THE EFFECTS OF ASSIGNED AND UNASSIGNED TOPICS ON THE LENGTH AND SYNTACTIC COMPLEXITY OF GRADE-THREE WRITING WITH A SURVEY OF GENDER DIFFERENCES IN UNASSIGNED TOPIC CHOICES AND ENVIRONMENTS OF INTEREST

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The Effects of Assigned and Unassigned Topics on the Length and Syntactic Complexity of Grade-Three Writing with a Survey of Gender Differences in Unassigned Topic Choices and Environments of Interest

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A Thesis Submitted in Partial
Fulfillment of the Requirements for the
Degree of Master of Education

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July, 1989

St. John's Newfoundland

ABSTRACT

This study was designed to engage children in writing to determine the effects of assigned and unassigned topics on the length and syntactic complexity of children's writing.

Additionally, this study was designed to survey the popular writing topics generated by the children and the gender differences in their self-generated topics and environments of interest for writing.

Twenty-four grade-three students were randomly assigned to two equivalent groups composed equally of boys and girls. For the first three weeks of the study, Group A was randomly assigned to writing on unassigned, self-generated topics and Group B was randomly assigned to writing on teacher-assigned topics. These writing conditions were alternated for the last three weeks of the study. At the end of the study, each child selected one favourite writing to be edited and given to each classmate.

A T-unit analysis used in the research of Hunt (1965) was applied to each of the 288 pieces of writing composed by the students. The number of words written provided a measure of the length of the students' writing. The average length of T-units provided a measure of the syntactic complexity of the students' writing.

Data gathered from the T-unit analysis were

subjected to the t-test for statistical significance between the means. Data were also subjected to a one-way analysis of variance. Results of the statistical testing showed that the children in this study wrote significantly more words on unassigned topics than on assigned topics. The difference between the means was statistically significant at the .01 level. There was no statistically significant difference between the means in the average length of T-units written on assigned and unassigned topics. Also, there was no statistically significant difference between boys' and girls' writing in the number of words written and the average length of T-units written. This occurred in the assigned-topic and unassigned-topic conditions.

The survey of unassigned topics revealed that the most popular topics were pets, space and the ocean. However, pets was the most popular topic choice of girls and the ocean was the most popular topic choice of boys. Additionally, girls generated more topics from their immediate environment whereas boys generated more topics from the extended-world environment.

Findings showed that the writing topic is a major factor in encouraging children to write. Additionally, findings showed that the writing curriculum must be geared to strengthening and broadening the interests and development of each child in the writing process.

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personality of the child who is faced with the task of learning to write" (p. 776).

Rukavina (1977) shared Stallard's concern for more attention to individuality in children's writing in the following statement: "Recognizing what makes each child's writing different and special is of extreme importance in encouraging the beginning writer" (p. 782).

Baker (1981) and Hudson (1985) also emphasized the necessity for teachers to recognize individuality in writing. Baker (1981) asserted that if the school is concerned with the child's own learning, it will provide time for children to make their own choices in writing. She stated that "such a context is one in which teachers assist children in their writing, rather than direct what they must do", (p. 20). Hudson (1985) concurred that "restructuring the classroom to allow for real, rather than assigned, constraints may allow children more natural and more extensive development as writers" (p. 19).

Additionally, Graves (1984) maintained the belief that teachers should provide for individual differences in the teaching and learning of writing. He addressed the need "to look at children differently, to view their behaviors without the control of teacher assignments, and to understand some of the developmental backgrounds behind their interests" (p. 9). He also insisted that "children need to control their own writing, but they can't do it alone" (p. 91). Moreover,

Graves suggested that teachers should help children maintain control "because when they are successful, children see themselves as important learners with things to say" (p. 91).

It was, therefore, in the light of the opinions of writers who have advocated the need and urgency for teachers to consider the individuality of the child in planning for the teaching and learning of writing, that the basis and nature of this study of children's writing was generated.

Background

Evidence of young children's interest in marking at a very early age was demonstrated in the research of Gibson and Yonas (1967). In their research they observed infants using tracing and nontracing objects. Gibson and Yonas found that "even the child at 16 months of age begins to be interested in graphic information" (p. 13).

Similar findings were documented by Clay (1975). She concluded from her observations of young children's scribbling activities that "developmentally, the pleasure of scribble gives place to the concept that these marks are signals of some as yet unknown meaning" (p. 50). Clay also noted that the child's first attempts to learn about writing "will be gross approximations which later become refined: weird letter forms, invented words [and] make believe sentences" (p. 15). This indicates "the child is reaching out towards the principles of written language and any instruction should

encourage him [her] to do this" (p. 15).

Dyson (1981, 1982) reported on her observations of writing strategies which a group of kindergarten children used at home and in their formal language arts program in school. Her report supported the findings of Gibson and Yonas (1967) and Clay (1975) which produced evidence of children's early interest in scribbling. As well, she noticed that children's graphics represented names and numbers from their home surroundings. These children used "words that [had] special meaning in children's lives" (Dyson, 1981, p. 777). However, despite the writing strategies the children had already developed, Dyson noted that the school curriculum assumed that these children were "waiting to be 'prepared' to write" (Dyson, 1982, p. 678); and, they were instructed in the sounds and names of alphabet letters before beginning to write (p. 675). At school, writing strategies were not expanded "they were simply stopped" (p. 676).

Findings similar to Dyson's (1981, 1982) were described by Harste and Burke (1980). In examining the writings of a 6-year-old child in a grade-one classroom, Harste and Burke noted that the child's writing activities at school consisted of printing messages from the board or circling particular words in a "class contributed 'language experience story'" (p. 172). The child, however, "at four years, three months ... encountered a wordless book [at home] and made up an appropriate story" (p. 174). Harste and Burke identified the

writing conditions in this classroom as inappropriate to meet the growth and sophistication of the child in her orchestration of language. They recommended, therefore, that instruction in language be centered around "open-entry language activities where constraints are allowed to evolve in a risk-free language environment" (p. 177).

The concerns raised by Harste and Burke (1980) and Dyson (1981, 1982) pertaining to writing activities which are inappropriate to meet the individual language development of children were also highlighted by Birnbaum (1980). Birnbaum expressed concerns about children's early academic writing experiences which are directed toward attaining component skills rather than meaningful uses of written language. She stressed that if the purposes of writing in school are directed solely to mastering spelling, neatness and punctuation then "the child [will] gradually [internalize] a view of composing as another exercise in which to demonstrate mastery of the conventions" (p. 203). Furthermore, Birnbaum pointed out that children must be encouraged to explore the uses of written language with real purposes "just as they more naturally find purposes for talking. That implies that they be allowed to write on topics that emerge from their own interests" (p. 209). In this way, she suggested, children will be encouraged to write and through writing they will be more successful in learning and using the conventions of written language (p. 209).

Bissex (1981) supported Birnbaum's views that if correctness has priority over meaning in writing, writing may be viewed as an "imposed task" (p. 789). In addition, Bissex emphasized the crucial role of the teacher in the writing process, particularly if the teacher is the child's only audience. Some children may not see adults writing at home, therefore, if the teacher is concerned with correctness rather than the message of the writing, children may be taught to be poor writers because of lack of purpose for writing (p. 789). Moreover, she asserted that "just as children learn to talk by talking in an environment that is full of talk, children learn to write by writing in an environment full of writing and writings" (p. 787). She stressed, however, that writing activities must produce meaningful reading for the child, not products for the teacher (p. 787).

The urgency projected by both Birnbaum (1980) and Bissex (1981) to make children's writing experiences meaningful experiences was also evident in early research by Nelson (1965). She indicated the need for research "which inquires into the teaching of composition and the concomitant pupil learnings" (p. 100). In her research Nelson investigated the influence of assigned topic choices on the written language of 6 and 7-year-olds. Her "findings confirmed qualitative and quantitative differences in writing as a function of the topic" (p. 106). Nelson's research also realized practical approaches for curriculum planning to maximize the child's

chances for learning about writing. These approaches included "delaying the introduction of assigned topic writing until the child has developed sufficient language skill to predict probable success in writing" (p. 106).

Jobe's (1974) study, which investigated children's creative writing from self-generated topics, provided evidence that substantiated the findings of Nelson (1965). From his findings Jobe made the following conclusion pertaining to writing opportunities without the constraint of assigned topics:

> There is danger of underestimating the creative ability of children. Teachers need to find time in the daily schedule to allow children to have free choice in writing. This encourages an independence of thought and an awareness of potential writing topics (p. 107).

Findings which have emerged from past research have provided the evidence of the need to foster children's individual interests as intrinsic motives for written expression. As a result, a new focus and direction may be necessary for research in writing in an area which has, as yet, been relatively unexplored. Braddock, Lloyd-Jones, and Schoer (1963) referred to this unexplored territory in the following questions: "What kinds of situations and assignments at various levels of schooling stimulate a desire to write well? What do different kinds of students prefer to write about when relieved of the expectations and requirements

of teachers and others?" (p. 52).

This relatively unexplored direction for research, therefore, may help to clarify the effects of individual interests on the writing of beginning writers. Thus, this study examined children's writing in assigned (teacher-selected) topics and unassigned (student-generated) topics in an attempt to contribute to the development of an understanding of the role of interest on the writing process and products of children.

Statement of the Purpose

Writing in the primary curriculum may often be regarded as an activity in which the teacher must take responsibility for assigning a topic and directing the form of the writing activity. However, if teachers always direct and control the writing experiences of their students, they may not be presented with opportunities to discover real and lasting purposes for writing. Therefore, writing may become a producing task for students rather than a means of expression. Thus, for children who have not discovered purposes for writing, directed writing activities may become difficult and frustrating experiences without meaningful purposes.

However, while writing activities may create difficulties for some children in the classroom, it has been documented by researchers such as Clay (1975) and Dyson (1981, 1982) that children develop confidence and enthusiasm in marking and

scribbling long before they enter the academic setting. Children find purposes for expressing themselves through their marks and scribbles at an early age. Therefore, in an effort to develop an understanding of the conditions which foster purposes and enthusiasm in written language, it may be of value to consider the conditions which create purposes and enthusiasm for marking and scribbling at an early age.

Recent research by Holmes (1984) substantiated the need to investigate the effects of different types of writing conditions in the school environment to develop written language. From her research with kindergarten children, Holmes reported that with independent writing time "subjects seemed to exhibit more variety and fluency in their writing" (p. 92). Also, with "freedom to experiment ... writing became more varied and detailed" (p. 92). Holmes indicated that the writing done by the students in her study reflected the findings of studies by Graves (1973) and Melas (1974) "that have concluded students write more when they write about topics of their own choosing" (p. 92). Holmes recommended, therefore, that "more studies be made to clarify the role of independent writing in the school curriculum" (p. 97).

In an attempt to examine the role of independent writing in motivating written expression, the first purpose of this study was to engage students in writing conditions which encouraged them to write on their own unassigned topics of interest as well as on assigned topics. Students were engaged

in writing in both assigned and unassigned-topic conditions in order to explore and compare the effects of these conditions on the length and syntactic complexity of their writing. The procedures for measuring length of writing and syntactic complexity of writing are discussed in Chapter 3.

A second purpose of this study was to categorize the students' assigned and unassigned topics under two environments of experience: immediate environment and extended-world environment. These environments are also defined fully in Chapter 3. The classification of independent topic choices was carried out in an effort to ascertain the frequency of occurrence of each environment in the topic choices of these students. In addition, the classifications served as a means to examine whether a relationship exists between environment of experience and the length and syntactic complexity of writing by these students. As well, these environments were employed in an attempt to determine whether gender differences exist in their topic choices.

In summary, this study attempted to explore answers to the following questions pertinent to the assigned and unassigned topics of the students in this grade-three class:

1. Are there differences in the syntactic complexity of writing in assigned versus unassigned topics?
2. Are there differences in the length of writing in assigned versus unassigned topics?
3. Does boys' and girls' writing differ in syntactic

complexity in assigned versus unassigned topics?

4. Does boys' and girls' writing differ in length in assigned versus unassigned topics?

5. In unassigned topics do boys and girls differ in their topics of interest in writing?

6. In unassigned topics do boys and girls differ in their orientation towards a particular environment in their topics of interest in writing?

7. Do children choose more topics from their immediate environment than from the extended-world environment for their writing?

8. Do children choose any particular topic more frequently than others in their free choice of topics in writing?

9. Are there differences in the syntactic complexity of writing by boys and girls on topics from their immediate environment and the extended-world environment?

10. Are there differences in the length of writing by boys and girls on topics from their immediate environment and the extended-world environment?

Significance of the Study

In planning writing opportunities teachers are faced with the crucial task of providing the best writing experiences for their students. Efforts to provide writing experiences, however, may be directed toward methods such as story starters or copying exercises which are guided by procedures for

motivating writing. Thus, if writing conditions are continuously guided by procedures rather than individual development in the writing process, the products of writing may take priority over the development of a genuine desire for expression through writing. Therefore, there is a need for more studies that inquire into writing conditions which may affect development in writing. The need for such an inquiry is expressed in the following statement by Henry (1971): "Plans for improving the education of children must be based ... on an understanding of the relationship among the factors" (p. 69). This study may contribute to research that seeks to understand the relationship between factors which may affect the writing process and products of young children.

The overview of writing research studies presented in this chapter has identified individuality in writing as an important factor in the development of writing for beginning writers. Thus, the teacher-researcher engaged students in assigned and unassigned-topic conditions for writing in this study, in an effort to examine the effects of personal topic choice on the syntactic complexity and length of their writing. The findings of this study may give teachers an opportunity to observe whether individuality in topic choice may be a factor which affects the writing process and products of children. Moreover, teachers and curriculum planners of writing may be able to utilize findings from this study to develop an understanding of the effects of experiences and

writing conditions on individual growth in the writing process.

The teacher-researcher feels it is the responsibility of researchers in writing to contribute to the development of teachers' awareness of what is important to the individual child in the writing process. As well, the results of her study may help teachers to evaluate whether children are more successful in writing when teachers give children more control in their writing activities through personal choices in writing topics.

Limitations of the Study

A number of limitations of the study are recognized by the teacher-researcher.

The teacher-researcher recognized that the small number of subjects in the study would restrict generalization of outcomes to a larger population.

Also, only one grade was represented from one school in an urban area. The children's personal topic choices for their writing may be applicable only to this particular class.

The researcher is also the teacher of this class, therefore, the researcher recognized that a degree of bias might be present even though specific procedures were strictly adhered to throughout the study to ensure as much objectivity as possible.

Another limitation recognized was the application of two

treatment conditions, assigned and unassigned topics, to the same subjects. Such an application of treatment conditions may have extraneous effects on the outcome, since the effects of the first treatment condition on the subjects cannot be erased. Thus, the effects of the first treatment condition may also be carried over to the second treatment condition. This may limit the interpretation and generalization of the findings. However, the teacher-researcher introduced procedures in an attempt to minimize such effects. These procedures were described in Chapter 3.

Organization of the Study

Chapter 1 includes background information, the statement of the purpose and the significance of the study. It also outlines limitations recognized.

Chapter 2 presents the theoretical background of the study, which includes an overview of research studies and professional literature related to children's writing in the following areas: Experience and Language Development, The Growth of the Personal Experience Model of Writing, The Nature of Children's Written Language, Children's Topic Choices for Writing, The Nature of the Writing Atmosphere, and Children's Purposes and Audiences for Writing.

Chapter 3 describes the sample and explains the design and procedures employed in the investigation. It includes definitions of terms in the study, as well as the statements

of the statistical and substantive hypotheses for the study.

Chapter 4 presents data with a statistical analysis of the data.

Chapter 5 gives a summary of the findings as well as educational implications and recommendations for further study.

infancy on readies a child to deal with the printed facet of language" (Burrows, Monson and Stauffer, 1972, p. 47). This statement summarizes the value of children's experiences in the acquisition of written language.

The awareness by educators of the value of children's experiences is currently influencing and shaping the direction of the present primary curriculum. This direction encourages a learning environment which surrounds children with meaningful firsthand experiences in order to foster the development of children's language, thought and creativity.

The child's interaction with the environment has been identified by Piaget as a vital factor in the process of cognitive growth. His theory of cognitive growth described the linking of two fundamental components for 'cognitive equilibrium' (Piaget, 1977, p.6). Piaget asserted that the child assimilates or incorporates "elements in the environment into [his/her] sensorimotor or conceptual scheme" (pp. 6-7); then, he/she must accommodate or adapt to the characteristics of those elements (pp. 6-7).

Webb (1980) described the fundamental components of Piaget's theory of cognitive growth as "an internal self-regulation mechanism that responds to environmental stimulation" (p. 93). From the evidence of Piaget's research, Webb suggested implications for planning learning activities which included considering the "stage characteristics of the student's thought processes" (p. 96); and using a wide variety

of experiences to provide for individual differences in learning activities (p. 96).

The importance of considering the implications suggested by Webb (1980) was reflected in the research findings of Graves (1973). Graves noted that the use of first person pronouns in the writing of 7-year-olds provided evidence of different levels of development in writing. Graves also identified the use of first person possessives as characteristic of possessiveness which, he suggested, is a trait of egocentricity. He explained that egocentricity is revealed in the way children view objects around them. He pointed out that a very young child develops strong attachments to objects around him/her such as a toy or a blanket. The object becomes a part of the child's personality and it is difficult to remove the special object (pp. 92-93).

In children's writing Graves found that those developmentally low in writing used first person possessives more and wrote about personal objects such as toys. However, he found that as children matured they were better able to detach themselves from special objects. At this stage, Graves noted, they demonstrated greater objectivity in relation to objects and events around them. Graves pointed out that this was evident in the child's ability to write about feelings and use the first person, I, to express personal experiences such as "I am this kind of person" (pp. 92-93).

The egocentricity revealed in children's writing in

Graves' research was also noted in the observations of Bissex (1980). In her observations of her son's writing Bissex noticed that his first attempts in writing were "letter-like forms in a non-linear arrangement"; additionally, she found that he was more concerned with the form of his marks than with their function. Bissex noted, however, that by age 8 her son was using dialogue and narrative in his writing to express his interest in the world around him. His writing revealed awareness of audience and function which, she asserted, demonstrated movement outward from an egocentric view of the world (p. 200). Bissex concluded that "understanding the purposes of a child's writing means understanding his changing view of himself and the world" (p. 200).

In an attempt to understand the purposes of children's writing, Vygotsky (1962) provided early research evidence of the need for the development of purpose in writing. Vygotsky maintained from his findings that the child "has little motivation to learn writing when we begin to teach it. He [she] feels no need for it and has only a vague idea of its usefulness" (p. 99). Vygotsky also identified the importance of setting meaningful functions for writing because of "the abstract quality of writing" (p. 99). Meaningful functions for writing were also fundamental in the recent report of Shuy (1981) on the usefulness of an "analytic, constructivist, holistic view of language learning" (p. 101). In this approach to language learning, Shuy explained, function

precedes form which implies "analytically viewing ... parts in a contextually relevant whole" (p. 101).

The holistic approach to the acquisition of language skills, Shuy pointed out, does not require attaining isolated skills. Language is learned with a function and a need to do something with language (p. 106). This, he suggested, follows the natural direction of language from "deep to surface" structure (p. 106). In explaining this structure, Chomsky (1965) stated: "the syntactic component of a grammar must specify, for each sentence, a deep structure that determines its semantic interpretation and a surface structure that determines its phonetic interpretation" (p. 16).

Shuy (1981) also contended that recent research has made a major difference in the perspective of language learning. It has, he believed, attempted to recapture the natural direction of language learning in spoken and written language, "in a holistic manner" (p. 106). This, Shuy insisted, fosters the acquisition of written language through meaningful functions for writing rather than learning isolated skills.

The analysis presented by Magoon (1977) on the constructivist perspective in education concurred with the views of Shuy (1981). Magoon observed that the constructivist approach focuses on the importance of process as well as end-products (p. 653). He also noted that this approach has implications for educational research. These implications, he contended, were illustrated in the work of Busis,

Chittenden, and Amarel (1976) who stated that "a revised paradigm for research would have to be as much concerned with the quality of experiences and the meaning of behavior as with the occurrence of the behavior" (cited in Magoon, 1977, p. 669).

The implications for writing and writing research presented in the report by Magoon (1977), and the report by Shuy (1981) concurred with Piaget's theory of cognitive growth. Both reports emphasized that underlying experiences and behavior are fundamental to understanding children's growth in language which was also evident in Piaget's theory. The need for this understanding in the teaching and learning of writing is summarized in the following statement:

> That written language has meaning is an understanding that each individual must discover for himself. Teachers cannot take it for granted that all kindergarten, first-grade, ... second-grade, [and third-grade] children have developed this understanding. This discovery that written language has meaning is not potentially possible unless the child has concepts of the referents for the written language he encounters. (Wadsworth, 1978, p. 152)

The Growth of the Personal Experience Model of Writing

Kantor (1975) suggested that "to understand the role of creative expression in the present-day language arts

curriculum properly, we need to consider its development" (p. 5). Shafer (1983) traced this development to the work of Rousseau who "can be considered [to be] the first major proponent of the personal experience model of writing" (cited in Kroll and Wells, 1983, p. 252). Rousseau's work in the eighteenth century was based on the value of experience and activity in learning. His ideas later influenced the work of psychologists such as Pestalozzi, Froebel, Montessori and other progressive educators who posited that firsthand experiences should be the basis for education in British primary schools in the 1920's and 1930's (cited in Kroll and Wells, 1983, p. 252).

Kantor (1975) identified early writers such as Mearns (1929), and Rosenblatt (1938) who were also considered to be influential in guiding the direction and the development of creative expression in the English curriculum. He referred to the theory and practice of Mearns as "both a romantic view of the natural expression of children, ... and an 'instrumentalist' conception of educational aims ... which stressed the interactions among interest, activity, subject matter, and the teacher" (p. 1). He described Rosenblatt's work as ahead of its time in that she asserted "the quality of means rather than practical ends" for creative expression (p. 19). Kantor indicated that the conclusions of the Dartmouth Seminar in the late 1960's was "a recapturing of a past legacy" of works that were instrumental in building an

experience-based curriculum (p. 26).

Shafer (1983) noted, however, that the evolution of the experience-based curriculum was not without criticism. More conservative educators objected to the personal experience theory of progressive educators because of their "concern with the neglect of grammar" in the experience-based curriculum (Kroll and Wells, 1983, p. 253). But, "the Hadow Report on Primary Education (1931) gave public utterance to a profound change of attitudes to education and represented the major landmark in the shift from an Elementary to a Primary school philosophy" (Blenkin and Kelly, 1981, p. 34). Its commitment was summed up in the following statement:

> Applying these considerations to the problem before us, we see that the curriculum is to be thought of in terms of activity and experience rather tnan of knowledge to be acquired and facts to be stored (cited in Blenkin and Kelly, 1981, p. 35).

Shafer (1983) also noted that the experience theory of creative expression was tested in the Plowden Report in 1963, and again in the Bullock Report in the 1970's. Both reports, however, recommended the practices of the experience-based curriculum in the British primary schools. In its recommendations, the Bullock Report endorsed the personal experience model of writing and "recommended attention to 'the fact that ... the teacher who aims to extend the pupil's power as a writer must therefore work first upon his intentions and

then upon the techniques appropriate to them'" (cited in Kroll and Wells, 1983, pp. 254-255).

The practices of the personal experience model for writing endorsed by the Bullock Report were observed by Christine and Ronald Laconte (1969) in their observations in English primary classrooms. They noticed that "almost all writing [was] derived from the personal experiences of the children and the emphasis [was] on freedom of expression rather than correctness or stylistic convention" (p. 19). In addition, "fluency [was] the most important goal, and nothing [was] done which might discourage the flow of words" (p. 19).

Dixon (1967) made similar observations of the experience model of writing in British primary schools. He found that the underlying purposes for writing evolved from the writing atmosphere in the classroom. Children were encouraged to share their experiences with the class and then they were encouraged to use writing or drawing or painting to recapture their experiences. Dixon also found that writing emerged through working with materials and sharing experiences in numerous integrated activities (p. 3).

Golden (1980) also observed children writing in several informal schools in England (p. 758). She too found that writing activities grew out of the children's actual experiences which, she noticed, allowed for individual language development. From her observations Golden suggested that "writing as an outgrowth of real experiences provides a

more interesting alternative than assigned topics, story starters and copying from the board" (p. 762).

The Nature of Children's Written Language

In order to help children write successfully, it is necessary to attempt to develop an understanding of the nature of children's written language by exploring answers to questions such as: What are children's intentions as they mark and scribble? Do young children write differently from adult writers? How can teachers foster growth in children's written language?

F. Smith (1981) suggested that one of the misconceptions of children's writing is that their "writing is for communication" (p. 793). Smith agreed that writing can be used for communication; but, he asserted, this is not the priority purpose in children's writing (p. 793). Smith maintained, also, that "children often like to show what they write -- until they become self-conscious about their expression, neatness, punctuation or spelling errors -- but the purpose of this social act is to share their delight ... rather than to communicate information" (p. 793).

The observations of children's writing activities reported by Calkins (1986) supported the suggestions of F. Smith (1981). She concurred that children and adults view writing differently. Children, Calkins asserted, view writing as "exploration with marker and pen" (p. 35); but, she

suggested, adults view writing as "an exercise on dotted-line paper" (p. 35). Her observations also indicated that young children's early writing attempts are playful activities in that "there is no planning, and there is no goal" (cited in Walshe, 1982, p. 67). In addition, from her observations Calkins (1979) reported the following generalizations about young writers:

> Children progress from titles under drawings to writing sentences that label their artwork, to writing more as printing becomes easier. [As well], by second-grade most children have progressed from letters to words and from words to phrases and episodes, characteristically linked together by a string of ands (cited in Vukelich and Golden, 1981, p. 168).

Hunt (1965) provided evidence in his research which substantiated the generalization made by Calkins (1979) indicating that and is characteristic of young children's writing. From the findings of his research of grammatical structures in children's writings, Hunt found that younger students used the "coordinator and" frequently in their writing (p. 11); therefore, punctuation was inadequate. Thus, he concluded from his findings that "if sentence length is assumed to be an index of language maturity, then the child who under-punctuates the most or uses and the most will, regrettably, be credited with the greatest language maturity" (p. 8). From his conclusions Hunt proposed the 'T-unit' to

be more reliable than a sentence as an index of children's language maturity (p. 21).

Hunt proposed the "T-unit ... as a potential index of maturity [because he found in his research that] the unit [had] the advantage of preserving all the subordination achieved by a student, and all his [her] coordination between words and phrases and subordinate clauses" (p. 21).

The "T-unit" or "minimal terminable unit" was named by Hunt (p. 21); but, it was also labeled as the "communication unit" in the research of Watts (1948) and Loban (1963, 1976) (cited in Loban, 1976, p. 9). Watts (1948) defined the unit "as a group of words which cannot be further divided without the loss of their essential meaning" (cited in Loban, 1976, p. 9). However, because "essential meaning" was difficult to define, Loban (1976) explained the unit as "each independent clause with its modifiers" (p. 9).

The communication unit in the research of Watts (1948) and Loban (1963, 1979) was applied to both written and oral communication, however, "Hunt's T-unit [was] based upon written language" (cited in Loban, 1976, pp. 8-9). His T-unit analysis consisted of first slicing up a whole piece of writing into units which were grammatically independent (pp. 20-21). Then, "to get the mean clause length for all the writing by one student, his [her] total number of words was divided by his [her] total number of clauses" (p. 15).

From the findings of his T-unit analysis, Hunt (1965)

concluded that "the older student can incorporate and consolidate more grammatical structures into a single grammatically interrelated unit. The younger student produces short separate units" (p. 143) which comprise a maximum of 8 words (p. 29). "His [her] span of grammatical concern or attention is narrow. As he [she] matures that span broadens" (p. 143).

Hunt's conclusions about writing composed by younger students were supported in earlier research by Wilson (1963). In his research Wilson found that children in grade three write sentences of 5 or 6 words. Additionally, Wilson noticed that their written langauge was similar to their oral speech (p. 371).

Hunt's T-unit analysis was tested by O'Donnell, Griffin and Norris (1967) in their research into "the development of syntactic structures in children's written and oral narration" (p. v). In their research, they found that when Hunt's T-unit analysis was applied to an extensive sample of children's written language, "the mean length of T-units [had] special claim to consideration as a simple, objective, valid indicator of development in syntactic control" (pp. 98-99).

The research of O'Donnell, Griffin and Norris (1967) also revealed that "in writing, the syntax of third graders could be judged inferior to that of the older children at almost every point at which analysis was applied" (p. 94). As well, they found that grade-three girls seemed to be superior to

grade-three boys in writing syntax (p. 96).

These conclusions by O'Donnell, Griffin and Norris (1967) were consistent with the findings of Maccoby (1966). In her detailed review of research studies related to differences between boys and girls in intellectual functioning, Maccoby made the following conclusions in relation to children's verbal ability:

> Throughout the preschool years and in the early school years, girls exceed boys in most aspects of verbal performance. They ... use longer sentences, and are more fluent. By the beginning of school, however, there are no longer consistent differences in vocabulary .... [But], throughout the school years, girls do better on tests of grammar, spelling, and word fluency (p. 26).

The findings of Maccoby (1966) were endorsed by Sexton (1969) who reviewed research studies which dealt with developmental differences between boys and girls. Sexton (1969) noted that "boys are about sixteen months behind girls in the development and control of hand muscles .... [Thus] the boy's early struggles and failures with handwriting may condition many of his later responses to the written language" (p. 105).

Additionally, Sexton (1969) pointed out that "though girls develop faster, boys are at all ages more active" (p. 105). This developmental difference between boys and girls was also noted by Sears, Rau and Alpert (1965) who reported

on a study which investigated child-rearing and types of behavior in 4-year-olds. Their findings, "in general, [implied that] the direct and active forms of aggression, especially the antisocial forms, seem to characterize the masculine-sex-typed boys, whereas the interpersonal, verbal, and prosocial forms seem to characterize the girls" (p. 169). In relation to these developmental differences, Sexton (1969) suggested that "the boy's desire for autonomy and the girl's orientation to adults may require different teaching methods" (p. 108).

This suggestion by Sexton (1969) also supported an observation made by Wilson (1963). In his research Wilson observed that some children delayed writing by moving about and engaging in conversations when they were asked to write (p. 371). He also suggested that these behaviors "indicated a need for release from restraints [while writing]" (p. 371).

The suggestion of Wilson (1963) was substantiated by Clark (1954), Graves (1980) and Calkins (1986). Clark (1954) found "that when children wrote about themselves -- their feelings and emotions -- they responded most freely and usually achieved highest quality and interest" (p. 152). In addition, Clark found that children wrote longer sentences and used more independent clauses in their highly personal writing" (p. 152). Graves purported that "from the first day of school we must leave control of the writing with the child -- the choice of topic and the writing itself. Then children

write more and care more [about their writing]" (cited in Walshe, 1981, p. 9). Calkins (1986) concurred that "writing will ... be meaningful for ... students if it connects with the purposes and interests that energize their lives" (p. 111).

Children's Topic Choices for Writing

Girdon (1954) revealed from her experiences and observations that topics which teachers select for writing may be frequently outside the interests and experiences of some children (p. 399). She suggested, therefore, that teachers allow free-writing time in order to foster free expression of meaningful experiences since, "even with many guesses, [the teacher] could never guess all of the topics a class might choose to write about in one free-writing period" (p. 400).

The early observations of Girdon (1954) were exemplified in the research of Graves (1973), Melas (1974) and Jobe (1974). Their research supported the suggestions of Girdon and revealed some of the varied writing topics of children.

Graves (1973) studied the assigned and unassigned writing process of a group of 7-year-olds. In his study assigned writing was defined as writing that the children were required to do and complete. Unassigned writing was defined as writing which did not require completion (p. 33).

From the children's writing Graves documented their themes or main ideas in their writing according to territorial

range. The range of territorial writing included a "primary territory [which referred to] elements near at hand of concern to children, ... secondary territory [which referred to] the metropolitan areas beyond the child's school and home, [and] expanded territory [which referred to] the area beyond the secondary" (pp. 95-97).

Graves found in his research that "boys wrote more about secondary territory which included male vocations and sports" (p. 99), whereas, "girls almost completely ignored writing in the secondary territory" (p. 99). As well, boys selected more themes in the extended territory than did girls. These themes included space, maps and presidents. However, girls wrote more about themes in the primary territory than did boys. These included such themes as my home, my dog and my toys (pp. 96-100).

Melas (1974) also attempted to investigate whether there are significant differences in the themes of children's independent writing and the themes of teacher-assigned writing (p. 1). His findings concurred with the findings of Graves (1973) which revealed differences in the writing themes of boys and girls.

In Melas' research unassigned writing was defined as writing done on the child's own initiative, or writing done "during a 'specified writing' time but without influence or demand by the teacher" (p. 9). Assigned writing was defined as writing which was influenced by the suggestions and

comments of the teacher, or the children were required to write on a topic which was selected by the teacher (p. 9).

Melas found in his study that in unassigned writing the children wrote more on Action and Sports themes (p. 63). In addition, unassigned writing themes "to a large extent" were different from those found in assigned writing (p. 113). Melas also noted "that boys included themselves in their Imaginative and Narrative themes less often than girls which [he suggested] is a possible indication of a difference in maturity levels that bears upon writing assignments and teacher expectations" (p. 115).

The findings of Graves (1973) and Melas (1974) corroborated the findings of Pitcher and Prelinger (1963) who studied fantasy in children's stories. The stories were told voluntarily by 137 nursery-school and kindergarten age children from upper socioeconomic families. From their investigation Pitcher and Prelinger made the following conclusions about fantasy in boys' and girls' stories:

> ... the boy more than the girl has a tendency to go out of bounds, to fraternize with the grandiose and unknown .... The girl more often stays close to the here and now in her main interests which are the domestic and the familiar scene (p. 174).

Additionally, Pitcher and Prelinger noted "how different cultural expectations made of boys and girls are expressed in different emphasis in fantasy themes [such as good and evil]"

(p. 205). 5-year-old girls were "still mostly concerned with problems of domestic behavior [for example], ... children who mess the house" (p. 201). Whereas, "[boys matched] forces of good and evil in organized warfare [and saw] a responsibility for saving the people from bad witches" (p. 202).

The research of Pitcher and Prelinger (1963) Graves (1973) and Melas (1974) revealed the need for teachers to consider children's interests when assigning writing topics. Melas (1974) believed that "the effects of this accounting should be materialized through the self-confidence and satisfaction that each child will exhibit as he [she] writes about what interests him [her] at that particular time and age" (p. 115). Pitcher and Prelinger (1963) suggested that "different patterns of experience confront the organizing forces of ... children's egos" (p. 205). Additionally, Graves (1973) pointed out that "some children may be forced to fulfil written assignments when they are completely lacking in ability to use 'inner language' or to self-discuss" (p. 2). Such assignments, he suggested, "do not assist [children] to grow in a positive disposition toward writing" (p. 2).

Jobe (1974) attempted "to discover the sources from which children select ideas for topics for creative writing" (p. 1). Jobe's work substantiated the recommendations of Graves (1973) and Melas (1974) in that he also suggested that teachers need to find time to allow children to have free choice in their writing topics (p. 107).

Jobe's study method involved 15-minute daily writing periods for ten weeks in which no topics were assigned in grades two, four and six. The Torrance Tests of Creative Thinking were administered to determine whether the children who were more original in their writing also scored higher in the measure of creativity.

Jobe's data revealed that boys and girls differed in their topics of interest when they were given freedom to choose their own topics for writing. This finding also concurred with the findings of Pitcher and Prelinger (1963), Graves (1973) and Melas (1974). Jobe also found that the most popular choices were 'fantasy' topics (p. 106), particularly for grade two girls (p. 45). This choice was followed by 'animal' topics (p. 106), particularly for grade four boys (p. 48). In addition, Jobe found that "the major influence on ... children's writing [was] an 'internal force', the 'original ideas' of the children themselves" (p. 106).

The Nature of the Writing Atmosphere

Taylor and Hoedt (1966) have provided early research evidence for the theory that "a relaxed, uncritical atmosphere is imperative for creative inspiration" (p. 80).

Taylor and Hoedt (1966) tested the hypothesis that "there would be no significant difference in the creative writing endeavors of ... pupils working under varying conditions of praise and criticism" (p. 80). Their data indicated that

praise produced significantly more work and more favorable attitudes (p. 83). Such findings, they suggested, demonstrated "that it would be advantageous for teachers to reduce criticism and increase praise of children's work in the classroom" (p. 83).

Similar observations were made by Burrows, Jackson and Saunders (1964). Their observations of the significance of the writing atmosphere were summarized in the following statement:

> Normal growth in writing as in all areas does not proceed in a straight line -- but there must be a sense of moving ahead. This development will best take place in a warm and appreciative atmosphere. The quality and sincerity of child writing dwindles to nothing if fear and self-consciousness set in (p. 43).

The observations of Burrows, Jackson and Saunders (1964) were substantiated by Lickteig (1981) and R. Smith (1983). Lickteig (1981) cited teacher attitude and a supportive learning atmosphere as two prerequisites in encouraging children to write (p. 45). She also concluded from her observations "that teacher attitude, which is audibly and visibly reflected in teacher words and actions, is the single most important ingredient in a program for children" (p. 45). Additionally, she asserted that a supportive teacher attitude must be combined with a learning atmosphere which allows risk-taking and "[experimenting with] ideas and materials" (p. 46).

R. Smith (1983) agreed that feedback and stimulation are vital components of the writing atmosphere (p. 7). In addition, he pointed out that the writing atmosphere "must also provide the possibility of success. [This means, Smith suggested,] that establishing realistic goals ... is a very important part of creating an effective environment for the developing writer" (p. 7).

Hauser (1982) made similar observations and also concluded that "when [children] are given an atmosphere which encourages risk-taking and allows them to make mistakes, they start experimenting, making language work for them" (p. 684). Additionally, he suggested, a supportive atmosphere will surround children with children's literature which "provides a wealth of beautiful models for students' own endeavors" (p. 684).

The views expressed by Lickteig (1981), Hauser (1982) and R. Smith (1983) were manifested in the research of Ewing (1967), Graves (1973), Holmes (1984) and Conway (1985) who studied the effects of environmental influences on children's writing.

The primary emphasis of the research of Graves (1973) was to gather case study information about two children in formal and informal environments under assigned and unassigned writing conditions. The formal environment was described as one in which 30 percent of the activities were chosen by the students and no more than 30 percent of the teachers' time was

spent in small groups. The informal environment was described as one in which no less than 60 percent of the students' activities were chosen by them and no less than 60 percent of the teachers' time was spent with small groups (p. 24).

Graves' findings revealed that "informal environments [gave] greater choice to children" (p. 211). As well, when children are given greater choice, he found "they [wrote] more and in greater length than when specific writing assignments [were] given" (p. 21). Additionally, he found that informal environments seemed to be more favorable to boys in that they wrote more than did girls in both assigned and unassigned writing. However, formal environments seemed to favor girls in that they wrote more than did boys (p. 211). Graves' research also provided evidence that in formal or informal environments unassigned writing was longer than assigned writing (p. 87).

Graves research received early support in the research of Ewing (1967) which also revealed differences in boys' and girls' writing in different writing conditions. Her study investigated the influence of different stimuli on the writing fluency, vocabulary, T-unit and structural patterns of writing by grade-three students. These stimuli were provided prior to writing and included minimal or no stimulus, an auditory stimulus, a visual stimulus and a motor stimulus (p. 52).

From her findings Ewing concluded that minimal stimuli are the most effective on the over-all quality of writing.

Additionally, girls are significantly more fluent in their writing than are boys and write significantly better after visual stimuli, whereas, boys write better when no stimulus is given (p. 109). Ewing recommended from her findings that "teachers should utilize a variety of techniques to elicit writing in children" (p. 110).

The findings of Holmes (1984) concurred with the recommendations of Ewing (1967). Holmes also concluded from her research that "opportunities for independent writing which encourage creative expression and experimentation with print should be provided" (p. 96).

Holmes' experimental study involved an experimental group which wrote independently with an adult model, an experimental group which wrote independently without a model and a control group which did writing skill sheets. The instruments used in her study to determine the effects of independent writing opportunities and a writing role model with respect to (a) concepts about print, (b) writing vocabulary, and (c) pre-reading performance of kindergarten children were: The Concepts About Print Test (Clay, 1972), The Inventory of Writing Vocabulary for Rating Progress (Robinson, 1973), and the Metropolitan Reading Tests (Nurss and McGauvran, 1976) (p. 51).

Holmes found that "many concepts about printed language and creative writing may be learned naturally if children are provided the opportunity to write in a rich literate

environment" (p. 94).

In observing the writing activities of a kindergarten class of hearing-impaired children, Conway (1985) provided evidence in her findings which supported the conclusions of Holmes (1984). Conway found that the hearing-impaired children in her study developed written communication along with "face-to-face communication" (p. 104). As well, [their] early growth in writing [was] in tune with the notion of experiential learning" (p. 104), that is, they refined their writing skills as they were immersed in a writing environment" (p. 104).

Conway concluded from her findings that the writing environment must be one which is conducive to a wide variety of purposes for writing, and "children's free-choice writing [may provide] a rich source of material for [the teacher in] planning writing activities (p. 104). Additionally, she suggested, "if we ... accept a holistic view of writing and of children as potential writers, we should be asking ourselves questions about writing and writing instruction" (p. 105).

Children's Purposes and Audiences for Writing

From observing young children write, Deford (1980) found that "invariably, once children know there is interest in their writing, they return time and time again to the interested party, producing sample after sample" (p. 160).

Deford also concluded that the children's written language was initiated in the same way as oral language was initiated: "through living and growing in a meaningful, print oriented society" (p. 158). This was evident from the children's responses to messages communicated on such things as store signs, road signs and product labels. It was also evident in the children's written messages which expressed feelings and wishes to others such as teachers and grandparents (pp. 158-161). Thus, Deford suggested "it is the combination of print, situational cues and an appropriate, meaningful context that aids the child in organizing this print environment" (p. 158).

Golden (1980) concurred that "by the time [children] enter school, [they] have developed a sense of the functions of language in a social context" (p. 757). Additionally, she asserted, "writing ... shares some similar goals with speaking" (p. 757). Thus, she suggested, "the teacher who creates a rich environment with authentic purposes for writing will help to assist the child in developing an awareness of writing as a natural process for communication" (p. 762). In addition, she recommended that children's "audiences should include classmates, teachers, family, and community members" (p. 761).

Newman (1984) supported the views of Golden (1980), and emphasized that "writing involves a constant sharing with others" (p. 72). Burrows, Jackson and Saunders (1964)

concurred that for a child "to stand before a group and hold their interest with his [her] story awakens in him [her] a sense of innate power and makes him [her] ready for larger ventures" (p. 98).

Summary

The value of the child's interaction with the environment is central to Piaget's theory of cognitive growth and development. The direction of the development of the present primary curriculum is also guided by this theory. Additionally, this theory is reflected in the holistic approach to language acquisition which emphasizes meaningful functions before form.

The need for meaningful language activities can also be traced to the philosophy which guided the evolution of the experience-based curriculum in the British primary schools. The practical approach of this philosophy has been observed by recent researchers who have witnessed the high level of fluency and creativity of children in the personal experience model of writing in British primary schools.

The effects of personal experiences on writing have also been noted by some researchers in writing over the past two decades. This existing research has also provided evidence that children write differently from adult writers and, as a result, a new index of children's writing maturity was proposed. In addition, recent research has contended that

children write best when they write from personal experiences, however, key elements which must be given careful consideration are topic choice, the writing atmosphere and children's purposes and audiences for writing.

analysis of data.

Subjects

This study was conducted at Brinton Memorial Elementary School, St. John's, which is under the administration of the Avalon Consolidated School Board. Brinton Memorial has a population of 187 students from kindergarten to grade six with one classroom assigned to each grade. The students are from middle and upper socioeconomic families. The parents are very involved in their children's education.

The sample of subjects for this investigation was selected from the grade-three class at Brinton Memorial. The class was made up of 31 students, 13 girls and 18 boys, ranging in age from 7 to 9 years of age. All students who obtained parental consent participated in the activities of the study, but data for the study were collected from the writing of two equivalent groups of randomly selected students. These groups were made up of 12 boys and 12 girls.

Since the students in this class had three years of writing experience, it was believed that all of them were able to function under the conditions of the study. Additionally, such a study of a heterogeneous class of grade-three students might help to indicate the varied writing interests which might emerge in a typical unstreamed grade-three class in an urban setting.

Permission to conduct the study in this grade- three

classroom was given by the principal. Also, permission to carry out the study at Brinton Memorial was given by the Avalon Consolidated School Board. As well, a letter requesting permission to engage children in such a study and to use data from the children's writings was sent to parents prior to the initiation of the study procedures.

Research Design

The design selected for this study was similar to the "Counterbalanced Designs" discussed by Campbell and Stanley (1963). In "Counterbalanced Designs" all subjects were engaged in all treatment conditions in an attempt to achieve experimental control. Thus, in this six-week study, two equivalent groups of randomly selected grade-three students in the same classroom were engaged in a random alternation of two conditions for writing -- teacher-assigned topics, treatment X_1, and unassigned, student-generated topics, treatment X_2. Each treatment was followed by two measures -- average length of T-units, labeled O_1, and number of words, labeled O_2. Thus, for the first three weeks, one group was engaged in X_1, while the other group was engaged in X_2. For the last three weeks, those subjects who were engaged in X_1 in the first three weeks was engaged in X_2 and vice versa. The following diagram illustrates this design:

$$\begin{array}{cc} X_1O_{1,2} & X_2O_{1,2} \\ \hline X_2O_{1,2} & X_1O_{1,2} \end{array}$$

In such a study of one class, however, the teacher-researcher recognized that results could be confounded by the interaction of groups and the sequence of treatment conditions. Consequently, it was possible that subjects who were exposed to unassigned, student-generated topics first might develop a strong preference for those writing conditions. Thus, their writing might be hampered when the writing conditions were changed to teacher-assigned topics. As well, it was possible that subjects who were exposed to teacher-assigned topics first might become dependent on teacher-guidance for their topics. The development of such a dependence might hamper writing when conditions were changed to unassigned, student-generated topics. Additionally, if interaction were permitted between groups during the writing process, interaction would also occur between treatment conditions. Thus, if such interaction occurred, the interpretation of data would be restricted as to the effects of treatments X_1 and X_2 on the length and syntactic complexity of writing. The teacher-researcher recognized that these extraneous conditions in the design might jeopardize external validity.

In an attempt to minimize these extraneous conditions, the teacher-researcher introduced a degree of isolation between groups during the writing process. Since "Counterbalanced Designs" provided for replications of the experimental conditions, it was possible for each group to be

engaged in the treatment conditions in two different thirty-minute periods. Thus, while one group was engaged in writing the other group was engaged in listening activities requiring headphones. These conditions were alternated after a thirty-minute period.

Additionally, because replications of the experimental conditions were made in this study, comparisons were demonstrated between groups and treatments. Thus, comparative data helped the teacher-researcher to detect coincident effects previously discussed because such effects would have occurred on separate occasions in each group. Moreover, comparative data provided statistical analysis of the effects of X_1 and X_2 on the length and syntactic complexity of writing.

This design offered the following controls for internal validity:

1. The design was controlled for history because all subjects were engaged in the same writing conditions with a degree of isolation between groups to help minimize interaction of groups and conditions. Thus, historical events should have produced the same differences in all subjects.
2. The maturation of subjects was controlled through randomization of subjects in each group. It was assumed that owing to the nature of randomization, maturation manifested similarly for both groups over the period of the study.
3. The selection of subjects was controlled since subjects from the same class were randomly selected. To ensure that

groups were equivalent prior to the treatment conditions, subjects were randomly assigned to respective experimental groups, A and B, also by random selection. It was assumed, therefore, that because of the nature of randomization the groups were equal in characteristics.

Experimenter bias was minimized also through the random assignment of experimental groups to a specific sequence of treatment conditions.

4. Instrumentation was controlled in that the researcher tabulated the number of words and T-unit analysis for writings on assigned and unassigned topics by a standard procedure employed in the research of Hunt (1965), Ewing (1967) and Oldford (1985). The accuracy of the researcher's calculations was randomly checked by a rater.

5. Experimental mortality was controlled since the experiment was conducted for only six weeks under natural classroom environmental conditions.

Definition of Terms

In order to facilitate the understanding of the major terms within the study, these major terms were identified and defined for this study as follows:

1. Assigned topics, treatment X_1, referred to any composing which each student did on a specific topic selected by the teacher-researcher. In order to ensure that her topic choices were relevant to the interests of her students, the teacher-

researcher's topic choices were developed from the unassigned thematic choices of 7-year-olds revealed in the research of Graves (1973). Graves classified these themes into areas of territorial choice which he labeled primary territory, secondary territory and expanded territory. Graves defined primary territory as elements near at hand to the child, secondary territory was defined as the metropolitan area which was beyond the child's home and school, and expanded territory included current events on a national and world scale. From Graves' developed territories, the guidelines in Appendix A were employed in the teacher-researcher's topic selections.

2. Unassigned topics, treatment X_2, referred to any composing each child did on topics generated from his/her own interests and experiences.

3. For this study two environments of experience were employed in the survey of unassigned topic choices. These environments were developed based on Graves' territories and labeled immediate environment and extended-world environment. Immediate environment in this study referred to areas of experience surrounding the child's home, school and community. Extended-world environment in this study referred to areas of experience beyond the community which included people, places and events as well as space and imaginary people, places and events. These environments were employed in the classification of student-generated topics in order to help determine whether students were motivated to write more on

immediate areas of experience or extended areas of experience. As well, these environments were employed to help determine specific topics of interest for writing, and whether gender differences existed in topic choices.

4. The T-unit was an index of maturity in writing in the research of Hunt (1965) which was discussed in Chapter 2. An example of the T-unit or communication unit analysis was given by Oldford (1985) in a 13-word transcript by 6-year-old David as follows:

5 /I went trick or treating./
3
5 I was skelton./ /I had lots of fun./
3 units

Total = 13 words

Average: 4.33

5. A measure of the dependent variable, syntactic complexity, was measure O_1 which was the average length of T-units in each writing. This was calculated following the standard procedure for the T-unit analysis of Hunt (1965) as illustrated by Oldford (1985).

6. A measure of the dependent variable, length of writing, was measure O_2 which was the total number of words in each writing. This was calculated as illustrated by Oldford (1985). The rules for counting the words were replicated from the research of Ewing (1967). The following rules were applied:

a. Contractions having a subject and predicate, such as "we'd" and "it's" were counted as two words.

b. Contractions of the verb and the negative, such as "didn't" and "shouldn't" were counted as one word.

c. Each part of a verb combination was counted as a separate word: thus "are coming" was counted as two words.

d. Hyphenated nouns, such as "merry-go-round", were counted as one word.

e. Word symbols, such as the dollar symbol $, and numerals written as number symbols were counted as words. Thus "$5.95" were counted as two words.

f. The number of words in partials were counted also. Partials were identified in research by Loban (1964) as follows:

"Partial +" designates a word or word-group that holds meaning. It is structurally incomplete but a functionally complete utterance, and occurs frequently in conversational writing. An example of this would be "How much is the puppy?" "Five dollars." Five dollars is a partial + because it functions as a meaningful utterance.

"Partial -" designates words which do not add to the meaning of the utterance. This category includes those words which other investigators have termed as holders, repeats, noises, edits, and garbles.

g. The number of words in each T-unit were counted and tabulated separately for each writing.

Statement of Hypotheses

The statistical hypotheses for this study were as follows, with b representing boys, and g representing girls:

HO_1: $MX_1 = MX_2$ (in the length of writing)

Reject or not?

HO_2: $MX_1 = MX_2$ (in syntactic complexity of writing) Reject or not?

HO_3: $MX_{1b} = MX_{1g}$ (in the length of writing)

Reject or not?

HO_4: $MX_{1b} = MX_{1g}$ (in syntactic complexity of writing) Reject or not?

HO_5: $MX_{2b} = MX_{2g}$ (in length of writings)

Reject or not?

HO_6: $MX_{2b} = MX_{2g}$ (in syntactic complexity of writing) Reject or not?

The substantive hypotheses were:

1. Children's writing will be significantly longer in unassigned-topic conditions than in assigned-topic conditions.
2. Children's writing will have significantly more syntactic complexity in unassigned-topic conditions than in assigned-topic conditions.
3. There will be significant difference between boys' and girls' writing in the length of writing in assigned-topic conditions.
4. There will be significant difference between boys' and girls' writing in the syntactic complexity of writing in

assigned-topic conditions.

5. There will be significant difference between boys' and girls' writing in the length of writing in unassigned-topic conditions.

6. There will be significant difference between boys' and girls' writing in the syntactic complexity of writing in unassigned-topic conditions.

Additionally, an attempt was made to explore answers to the following questions:

1. Do children choose more topics from their immediate environment than from the extended-world environment for their writing?

2. Do children choose any particular topic more frequently than others in their free choice of topics in writing?

3. Are there differences in the syntactic complexity of writing by boys and girls on topics from their immediate environment and from their extended-world environment?

4. Are there differences in the length of writing by boys and girls on topics from their immediate environment and from their extended-world environment?

5. In unassigned topics do boys and girls differ in their topics of interest in writing?

6. In unassigned topics do boys and girls differ in their orientation towards a particular environment in their topics of interest in writing?

Procedures

Writing in both assigned and unassigned-topic conditions was encouraged under minimal stimulus conditions. This meant that there were no discussions of topics and there were no preplanned activities to stimulate interest in writing on particular topics. Each assigned topic was printed within a stated direction on the top of the lined paper which was distributed to the students for their writing, for example, "Please write about the topic 'My Favourite Animal'." Directions for unassigned-topic writing were also stated on the top of their paper, for example, "Think about a topic which you would like to write about. Please print your topic and write about it." In both assigned and unassigned-topic conditions, the teacher-researcher began the writing period by asking the students to read the directions carefully before beginning to write. Five minutes were allowed for the teacher-researcher to review the directions for writing and for students to read the instructions on the prepared writing paper, before each thirty-minute writing period began.

In addition, there were minimal constraints surrounding both writing conditions. Therefore, the teacher-researcher attempted to create an atmosphere which was conducive to spontaneous writing without the constraints of demanding correct spelling and punctuation.

In an effort to minimize effects which might be caused by students' knowledge of participation in experimental

procedures, the teacher-researcher attempted to make the tasks and the classroom environment natural for them. In order to do this she engaged the children of each group in their regular listening activities when they were not engaged in writing. As well, she endeavored to engage these students in the same writing environment established in the writing periods in the months prior to the study. Also, during the months prior to the study, she had set up a writing center supplied with paper, pencils and markers which were used for free-time writing and assigned small-group writing. Thus, it was expected that these students were familiar with group activities.

In order to introduce the students to the conditions of the experiment, the following guidelines were strictly adhered to in a discussion with the students on the Monday afternoon prior to the initiation of the study. As well, a classroom assistant engaged for the study visited the classroom on that afternoon in order to meet the students.

1. The students were informed that the visitor to our classroom would be helping us with some activities for a six-week period. The assistant was introduced to the students and each student was given the opportunity to tell the classroom assistant his/her name.

2. The teacher-researcher informed the students in the class that for six weeks there would be thirty-minute periods for writing and listening activities each Tuesday and Thursday

morning after recess.

3. She also informed the students that, because of limited space at the listening center and limited supplies at the writing center, these centers would be shared. She explained that the class would be divided into two groups in order for one group to do their listening activities at the listening center while the other group would be able to use the writing center supplies for writing.

4. She also explained that each group would have the same opportunities for writing and listening activities each week.

5. She told each student his/her assigned group letter, A or B. These groups included all the students in the experimental groups as well as other students not assigned to the experimental groups, but who had parental consent to participate in the study. Students who did not have parental consent were assigned to a listening group because it is a part of their regular program. They were also involved in writing when listening activities were completed. But, they were not required to write under the conditions of the study. This was done in order to foster natural classroom conditions.

6. The time-table in Appendix B was copied on large poster board in order for it to be displayed and explained to the students. The teacher-researcher explained the time-table by reading it in detail to the students. She pointed to each day, period and group letter as she read in order for the students to follow the alternating pattern of the time-table.

7. She explained that the asterisk which sometimes appeared by their group letter meant that they would have free choice in their writing topic. She also explained that free choice meant they would use their own ideas to make up their own topics for writing.

8. The teacher-researcher explained that when no asterisk appeared by their group letter this meant the teacher would make up the topic for writing.

9. To relieve anxiety which the students might develop concerning not finishing their work, the teacher-researcher assured them that if they needed extra time to complete their writing they would be given extra time after she had seen their writing. This enabled the teacher-researcher to indicate the amount of writing done in the thirty minutes. As well, she assured them that the thirty-minute periods would be sufficient time to complete each listening activity on the tapes at the listening center.

10. The teacher-researcher also assured the students that both the assistant and herself would help them if they had difficulty spelling words. However, this help would be given only at their own desk when help was requested by raising their hands. But, she also told them that they should try to spell words on their own in a manner they thought to be correct or nearly correct. As well, they were informed they could use dictionaries or other books which contained words they required for their writing.

11. The teacher-researcher gave the students an opportunity to ask questions about the activities.

12. After discussing the activities with the students, the teacher-researcher showed the students the folders. The teacher-researcher explained to them that each student would receive two folders, one would be used to store their writings and the other would be used to store their paper for listening activities. They were told that these folders would be kept in specific areas of the classroom which she identified at that time.

13. To ensure that they had real purposes and real audiences for writing, the teacher-researcher told the students that after all the writing periods were completed they would choose their favourite writing to be edited and copied for each classmate to take home. When their writing folders were taken home, they would have a variety of favourite writings published by the class. As well, they were informed that they would also take home all their listening activities pages.

14. After the purposes of the folders were discussed, folders were distributed and the students were asked to decorate them. This opportunity to decorate the folders helped to make the activities of the experiment more personal for each student.

15. When the decorating activity was completed, the folders were stored in their specific locations. Each student placed his/her folder in the appropriate storage area in order to become familiar with the location of the folders and their

assigned group letter.

Daily Instructions

Five minutes prior to each activity every day the teacher-researcher gave the instructions outlined in Appendix C. These instructions were the same each day before each activity; however, the designated group for each activity was alternated. In order to alternate the activities between groups, the teacher-researcher rang a bell which indicated that writings and listening activities pages had to be placed in folders to be collected by the teacher-researcher and the classroom assistant. When the teacher-researcher collected the writing folders and the assistant collected the listening folders, the students were asked to move from the listening center to their seats. The teacher-researcher rang the bell five minutes later to indicate that directions would be given again. All the students were expected to be sitting quietly at their own desks when the second bell rang. After the directions were given again, the students moved to their appropriate places for the listening and writing activities.

Analysis of Data

Data were subjected to a statistical one-way analysis of variance to test for statistical significance among the means on three variables: 1. group, 2. gender, and 3. writing condition -- assigned and unassigned topics. Data were also

subjected to the t-test in order to test for statistical significance between the means in the average length of T-units and the number of words for writing on assigned and unassigned topics. The two 2x2x2 factorial designs used for the statistical analysis were recorded in Appendix D.

At the end of each week, writings were collected from the students' folders and a T-unit analysis was applied by the teacher-researcher. This analysis was applied only to the writing completed during the thirty minutes assigned for writing. Writing done after that period was not included in the analysis. In order to verify the calculation of T-units and number of words in each T-unit, a rater independently and randomly checked the first, middle and last writings in both assigned and unassigned topic conditions.

The total output of words, T-units, and average length of T-unit in writings on assigned and unassigned topics were calculated for each student. The overall data were recorded by students' assigned numbers and presented in Appendix E. A summary of the overall data was recorded in Table 1, Table 2, Table 5 and Table 6 in Chapter 4. The distribution of the data was also shown in Figure 1 and Figure 2 in Chapter 4. Samples of the T-unit analysis were recorded in Appendix F.

Interobserver agreement was calculated by the percentage agreement reliability method described by Hartmann (1977). In this reliability method the smaller of the two scores was divided by the larger. This ratio was multiplied by 100.

Calculations were recorded in Appendix G.

Classification of Topics

All topics were classified under environment of experience by a two-part method. This method was employed in an attempt to explore answers to the following questions:

1. Are there differences in the syntactic complexity of writing by boys and girls on topics from their immediate environment and the extended-world environment?
2. Are there differences in the length of writing by boys and girls on topics from their immediate environment and the extended- world environment?
3. Do children choose more topics from their immediate environment than from the extended-world environment for their writing?
4. Do children choose any particular topic more frequently than others in their free choice of topics in writing?
5. In unassigned topics do boys and girls differ in their topics of interest in writing?
6. In unassigned topics do boys and girls differ in their orientation toward a particular environment in their topics of interest in writing?

First, all assigned and unassigned topics were classified with data on words written and average length of T-units written according to environments of experience previously explained in the definitions of terms for the study. This

information was recorded in Table 8 and Table 9 in Chapter 4.

The data on immediate and extended-world-environment topics from assigned and unassigned writing were presented also through bar graphs in Figure 5 and Figure 6, Chapter 4.

Secondly, sub-categories were developed by the teacher-researcher in an attempt to answer question number five, which was previously stated as follows:

5. In unassigned topics do boys and girls differ in their topics of interest in writing?

These sub-categories were based on the definitions for immediate and extended-world environments for this study. The immediate environment included such sub-categories as pets, peers and vocations and any topics about the home, family and community. The extended- world environment included such sub-categories as space, television shows and any topics related to the environment beyond the community and imaginary people, places and events. New sub-categories were added for writing topics which did not fit the teacher-researcher's sub-categories. The occurrences of these sub-categories were tallied and recorded in Table 6 and Table 7 in Chapter 4. Also, Figure 3 and Figure 4, Chapter 4, demonstrated the distribution of the data.

A rater also independently classified all the unassigned topics. Interobserver agreement was calculated by the percentage agreement reliability method which was described in this chapter. Calculations were recorded in Appendix H.

length of T-units for each piece of writing. Tallying the number of words written provided a measure of the length of the student's writing. The average length of T-units written for each piece of writing composed on assigned and unassigned topics provided a measure of the syntactic complexity of each student's writing. The overall data were recorded in Appendix E. Samples of the T-unit analysis were given in Appendix F.

A rater also independently and randomly checked the first, middle and last writings on assigned and unassigned topics. This procedure was described in Chapter 3. The calculations of the percentage agreement reliability method were recorded in Appendix G.

The SPSS-X statistical package was used to test six hypotheses. Data were subjected to a statistical one-way analysis of variance to test for statistical significance of differences among the means on three variables: 1. group, 2. gender, and 3. writing condition. Data were also subjected to the t-test for statistical significance between the means in the average length of T-units written, and the number of words written on assigned and unassigned topics. The two 2x2x2 factorial designs used for the statistical analysis were recorded in Appendix D.

The second purpose of this study was to collect data in order to provide descriptive information in a survey of the students' writing in this study. The survey comprised several questions which were stated in Chapter 1 and Chapter 3. These

questions pertained to the unassigned, popular topic choices of the students in this study and the gender differences in their unassigned topic choices and their environments of interest for writing defined in Chapter 3. The overall data were recorded in Table 6, Table 7, Table 8 and Table 9 in this chapter. Interobserver agreement was recorded in Appendix G and Appendix H.

This chapter will present the findings of the statistical treatment of data yielded on the effects of assigned, and unassigned topics on the length and syntactic complexity of the children's writing in this study. It will also provide data and descriptive information in a survey of the children's unassigned, popular topic choices and the gender differences in their unassigned topic choices and their environments of interest for writing.

Findings

Data from the writings of 12 girls and 12 boys in Group A and Group B were subjected to a statistical one-way analysis of variance. In the statistical analysis, between-groups variance showed no statistically significant difference between the means in Group A and Group B in the number of words written on assigned and unassigned topics. Between-groups variance also showed no statistically significant difference in the means in Group A and Group B in the average length of T-units written on assigned and unassigned topics.

Since there was no statistically significant difference between Group A and Group B, the teacher-researcher judged that the extraneous effects described in Chapter 3 which might jeopardize external validity were minimized. Thus, the following findings of this study are presented with each substantive hypothesis.

Statistical Analysis

Hypothesis 01: Students' writing will be significantly longer in unassigned-topic conditions than in assigned-topic conditions.

Substantive hypothesis 01 was supported. The data were subjected to the t-test for statistical significance between the means in the number of words written on assigned and unassigned topics. Results of the t-test showed that the difference between the means was statistically significant at the .01 level of significance. These results indicated that the number of words written by the students in this study on unassigned topics was significantly more than the number of words written on assigned topics.

The raw score calculations of the total number of words written showed that the students wrote 1798 more words on unassigned topics than on assigned topics. Table 1 demonstrates the difference in the total words written.

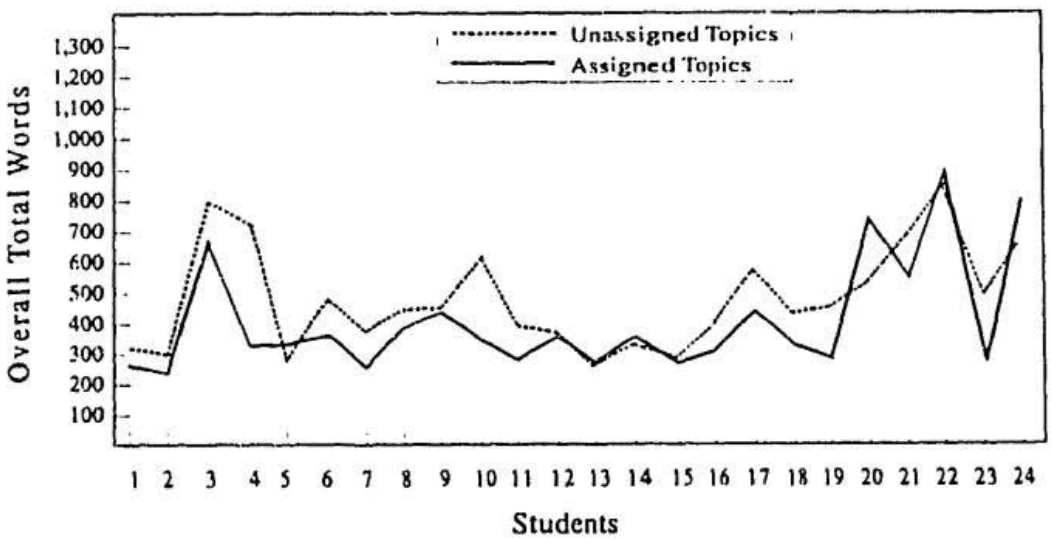
Table 1

Overall Total Words Written on Assigned and Unassigned Topics

Overall Total Words on Assigned Topics	Overall Total Words on Unassigned Topics
9,409	11,207

The distribution of data yielded on the number of words written by each student in this study in assigned, and unassigned topics is illustrated also in Figure 1.

Figure 1. The total output of words by each student in assigned and unassigned topics.



Hypothesis 02: Students' writing will have significantly more syntactic complexity in unassigned-topic conditions than in assigned-topic conditions.

The findings failed to support substantive hypothesis 02. Data were subjected to the t-test for statistical significance between the means in the average length of T-units written on assigned and unassigned topics. The results of the statistical testing showed that the difference between the means in the average length of T-units written by the students in this study on assigned, and unassigned topics was not statistically significant. Thus, it was concluded that students' writing on assigned and unassigned topics in this study was not significantly different in syntactic complexity.

Additionally, raw score calculations showed that the average length of T-units written by the students in this study on unassigned topics was .27 words shorter than T-units written on assigned topics. The findings on the overall average length of T-units are presented in Table 2.

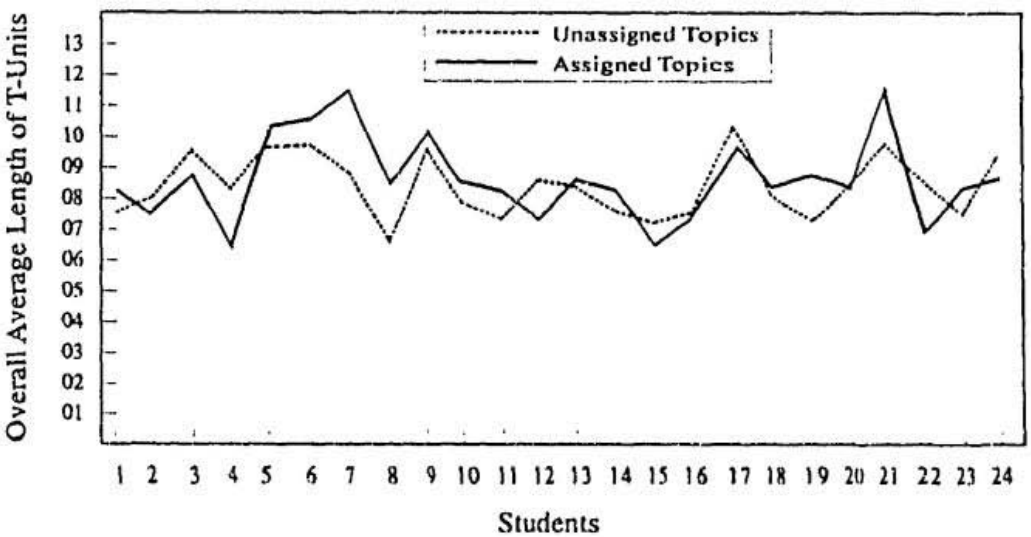
Table 2

Overall Average Length of T-units
Written on Assigned and Unassigned Topics

Overall Average Length of T-Units on Assigned Topics	Overall Average Length of T-units on Unassigned Topics
8.57	8.30

The distribution of data yielded on the average length of T-units written by each student in this study in assigned, and unassigned topics is illustrated in Figure 2.

Figure 2. Average length of T-units written by each student in assigned and unassigned topics.



Hypothesis 03: There will be significant difference between boys' and girls' writing in the length of writing in assigned-topic conditions.

Hypothesis 04: There will be significant difference between boys' and girls' writing in the syntactic complexity of writing in assigned-topic conditions.

The findings failed to support substantive hypothesis 03 and substantive hypothesis 04 when data were subjected to a statistical one-way analysis of variance. Results of the statistical analysis showed that, for boys' and girls' writing on assigned topics, the difference between the means in the number of words written was not statistically significant. Also, the difference between the means in the length of T-units written was not statistically significant. It was concluded that boys and girls writing on assigned topics in this study was not significantly different in the length of writing composed. Also, it was concluded that boys' and girls' writing on assigned topics in this study was not significantly different in syntactic complexity.

However, raw score calculations showed that girls wrote 1471 words more than did boys on assigned topics. Raw scores also showed that the average length of T-units written by girls on assigned topics was .44 words longer than the average length of T-units written by boys. Table 3 presents these findings.

Table 3

Overall Total Words and Average Length of T-Units Written by Boys and Girls on Assigned Topics

Students By Gender	Overall Total Words Assigned Topics	Overall Average Length of T-Units Assigned Topics
Boys	3969	8.35
Girls	5440	8.79

Hypothesis 05: There will be significant difference between boys' and girls' writing in the length of writing in unassigned-topic conditions.

Hypothesis 06: There will be significant difference between boys' and girls' writing in the syntactic complexity of writing in unassigned-topic conditions.

The findings also failed to support substantive hypothesis 05 and substantive hypothesis 06 when data were subjected to a statistical one-way analysis of variance. Results of the statistical testing showed that, for boys' and girls' writing on unassigned topics, the difference between the means in the number of words written was not statistically significant. It was concluded that boys' and girls' writing on unassigned topics in this study was not significantly different in the length of writing composed. Also, it was concluded that boys' and girls' writing on unassigned topics

in this study was not significantly different in syntactic complexity.

But, findings from the raw score calculations showed that girls wrote 1183 words more than did boys on unassigned topics. Also, the average length of T-units written by girls was only .1 words shorter than the average length of T-units written by boys on unassigned topics. Table 4 illustrates these findings.

Table 4

Overall Total Words and Average Length of T-Units Written by Boys and Girls on Unassigned Topics

Students By Gender	Overall Total Words Unassigned Topics	Overall Average Length of T-Units Unassigned Topics
Boys	5012	8.35
Girls	6195	8.25

Survey of Topics

During the six-week period of the study, a total of 144 topics were self-generated by the students in this study. The boys generated 72 of these topics and the girls also generated 72 of these topics.

All the self-generated, unassigned topics were classified

according to environment of interest under predetermined sub-categories. This procedure was outlined in Chapter 3. The teacher-researcher classified the students' unassigned topics, and a rater also independently classified the same topics following the procedure described in Chapter 3.

Data gathered from the classification of the students' unassigned topics, and data from the T-unit analysis conducted on their writings, as described in Chapter 3, provided descriptive information about the children's writing in this study. This information is presented through a discussion of several questions which were stated in Chapter 1 and Chapter 3.

Question one: Do children choose more topics from their immediate environment than from the extended-world environment for their writing?

The data gathered from the classification of unassigned topics showed that 63 of the 144 unassigned topics of the students in this study were generated from the extended-world environment. But, the data also showed that 81 of their 144 unassigned topics were generated from their immediate environment. Thus, 44 percent of the students' unassigned topics were generated from the extended-world environment. However, 56 percent of their unassigned topics were generated from their immediate environment. This data is presented in Table 5.

Table 5

Overall Total Occurrences of Unassigned Topics in the Immediate Environment and Extended-World Environment for Boys and Girls

Environment	Total Occurrences	Percentage of Occurrences
Immediate	81	56%
Extended-World	63	44%
Total Output	144	100%

Question two: Do children choose any particular topic more than others in their free choice of topics in writing?

Topics about pets, space, and the ocean were self-generated by the students in this study most often out of all their self-generated, unassigned topics. The data gathered from the classification of topics showed that the highest occurrence of any one particular topic was 17 times out of the total 144 unassigned topics.

Pets occurred the most often as a topic choice of all the topics in the immediate-environment category. This topic choice was self-generated 4 times by boys and 13 times by girls. This was a total occurrence of 17 times out of all the self-generated topics.

Space and the ocean shared the highest occurrence of all the topics in the extended-world-environment category.

Topics about space were self-generated 10 times by boys and 7 times by girls. This was a total occurrence of 17 times out of all the self-generated topics. Topics about the ocean were self-generated 11 times by boys and 6 times by girls. This was also a total occurrence of 17 times out of all the self-generated topics.

Additionally, in unassigned topics the most popular topic choice self-generated by boys was the ocean. The most popular topic choice self-generated by girls was pets.

Data showed that 15 percent of the boys' topic choices were about the ocean. This was the highest percentage of occurrence of any one topic self-generated by boys.

Data showed that 18 percent of the girls' topic choices were about pets. This was the highest percentage of occurrence of any one topic self-generated by girls.

Space was the second topic choice of boys, and family members was the second topic choice of girls.

Data showed that 14 percent of all the boys' unassigned topics were about space. This was the second highest occurrence of all the boys' topics.

Data showed that 15 percent of all the girls' unassigned topics were about family members. This was the second highest occurrence of all the girls' topics.

The overall data gathered in the classification of unassigned topics in the immediate, and extended-world-environment categories are presented in Table 6 and Table 7.

Table 6

Overall Occurrences of Immediate-Environment Topic Choices for Groups A and B in Unassigned Topics

Immediate Environment Sub-Categories	Total Occurrences		Percentage of Occurrences	
	Boys	Girls	Boys	Girls
Self	6	7	8%	10%
Family Members	--	11	--	15%
Pets	4	13	6%	18%
Peers	1	4	1%	6%
Vocations	--	2	--	3%
Community Events	2	--	3%	--
Community Places	--	--	--	--
Community People	2	1	3%	1%
Sports	2	2	3%	3%
Toys	1	1	1%	1%
Food	2	--	3%	--
Jokes	1	--	1%	--
School	--	2	--	3%
Books	8	1	11%	1%
Treasures	2	1	3%	1%
Seasons	--	5	--	7%
Overall Total	31	50	43%	69%

Note: A dash denotes no writing composed.

Table 7

Overall Occurrences of Extended-World-Environment Topic Choices for Groups A and B in Unassigned Topics

Extended-World Environment Sub-Categories	Total Occurrences		Percentage of Occurrences	
	Boys	Girls	Boys	Girls
Places beyond the Community	--	5	--	7%
Events beyond the Community	2	--	3%	--
People beyond the Community	--	1	--	1%
Space	10	7	14%	10%
TV Shows	2	--	3%	--
Movies	1	--	1%	--
Imaginary Things	8	1	11%	1%
Imaginary People	2	2	3%	3%
Dinosaurs	3	--	4%	--
Machines	2	--	3%	--
The Ocean	11	6	15%	8%
Overall Total	41	22	57%	31%

Note: A dash denotes no writing composed.

Question four: In unassigned topics do boys and girls differ in their orientation towards a particular environment in their topics of interest in writing?

The boys in this study generated more topics from the extended-world environment than from their immediate environment. However, girls generated more topics from their immediate environment than from the extended-world environment.

The data already presented in Table 6 and Table 7 showed that boys generated 72 unassigned topics. The boys generated 31 of their unassigned topics from their immediate environment. But, 41 of their unassigned topics were generated from the extended-world environment.

The data presented in Table 6 and Table 7 also showed that girls generated 72 unassigned topics. The girls generated 50 of their unassigned topics from their immediate environment. But, only 22 of their unassigned topics were generated from the extended-world environment.

The overall occurrences of all immediate-environment, and extended-world-environment topics for boys and girls in unassigned topics are represented through bar graphs in Figure 3, and Figure 4.

Figure 3. Overall occurrences of immediate-environment topics generated by boys and girls.

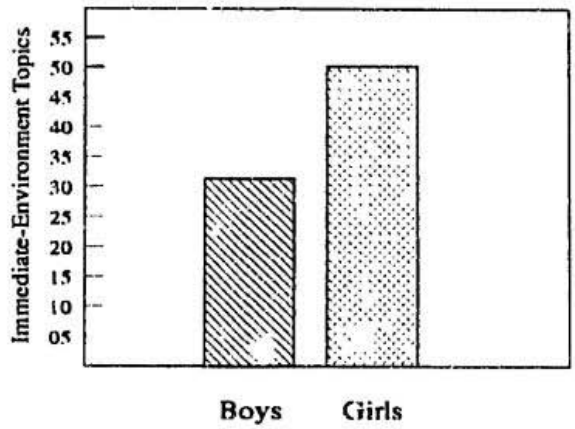
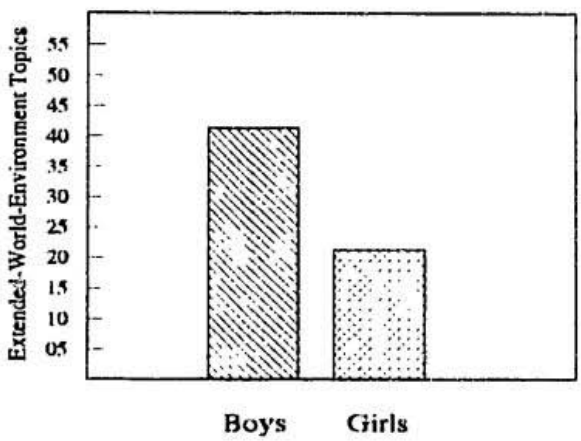


Figure 4. Overall occurrences of extended-world-environment topics generated by boys and girls.



Question five: Are there differences in the syntactic complexity of writing by boys and girls on topics from their immediate environment and from their extended-world environment?

Since the measure of syntactic complexity for this study was the average length of T-units, the raw score calculations of the T-unit analysis described in Chapter 3 provided descriptive information on the syntactic complexity of boys' and girls' writing in this class.

When topics were assigned, data from the T-unit analysis showed that T-units written by boys were .18 words longer on immediate-environment topics than on extended-world-environment topics. However, when topics were assigned, T-units written by girls were .41 longer on extended-world-environment topics than on immediate-environment topics.

When topics were unassigned, data from the T-unit analysis showed that T-units written by boys were .19 words longer on immediate-environment topics than on extended-world-environment topics. However, when topics were unassigned, T-units written by girls were 1.88 words longer on extended-world-environment topics than on immediate-environment topics.

Additionally, the data showed that girls wrote longer T-units than did boys on topics from their immediate-environment and their extended-world environment. This occurred in assigned and unassigned topics. In assigned topics from the immediate environment, T-units written by girls were .25 words

longer than T-units written by boys. In assigned topics from the extended-world environment, T-units written by girls were .84 words longer than T-units written by boys. Also, in unassigned topics from the immediate-environment, T-units written by girls were .34 words longer than T-units written by boys. In unassigned topics from the extended-world environment, T-units written by girls were 2.41 words longer than T-units written by boys. The data is presented in Table 8.

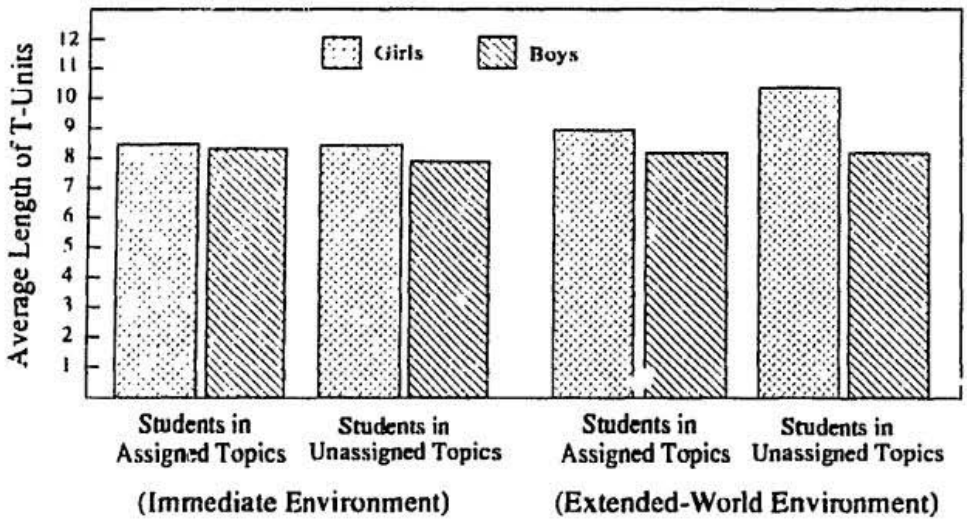
Table 8

Overall Average Length of T-units by Boys and Girls in Assigned and Unassigned Topics for Immediate (I)and Extended-World (E) Writing Environments

Students By Gender	Overall Average Length of T-units Assigned Topics in		Overall Average Length of T-units Unassigned Topics in	
	I	E	I	E
Boys	8.41	8.23	8.10	7.91
Girls	8.66	9.07	8.44	10.32
Difference	.25	.84	.34	2.41

The distribution of the data in Table 8 is illustrated through bar graphs in Figure 5.

Figure 5. Overall average length of T-units written by boys and girls in assigned and unassigned topics in the immediate and extended-world environments.



Question six: Are there differences in the length of writing by boys and girls on topics from their immediate environment and from the extended-world environment?

The number of words written by the boys and girls in this study was a measure of the length of their writing as discussed in Chapter 3. Thus, the raw score calculations of the number of words written provided descriptive information about the length of boys' and girls' writing in this study.

The data showed that boys in this study wrote the most words on unassigned topics from the extended-world environment. However, girls in this study wrote the most words on unassigned topics from their immediate environment.

Additionally, when topics were assigned, the data showed that boys wrote 1201 more words on immediate-environment

topics than on extended-world-environment topics. Also, girls wrote 1660 more words on immediate-environment topics than on extended-world-environment topics. But, in unassigned topics boys wrote 374 more words on extended-world-environment topics than on immediate-environment topics. However, in unassigned topics girls wrote 2981 more words on immediate-environment topics than on extended-world-environment topics.

The data showed that in assigned topics the children in this study wrote 2861 more words on topics generated from their immediate environment than from the extended-world environment. Also, the data showed that in unassigned topics the children in this study wrote 2607 more words on topics generated from their immediate-environment than from the extended-world environment. But, the overall total number of words written on assigned and unassigned topics showed that girls wrote more words than did boys on immediate-environment topics. However, the overall total number of words written on assigned and unassigned topics showed that boys wrote more words than did girls on extended-world-environment topics. The data is presented in Table 9.

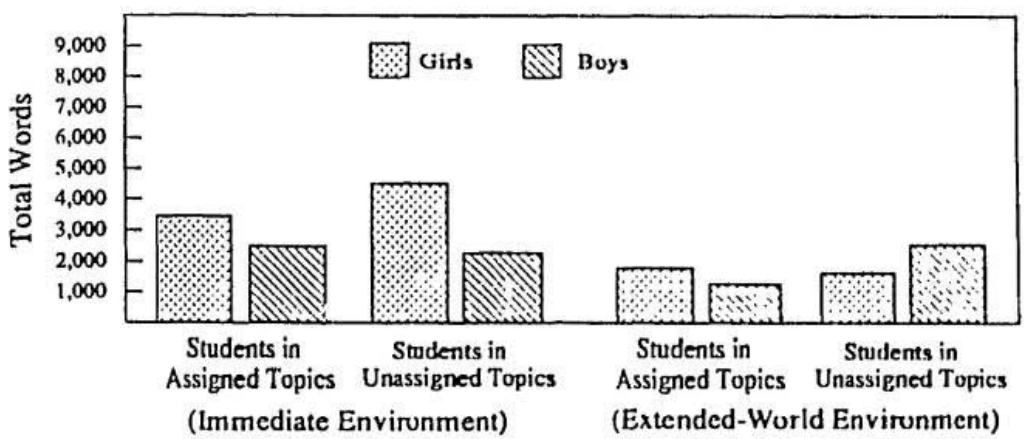
Table 9

Overall Total Words Written by Boys and Girls on Assigned and Unassigned Topics for Immediate (I) and Extended-World (E) Writing Environments

Students By Gender	Overall Total Words Assigned Topics		Overall Total Words Unassigned Topics	
	I	E	I	E
Boys	2585	1384	2319	2693
Girls	3550	1890	4588	1607
Total Output	6135	3274	6907	4300

The distribution of the data in Table 9 is represented through bar graphs in Figure 6.

Figure 6. Overall total words written by boys and girls in assigned and unassigned topics in the immediate and extended-world environments.



Summary

This chapter has provided a statistical analysis of the data yielded on the effects of topic on the length and syntactic complexity of writing by children in this study. It has also provided descriptive information about the unassigned, popular topic choices of the children in this study and the gender differences in their topic choices and their environments of interest for writing. Within the limitations of the study, the major findings might be summarized as follows:

1. Findings supported substantive hypothesis 01 which stated: Students' writing will be significantly longer in unassigned-topic conditions than in assigned-topic conditions. Results showed that the length of writing on unassigned topics was significantly longer than writing on assigned topics. This was statistically significant at the .01 level of significance.

2. Findings failed to support substantive hypothesis 02 which stated: Students' writing will have significantly more syntactic complexity in unassigned-topic conditions than in assigned-topic conditions. Results indicated that the difference between the means in the average length of T-units written on assigned and unassigned topics was not statistically significant.

3. Findings failed to support substantive hypothesis 03 which stated: There will be significant difference between

boys' and girls' writing in the length of writing in assigned-topic conditions. Results indicated that for boys' and girls' writing on assigned topics the difference between the means in the number of words written was not statistically significant.

4. Findings failed to support substantive hypothesis 04 which stated: There will be significant difference between boys' and girls' writing in the syntactic complexity of writing in assigned-topic conditions. Results indicated that for boys' and girls' writing on assigned topics the difference between the means in average length of T-units written was not statistically significant.

5. Findings failed to support substantive hypothesis 05 which stated: There will be significant difference between boys' and girls' writing in the length of writing in unassigned-topic conditions. Results indicated that for boys' and girls' writing on unassigned topics the difference between the means in the number of words written was not statistically significant.

6. Findings failed to support hypothesis 06 which stated: There will be significant difference between boys' and girls' writing in the syntactic complexity of writing in unassigned-topic conditions. Results indicated that for boys' and girls' writing on unassigned topics the difference between the means in the average length of T-units written was not statistically significant.

7. When writing topics were generated by the students, 44 percent of all their topics were generated from the extended-world environment. But, 56 percent of all their topics were generated from their immediate environment.

8. When the students generated their own topics for writing, pets was the most popular topic choice in the immediate-environment category. However, there were two popular topic choices in the extended-world-environment category. These were topics about space and the ocean.

9. When topics were generated by the students, the most popular topic choice generated by boys was the ocean.

10. When topics were generated by the students, the most popular topic choice generated by girls was pets.

11. Boys generated more topics from the extended-world environment than from their immediate environment.

12. Girls generated more topics from their immediate environment than from the extended-world environment.

13. The average length of T-units written by boys on assigned and unassigned topics was longer on immediate-environment topics than on extended-world-environment topics.

14. The average length of T-units written by girls on assigned and unassigned topics was longer on extended-world-environment topics than on immediate-environment topics.

15. The average length of T-units written by girls was longer than those written by boys on the immediate-environment and extended-world-environment topics. This occurred in assigned

and unassigned topics.

16. When topics were assigned and unassigned, the students wrote more words on immediate-environment topics than they did on extended-world-environment topics.

17. When topics were unassigned, boys wrote more words on extended-world-environment topics than on immediate-environment topics.

18. When topics were unassigned, girls wrote more words on immediate-environment topics than on extended-world-environment topics.

19. In the overall total number of words written on assigned and unassigned topics, girls wrote more words on immediate-environment topics than did boys.

20. In the overall total number of words written on assigned and unassigned topics, boys wrote more words on extended-world-environment topics than did girls.

21. In the overall total number of words written on assigned and unassigned topics, girls wrote more words than did boys.

environments of experience for writing described in Chapter 3.

The study was conducted in the grade-three classroom at Brinton Memorial Elementary School, St. John's. The students were engaged in writing for six weeks during April and May, 1988. Twenty-four students were randomly assigned to two equivalent groups composed equally of boys and girls. For the first three weeks of the study, Group A was randomly assigned to writing on unassigned, self-generated topics and Group B was randomly assigned to writing on teacher-assigned topics. These writing conditions were alternated for the last three weeks of the study. At the end of the study, each child selected one favourite writing to be edited and given to each classmate.

A T-unit analysis described in Chapter 3 was applied to each of the 288 pieces of writing composed by the students. The number of words written on each piece was tallied. This provided a measure of the length of the students' writing. Also, the average length of T-units was determined for each piece of writing. This provided a measure of the syntactic complexity of the students' writing.

The SPSS-X statistical package was used to test six hypotheses related to the length and syntactic complexity of children's writing. Data were subjected to a one-way analysis of variance to test for statistical significance among the means on three variables: 1. group, 2. gender, and 3. writing

condition. Data were also subjected to the t-test for statistical significance between the means in the average length of T-units written, and the number of words written. In addition, data collected provided descriptive information in a survey which pertained to the length and syntactic complexity of the children's writing in this study and the gender differences in their unassigned topic choices and their environments of interest for writing described in Chapter 3.

Since statistical treatment indicated that between-groups variance between the experimental groups A and B was not statistically significant in the number of words written and the average length of T-units written, the teacher-researcher judged that extraneous effects described in Chapter 3 were minimized. Thus, within the limitations of the study, the major findings were summarized in Chapter 4.

Results of the findings of the statistical treatment of data showed that writing composed on unassigned topics by the children in this study was significantly longer than their writing composed on assigned topics. The difference between the means in the number of words written was statistically significant at the .01 level of significance. Thus, the findings showed that the children in this study wrote more when they generated their own topics than when topics were generated by the teacher.

This finding supported findings of American studies by Nelson (1965), Graves (1973), Melas (1974), and Holmes

(1984), which concluded that topics influence the quantity of writing composed by children. Nelson (1965) found quantitative differences in children's writing which she concluded were influenced by the topic. Graves (1973), Melas (1974), and Holmes (1984) concluded that children write more when they write about personal-choice topics.

However, results of the statistical analysis showed no statistically significant difference in the average length of T-units written by the children in assigned-topic and unassigned-topic conditions. Also, Table 2, Chapter 4, showed that the average length of T-units written on unassigned topics was 8.30 words and the average length of T-units written on assigned topics was 8.57 words. Thus, since the average length of T-units was a measure of syntactic complexity in this study, it was concluded that writing in assigned and unassigned topics was similar in syntactic complexity.

These findings supported the findings of American studies by Wilson (1963), and Hunt (1965) which showed that young children write in short units. Hunt found that the younger student writes in short T-units which comprise a maximum of 8 words. Hunt concluded that the younger student's span of grammatical concern is narrow, but the span broadens as the student matures. Wilson also found in his early research that children in grade three write sentences of 5 or 6 words.

Additionally, results of the statistical analysis showed

no statistically significant difference between boys' and girls' writing in the number of words written and the average length of T-units written. This occurred in assigned-topic and unassigned-topic conditions. But, data recorded in Table 3, Table 4 and Table 9, Chapter 4, provided evidence of a trend indicating girls wrote more words than did boys on assigned and unassigned topics. Also, data in Table 8, Chapter 4, provided evidence of a trend that the average length of T-units written by girls was longer than the average length of T-units written by boys on assigned and unassigned topics.

These trends in the data are supported by the findings of American studies by O'Donnell, Griffin and Norris (1967), and Ewing (1967) which indicated girls are more mature than boys in writing syntax. When O'Donnell, Griffin and Norris investigated writing samples of grade-three students, they found that grade-three girls seemed to be superior to grade-three boys in writing syntax. Ewing also investigated writing by grade-three students and found that girls are more fluent than are boys in writing.

These trends are also supported by the findings of Maccoby (1966), and Sexton (1969) who reviewed research studies related to differences between boys and girls in intellectual functioning and development. Maccoby found that throughout the preschool and early school years girls exceed boys in verbal performance. However, she pointed out that by

the beginning of school there are no longer consistent differences in vocabulary development between boys and girls. Sexton found that boys are about sixteen months behind girls in the development and control of hand muscles. She concluded that struggles with handwriting may condition many of the boys' early responses to written language.

Since findings from writing composed on assigned and unassigned topics in this study showed no statistically significant difference between boys' and girls' writing in the number of words written and the average length of T-units written, these findings imply that conditions other than free choice in topic selection may affect the quantity and syntactic complexity of boys' and girls' writing.

The assigned topics in this study were developed from the unassigned thematic choices of 7-year-olds as documented in an American study by Graves (1973) and consequently were based on children's interests. Graves found that girls wrote on such themes as my home and my dog. But, boys wrote on such themes as presidents and space. In addition, the teacher-researcher was informed in her choice of topics by an American study of Pitcher and Prelinger (1963) which investigated fantasy in children's stories. From their investigation of stories told by nursery-school and kindergarten age children, Pitcher and Prelinger found that girls chose topics around the more familiar home environment whereas boys had a tendency to go outward toward the unknown. Based on the knowledge of

children's self-generated themes, the teacher-researcher assigned such topics as "My Favourite Animal" and "A Trip to Space" which had been appropriately delineated by such studies.

When boys and girls in this study wrote on assigned topics which were based on children's interests, statistical analysis indicated these topics had the same effects on the quantity and syntactic complexity of boys' and girls' writing as their unassigned, self-generated topics. If assigned topics were developed based on other criteria, different findings might have resulted between boys' and girls' writing.

Findings from the survey of the children's unassigned, self-generated topics in this study revealed differences between boys' and girls' topics of interest. The data gathered from the survey of unassigned topics which were presented in Table 6 and Table 7, Chapter 4, showed that the popular topic generated by boys was the ocean, and the popular topic generated by girls was pets. The second popular topic choice of boys was space, and the second popular topic choice of girls was family members. However, the ocean and space topics were the boys' and girls' most popular topics generated from the extended-world environment. It was also noted that the ocean and space were major themes in the children's basal reading series during the period of the study. These themes had been enriched through children's literature, films and presentations by classroom guests.

Additionally, boys generated more topics from the extended-world environment than from their immediate environment. Also, when topics were unassigned boys wrote more words on extended-world environment topics than on immediate environment topics. But, girls wrote more words on immediate environment topics than on extended-world-environment topics. Girls also generated more topics from their immediate environment than from the extended-world environment.

These findings paralleled the findings reported in American studies by Pitcher and Prelinger (1963) and Graves (1973). Pitcher and Prelinger concluded that girls' interests are centered around things close at hand and familiar whereas boys' interests go more outward toward the unknown. Pitcher and Prelinger also concluded that the different emphasis in boys' and girls' writing themes expressed different cultural expectations made of boys and girls. Graves also found that boys selected more writing themes in the extended territory such as space, maps, and presidents. However, girls selected more writing themes in the primary territory such as my home, my dog and my toys.

The results of the survey of unassigned topics in this study also corroborated the conclusions of an American study by Melas (1974), and a Canadian study by Jobe (1974). They concluded from their findings that boys and girls differed in their topics of interest for writing.

Another major finding showed that 56 percent of all the unassigned topics of the students in this study were generated from their immediate environment. Also, findings in this study showed that in assigned and unassigned topics, students wrote more words overall on immediate-environment topics than on extended-world-environment topics. This data were presented in Table 5 and Table 9, Chapter 4.

These findings supported the report of Deford (1980), which suggested that the meaningful situations of the child's immediate environment present meaningful purposes for the child to write. Deford illustrated this in the messages which children wrote to express feelings and wishes to others such as teachers and grandparents.

These findings also supported the reports by Dixon (1967), Christine and Ronald Laconte (1969), and Golden (1980). In their observations of children writing in British primary schools, they found that children's writing grew out of their immediate experiences.

Conclusions

Findings in this study show that topic selection is a major factor affecting the quantity and syntactic complexity of children's writing. Findings also show that children are motivated to write more if the writing environment presents opportunities for freedom of topic choice. However, findings reveal that factors other than unassigned topics may affect

the quantity and syntactic complexity of boys' and girls' writing. These factors may include developmental differences and the criteria on which assigned topics are based.

The writing topics generated by the children in this study also reflect individual and gender differences in interests which may have a bearing on experiences as well as social and cultural expectations.

The findings of this study provide evidence of the crucial connection between children's personal interests and their development in written language. However, findings also suggest that children's interests must be enriched through reading resources which are geared to broadening the scope of interests of boys and girls. Thus, purposeful writing in the primary curriculum must focus less on assigning topics and focus more on expanding and strengthening children's interests to encourage real growth in written language. If children find enjoyment in their interests, they will also find enjoyment in writing about their interests.

Educational Implications

The findings of this study supported past research studies which identified the value of children's interests in the development of their written language. Thus, within the limitations of the study, the findings produced a number of implications for education.

1. Children need a writing environment which is geared to

meet the individual interests of each child through personal-choice topics.

2. When teachers plan a writing curriculum for their students, they should endeavour to provide a balance between opportunities for writing on teacher-assigned topics and student-generated topics.

3. Teachers should endeavour to be continuously aware of events within their students' immediate environment and integrate those events into their writing topics.

4. Teachers should endeavour to integrate reading themes into the children's writing activities.

5. Teachers should endeavour to broaden the scope of interests of boys and girls through rich literary, vicarious and real-life experiences.

Recommendations For Further Research

The major findings of this study help to provide further understanding of the effects of topic selection on the writing of grade-three children. However, since one study cannot provide clear answers for all the questions surrounding the complexity of children's writing, the following recommendations are made for further research:

1. It is recommended that the study be replicated using a larger sample size and also including children from both urban and rural schools. Such a study might help to provide clearer generalizations concerning the effects of topic on the

differences between boys' and girls' writing in quantity and syntactic complexity, as was indicated by the trend in the data.

2. It is recommended that studies be made at different grade levels in an attempt to ascertain the effects of topic on the quantity and syntactic complexity of children's writing at different grade levels.

3. It is recommended that studies be made to determine the effects which classroom themes might have on the quantity and syntactic complexity of children's writing.

4. It is recommended that studies be made to help provide clearer generalizations regarding gender differences in interests reflected in writing topic preferences.

5. It is recommended that a cross-cultural study be made to determine whether cultural expectations influence writing topics generated by boys and girls.

6. It is recommended that studies be made to determine the effects of developmental differences in children's fine-motor co-ordination on the length and syntactic complexity of children's writing.

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APPENDIX A

Assigned Writing Topics

Graves' Territories	Children's Themes	Teacher-researcher's Topics
Primary	My home	"My Favourite Room at Home"
	My dog	"My Favourite Animal"
Secondary	Nurses	"A Job I Would Like When I Grow Up"
	Fires	"Something Which Happened in My Community"
Expanded	Space	"A Trip to Space"
	Presidents	"A TV Star I Would Like to Meet"

APPENDIX B
Time-Table of Study

Weeks	ONE				TWO			
Days	Tues.		Thurs.		Tues.		Thurs.	
Times	11:00	11:40	11:00	11:40	11:00	11:40	11:00	11:40
	11:35	12:15	11:35	12:15	11:35	12:15	11:35	12:15
Writing Activity Group	A*	B	A*	B	B	A*	B	A*
Listening Activity Group	B	A	B	A	A	B	A	B

Weeks	THREE				FOUR			
Days	Tues.		Thurs.		Tues.		Thurs.	
Times	11:00	11:40	11:00	11:40	11:00	11:40	11:00	11:40
	11:35	12:15	11:35	12:15	11:35	12:15	11:35	12:15
Writing Activity Group	A*	B	A*	B	B*	A	B*	A
Listening Activity Group	B	A	B	A	A	B	A	B

Note: An asterisk denotes unassigned topics.

Time-table of Study (cont'd)

Weeks	FIVE				SIX			
Days	Tues.		Thurs.		Tues.		Thurs.	
Times	11:00 11:40	11:35 12:15	11:00 11:40	11:35 12:15	11:00 11:40	11:35 12:15	11:00 11:40	11:35 12:15
Writing Activity Group	A	B*	A	B*	B*	A	B*	A
Listening Activity Group	B	A	B	A	A	B	A	B

Note: An asterisk denotes unassigned topics.

APPENDIX C

Directions for Activities

Day 1: Teacher-researcher's directions to students

11:00 - 11:35

1. "Our writing and listening activities will begin in five minutes. Group B please move quietly to the listening center."

   (Before the next direction is given, the students will be seated quietly at their appropriate places. Also, writing paper, pencils and listening activity papers will be distributed to the appropriate groups by the researcher and assistant.)

2. "Group B please listen carefully at the listening center and begin when our helper gives the directions and starts the tape. Group A carefully read the directions on your paper."

3. "When you hear this bell ring, it will mean that the period has ended and it is time to put your papers in your folders. Each group should wait for their folders to be collected. When the bell rings a second time, everybody should be sitting quietly at their own desks. You may begin."

APPENDIX D

Two 2 x 2 x 2 Factorial Designs

		Treatment Factor	
	Group A	X_1	X_2
		length of writing	length of writing
	boys	syntactic	syntactic
Gender		complexity	complexity
Factor		length of writing	length of writing
	girls	syntactic	syntactic
		complexity	complexity

		Treatment Factor	
	Group B	X_1	X_2
		length of writing	length of writing
	boys	syntactic	syntactic
Gender		complexity	complexity
Factor		length of writing	length of writing
	girls	syntactic	syntactic
		complexity	complexity

APPENDIX E

Overall Data from T-unit Analysis

Overall Total Words for Assigned and Unassigned Topics

Students By Assigned Numbers	Overall Total Words	
	Assigned	Unassigned
1	269	303
2	225	298
3	643	797
4	308	715
5	313	260
6	352	470
7	228	379
8	382	435
9	411	445
10	335	600
11	283	392
12	333	359
13	257	243
14	332	311
15	245	278
16	300	371
17	414	550
18	311	416
19	280	449
20	711	507
21	520	686
22	883	824
23	279	487
24	795	632
Total Output	9,409	11,207

Overall Data from T-Unit Analysis (cont'd)

Overall Total T-units for Assigned and Unassigned Topics

Students By Assigned Numbers	Overall Total T-units	
	Assigned	Unassigned
1	33	41
2	30	38
3	73	86
4	48	89
5	30	28
6	33	49
7	20	43
8	46	66
9	41	47
10	40	77
11	35	55
12	46	42
13	30	29
14	41	42
15	37	39
16	42	49
17	43	54
18	38	51
19	32	62
20	85	61
21	46	70
22	128	95
23	34	66
24	93	68
Total Output	1,124	1,347

Overall Data From T-unit Analysis (cont'd)

Overall Average Length of T-units For Assigned and Unassigned Topics

Students By Assigned Numbers	Overall Average Length of T-Units	
	Assigned	Unassigned
1	8.15	7.39
2	7.50	7.84
3	8.81	9.28
4	6.42	8.03
5	10.43	9.29
6	10.67	9.59
7	11.40	8.81
8	8.30	6.59
9	10.02	9.47
10	8.38	7.79
11	8.09	7.13
12	7.24	8.55
13	8.57	8.38
14	8.10	7.40
15	6.62	7.13
16	7.14	7.57
17	9.63	10.19
18	8.18	8.16
19	8.75	7.24
20	8.36	8.31
21	11.30	9.80
22	6.90	8.67
23	8.21	7.38
24	8.55	9.29
Total Output	205.72	199.28
Average Length	8.57	8.30

APPENDIX F

Samples of the T-unit Analysis

This appendix contains samples of writing composed by one girl in Group A and one boy in Group B. Samples are given for the beginning and the end of assigned-topic and unassigned-topic writing conditions.

Hunt's T-unit analysis consists of first slicing up a whole piece of writing into units which are grammatically independent. To get the mean clause length, the total number of words is divided by the total number of clauses.

Beginning of Unassigned-topic Condition

April 12, 1988 -- Girl Number 10

Transcript:

My Cousin

She's very cute if you hold out your arms and say Leslie give me hug./ /Sometimes she does/ /and other times she doesn't/. /But if she does she gives you a hug and says ah./ /She is going to be two on the 30 of April./ / She lives in Little Heart's Ease/ /but she usuly comes in on weekends to play with me and my sister./ /When they came in for the Easter we all did alot of things./ /With my aunt and uncle we went down a long trail to a pond/ /we were looking for a rafe but it was brokend a bit/ /we all sat on it and my uncle

took a picter./ /We had lots of fun./

Total = 12 T-units Total = 122 words

Average = 10.17

End of Unassigned-topic Condition

April 28, 1988 -- Girl Number 10

Transcript:

The Planets

The planets names are in order Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto./ /Facts about planets/: /Mercury: is closest to the sun./ /Venus: has storms wilder then hurricanes./ /Earth: home to all of us./ /Mars: the red planet./ /Jupiter: The biggest./ /Saturn: not the only planet with rings./ /Uranus: discover more then 200 years ago./ /Neptune: takes 165 years to go around the sun./ /Pluto: a mystry to scientists./ /Three planets have a ring around it Saturn, Uranus, Jupiter./

Total = 12 T-units Total = 81 words

Average = 6.75

Beginning of Assigned-topic Condition

May 3, 1988 -- Girl Number 10

Transcript:

My Favourite Room at Home

My favourite room is my playroom because I can play

any games I want./ /I can work in there to./ /I play in there in the morning before breakfast./ /I do my homework there to./ /After I do my homework and after super I play there agian./ /I play lots of games with my sister there to./

Total = 6 T-units Total = 57 words

Average = 9.50

End of Assigned-topic Condition

May 19, 1988 -- Girl Number 10

Transcript:

A TV Star I Would Like to Meet

I want to meet Corey Heart./ /I want to meet him/ /he is one of my favorite rock star./ /He is a very good singer./ /I have seen three of his video's at my cousin's house./

Total = 5 T-units Total = 36 words

Average = 7.20

Beginning of Assigned-topic Condition

April 12, 1988 -- Boy Number 20

Transcript:

My Favourite Room at Home

My favourite room is the TV room./ /I like ti because we watch TV shows./ /Sometimes we watch tapes/ /yesterday my mom taped kate and aelly, Mcigier cause

they were on to late/ /kate and aelly was on 9:30 pm/ /and Micger was on 10:30 pm./

Total = 6 T-units Total = 44 words

Average = 7.33

End of Assigned-topic Condition

April 28, 1988 -- Boy Number 20

Transcript:

A TV Star I Would Like to Meet

I want to meet Micguvr/ /I watch it all the time except when carolyn is looking after us/ /and thats almost all the time./

/shes makes us do our homework and go to bed at 9:30 pm./ /Sometimes shes nice and lets watch it./ /When mom finds out we are in big troble./

Total = 6 T-units Total = 54 words

Average = 9.00

Beginning of Unassigned-topic Condition

May 3, 1988 -- Boy Number 20

Transcript:

The Ocean

In the sea their are many creturers that don't live on land./ /Under the sea people risk their live to find out things that are mistories to sintistist./ /Some Divers work with sharks./ /Even some snarle seam to be

nice/ /but when they scerd they could hut you/ /people learn more about the sea.//There are many creturers like catfish, sharks, whales, shordfish, Blue-Blotched butter flyfish, Braincoral, clownfish, Anemone, hermit crad, spider shell flut worm, blue star fish, bloodspotted crad, sping sea urchin, common starfish, lionfish, chumbered fish, tigercown, turtleweed, slate pencil urchin, green turtle./

Total = 7 T-units Total = 96 words

Average = 13.71

End of Unassigned-topic Condition

May 19, 1988 -- Boy Number 20

Transcript:

whales without teeth

Some whales have no teeth/ /some whales do have teeth./ Baleen whale wher hunted long ago/ /they where hunted for a long time because every part of there botys are useful to man/ /now baleen whales are not to be hunted/ /there is not many balleen whales/ /to you know blue whales are the big est wahales in the sea/ /and fin back whales are senced bigest./

Total = 9 T-units Total = 86 words

Average = 9.56

APPENDIX G

Interobserver Agreement in T-unit Analysis

Interobserver Agreement for the T-unit Analysis in Assigned Topics Randomly Checked by Rater

Students By Assigned Numbers	Total Words Tallied By		Percentage Agreement Reliability
	Researcher	Rater	
1	79	79	100%
2	82	82	100%
3	--	--	--
4	--	--	--
5	49	49	100%
6	164	164	100%
7	40	40	100%
8	138	138	100%
9	57	57	100%
10	--	--	--
11	36	36	100%
12	--	--	--
13	74	74	100%
14	--	--	--
15	30	30	100%
16	33	33	100%
17	44	44	100%
18	48	48	100%
19	95	95	100%
20	101	101	100%
21	172	172	100%
22	--	--	--
23	33	33	100%
24	112	112	100%

Note: A dash denotes that this student's writing was not randomly checked by the rater.

Interobserver Agreement in T-unit Analysis (cont'd)

Interobserver Agreement for the T-unit Analysis in Assigned Topics Randomly Checked by Rater

Students By Assigned Numbers	Total T-units Tallied By		Percentage Agreement Reliability
	Researcher	Rater	
1	9	9	100%
2	11	11	100%
3	--	--	--
4	--	--	--
5	7	7	100%
6	15	15	100%
7	4	4	100%
8	16	16	100%
9	10	10	100%
10	--	--	--
11	5	5	100%
12	--	--	--
13	6	6	100%
14	--	--	--
15	4	4	100%
16	6	5	83%
17	6	6	100%
18	5	5	100%
19	10	9	90%
20	13	12	92%
21	22	22	100%
22	--	--	--
23	4	4	100%
24	17	17	100%

Note: A dash denotes that this student's writing was not randomly checked by the rater.

Interobserver Agreement in T-unit Analysis (cont'd)

Interobserver Agreement for the T-Unit Analysis in Unassigned Topics Randomly Checked by Rater

Students By Assigned Numbers	Total Words Tallied By		Percentage Agreement Reliability
	Researcher	Rater	
1	18	18	100%
2	47	47	100%
3	225	225	100%
4	68	68	100%
5	--	--	--
6	75	75	100%
7	59	59	100%
8	--	--	--
9	80	80	100%
10	192	192	100%
11	--	--	--
12	50	50	100%
13	108	108	100%
14	132	132	100%
15	41	41	100%
16	--	--	--
17	--	--	--
18	64	64	100%
19	60	60	100%
20	78	78	100%
21	148	148	100%
22	--	--	--
23	140	140	100%
24	71	71	100%

Note: A dash denotes that this student's writing was not randomly checked by the rater.

Interobserver Agreement in T-unit Analysis (cont'd)

Interobserver Agreement for the T-unit Analysis in Unassigned Topics Randomly Checked by Rater

Students By Assigned Numbers	Total T-units Tallied By		Percentage Agreement Reliability
	Researcher	Rater	
1	2	2	100%
2	6	6	100%
3	31	31	100%
4	10	10	100%
5	--	--	--
6	9	9	100%
7	7	7	100%
8	--	--	--
9	9	9	100%
10	35	35	100%
11	--	--	--
12	4	5	80%
13	12	12	100%
14	15	16	93%
15	7	7	100%
16	--	--	--
17	--	--	--
18	12	12	100%
19	7	7	100%
20	10	10	100%
21	15	15	100%
22	--	--	--
23	16	19	84%
24	8	8	100%

Note: A dash denotes that this student's writing was not randomly checked by the rater.

APPENDIX H

Interobserver Agreement in Topic Choices

Interobserver Agreement of Immediate Environment Topics for Unassigned Topics Generated by Boys

Immediate Environment Sub-categories	Tallied By		Percentage Agreement Reliability
	Researcher	Rater	
Self	6	6	100%
Family Members	--	--	--
Pets	4	4	100%
Peers	1	1	100%
Vocations	--	--	--
Community Events	2	1	50%
Community Places	--	--	--
Community People	2	2	100%
Sports	2	2	100%
Toys	1	--	0%
Food	2	2	100%
Jokes	1	1	100%
School	--	--	--
Books	8	8	100%
Treasures	2	3	66%
Seasons	--	--	--
Overall Occurrences	31	30	96%

Note: A dash denotes no writing composed.

Interobserver Agreement in Topic Choices (cont'd)

Interobserver Agreement of Immediate Environment Topics for Unassigned Topics Generated by Girls

Immediate Environment Sub-categories	Occurrences Tallied By		Percentage Agreement Reliability
	Researcher	Rater	
Self	7	8	87%
Family Members	11	10	90%
Pets	13	13	100%
Peers	4	4	100%
Vocations	2	2	100%
Community Events	--	--	--
Community Places	--	--	--
Community People	1	1	100%
Sports	2	2	100%
Toys	1	1	100%
Food	--	--	--
Jokes	--	--	--
School	2	2	100%
Books	1	1	100%
Treasures	1	1	100%
Seasons	5	5	100%
Overall Occurrences	50	50	100%

Note: A dash denotes no writing composed.

Interobserver Agreement in Topic Choices (cont'd)

Interobserver Agreement of Extended-World-Environment Topics for Unassigned Topics Generated by Boys

Extended-World-Environment Sub-categories	Occurrences Tallied By		Percentage Agreement Reliability
	Researcher	Rater	
Places beyond the Community	--	--	--
Events beyond the Community	2	2	100%
People beyond the Community	--	--	--
Space	10	10	100%
TV shows	2	3	66%
Movies	1	1	100%
Imaginary Things	8	5	62%
Imaginary People	2	5	40%
Dinosaurs	3	3	100%
Machines	2	3	66%
The Ocean	11	10	90%
Overall Occurrences	41	42	98%

Note: A dash denotes no writing composed.

Interobserver Agreement in Topic Choices (cont'd)

Interobserver Agreement of Extended-World-Environment Topics for Unassigned Topics Generated by Girls

Extended-World-Environment Sub-categories	Occurrences Tallied By		Percentage Agreement Reliability
	Researcher	Rater	
Places beyond the Community	5	5	100%
Events beyond the Community	--	--	--
People beyond the Community	1	1	100%
Space	7	7	100%
TV shows	--	--	--
Movies	--	--	--
Imaginary Things	1	1	100%
Imaginary People	2	1	50%
Dinosaurs	--	--	--
Machines	--	--	--
The Ocean	6	7	85%
Overall Occurrences	22	22	100%

Note: A dash denotes no writing composed.

APPENDIX I

Letters Requesting Permission to Engage Children in the Study

Brinton Memorial Elementary School
116 Strawberry Marsh Road
St. John's, Newfoundland A1B 2V5
February 15, 1988

Mr. Newman Kelland
Superintendent
Avalon Consolidated School Board
P.O. Box 1980
St. John's, Newfoundland
A1C 5R5

Dear Mr. Kelland:

As part of my Master's program in Curriculum and Instruction at Memorial University, I would like to conduct a study of children's writing in my grade three classroom at Brinton Memorial Elementary School. The study, designed to determine the effects of topic on children's expressive writing, would require a six-week period during April and May.

For two thirty-minute periods each week each child who has parental consent would be engaged in writing on different topics. In order to ensure confidentiality, data would be recorded by using assigned student numbers.

The activities and conditions of my proposed study are typical of the grade three classroom learning environment. I intend to incorporate the activities as part of our Language Arts Program. I have consulted my principal, Mr. Gruchy, who has no objections to my doing this.

I thank you in anticipation of your consideration of my proposed study.

Sincerely,

Brinton Memorial Elementary School
116 Strawberry Marsh Road
St. John's, Newfoundland A1B 2V5
March 11, 1988

Dear Parents:

As part of my studies at Memorial University, I will be engaging the grade three class of Brinton Memorial in a special writing project for a six-week period. The project, designed to determine the effects of topic on children's writing, will consist of two thirty-minute writing periods each week. All data will be kept confidential.

The conditions and activities of my project are typical of the grade three classroom learning environment, and will easily fit into our Language Arts Program. My classroom assistant for these activities will be Miss Evelyn Roach.

If you have no objections to your child's participation in the writing project, please sign the attached form. I would appreciate it if you would return the form by March 18, 1988. Should you have any concerns please contact me at 753-8410.

Sincerely,

_____
Grade Three Teacher

Attach.

March 11, 1988

I am aware that my child will be participating in a writing project.

Parent's signature: _____