25% of the words.

All of the students stated that they tried to use some of the calendar words in their writing, for reasons of extrinsic rewards, novelty or improved clarity, although they also expressed concern about the semantic appropriateness of the content of their work.

The students stated that they learned new words from other people, books and the media.

When asked about their strategies for dealing with unknown word meanings which were encountered while reading, the students indicated that they asked other people, applied phonetic analysis to the word(s) or utilized contextual information.

The Written Expression of the Students

The written expression of the students was analyzed to examine the relationship of methods of vocabulary instruction to the expression of the taught vocabulary in the students' writing.

When the observed time spent on writing activities was totaled, time devoted to formal handwriting, spelling and reading tests was not included in the calculation. As well, the time calculated was the time provided for writing. The calculation did not represent the time the children were actively engaged in writing (eg. if 30 minutes were allotted

for a writing activity, that does not mean that the children wrote for 30 minutes).

During the observational period, the time spent on writing activities was approximately 360 minutes. This total represents 24.1% of the 1 496 minutes which were spent on language arts. The 360 minutes included writing in which the students worked on selections from their writing folders (i.e. free choice writing) and writing in which the topics were assigned (eg. answering questions, writing questions). The time allotted to these types of writing was approximately equal. While the researcher observed the class, approximately 15 minutes a day were spent on some type of writing.

There were five sessions where the students worked on written expression from their writing folders. The children were free to select any writing topic or style, but most of the students wrote stories. Other observed forms of writing were interviews, reports and forms of poetry.

When the students' written expression was examined, the researcher found that 12 students had incorporated at least one word from the calendar. There were 10 students who utilized six of the instructed calendar words a total of 13 times in their written expression. The word 'grovel' appeared six times in five students' work (i.e. one student used the word twice). Two instances of the instructed calendar words were in poems and the remaining eleven words

were incorporated into stories. With regard to appropriateness, there were only two instances where the words were used inappropriately in the context of the work.

Ten other calendar words which had either been taught previous to the recording of the instruction or had not received instruction were incorporated into the students' writing as well. There were 13 instances of uninstructed calendar words appearing in the students' writing.

During the free choice writing periods, the researcher observed some students traveling to the back of the room where the calendar words were posted. The students read the explanations as they were looking for words to use in their writing. For example, one student wanted to write an acrostic poem about a NHL hockey team and he wanted to use some of the calendar words. He went to the back of the room where the words were located and searched for words which began with the same letters as the letters in the team. Consequently, he used the words 'facile' and 'lissome' in his poem.

Because the school was involved in an Olympic unit, the researcher noted the occurrences of Olympic-related writing in the students' free choice writing. There were two students whose written work was related to the Olympics.

There were seven writing assignments where the teacher assigned the writing activity. Four of these assignments were related to a story or poem which the class had read

from the reader or listened to on tape. For one activity, the students were to imagine being experts at something. The children were to write directions which would train another individual to perform the activity at which they were an expert. The other story or poem related assignments were answering questions from a story; writing questions for a story, trading books with someone and answering each other's questions; and recalling information from a poem which they had heard on tape.

The remaining three of the seven writing activities were related to the Olympics. The students responded to letters in the paper which had been written to the editor concerning the Olympics; cut out an Olympic-related picture, wrote five questions about the picture, gave the picture and questions to a classmate and answered another person's questions; and wrote about their Olympic-related field trip.

In the assigned topic writing, only one vocabulary word (which had received limited instruction) was incorporated into two students' written work. The word 'expert' appeared in two separate students' writing of the training explanation and considering the nature of the assignment, the incorporation of this word was logical.

During either type of writing, the students' work was readily accepted and praised by the teacher. Rarely, were the issues of editing content with regard to quality or

considering the reader/writer relationship addressed when the teacher spoke to the children about their writing.

It is not surprising that very few of the instructed vocabulary words appeared in the students' writing due to the fact that there was no theme or unit around which the words were taught. The words were taught in isolation and the students lacked a central concept to connect and integrate these words. Past research has shown that selecting and teaching words around a common topic is a component of effective vocabulary instruction (Duin & Graves, 1986, 1987).

As well, past research has generally found that instructed vocabulary words were used in the students' written expression if, in the treatment sessions, the words were taught directly and the students were encouraged to use the words in their writing (Thibodeau, 1963; and Duin & Graves, 1986, 1987). In Classroom A, the students were enticed, to some extent, to use the calendar words in their writing, although for some students, the extrinsic reward of stickers may not have been motivating.

The main difference between this study and past research which has investigated the relationship of vocabulary instruction to students' writing lies in the instruction. The instruction in past studies has been much more intense and has been for a different purpose than the instruction in Classroom A. Not only was there a common

topic around which the words were taught, but a substantial amount of time was invested in the instruction of the target vocabulary words in past research. In the intensive instruction, the students were active participants in the learning. The students were required to activate their background knowledge, participate in the discussion of the words, interact with various forms of information about the words in multiple exposures and generate contexts which included the vocabulary words. Further, in past studies, a concentrated effort was devoted to having the students learn the target vocabulary words.

In Classroom A, the students were not actively involved in the discussions of the vocabulary words. As well, the background knowledge of the students was infrequently accessed and utilized in the instruction. Thus, it would seem that the methods of vocabulary instruction did affect the expression of the taught vocabulary in the students' writing.

CLASSROOM B

The Language Arts Program

The research in Classroom B took place from January 11, 1988 to March 2, 1988. During this time, three days were consumed by a field trip and semester break. Forty minutes of language arts time was rescheduled due to the school Olympic unit.

According to Mrs. Smith's timetable, 440 minutes of language arts time a week was scheduled (60 minutes of library classes/week were excluded from this calculation). Due to science fair presentations, approximately 90 minutes of language arts time was missed. Mrs. Smith made up this time by rescheduling her timetable to compensate for the loss. As well, the class weekly went to the library with a grade one class to assist them in selecting books, to read to them and to listen to the grade ones read. This took up 180 minutes of the language arts time while the researcher was present.

During the scheduled language arts time, the children were involved in journal writing, formal handwriting, spelling, and writing and reading activities. Mrs. Smith structured her language arts program around themes. While the researcher was present, a snake unit was covered. Mrs. Smith stated that the purpose of the unit was for the students to realize that they independently could find out about any given topic through their senses. The experiences in the unit were guided by the assigned activities. Mrs. Smith stated that the purpose and the structure of the unit meant that there was less direct teaching (and maybe less vocabulary instruction) in this unit compared to others. The extensive use of peer interaction throughout the unit also affected the amount of direct instruction.

The presentation by the local snake experts was one of the highlights of the unit. As well as sharing their great wealth of knowledge with the students, the experts showed several live snakes, two snake skins, a snake skeleton and a preserved snake. The children were extremely interested in the presentation and they asked many questions.

According to Mrs. Smith's timetable, which she intended to be flexible, the children were to write in their journals for 10 minute periods four times a week. However, this occurred irregularly as activities were rescheduled and some of the students were hesitant to make journal entries. The children were free to write whatever they wished in their books. When Mrs. Smith was asked what she saw as the purpose of journal writing, she stated, "Well, I want them to be comfortable with writing in their journals. I want them to get their thoughts down and in responding to those, I respond totally to their thoughts, and I never ever mark them with regards to any kind of mechanics or anything, and I try not to be judgmental in my responses."

On a few occasions, Mrs. Smith suggested ideas or topics that the students could select to write about in their journals (eg. Olympic or snake related ideas, a specific poetry form). "Occasionally I lead them a little bit or if I find they're sagging, that they're writing on the same topic over and over again, I might make some suggestions, but I try not to do that too often..." Often,

several students read their entries to the class. Generally, the students' entries in their journals were brief. The following are examples of students' journal entries.

1) Today we're getting a computer. I might do some information about snakes. My brother might be doing some reports on it! 2) Tonight _____ and me will have fun. On the 26 my dad is coming with us on the field trip. _____ and I will sit with dad.

The teacher's responses to the journal entries usually consisted of a comment and/or a sticker. The following are examples of Mrs. Smith's responses. 1) Hang on...we'll be talking snakes into February! 2) Super! 3) I didn't know you did this! 4) Oh, oh; Into everything! Better baby-proof your house! 5) I love them all - Publish!

Formal handwriting lessons occurred regularly from one to three times per week. Again, not all of the students participated in these handwriting lessons due to their involvement in other activities. Sometimes, words for particular letters were elicited from the students and they could select from this source or write some of their own. At other times, the teacher prescribed words or letter combinations for the students to copy from the board.

While the researcher was present in the class, the students had one pretest, two posttests (10 words on each) and one standardized test in spelling. The two tests given

by the teacher consisted of theme-related words which she felt were important for the students to know how to spell. When asked in an interview about the source of the spelling words, Mrs. Smith responded, "Sometimes I choose them and they're words that they're going to use a lot in their work. Sometimes they choose them - ones they feel they'll use a lot and don't know how to spell." When giving the second pretest to the students Mrs. Smith stated, "Now, I have chosen these words because they're ones that I've either noticed you've had trouble with or ones that I've noticed that you've been using a lot in your poetry and reports and things like that. They're good ones to know."

For all of the spelling tests, the teacher dictated the words in isolation and provided context-rich sentences for each word. For example, "Venom. Venom. A snake can poison its victim with venom. And that's the juices that it injects into its victim." Once the list was completed for the pretest, the words were spelled properly by called upon students and the students were to copy down the correct spelling(s) beside/underneath any misspelled word(s).

While the researcher was observing, the teacher administered the Edmonton Spelling Test. She stated that this standardized test was given three times a year. When asked the purpose of administering this test, Mrs. Smith replied, "Basically just to see where they stand and who needs extra help with spelling - it just gives me a better

overall view of their spelling ability." The results of the test were used for informal evaluation as the mark was not included in the students' overall spelling marks.

The teacher organized five centers for the students to work at during approximately three weeks of the snake unit. The students were divided into five groups and rotated through the snake-related activities at each center. At center one, the students were to gather 10 facts about snakes from books, encyclopedias and magazines. The assignment at center two was to brainstorm for words which described kinds, movements and appearances of snakes. Then the children were to cut out a snake which illustrated one of the words they had brainstormed. They could create as many snakes as time allowed and the snakes were displayed on a bulletin board at the back of the room.

At center three, the students were to write a lanterne poem. This poetry form consisted of five lines. The first line had one syllable, the second line had two syllables, the third line had three syllables, the fourth line had four syllables and the fifth line had one syllable. The students were to brainstorm for words before they started writing their poems. Mrs. Smith told the researcher that in a whole class context, the students had discussed and practised writing this type of poem the week previous to the center work.

The students at center four read an article titled "Design is a Dandelion" from a Starting Points reader. This selection dealt with design in nature. The children were not required to read the entire article - they were just to get a general idea of the selection. After reading, they were to make a snake out of plasticine, concentrating on form and texture.

At center five, the students were to look up 10 words in the dictionary and write down at least one meaning for each. If the students completed this task, there was an additional list of words which they could look up. The teacher selected the words to include on the lists.

Researcher: The words from the dictionary center, where did they come from?

Mrs. Smith: I basically went through and chose those that I thought would be interesting, some of them to know about...

Researcher: Did you just pick them randomly or did you look through books?

Mrs. Smith: Um, I suppose I looked through some of the things, the facts I thought they would find.

Once the center work was completed, other whole class reading and writing activities occurred. While the researcher was present, one story was read to the class by the teacher, one content article was read by the students aloud in pairs, four cross grade reading tests were

administered and 15 poems were read and discussed. The usual procedure of dealing with the poems was that the teacher read them initially while the students followed along. Then individual students or the whole class would recite the poem.

As well, the students researched and wrote reports on one particular kind of snake. Further, while the researcher was present, there were approximately 100 minutes of sustained silent reading time. During this time, Mrs. Smith usually focused her attention on matters at her desk or around the room. Very few students chose to silent read when they were finished their work, although reading materials were available in the classroom.

Vocabulary Instruction

In Classroom B, vocabulary instruction predominantly occurred in the whole class context. Individual vocabulary instruction was very minimal during the observational period. The tables outline the source and the frequency of the instructed vocabulary words, the type and frequency of instruction and the categorized articulations of the instruction. Finally, a summary and a discussion of the vocabulary instruction in Classroom B are presented.

Whole Class Instruction

In Classroom B, the data yielded 109 instances of vocabulary instruction by the teacher. There were 105

examples of vocabulary teaching with the whole class and four instances of individual instruction. Table 11 illustrates the number of words from specific sources and the type of instruction which was employed (highlighted or limited). The term 'text' in Table 11 refers to stories, books, poems or tests. 'Instructions' refers to instances where the teacher gave directions or information about procedures to the students.

Table 11

Source, Frequency and Type of Instruction of Vocabulary

Words in Classroom B

Source	Number	%	Instruction			
			H	%	L	%
Text	34	32.3	5	4.8	29	27.6
Spelling tests	13	12.3	3	2.9	10	9.5
Students	8	7.6	1	.9	7	6.7
Teacher talk	13	12.3	1	.9	12	11.4
Instructions	37	35.2	6	5.7	31	29.5
Total	105	99.7	16	15.2	89	84.7

When combined, the sources of text and instructions accounted for two-thirds of the words that were taught. A breakdown of the source of the words in the text category revealed that 15 words were from poems, seven words were from two stories, six words were from tests, two words were from books, and four words were from other sources. The researcher inquired if Mrs. Smith taught vocabulary words

from stories read in class. She replied, "Not a lot. Sometimes I do but I tend to more let them just go for it." When asked if she talked about the words prior to the reading, Mrs. Smith responded, "Oh no, as they come to them. But I do. It depends. If some of the words are local or from a different age, but I wouldn't hand out a word list that has words on it."

Limited instruction was overwhelmingly the major type of instruction utilized by Mrs. Smith in discussing the vocabulary words in the whole class context.

The 105 instances of highlighted or limited instruction from the whole class context were categorized by employing the categorization scheme described in Chapter 3. The percentage in Table 12 is an expression of the total number of responses categorized, i.e. 279.

Table 12

Categorization of Classroom B Vocabulary Instruction

Category	Number	%
Synonyms	33	11.8
Examples	48	17.2
Use	29	10.4
Features	82	29.4
Explanations	53	19.0
Background knowledge	33	11.8
Demonstrations	1	.4
Total	279	100

Comparatively, features was the category into which most of the responses were classified. When the categories of features, explanations and examples were combined, they accounted for two-thirds of the responses. The categories of synonyms, use and background knowledge were approximately even in their number of responses. Demonstration was notably the category with the least responses. The teaching style of Mrs. Smith and/or the nature of the instructed words may explain the low number of demonstrations.

For the categories of synonyms and examples, the teacher was the source of over one-half of the categorized interactions. Approximately two-thirds of the articulations which were categorized as use originated from Mrs. Smith. For the feature and explanation categories, the teacher was the source of approximately three-quarters of the discourse which was categorized into these categories. All but two instances of background knowledge originated from the teacher (i.e she related the word/phrase to the students' prior experiences or she drew upon the students' background experiences) and the sole demonstration was performed by Mrs. Smith.

As in Classroom A, the researcher noted instances of both multiple meanings and multiple exposures. For two words, multiple meanings were mentioned. There were 16 words which received multiple exposures in the whole class context.

While the researcher was present in the classroom there were three instances where Mrs. Smith drew the students' attention to vocabulary words. One student volunteered the word 'habitat' as an answer to a question. Mrs. Smith replied, "Habitat or can you put that a bit more simply? That's a good word Sam. What does it mean?...Perhaps Sam has given us a new word to chew on today."

In another instance, the word 'wend' was in a poem the class was discussing and two students commented upon the word. Mrs. Smith stated, "...it's a word that we don't use a lot anymore but 'wend' is a word. Sometimes we say we wend our way home and it's just another way of saying that we make our way home. So there you've learned a new word for today."

In a third instance, the class was discussing a poem and a student commented that the snake in the poem vanished. Mrs. Smith responded, "He vanishes. Isn't this so much more appropriate than saying he goes away quickly. It's a much better word choice isn't it?" It seemed that she was attempting to communicate to the children the power of appropriate vocabulary in expressing meaning.

While the researcher was present, the students participated in one whole class brainstorming activity. The children orally brainstormed for words which described two animal characters in a story the teacher had read. Following the verbalization of the students' responses, the

children completed another activity which was not related to the brainstorming activity.

Individual Instruction

The observed individual vocabulary instruction was very minimal in this study. The source of three of the four words was teacher talk and all of the words received limited instruction by the teacher.

In the individual instruction situations, there were only nine categorized articulations and the teacher was dominant as the source of information. Multiple meanings were not discussed for any of the four words. One of the four words had been mentioned twice in the class previous to the individualized instruction.

Summary and Discussion of the Instruction

Approximately two-thirds of the instructed vocabulary words came from either texts (stories, books, poems or tests) or teacher instructions. Limited instructional methods were predominantly utilized by Mrs. Smith. The three dominant categories into which the data were classified were features, explanations and examples. Demonstration was the category with the least responses. During the vocabulary instruction, the teacher was the predominant source of information as she did most of the 'telling'.

The explanation of the predominance of features and

examples in Mrs. Smith's vocabulary instruction is similar to the explanation for Mr. Jones's instruction. Just as qualitative differences exist in individuals' responses in explaining the meanings of words, these same qualitative differences exist in the articulation of the meanings of the words during instruction. The relationships amongst the presumed familiarity of the students with the word/concept, the nature of the word/concept, the word/concept-learning task, the teaching style and the purpose of instruction would affect the verbalizations of the instructor. Mrs. Smith predominantly utilized limited instructional techniques and she consequently articulated more concrete information, i.e. features and examples. For the teacher's purposes, the limited instruction and the articulation of lower level cognitive information may have been sufficient. Even for the small amount of highlighted instruction which occurred, there were no instances of 'full blown' vocabulary instruction such as described in past research (Gipe, 1979; Eeds & Cockrum, 1985; Beck, Perfetti & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983; Jiganti & Tindall, 1986; and Duin & Graves, 1987).

Analysis of Classroom B Student Interviews

The six students selected to be interviewed were an academically representative sample of the class. The semi-structured interviews were conducted individually with

each student. The students were asked to respond to a sample of instructed vocabulary words, to a sample of words which they had looked up in the dictionary and to other vocabulary-related questions.

The students' responses to the vocabulary words are divided into the same seven sections as were Classroom A responses. The first four sections are classifications of the appropriateness of student vocabulary responses: conventional answers, vague or imprecise responses, non-attempts and errors. Next, the relationship of the categorized student responses and the type of instruction is examined. Following these five sections, the findings of the data are examined with reference to the literature presented in Chapter 2. In the final section, the students' answers to the other questions asked by the researcher are presented and analyzed.

In the student interviews, the six students were each asked 32 words. Twenty-six of the words had received highlighted or limited instruction in a whole class context. The other six were a sample of words the students had been assigned to look up in the dictionary. The words from the whole class context and the dictionary center are dealt with separately.

Conventional Vocabulary Responses

Whole Class Instruction

Of a possible 156 words from the whole class context (26 words x 6 students), the students responded to 112 or 71.8%. The answers of the students were categorized according to the scheme described in Chapter 3. As well, the data were classified in terms of information which was volunteered (V) by the students or probed (P) by the researcher or both (VP). The percentages in Table 13 are expressed in terms of the total number of responses which were categorized from the student data, i.e. 318.

Table 13

Categorization of Student Responses to Vocabulary Words

Instructed in Classroom B

Category	Number	%	V	P	VP
Synonyms	33	10.4	32	1	0
Examples	70	22.0	19	41	10
Use	29	9.1	24	5	0
Features	94	29.6	62	16	16
Explanations	61	19.2	53	5	3
Background knowledge	25	7.9	13	12	0
Demonstrations	6	1.9	5	1	0
Total	318	100	208	81	29

Features was the salient category of responses and when combined, the categories of features, examples and

explanations accounted for 70.8% of the responses.

Demonstration was significantly the category with the least amount of responses. The nature of the words asked may partially explain the small number of demonstrations.

With regard to volunteered and probed information, 65.4% of the responses were volunteered by the students and 25.5% of the responses were probed by the researcher. There were 70 examples recorded but 41 or 58.6% of these were the result of probing by the researcher. In an attempt to draw more information from the students about the words, the researcher often asked for examples. This may partially explain the large number of probed examples. Approximately one-half of the background knowledge responses were due to information probing as well.

For the words which had been taught in the class, there were 10 instances where the students verbalized multiple meanings. Of these 10 instances, seven were the result of the researcher probing for more information. As well, four of the 10 instances were for the word 'principal', two others were for the word 'design' and two more instances were for the word 'fancy'. Thus, multiple meanings were only articulated for five different words.

Dictionary Words

When the students' answers for the dictionary exercise words were examined, it became evident that there were 34

responses to be categorized. The percentages are expressed in terms of the total number of categorized responses.

Table 14

Categorization of Student Responses to the Dictionary Words

Category	Number	%	V	P	VP
Synonyms	5	14.7	5	0	0
Examples	10	29.4	6	3	1
Use	3	8.8	2	1	0
Features	8	23.5	5	3	0
Explanations	6	17.6	5	1	0
Background knowledge	2	5.9	2	0	0
Demonstrations	0	0	0	0	0
Total	34	99.9	25	8	1

Again, it is necessary to exercise caution due to the small number of responses to the dictionary words. The students only attempted 12 of the 36 instances of dictionary words.

The category with the most responses was examples. The combining of examples, features and explanations accounted for 70.5% of the categorized responses. The categories of use and background knowledge were low in terms of the amount of responses. There were no demonstrations by the students when they were articulating answers to the dictionary words, although the words which were asked may account for this. The data seem to indicate that the students' knowledge of the dictionary words was at a similar cognitive level as the

words instructed in the whole class context. The latter may be explained by the small number of categorized responses or the nature of the words which were asked or the students' answering styles/patterns.

Of the 34 categorized responses, 73.5% (25/34) were volunteered by the students and 23.5% (8/34) were probed by the researcher.

There were no instances of the students articulating multiple meanings for the dictionary words. However, the six words which were asked may partially explain the latter.

Imprecise Vocabulary Responses

As would be expected, the students' responses to the vocabulary words varied in depth and richness. The data revealed that for both sets of words, imprecise information was articulated for nearly one-third of the responses. If an individual's knowledge of words is believed to be on a continuum of depth, breadth and precision, then it is logical that vague information would exist as an individual refined/modified/sharpened his/her knowledge of word meanings.

Non-Attempts

Of a possible 156 words, the students did not attempt 44 or 28.2% of the words.

For the dictionary words, the students did not attempt to answer 24 of 36 (66.7%) of the words. Based upon the

word list of the dictionary assignment, it would seem probable that for many of the words, the children would be learning new words for new concepts. As stated earlier, Graves (1987) identifies this type of word-learning task as the most difficult. As well, the nature of the assignment was relatively passive as the students could easily complete the dictionary task without accessing their background knowledge. The word-learning task and the nature of the assignment may explain the large amount of dictionary words which were not attempted by the students. As Marzano and Marzano state, "when students first learn a concept it is essential to create many experientially based associations with the new words" (1988, p. 28).

Errors

The errors of the students in Classroom B were categorized using the same scheme as for Classroom A. Table 15 illustrates the number and type of errors. Again, there are two percentages presented, the first illustrating the percentage of errors in terms of the total number of words to which the students responded, i.e. 112, and the second depicting the percentage of errors in terms of the total number of categorized responses, i.e. 318.

Table 15

Type and Number of Total Vocabulary Errors of Classroom B
Students

Type of Error	Number	% of Words	% of Responses
Fictitious	16	14.3	5.0
Malapropism	6	5.4	1.9
Homophone	0	0	0
Total	22	19.7	6.9

Errors were made on 14 of the 36 words (38.9%) which each student was asked. The word 'design' was the only word which all of the students tried and made no errors.

When the errors on the dictionary words were separated from the total errors, there were only two instances of malapropisms, and all of the fictitious errors were made on words which had either received highlighted or limited instruction in the whole class context.

Student Responses and the Type of Instruction

It is necessary to examine the students' responses to the vocabulary words in terms of the type of instruction the words received. On the list of words which the students were asked, there were 10 words which had received highlighted instruction, 13 words which had been taught by limited instruction and three words which had received both types of instruction because they had been discussed more than once in the class. Table 16 illustrates the breakdown

of responses for each type of instruction and the percentages are expressed in terms of the total number of words, i.e. 156.

Table 16

The Relationship of the Categorized Student Responses and
the Type of Vocabulary Instruction in Classroom B

	H	%	L	%	H/L	%
Type of Response						
Conventional	19	12.2	28	17.9	10	6.4
Imprecise information	14	9.0	14	9.0	7	4.5
Non-attempts	17	10.9	27	17.3	0	0
Errors	10	6.4	9	5.8	1	.7
Total	60	38.5	78	50	18	11.6

For each type of instruction, the students articulated responses which contained at least some acceptable information for approximately one-half of the words. This is surprising as it would seem that more conventional responses would be articulated for words which had received greater time and effort in instruction. This suggests that perhaps there was not a significant difference between the types of the instruction utilized by Mrs. Smith.

For both types of instruction, the percentage of words the students did not attempt was notably high. Again, this supports the notion that the two types of instruction were similar.

For the three words which received both highlighted and limited instruction, 94.5% of the responses contained at least some acceptable information. The multiple exposures of these words may account for the students' ability to verbalize responses to these words.

An Explanation of the Vocabulary Response Data

When combined, the total number of imprecise responses, non-attempts and errors warrant discussion. As cited in Chapter 2, the literature on effective vocabulary instruction emphasizes the imperativeness of accessing students' background knowledge during vocabulary instruction (Wixson & Carr, 1986; Nelson-Herber, 1986; Thelen, 1986; and Blachowicz, 1986). During the whole class vocabulary instruction, students voluntarily accessed their background experiences twice. The teacher related the vocabulary words to the students' background knowledge for 31 words. Thus, Mrs. Smith was attempting to follow sound pedagogical practises. The following are typical examples of Mrs. Smith relating target words to the students' prior experiences.

Mrs. Smith: If you think about some stories in your earlier grades, you may have seen this word before.

Mrs. Smith: If I were to write a story about Clarence's life, it would be a biography of Clarence.

Mrs. Smith: On this exercise, you're going to be predicting which is not totally new to you because we do

this is in science and you've done it in another reading exercise.

As stated in the explanation of Classroom A's data, students need to be active participants in the process of developing word meanings. As well, their background knowledge must be assessed and utilized for effective vocabulary instruction. Methods of instruction which require students to deeply process word meanings have proven to be effective (Gipe, 1979; Kameenui, Carnine & Freschi, 1982; Beck & McKeown, 1982; Beck, Perfetti & McKeown, 1983; McKeown, Beck, Omanson & Perfetti, 1983; Stahl, 1983, 1985; Eeds & Cockrum, 1985; Raphael & Schwartz, 1985; Stahl & Vancil, 1986; and Jiganti & Tindall, 1986).

There were 105 examples of whole class vocabulary instruction. In 41 or 39% of these instances, the students were involved in verbalizing the meaning(s) of the vocabulary word being addressed. Therefore, on 64 words (61%) the teacher gave the meaning(s) to the students. Research on effective vocabulary instruction stresses the active role of students in learning new vocabulary (Carr & Wixson, 1986; Thelen, 1986; Stahl, 1986; and Blachowicz, 1986). In Classroom B, the teacher did most of the 'telling'. Further, when instruction did occur, 84.7% of the words were taught via limited instruction and this brief instruction may have been insufficient for many of the students. The students verbalized conventional responses

for approximately one-third of the words which received either highlighted or limited instruction.

Thus, the methods of vocabulary instruction utilized in Classroom B may explain the prominent number of occurrences of imprecise responses, non-attempts and errors.

Student Responses to Research Questions

Following the asking of the word lists, the researcher posed seven other vocabulary-related questions to the students.

- 1) When you looked up the words in the dictionary at center five, do you remember the meanings of the words? If so, why do you think you remember some better than others? If not, why?

Four students stated that they remembered some of the meanings of the words that they looked up in the dictionary. Two students (one average and one below average) responded that they didn't remember any of the words from the dictionary center but the researcher neglected to include the word "meaning" in the question. The wording of the inquiry may explain their answer to the question.

One of the above average students stated that the number of meanings for a word was a factor which affected her memory of the meanings.

Elaine: Some of them that I remember have got lots of meanings so you can just remember 1 or 2 meanings from them.

Researcher: And what about the other ones that you don't...

Elaine: There's only one special meaning for them.

Three students made comments about the nature of the words as a factor which affected their memory of the meanings.

Andrew: Well, they were hard words to read.

Matthew: Well, some of them you understand, some of them, you don't.

Three students mentioned two words which were on the dictionary list - (non)venomous and viper. These words were high frequency words in the unit and they were spelling list words as well.

Two students (both average) stated that it was difficult to remember the meanings of the words because time had passed. Five weeks would have been the maximum amount of time which would have passed from the time of the dictionary exercise and the student interviews.

The reasons the students mentioned as factors which affected their memories of the words were sound and logical.

The researcher asked Mrs. Smith whether the students had previously engaged in dictionary activities such as was assigned at the center. She replied, "Not a lot at this time of year." The researcher also asked if she was looking for one meaning in the students' responses. Mrs. Smith stated, "No, if they're a couple of meanings, I expect them

to put them down just so they'll get the idea of what a dictionary is. Just the idea of using the guide words - that they're there for a reason."

The analysis of the data indicated that the students' knowledge of the meanings of the sample dictionary words was minimal. Conventional responses were articulated for only six or 16.7% of the dictionary words. The children did not attempt to respond to 24 or 66.7% of the words and only the word 'viper' was attempted by all of the students and this was a high frequency word in the snake unit. There were four instances of vague or imprecise information and these occurred on two words ('viper' and 'revive'). The two malapropism errors occurred on the word 'viper'. The sample of dictionary words the researcher selected to ask the children may partially explain the response data. As well, there is evidence that copying definitions from a dictionary is of limited value in learning vocabulary (Eeds & Cockrum, 1985; Gipe, 1979; Jiganti & Tindall, 1986; and Duin & Graves, 1987).

2) Do you try to use any of the words you looked up in the dictionary in your writing? Why or why not?

Five students responded positively to the question, with three qualifying their answers by saying, "Sometimes." The other student (below average) stated that she did not

try to use any of the dictionary words in her writing because she did not think of them.

Four children spoke about the semantic appropriateness of the words to the content of their work as a factor which determined whether they would use the words in their writing.

Mary: Well, in our snake unit we use things that go with snakes.

Two students indicated that their knowledge of the meanings of the words was a factor which determined their usage of the dictionary words.

One above average student indirectly referred to the reader/writer relationship as a consideration when selecting words to include in her writing. From her response, it was evident that Elaine was aware of her audience when she was writing.

Researcher: Why do you think you use particular ones?

Elaine: Because...you want to puzzle someone.

The analysis of the written expression of the students revealed that five of the dictionary words appeared in the students' writing. The topic of the unit made it logical for the words 'venomous', 'venom', 'hibernate' and 'viper' to be incorporated into the students' writing. 'Shabby' was the other dictionary word which appeared twice in the students' work. It should be noted that the dictionary words were displayed on two charts at the front of the room.

The researcher observed some students copying some of the dictionary words when the children were to brainstorm for words at centers two and three.

3) Do you like looking up words in the dictionary? Why or why not?

The researcher neglected to ask one of the above average students this question. Four of the five students asked responded positively to the question, one qualifying her answer by saying, "Sometimes." Three students (two average and one below average) expressed their enjoyment of using the dictionary.

Mary: And we play games with the dictionary and everything like that and I just thought it was fun.

The below average student who replied that she "sometimes" liked to look up words in the dictionary, gave attitudinal reasons to explain her answer.

The above average student who responded negatively to the question communicated her desire to make independent decisions about using the dictionary.

Elaine: Not really, unless I want to find something out.

4) When you are writing, do you ever try to use any of these new words or other bigger words or other new words in your writing? Why or why not?

Four students stated that they did try to use new or big words in their writing. By their answers, it was evident that these students were cognizant of the reader/writer relationship as they were concerned about the content of their written work.

Elaine: When I'm writing mysteries, I see if I can puzzle more people. Depends on the kind of story I'm writing...you can think of a different word with just a few big words to describe what you used with all the other littler words.

Ann: Because sometimes I want it to sound a little bit bigger instead of little words. They're kind of better than the other ones...Make it more interesting.

The other two students (one average and one below average) negatively answered the question about using new words they had learned outside of school in their writing. The average student was concerned about the appropriateness of the words to her writing topic.

Mary: 'Cause they're different words and in our snake unit, the words on tape don't really fit with snakes. When asked if she would include the words if snakes were not the writing topic, she replied, "I don't know, maybe."

The below average student indicated that mechanical concerns inhibited his incorporation of these new learned words into his work.

Andrew: I don't know how to spell them or the teacher doesn't want to spell them out for us.

However, Andrew replied that he sometimes tried to use other bigger or new words in his writing at school.

Andrew: Sometimes...Like, so it sounds a little nicer and different.

The other below average student who replied that she did use new words which she had learned at school in her writing, answered that she did not try to use other bigger or new words because they were too difficult to spell.

From the researcher's observations, it was evident that Mrs. Smith accepted and encouraged the use of invented spelling in the students' work. Even though the acceptance of invented spelling was communicated to the students, both of the below average students indicated mechanical concerns as a factor which influenced their decisions to use words in their writing. This is insightful as to their priorities when composing (i.e. mechanics vs content).

5) Where else do you learn new words other than at school?

All of the students mentioned other people (parents, friends or others) as sources of new words. Two of the students stated that they inquired about the meanings of the new words.

Ann: When my mom's talking, I usually listen and after she's finished talking, I usually ask her what it meant.

Three students indicated that media sources (T.V., tapes and movies) were origins of new words. Books were mentioned as sources where new words were encountered by three students.

One below average student stated that she learned new words from the dictionary. This was the same student who admitted that she did not enjoy looking up words in the dictionary. Her earlier response leads the researcher to question the accuracy of her reply.

6) What do you do when you are reading and you come to a word and you don't know what it means?

In their answers to this question, five of the six students mentioned asking other people the meanings of unknown words which they encountered.

Ann: I usually go ask Mrs. Smith and she tells me.

Mary: I'd just go ask mom what it would be or I'd ask dad.

Three students (one average and two below average) indicated in their responses that they used the dictionary to assist them with unknown words. This is interesting in light of Andrew's and Nancy's, the two below average students, earlier responses about the dictionary. Andrew stated that he didn't remember any of the words from the dictionary center and Nancy stated that she did not like to look up words in the dictionary. These previous statements,

as well as the academic standing of the students, lead the researcher to doubt the application of this strategy by these individuals.

In answering the question, one above average student indicated that she used the structure of the words to discover their meanings.

Ann: I'd just, like if it was nonvenomous, then I'd think of venomous and then I'd think what it was.

The two average students mentioned applying phonetic analysis to unknown words, apparently paralleling word identification with word meaning.

Four students stated that they sometimes skipped a word which they did not know the meaning of while they were reading. One of the above average students voluntarily mentioned that she used information in the text to assist her in discovering the meaning of the skipped word.

Elaine: I skip it and then after I've read more of the story, I can usually figure out what it means.

When probed, four other students also acknowledged the use of context in assisting them with the meanings of unknown words.

Ann: Well, sometimes some words they like say, I didn't know the word apple and it said, "The red round apple," and I just think it was red and round so it that's what it was.

Matthew: When I read back, I get to the end of the story and then you go back to the beginning of the sentence and it makes sense...

On two particular occasions while the researcher was observing the class, Mrs. Smith spoke to the class about using contextual information when dealing with unknown word meanings.

Mrs. Smith: Sometimes if we think about new words and what's been said, we can get the meaning of them.

Mrs. Smith: Often in stories like this there are words that maybe you don't know but by thinking of how they're used, you can usually figure out what they mean. One of those words here is sluice (writes sluice on board). What do you think that word means from what I've just read? I'll read that paragraph again to you.

Mrs. Smith verbally communicated an effective contextual strategy for dealing with unknown word meanings. She began to model the strategy but did not explicitly or completely follow her own verbal instructions. As well, the students did not actively engage in the processes of the strategy. In a recent study by Blachowicz (1987), she found no instances of teachers modeling the use of context clues in vocabulary instruction. Blachowicz states that teachers can "...give students explicit instruction in and practice in using context and word learning tools" (1985, p. 881). Further, teachers "...can communicate concepts of acquiring

word meaning by demonstrating how they themselves use context to gather the information needed to derive the word's meaning" (Castle, 1986, p. 14).

- 7) Explain your thinking processes as you completed each test.

Vocabulary Test

The first test was exclusively a vocabulary test and in order to assist the children in their verbalizations, the researcher specifically dealt with three questions on the test. The following are the three questions.

- 1) Snakes that are not poisonous are
 affectionate large nonvenomous antivenins
- 2) The little bird was so frightened by the snake that it could do nothing but stand there as if it were
 peculiar hypnotized satiated coiled
- 4) A snake's body is really very
 complex simple heavy downy

All of the students mentioned utilizing their background knowledge to assist them in completing the exercises.

Elaine: And coiled, it doesn't sound very good because birds can't coil. I should know that, I have two pet birds.

Ann: Well, I remember the stories that had it in them and I thought about it.

In their explanations of completing the sentences, four of the students (two directly and two indirectly) referred to the fact that the answers had to make sense.

Ann: Because sometimes when you're hypnotized, you stay still and you're scared so much that you might be hypnotized.

Mary: None of these other words really fit.

According to the teacher's marking scheme, none of the students answered question #4 correctly. All of the children felt that 'simple' was the right answer. Each student's explanation of their reasoning for that choice was correct and logical.

Andrew; Well, like when you look at it, it looks simple. If you were going to draw it, it looks kinda' simple.

Nancy: Because they're not hard. If you study them, you should know they're simple...Easy to figure out. All of the students admitted that they did not know the meaning of complex, which according to the teacher, was the right answer.

All of the students acknowledged that there were words on the test which they could not pronounce. A variety of strategies were verbalized by the students in dealing with these words. Two students just skipped or ignored the words they couldn't say. Another student stated that she

attempted the words but if she was unsuccessful, she went on and one below average student admitted that he guessed.

Reading Test #1

In pairs, the students read a content article titled "A Snake Grows New Scales". The following day they were given the test and the students discussed the answers to the questions with their partners. Once their discussion was finished, the students returned to their desks and completed the test individually. Three questions on the test addressed vocabulary. The students were to check the word(s)/phrase(s) which meant the same as the underlined words.

1) In the article it said: The skin over the snake's eyes grew foggy. Foggy means:

- ☐ confused ☐ misty ☐ not clear
☐ puzzled ☐ blurred ☐ dim

2) Now the skin was ready to be shed. Shed means:

- ☐ a building ☐ pour out ☐ throw off a covering

3) The coat over the snake's body was made of small little plates. Plates means:

- ☐ a protective covering ☐ a dish
☐ the place where a batter stands to hit a ball

In explaining their answers to the questions, all of the students gave examples when verbalizing their choices.

Elaine: Blurred means you can't see very well because say you had a cloth over your eyes, your vision would be blurred.

Matthew: Well, misty means you sort of can't really see out like it looks like a whole bunch of snow falling sort of.

As well, all the students stressed the fact that the answers must make sense. Five students, in at least one instance, illustrated how the other alternatives did not make sense and thus could not be the correct answers.

Andrew: Pour off out, you can't pour skin...And a building, what does the - that's not a very good one so it has to be throwing off a covering.

Reading Test #2

This test was a cross grade quiz composed by Mrs. Smith. The students were to read the story "A Hamster at Large" silently and then answer the questions on the exercise independently by circling the correct answer(s). Two of the questions dealt with vocabulary.

1) In the story, it says that Ginger's Mother wouldn't object to a temporary hamster.

Object means:

- a) anything that can be seen or touched
- b) a person that is funny or foolish
- c) a purpose or goal
- d) be opposed, feel dislike

Temporary means:

- a) lasting a short time only
- b) the sides of the head
- c) small

Four of the students admitted that they did not go back to the original sentence and check if their selections made sense. Only the two average students indicated that they checked their answers.

Elaine: Why should I when I know the words already?

Ann: No, I couldn't. I mean, well, I could but I didn't. I thought we couldn't.

The two above average and the two average students acknowledged that they had heard of the word 'temporary' before. This past exposure to the word may have assisted them in answering the question.

Summary of the Student Interviews

The students responded to over two-thirds of the words taken from the class setting and to one-third of the words taken from the dictionary exercise. For both word lists, the three categories into which most of the data were categorized were features, examples and explanations, and demonstration was the category which had the least responses. Most of the students' responses for both groups of words were volunteered. Imprecise information was verbalized by the students for approximately one-third of

the responses to the words taken from both the whole class context and the dictionary assignment. For both lists of words, there were non-attempts for approximately 30% of the words taught in the whole class and two-thirds of the dictionary words. Errors were verbalized for over twice as many words from the dictionary list as from the whole class list.

With regard to the questions answered by the students during the interviews, the data revealed that the children believed that they remembered the meanings of the words which they looked up in the dictionary. They acknowledged that the nature of the words and the passage of time affected their memories of the meanings. However, the analysis of the data indicated that of the one-third attempted words, conventional responses were articulated for only one-half of the words.

The majority of the students stated that they liked looking up words in the dictionary and that they tried to use some of the dictionary words in their writing, although they were concerned about the semantic fit of the dictionary words with the content of their work.

When the students were asked to identify sources of new words other than school, the children listed other people, books and media sources.

The majority of the students stated that they tried to use new or other bigger words in their writing as these

words positively affected the quality of the content of their work. They students expressed concern about the semantic appropriateness of new or bigger words to the content of the written work. Further, the two below average students were concerned about mechanical aspects of incorporating new words into their written expression.

When asked about their strategies for dealing with unknown word meanings they encountered while reading, the students indicated that they asked other people, they looked up the word(s) in the dictionary, they skipped the word(s) or utilized contextual information.

Some of the issues about multiple choice tasks which surfaced in the students' answers to the tests are similar to the concerns of researchers (Anderson & Freebody, 1981, 1985; Graves, 1986; and Curtis, 1987). Multiple choice tests do not accurately assess the precision of students' knowledge about words. Although the multiple choice test completed by the students which allowed for more than one acceptable answer better addressed this concern than the type with only one correct answer. As well, no indication of prior knowledge is assessed by administering a multiple choice test. The results of multiple choice tests communicate nothing about the thinking processes which the students engage in when selecting an answer. The issues of guessing, distractor influence, word recognition, and

test-taking strategies are other concerns about multiple choice tests.

From the students' answers to the test questions, it seemed that the students utilized their background knowledge when completing the tests. Many of the students gave examples from their prior experiences when explaining their answers to the researcher. As well, the majority of the students stressed the importance of their answers making sense and many of the children demonstrated how the alternative answers were inappropriate choices. Generally, the students verbalized logical strategies in their explanations of the thinking processes in which they engaged while completing the tests.

The Written Expression of the Students

The written expression of the students was analyzed to examine the relationship of methods of vocabulary instruction to the students' expression of the taught vocabulary.

As in Classroom A, the time allotted to spelling, formal handwriting and reading tests was excluded from the calculation of time spent on writing activities. As well, the calculated time represents the time scheduled for the writing activities, and not the time the children were actually engaged in writing.

As stated earlier in the chapter, the children in Mrs. Smith's class wrote in journals. During the observational time of the research, approximately 190 minutes was devoted to journal writing. The children worked in centers for three weeks and four of the centers entailed some sort of writing component. Therefore, the time allocated to the four centers (190 minutes) was included in the overall total of time spent on writing. Time was also calculated for other assigned writing activities which were not part of the center work. The time allocated for other teacher assigned writing activities was approximately 470 minutes. In totality, 850 minutes were provided for the children to engage in writing activities. This constituted approximately 28.8% of the language arts time. Thus, while the researcher observed the class, approximately 25 minutes a day were spent on some type of writing.

The children were involved in a variety of types of writing in Classroom B. The following is a list of some of the writing activities which were assigned by Mrs. Smith: a factual report on one type of snake, a definition poem, a conversation between two or more snakes, a limerick poem, a lanterne poem, an invitation to a snake presentation, a thank you letter, questions for an interview, arguments for a debate and answering questions about a story.

The various written expression of the students was analyzed. With regard to journal writing, the researcher

looked for the number of instances where the students wrote snake-related entries (eg. a fact, a comment, a poem, an illustration with information), even though they were free to select journal topics. In total, there were 37 entries about snakes written by 13 students and all but two of these students wrote more than one entry about snakes. Thus, approximately one-half of the students in the class wrote at least one snake-related journal entry. It is difficult to calculate a percentage of snake-related entries because not all of the students wrote in their journals at the scheduled times. However, the researcher would estimate that approximately 10% of the total journal entries were somehow related to the snake unit. Mrs. Smith mentioned writing snake-related entries in the journals two or three times but her suggestions did not seem to impact the students' entries (i.e. there was not a significant increase in snake-related entries following her suggestions). The information gathered on the journal entries seemed to indicate that the students were interested in the topic of the language arts unit.

The researcher examined the written work of the students and searched for vocabulary words which had received either highlighted or limited instruction in the class. The source and frequency of these words are illustrated in Table 17.

In the source category, 'report' refers to facts or reports which were written about snakes. The term 'other' includes the arguments written for the debates, the thank you letters, the invitations, the questions written for the interviews, the answers written to assigned questions and Journal entries.

Table 17

Source and Frequency of Instructed Vocabulary Words in the
Written Expression of Classroom B Students

Word	Number	Source		
		Reports	Poems	Other
fangs	30	24	5	1
mongoose	14	0	14	0
venomous	13	4	9	0
camouflaged	8	7	1	0
rodents	6	5	0	1
appearance	5	3	0	2
venom	5	5	0	0
hibernate	4	4	0	0
fancy	3	0	0	3
design	1	0	0	1
Total	89	52	29	8

The data revealed that of the 89 (105 - 16 multiple exposures) instructed vocabulary words, 10 were used in the students' written expression, and only one of the 10 words, 'fang', had received highlighted instruction. The word

'fang' would be likely to appear frequently in the students' writing as it was a pertinent word to the snake report assignments.

The combining of the words 'fang', 'mongoose' and 'venomous' accounted for two-thirds of the occurrences of the instructed vocabulary. The types of poems which the children wrote were conducive to incorporating the words 'mongoose' (limerick poem) and 'venomous' (lanterne poem).

It is not surprising that the vocabulary words which were incorporated appeared mostly in the snake reports/facts and the poetry writing (91%). The required content of these writing assignments easily lent themselves to include the 10 vocabulary words. All of the instructed words were used appropriately in the written work.

There were other words which were not instructed but were related to the unit and appeared frequently in the students' work. The most frequently appearing words, 'poisonous' (40), 'reptiles' (33), 'scales' (18), 'shed' (18), 'slither' (17) and 'striking' (14) were words that would be expected to be used often in a snake unit. The snake reports/facts and poetry forms were overwhelmingly the major types of writing assignments in which the uninstructed vocabulary words were incorporated. Again, this is logical as the content of these compositions was conducive to utilizing the listed words.

The word 'expert' was included in 13 of the students' invitations to the snake presentation which involved two individuals who were very knowledgeable about snakes coming to the school and speaking to the class about their snakes. When the class discussed possible ideas to include in the invitations, the word 'expert' was mentioned by the teacher and some students. It is sensible that the word 'expert' would be used in this writing assignment.

Eight words from a story read to the class and viewed in video form were used in 15 students' answers to questions about the story. It would seem logical for the students to incorporate these words into their answers about the same text. The following words were used by the students: 'melon bed', 'sluice', 'flood', 'triumph', 'bungalow', 'funeral', 'rubbish heap' and 'firestick'.

When the children chose snakes for their reports, nearly every student in the class selected a different type of snake. As well, the names of over 50 different kinds of snakes were found in the students' writing.

As stated earlier in the chapter, the activity at center two involved the brainstorming of words to include under the general headings of movements, kinds and appearance. The students were encouraged by the teacher to use the words from these lists (which were displayed on a bulletin board) in their writing assignments. By analyzing the written expression of the students, it was evident that

some of the words from the center were incorporated into the students' written work. However, it is difficult to determine the source of the words used by the children (i.e. whether the words were copied from the list or independently thought of or read/heard in other contexts).

Usually, the teacher readily accepted the students' written work. Only for the invitations and the thank you letters was more emphasis placed on content quality and quantity.

The students' work was marked according to certain criteria which the teacher had previously established for each assignment. A unit mark sheet was distributed to each student and the criteria for the activities were explained to the class on two separate occasions. The breakdown of the mark, which included both mechanical and content aspects, was usually written beside the assignment. Mrs. Smith marked the students' work daily and thus the children received prompt feedback. A mark for vocabulary was assigned for many of the written assignments (eg. poetry forms, snake reports). On two separate occasions Mrs. Smith explained the criteria for the component of "appropriate vocabulary" as the "... use of words that tell about snakes, if you use the best words that there are to tell about snakes" and "...words that best tell what you're talking about."

By examining the written expression of the students, the researcher found that very few instructed vocabulary words were used by the students. The number of occurrences of these words seemed substantial but one-third of the instances were for the word 'fang'. The presence of a central theme in the language arts activities appeared to have a minimal positive effect on the usage of the instructed vocabulary words in the students' writing. In past research, the teaching of the vocabulary words around a common topic has significantly affected the learning of the instructed words and the using of these words in written work (Duin & Graves, 1986, 1987).

Past research which has investigated the relationship of vocabulary instruction and students' written expression of the taught vocabulary, has found that the students included the instructed words if the words were taught directly and the students were encouraged to use the words in their writing (Thibodeau, 1963; Wolfe, 1975; and Duin & Graves, 1986, 1987). Mrs. Smith did emphasize the importance of selecting appropriate vocabulary for the writing assignments on several occasions but specific reference to utilizing the instructed words was not articulated.

There was a major difference between the vocabulary instruction of past research projects and the vocabulary instruction observed in Classroom B. The purpose of the

vocabulary instruction in Classroom B differed from past research which has investigated the relationship of vocabulary instruction and the students' written expression. The researchers in previous studies were concerned about the amount of actual word learning which occurred and therefore, the instruction was structured accordingly. The data indicate that Mrs. Smith's purpose for vocabulary instruction was not to evaluate the children on their understanding of the word meanings. The observations and the interactions indicate that Mrs. Smith instructed words which would assist/facilitate the understanding/completion of some text/activity. Apparently Mrs. Smith had broader goals than just vocabulary instruction but this is understandable considering the many demands and facets of a language arts program.

Mrs. Smith utilized limited instructional techniques for 84.7% of the vocabulary words. The students articulated conventional responses for approximately one-third of the words which received either limited or highlighted instruction. For the limited instructed words, the students did not attempt 34.6% of the words and for the highlighted instructed words, the children did not attempt 28.3% of the words. Thus, neither type of instruction resulted in the children developing a deep understanding of the instructed vocabulary words. (Therefore, there most likely was not a distinct difference between the two types of instruction).

It would seem logical that if a sufficiently deep understanding of the meanings of words was lacking, it would be difficult to incorporate these words into an individual's written work.

The type of instruction in other studies was more intensive. Generally, in past studies, the students actively manipulated the target vocabulary words in diverse exercises which required them to activate their prior experiences. However, earlier in the vocabulary instruction section, it was demonstrated that the children in this study were not actively involved in the discussions of the target words. As well, the students' background knowledge was infrequently accessed and utilized in the vocabulary instruction. Thus, it appears that the methods of vocabulary instruction did affect the students' expression of the vocabulary in their written work.

Chapter Summary

When considering the findings of the analyses of the data, it is important to remember that: the two teachers in this study were aware of the general, but not the specific, purpose of the study; vocabulary development is one component of a language arts program; and the two teachers were generalists who were responsible for a variety of subject areas.

Although it was not the intent of the project to compare the two classrooms where the research took place, upon analyzing the data, common elements surfaced.

Both teachers directly taught vocabulary and predominantly utilized limited instructional techniques during the instruction. When the articulations of vocabulary instruction were categorized, the three categories into which the majority of the interactions were classified were the same for both teachers. In descending order of predominance, the categories were features, explanations and examples. Both teachers rarely used demonstrations in their instruction of vocabulary. In both classrooms, the teachers were the predominant source of the information when the vocabulary words were being discussed, i.e. the teachers did a lot of 'telling'. The instances where the students' background knowledge was accessed were limited in both classrooms as well. Further, in a few instances, both teachers verbalized imprecise information during vocabulary instruction but this is understandable given the demands of classroom life.

When the responses to the words which the students were asked were categorized, the three categories into which most of the articulations were classified were the same for both classes. In descending order of predominance, the categories were features, examples and explanations. Demonstration was the category with the least categorized

responses for both classes. However, the words which were asked may have influenced the instances of demonstrations. Approximately two-thirds of the responses in each class were volunteered. For both classes of students, a large percentage of the verbalized examples were the result of the researcher probing for more information.

Of the words attempted, a small number of conventional responses were articulated by the students of both classrooms. Both groups of students verbalized imprecise or vague information and errors in their responses to the words asked by the researcher. As well, a notable number of words were not attempted by both classes of students.

In the student interviews, the researcher asked both classes of students about a select group of the words. In Classroom A, the students were asked about words from the calendar and the students in Classroom B were asked about the words they looked up in the dictionary. Generally, both groups of students responded that they remembered the meanings of the select group of words. However, the analyses of the data of both classrooms seemed to indicate that the students remembered less than what they thought.

The majority of the students from both classrooms stated that they tried to use some of the words from the select group of words they were asked about in their writing. Most of the children in both classes indicated that they tried to use other bigger or new words in their

writing as well. The children from the two classes stated that they learned new words from other people, books, media sources and the dictionary. Finally, when asked about their strategies for dealing with unknown word meanings encountered while reading, both groups of students stated that they asked other people, applied phonetic analysis or utilized context clues.

With regard to the written expression of the students, very few instructed words from both classrooms appeared in the children's writing and generally, the words were used appropriately. The presence of a theme in Classroom B seemed to help the students include instructed and uninstructed topic related words more often in their written expression.

The final chapter will include conclusions of the research and implications of the study for classroom practitioners and for future research.

CHAPTER 5

Conclusions and Implications

Introduction

The final chapter of the thesis begins with a review of the study. Following the review, the findings of the research are summarized and presented according to the guiding questions of the study; the implications for instruction and for further research are discussed, and a concluding statement is articulated.

Review of the Study

The purpose of this research was to look at the relationships between vocabulary instructional methods and the expression of the taught vocabulary words in the students' written language, and between the instruction and the students' ability to explain the meanings of the instructed words. Two inherent components of vocabulary instruction which were also examined were teacher selection of vocabulary words and teacher utilization of student background knowledge. The research was conducted in two grade four classrooms in an elementary school approximately 70 kilometres from Calgary, Alberta, Canada. The naturalistic research procedures of taking field notes, recording classroom interactions, interviewing the teachers and the students, and examining the students' written expression were utilized to gather the data. The researcher

analyzed the data of the vocabulary instruction of both classrooms and the data from the student interviews. The researcher also examined the written expression of the students to determine how frequently and how appropriately the instructed vocabulary was incorporated into the students' writing.

The Findings of the Research

The findings of the study are summarized and presented according to the four specific questions which guided this research project.

1. If vocabulary is being directly taught, how are the words generated and what are the methodologies used to teach the vocabulary?

The findings of the study indicated that vocabulary was being directly taught in both classrooms with a small amount of instruction occurring in Classroom A and comparatively, a larger amount in Classroom B.

In Classroom A, the main sources of the instructed vocabulary words were a special calendar designed for vocabulary development and the spelling units. No instructed vocabulary words came from stories or poems the class dealt with. Other sources of vocabulary words were language arts exercises, spelling tests, teacher instructions, thesaurus explanation, a book read by the teacher, rhyming words and the students.

In Classroom B, the main sources of the instructed vocabulary words were 'instructions' where the teacher gave directions or information about procedures to the students and 'text'. A breakdown of the sources of text revealed that approximately one-half of the words were from poems and the remaining half of the words were from stories, tests and books. Other sources of the instructed vocabulary words were spelling tests, teacher talk and the students.

Limited instruction was overwhelmingly the major type of instruction utilized by the teachers when discussing vocabulary words, although to a greater extent by the teacher of Classroom B. In Chapter 1, limited instruction was defined as vocabulary teaching, in either a group or an individual context, where a brief mention of a meaning or a definition or an example of a word/phrase was given and/or elicited. Neither time nor energy was invested in the articulation of the meaning. Also included in this category were those instances where the teacher seemed to be briefly 'checking' or assessing whether the students remembered or knew specific words or concepts.

Highlighted instruction occurred in both classrooms. This term was used to describe teaching situations, in either a group or an individual context, where effort was concentrated on teaching specific words by the teacher directing attention to a word/phrase and investing time and energy in the discussion. Nearly all of the highlighted

instruction in Classroom A occurred with words which originated from the calendar. The nature of the calendar words and the purpose of instruction may explain the teachers' utilization of highlighted instruction for those words. In Classroom B, only 17% of the instruction was highlighted. Again, the nature of the words, the purpose of instruction or the teacher's teaching style may explain the low frequency of highlighted instruction.

Once the instructional data were analyzed, it became evident that the teachers predominantly verbalized more concrete than abstract information (i.e. features and examples). As well, during the vocabulary instruction, the teachers were the dominant source of information.

2. Is background knowledge assessed and accessed both before and during vocabulary instruction? If so, how?

In both classrooms, the background knowledge of the students was assessed before vocabulary instruction, although not regularly. Assessment of background knowledge involved the teachers asking the students if they knew the meaning(s) of the word(s) prior to instruction. There were no overt instances of the teachers assessing the background knowledge of the students during instruction.

The students may have accessed their background knowledge when asked if they knew the meaning(s) of the

word(s) but this is difficult to determine. During the vocabulary instruction in both classrooms, the students volunteered information from their background experiences twice and the teachers related the vocabulary words to the students' prior experiences in approximately one-third of the instances of instruction. However, these background knowledge references were usually brief and limited in depth. It would seem probable that the degree to which the students accessed their background knowledge would be minimal because of the students' relatively passive roles during the instruction as the teachers did most of the 'telling'.

3. To what extent are the students able to explain the meanings of the taught vocabulary words during the student interviews?

A qualitative scheme was utilized to categorize the students' responses to the words asked by the researcher. The errors of the students were categorized as well.

In Classroom A, the students responded to 60.9% of the total words asked. Conventional responses were verbalized for 26.6% of the words, imprecise information was given for 12.5% of the words and errors were made on 21.9% of the words. The students did not attempt 39.1% of the total words asked. The analysis of the data seems to indicate

that the students' depth of understanding of the instructed words was minimal.

For the words which were taken from the whole class context in Classroom B, the students responded to 71.8% of the words. Conventional responses were articulated for 36.5% of the words, imprecise information was given for 22.4% of the words and errors were made on 12.8% of the words. The students did not attempt 28.2% of the words asked. The students included some appropriate information in their explanations of nearly 60% of the words to which they responded.

Features and examples were the categories into which the greatest number of responses were categorized for both classes of students. The data suggest that the vocabulary knowledge of the students, like the information articulated by the teachers during the instruction, contained more concrete than abstract information.

4. To what extent (i.e. how frequently and how appropriately) do the students voluntarily incorporate the taught vocabulary words in their written language in the language arts classes?

In Classroom A, 10 students incorporated six of the instructed calendar words a total of 13 times in their free topic choice writing. With regard to appropriateness, there were two instances where instructed words were used

inappropriately in the context of the work. One other instructed vocabulary word appeared twice in an assigned topic writing activity.

In Classroom B, 10 instructed vocabulary words appeared 89 times in the students' writing and all of the instructed vocabulary was used appropriately in the written work. As well, other uninstructed words related to the language arts theme appeared several times in the students' written expression. The data indicated that the presence of a central theme was conducive to structuring writing activities around the common topic and to incorporating the instructed vocabulary words into the assignments.

Implications for Instruction

Several implications for classroom practise can be drawn from the findings of the present study. In general, the implications are concerned with vocabulary instruction.

The first implication of the research deals with the purpose of instruction as instructors need to consider the reasons for teaching specific vocabulary. The purpose of instruction will ultimately affect the choice of words which are taught and the methods utilized to teach the words. In Classroom A, the purpose of the calendar activity was to expose the students to new words. However, the interviewed students articulated very few conventional responses for the calendar words and a small number of the calendar words were

incorporated into the students' written work. The intention of the activity was pedagogically sound but some of the words were inappropriate for the grade level. As well, the instructional methods utilized may have been insufficient to fulfill the purpose of instruction.

The research has implications for vocabulary measurement or assessment by teachers. Students' knowledge of words differs qualitatively and this fact should be considered when instructors are constructing evaluation measures. Knowledge gained from vocabulary measures which provide information about the processes students engage in when learning words may consequently affect vocabulary instruction.

In one classroom in the study, the words were generally taught around a theme. In this class, instructed vocabulary words appeared more often in the students' writing than in the classroom without a central language arts idea. If students engage in numerous reading and writing activities about the same topic, there would seem to be a greater likelihood that the students would have repeated encounters with the words as well as have opportunities to incorporate the words into their written expression. Further, the presence of a central concept contributes to the continuity of the components of the language arts program.

Although the dictionary is a valuable resource for students, the findings of this study confirm previous

research which has indicated that copying definitions of arbitrarily assigned words from a dictionary is of little value in learning vocabulary. The students from Classroom B articulated very few conventional responses for the dictionary words that were asked by the researcher. As shown in the literature review, there are more effective methods of vocabulary instruction than looking up words in a dictionary. The purpose(s) and the intended learning outcome(s) of assigned dictionary activities need to be carefully considered as the students need to know the features of dictionaries and how to use them.

Another instructional implication from the study is the need for teacher modeling of strategies to promote independent word learning by the students. The teacher of Classroom A modeled consulting a dictionary and demonstrated how to use a thesaurus and the teacher of Classroom B spoke of a contextual strategy. When asked about their strategies for dealing with unknown word meanings which were encountered while reading, the students of both classrooms indicated that they asked other people, and for many, this strategy was their initial response. It appeared that the students needed to develop more independent approaches for dealing with unknown words in context. Not only do teachers need to model strategies for students but perhaps teachers themselves need explicit ideas or instruction in how to effectively model strategies.

Implications for Further Research

The findings of the present research extend the literature on vocabulary instruction and the relationship of vocabulary instruction to students' written expression. As well, the findings of the study suggest implications for future research.

In this research, neither teacher was cognizant of the specific purpose of the project. Further naturalistic research investigating the relationship of vocabulary instruction and students' written expression would be valuable. By attempting to preserve ecological validity, the results of naturalistic research endeavours attempt to accurately describe classroom life. The awareness of actual classroom practises will assist researchers, theorists, educators and publishers in their continuing search for theories/ideas/methods which will positively affect the education of students.

In the classrooms observed in this study, the intensity of the vocabulary instruction was minimal. To further investigate the relationship of vocabulary instruction and students' written expression, classrooms could be observed where in depth vocabulary instruction occurs, but the students are not induced (beyond the usual teacher encouragement) to incorporate the instructed words into their writing. Information could be gathered on both the students' understanding of the vocabulary words and the

students' incorporation of the instructed words into their written expression. An assessment of the children's knowledge of the target words prior to the instruction would also be valuable as information about the degree of actual 'word learning' could be assessed more accurately. The relationship of the degree of word learning and the incorporation of the vocabulary words could also be investigated.

A study with a similar purpose to the present research could be conducted at various grade levels to examine age-related differences. As well, a longitudinal study investigating the relationship of vocabulary instruction and students' written expression would be valuable. A more comprehensive study could examine students' vocabulary growth, possible interactions of school subjects and the expression of vocabulary, and patterns of vocabulary instruction over time and across subjects.

In both observed classrooms, the teachers predominantly utilized limited instructional techniques. To further examine the effects of brief instruction, repeated exposures of words taught by limited instruction could be examined. The students' knowledge level of the words and the incorporation of the words into the students' written expression could be examined.

Initially, the researcher hoped to investigate the students' oral expression of the instructed vocabulary as

well as their written expression. However, it became evident within a few days of the study that this endeavour would not be possible. The characteristics of classroom 'life' made it difficult for the researcher to record the oral language of the students. Many researchers have acknowledged the importance of students utilizing instructed vocabulary in their oral language to facilitate and deepen the understanding of the words as the students begin to take 'ownership' of the words. Research (conducted by a research team or by a researcher carrying out a case study) which examined the incorporation of taught vocabulary in students' oral language would extend the literature on vocabulary instruction.

Concluding Statement

Vocabulary is an inherent feature of both spoken and written language. Because of the power of words, the effects of vocabulary instruction on various components of language arts should continue to be a concern of both researchers and practitioners.

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Appendix A

The Categorization Schemes

The following two examples illustrate how the teachers' vocabulary instruction and the students' responses to the word lists were categorized.

1) Mrs. Smith: I'd like you to read 'The Principal Part of a Python'. A python is another kind of snake. When I say principal part, what do I mean? What do you mean when you say, I mean, we know that Mr. Thomas is the principal of our school but this kind of principal is different. The principal (emphasizes word) part of a python. What are we talking about? (pause) Jack? Norman, you just said it quietly under your breath. Say it again so that they can hear you at the back.

Norman: The main part of a python.

Mrs. Smith: The main part (emphasizes words) of a python.

2) Mrs. Smith: O.K., I'm going to divide you into five groups and we're going to do what's called brainstorming - meaning that you have one recorder and your group gets down as many questions as possible. Get down as many questions as you can - anything that comes to mind. Don't take time haggling over is that a good question or a bad question or a middle type of question. We'll sort that out later.

Categorization of Data

- 1) principal - limited instruction, synonym, example,
background knowledge, multiple meanings
- 2) brainstorming - limited instruction, use, features,
explanation

The following two examples illustrate how errors which occurred during the classroom interactions or the student interviews were categorized.

1) Researcher: The first word is dismantle.

Karen: Well, it's like, you know on your fireplace?

Researcher: Um hm.

Karen: You've got a thing that you can keep some of your things on.

Researcher: What part of the fireplace?

Karen: It's above the fireplace. You can keep candles on it and pictures.

2) Researcher: Prop?

Jody: When you eat supper and you have lots left and you save it for supper maybe the next day.

Researcher: And that's called prop?

Jody: Um hm.

Categorization of Errors

- 1) dismantle - malapropism (mantle)
- 2) prop - fictitious

Appendix B

The Words Asked During the Student InterviewsClassroom AClassroom B

Whole Class Instruction

1. dismantle
2. advantageous
3. grovel
4. ticklish
5. gruff
6. ecumenical
7. copious
8. gape
9. reinforcement
10. alibi
11. latent
12. beginner
13. expert
14. numb
15. amnesia
16. lissome
17. blunt
18. derogatory
19. calamitous
20. sparkle
21. document
22. blurt
23. ambitious
24. penmanship
25. adjectives
26. thesaurus
27. dollop

1. fledgling
2. sluice
3. principal
4. indefinitely
5. bantam
6. serpent
7. habitat
8. pursuing
9. spectator
10. fancy
11. summarize
12. tailor
13. anonymous
14. solo
15. hypnotize
16. guide words
17. design
18. appearance
19. sympathetic
20. nuisance
21. interview
22. form
23. simile
24. vocabulary
25. limerick
26. biography

Spelling Words

1. idle
2. feeble
3. pall
4. lop
5. tern
6. poll
7. dread
8. mowing
9. dwelt
10. prop

Dictionary Words

1. affectionate
2. cavernous
3. revive
4. consolation
5. valiant
6. viper