THE EFFECT OF ABSTRACTION LEVEL ON SYNTACTIC STRUCTURES IN WRITTEN COMPOSITION AT THE SIXTH GRADE LEVEL

ACCEPTED

by

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B. Ed., University of Calgary, 1971

A THESIS ACCEPTED IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in the Faculty

of

Education

We accept this thesis as conforming
to the required standard

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UNIVERSITY OF VICTORIA

April 1983

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ABSTRACT

This study examined the relationship between the level of abstraction from raw experience in children's written composition and the complexity and types of syntactic structures used. Level of abstraction was defined in terms of five writing modes. The modes, from least to most abstract, were as follows: description, factual narration, fictional narration, exposition, and argument. It was hypothesized that each mode would elicit a higher level of syntactic complexity, as measured by T-Unit length and by the number of sentence-combining transformations per T-Unit, than the next lower mode on the hierarchy. It was also hypothesized that the frequency of occurrence of specific types of transformations per T-Unit would be different in each mode. Sex was predicted not to be a significant moderator variable.

Six Grade Six teachers in four elementary schools in the Public School District of Grande Prairie, Alberta, Canada volunteered to participate in this study. Each teacher had his students write two compositions in each of the five modes of writing, in accordance with plans developed by the investigator. The order of modes was randomized for each school. Those students who did not write all compositions were eliminated from the study. A random sample of three boys and three girls from each of the six classes was chosen. The investigator conducted a detailed syntactic analysis of each of the three hundred sixty compositions.

The resultant research design was a 2 x 5 (sex x mode) factorial design. Two way analysis of variance with repeated measures on the mode variable was used to determine significance, and the Scheffe' technique was used to determine significance between cells.

The results confirmed that different modes of writing do yield differing levels of complexity, but not consistent with the directions hypothesized. Using T-Unit length as the measure, the result was as follows:

Argument > Exp. > Desc = Factual Narr. > Fictional Narr.

Using sentence-combining transformations per T-Unit as the measure, the result was as follows:

Argument = Exp. = Desc > Factual Narr. > Fictional Narr.

It was also found that different modes of writing do yield differing frequencies of specific transformations per T-Unit. Sex was found not to be a significant moderator variable.

It was concluded that there may not be a direct relationship between level of abstraction and syntactic complexity. However, since the relationship between level of abstraction and modes of writing was only a theoretical assumption, it was suggested that further research which uses more direct measures of abstraction level should be done.

The study was significant in that it suggests that if one wishes students to grapple with a full range of syntactic structures, they should be assigned writing in various modes. It also added further confirmation to other studies which have shown that developmental research on syntactic complexity must take mode of writing into account. This study also demonstrated that fictional narration and

factual narration yield differing levels of syntactic complexity; no previous studies have examined the differences between those modes.

This study used more extensive pre-writing experiences than did other similar studies. The subjects produced more complex sentences than what previous studies would lead one to expect. Therefore, the relationship between the nature of pre-writing experiences and syntactic complexity generally and within each of the modes is suggested as a fruitful area for further research.

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ACKNOWLEDGEMENTS

The author wishes to extend his sincere appreciation to Dr. R. D. Armstrong, Chairman of the Supervising Committee, for all his advice and assistance. A study such as this is not completed without a lot of frustration; Dr. Armstrong was always a patient listener. The thorough advice and clear thinking of Dr. Peter Evans and Dr. Irv Burbank was also appreciated. Two other faculty members of the University of Victoria, although they were not on the Supervising Committee, continually showed interest and support. Thank you, Dr. Lloyd Ollila and Dr. Bill Cross.

The support of the Grande Prairie School District was also essential to the completion of this project. Derek Taylor, Superintendent of Schools, provided on-going encouragement. Teachers Len Toews, Linda Patterson, Guy Spencer, Neil Dobson, Lionel Kyle, and Henry Schellenberg went beyond the call of duty to teach the lessons as provided and to send in student compositions. The secretarial staff of the Central Office assisted with hours of typing and mimeographing. The District has always had the reputation of operating as a team, and I thank the entire team for backing me up.

Finally, to my wife Mary and daughters Carmen, Cheryl, Kirsten, and Wendy--Thanks for typing, for going without some holidays, for bringing the coffee, for keeping the house quiet at times when you would rather have been boisterous, for listening to frustrations--Thanks for loving and caring.

CHAPTER I

THE PROBLEM

Context of the Problem

Over the past decade, public concern has mounted in North America regarding language abilities of students. This concern has resulted in increased attempts to measure these abilities such as the testing programs initiated by the Minister's Advisory Committee on Student Achievement and the subsequent Achievement Testing program developed by the Student Testing and Achievement Branch of the Alberta Ministry of Education in Alberta, Canada. British Columbia has also recently conducted assessments of language arts achievement.

Some of the concern has centred on the perceived lack of student ability to write clear, well-organized, syntactically complex sentences. The British Columbia assessment concluded that sophistication of sentence structure was lacking, and also expressed concern that teachers may not be placing as much emphasis on syntactic density as on such concerns as correct usage. The report stated (Evanechko, 1976):

> While clear structure is undeniably important in written language, the lack of support for density of meaning was somewhat surprising. From a developmental point of view, syntactic density is an excellent measure of the maturity of writing.
>
> Teachers do not appear to be fully aware of the effect which the use of language forms and structures that are packed with information have on the quality of writing. The importance of rhetorical or stylistic skills is not highly regarded (p.61).

The problem is often attributed to the fact that students are not provided adequate opportunity to practice the skills of written composition in realistic, whole discourse situations. In addition, it

is felt by many that because of the heavy emphasis that has been placed on the development of student creativity, teachers may have been overemphasizing the writing of poetry, fictional stories, and description, while possibly underemphasizing the writing of exposition and argument.

Beginning in the 1960's, an extensive amount of research has been directed toward determining the growth sequences in students' oral and written syntax. While investigating these sequences, many of the major researchers have recognized that syntactic complexity may be affected by the nature of the writing task. Kellogg Hunt (1965) stated:

> We need to isolate and describe more clearly the effect of subject matter on grammatical structures (p.151).

O'Donnell, Griffin and Norris's (1967) investigation into the syntax of written composition in Grades 4, 8, and 12 relied on a corpus that was primarily narrative in character, and they commented that:

> The language samples do not necessarily show what the children would have done under other types of stimulus conditions (pp.27-28).

Loban (1976), after an extensive longitudinal study of the language growth of 211 students from ages five to eighteen, made similar statements:

> We conclude that the topic of any writing or speaking shifts the frequency of dependent clause functions (p.57).

> The order (of attainment of syntactic structures) will be conditioned by the requirements of a particular situation (p.79).

Surveys of research have also indicated the need to investigate the relationship of varying types of writing to syntactic complexity. Braddock (1963) stated:

> Largely ignored by people doing research in composition, variations in mode of discourse may have more effect than variations in topic on quality of writing (p.8).

In the period since then, several studies which are reviewed in depth later (Martinez San Jose´ 1972, Pope 1974, Heil 1976, Perron 1976, Crowhurst 1977) have investigated this relationship. However, it would appear that the research is not yet considered to be conclusive. Courts (1977) states:

> Syntactic fluency seems to be as closely bound to style or function as it is to age (p.3).

> I suggest that learning to write consists of learning to master different kinds of writing and that a student who is master of one may not be master of all (p.7).

King (1978), in an article suggesting future research directions in language arts, states:

> T-Unit measures applied to types of discourse might throw indirect light on the differences of the composing process by type (p.200).

King also refers to James Moffett´s theories of time and space distance between writer and experience as being crucial factors in defining modes of discourse. Thus it appears that a framework of both theory and empirical findings which would render further research productive does exist.

The Problem

The purpose of this study was to investigate the relationship between what James Moffett calls "the level of abstraction from raw experience" in children's written composition and the complexity and nature of the syntactic structures used by children in written composition. Moffett and Wagner (1976) define "raw experience" as that experience which the human mind has not yet symbolized in any form (p.9). In this study, level of abstraction from raw experience is what Tuckman (1978) defines as an "intervening variable" (p.67). Level of abstraction from raw experience was operationalized in terms of five different modes of writing. Thus the mode of writing is the independent variable. The study examined the effect of five differing modes of writing on the complexity of syntax and on the frequency of occurrence of specific sentence-combining transformations which contribute to the overall complexity. The study also examined whether the sex of the student interacted with the above variables. In Tuckman's (1978) terminology, complexity of syntax and the frequency of occurrence of specific transformations would be "dependent variables", and sex would be a "moderator variable" (pp.59-63).

The Definition of Terms

For the purposes of this study the meanings attached to certain terms were as follows:

Argumentative writing. Compositions that in the main argue a point of view, defend a position, or express an emotional inclination, for the purpose of persuading the reader.

Descriptive writing. Compositions that in the main depict people, places, things, and/or events in detail by creating sensory images.

Expository writing. Compositions that in the main explain a procedure or an experience, usually for the purpose of informing a reader.

Factual narrative report writing. Compositions that in the main relate an actual sequence of events, observance or experiences, unembellished by the author's imagination, or by experiences which did not actually happen.

Fictional narrative story writing. Compositions that in the main relate a sequence of events, observances, or experiences which are drawn from several real or imagined experiences of the author and are recombined imaginatively, usually through the application of implicit or explicit knowledge of generally accepted story format, for the purpose of entertaining the reader.

Level of abstraction. The time-space distance between a writer and the raw, sensory, unprocessed experiences providing the basis for his written composition. It is assumed that a description of an object or group of objects which a writer has just experienced

through sight, touch, taste, smell, or hearing would be the lowest level of abstraction. A factual narrative report would be next higher, then a fictional story, and then an exposition. An argument weighing generalized ideas of others on some scale of generalized personalized values would be the highest level of abstraction. Elaboration relative to these assumptions is found in Chapter II.

Mode of discourse. This term refers to the differences in written compositions which argue a point of view, explain a process, relate or report a sequence of events, or depict details, in other words, the classical distinctions among argument, exposition, narration, and description respectively. In addition, it is assumed that narration may be subdivided into factual reporting and fictional story-telling, the latter being more abstract in that the writer brings to bear both his memory of experiences and his internalized knowledge of story format.

In this study, the five modes of discourse comprising the independent variable were description, factual narration, fictional story, exposition, and argument.

Sentence-combining transformation. A transformational process which produces one sentence where otherwise there would have been two or more. Transformations may be nominal, adverbial, or coordinating.

e.g.

Mr. Jones liked the desk.

The desk was new.

The desk was his.

The desk was in his office.

Mr. Jones liked his new desk in his office.

Three nominal sentence-combining transformations have been used to produce one sentence from four. When writers use sentence-combining transformations, they produce sentences which are more syntactically complex than if they did not use transformations.

Syntactic complexity. The observed characteristics of syntax of writers in higher grades. It has been observed that as grade level increases, mean T-Unit length increases, the number of sentence-combining transformations per T-Unit increases, and the frequency of occurrence of specific types of structures increases.

T-Unit. A minimal terminable unit or collection of words, or a unit grammatically capable of being begun with a capital letter and terminated with a period. One main clause (principal or independent clause) with all the subordinate clauses attached to or embedded in it.

The Hypotheses

The study was designed to determine whether the abstraction level of writing would have an effect on the resultant syntactic complexity or on the frequency of occurrence of specific types of

transformations, and whether there would be any differences of the effect for boys and girls. The abstraction level of writing has been operationally defined in terms of modes of writing. Syntactic complexity has been operationally defined in terms of T-Unit length and the number of sentence-combining transformations per T-Unit.

The following hypotheses were tested in the experiment:

1. The mean T-Unit length will increase progressively as students perform written tasks requiring them to describe, to narrate factually, to narrate fictionally, to explain, and to argue or persuade.
2. The mean number of sentence-combining transformations per T-Unit will increase progressively as students perform written tasks requiring them to describe, to narrate factually, to narrate fictionally, to explain, and to argue or persuade.
3. The mean frequency of occurrence of specific types of sentence-combining transformations per T-Unit will be significantly different for writing in the descriptive, factual narrative, fictional narrative, expository, and argumentative modes.
4. There will be no difference in mean T-Unit length for boys and girls in any of the five discourse modes.
5. There will be no difference in mean number of sentence-combining transformations per T-Unit for boys and girls in any of the five discourse modes.

6. There will be no difference in mean T-Unit length for boys and girls in the five discourse modes combined.
7. There will be no difference in mean number of sentence-combining transformations per T-Unit for boys and girls in the five discourse modes combined.
8. There will be no difference in the mean frequency of occurrence of specific types of sentence-combining transformations per T-Unit for boys and girls in any of the individual modes, or in the modes combined.

Design of the Study

Six Grade Six teachers in four schools in the Grande Prairie School District in Grande Prairie, Alberta, Canada agreed to participate in the study. Each teacher taught five lessons relating to the topic of hockey and five lessons relating to the topic of clothing. The researcher designed the lesson formats in such a manner as to elicit two compositions in each of the five specified writing modes. All lessons followed a common format: students were provided an input of experience; they were then provided an opportunity to discuss their experiences in small groups; then they wrote a specified composition; and finally they revised their compositions without assistance. The order of the composition modes was varied randomly to control for possible sequence effects.

The researcher collected all the writing samples. Those students who did not complete all ten compositions were rejected from the study. The researcher read the compositions of the remaining

students to determine whether they had responded appropriately to the task; that is, whether they had in fact written in the mode required by the assignment. All students did respond appropriately. The researcher then selected randomly, by drawing names from a hat, three boys and three girls from each of the six classes, for a total of eighteen girls and eighteen boys or thirty six subjects. The researcher then independently analyzed the 360 written compositions to determine the length of T-Unit, the frequency of occurrence of all sentence-combining transformations per T-Unit, and the overall or combined number of sentence-combining transformations per T-Unit.

The research design can be described basically as a 2 X 5 factorial design. The statistical technique used for analysis was a two way analysis of variance with repeated measures. More specific details are provided in Chapter III.

Limitations

The validity of the findings of the study was limited in the following ways:

1. No tests of intellectual ability or socioeconomic levels of the students were done.
2. Students selected may have been atypical in that their attendance patterns may be more regular than the attendance of normal grade six population.
3. The study was conducted with heterogeneously grouped Grade Six classes only.

4. The stimulus presentations for the composition samples were used for the first time in this study. The use of a slightly different stimulus for each mode may have had some effect on the outcome.
5. The researcher did all the analysis independently, and may have interpreted some types of transformations in a different manner from that of other researchers. (Chapter III contains a detailed summation of how various transformations were interpreted and counted.)

Significance of the Study

The question of factors which influence syntactic complexity is in need of further study for several reasons. Syntactic complexity is an important factor contributing to the overall quality of writing. Although the relationship of mode of writing to syntactic complexity has been previously investigated, the present study went beyond previous studies in the following ways:

1. This study controlled the variable of topic, whereas only one other similar study (Crowhurst 1977) has done so.
2. This study distinguished between factual narrative reporting and fictional narrative story writing as modes of discourse. Previous studies have considered only the four traditional modes of description, narration, exposition, and argument.
3. This study used samples of written composition collected in response to currently recommended pre-writing activities; the active to oral to written principle was adhered to.

4. This study examined the variations in all the specific types of sentence-combining transformations which contributed to differences in overall levels of syntactic complexity. Previous studies have relied primarily on gross measures such as T-Unit length or have examined only selected types of transformations.

Significance for Research

This study has provided support for the growing body of evidence that mode of writing must be controlled in any future developmental studies. Also, need for further research into the development of syntactical maturity within each mode has been indicated. In addition, further research relating the frequency of writing assignments in a given mode and the growth in use of transformations which are frequently elicited by that mode is indicated.

Significance for Instruction

This study has provided further direction regarding the possible benefits of varying mode expectation for the writing tasks of students. It has also indicated that it may be desirable for teachers to control for mode when evaluating the written compositions of students. Finally, the study has provided some indication of which specific types of syntactic structures are most likely to be elicited by each mode of writing, and this could provide direction for the possible design and content of sentence-combining curriculum at the Grade Six level.

Organization of the Study

This chapter has attempted to provide the background for and to introduce the problem dealt with in the study. Hypotheses were stated, terms were defined, an overview of the methodology for carrying out the study was provided, and the limitations and significance of the study discussed.

The remainder of the report is organized as follows:

Chapter II: Review of the Related Literature
Chapter III: Design of the Study
Chapter IV: Analysis of the Data
Chapter V: Conclusions, Implications, and Recommendations

CHAPTER II

REVIEW OF THE LITERATURE

In the following review of literature, this study is related to other important research and to theory. First, a theoretical framework for this study is established. Second, closely related studies which establish empirical support for the hypotheses of this study are summarized. A review of these studies also lends support to the methodology employed in carrying out the present study, in particular, the need to control audience and topic, the requisite size of writing sample, and the usefulness of providing common pre-writing experiences. Next, literature relevant to the problem of measuring syntactic complexity is summarized. Then it is established that syntactic complexity is an important characteristic contributing to overall writing quality. Finally, the relationship of sex to language variables in other studies is reviewed to provide a basis for including sex as a variable in this study.

Theoretical Framework

The theoretical framework for the proposed study is based largely on the work of the James Moffett. Moffett appears to have been one of the first to provide cognitive-based rationale for the traditional rhetorical categorizations of modes of discourse: description, narration, exposition, and argument. According to Moffett, English is primarily a symbol system, and in order to understand it, one needs:

> some notion of hierarchy of abstraction, defined as greater and greater processing of phenomena by the human mind (p.9).

This processing of phenomena can occur in two differing dimensions, that of abstracting from raw experience and that of abstracting for some defined audience. Although Moffett suggests that it is impossible to separate these two aspects of abstraction in the composing process, the research process must attempt to do so. By controlling the audience dimension (abstracting for) and varying the mode dimension (abstracting from) or vice-versa, researchers can empirically verify the theory.

Moffett departs somewhat from traditional conventions by referring to the description mode as "drama". This, he says, is the lowest level of verbal abstraction. It follows the "chronologic of perceptual selectivity" -- the writer records what he perceives to be happening. In time and space, the writer is very close to his subject.

Moffett (1968) departs even further from traditional conventions in his discussion of narration. He distinguishes between factual narration, or the reporting of what has happened through the "chronologic of memory selectivity" (the next higher level in the abstraction sequence after drama), and fictional narration, which he considers to be a separate dimension having several differing levels of abstraction within it. Thus he states:

> Any sort of fiction is as much an abstraction of reality as any other mode of discourse, and a high level one at that -- obviously it would make no sense to blandly place fictive stories on the same rung of the abstraction ladder as narrative reportage

> of actualities just because they both follow a chronological order, for the previous assimilation of experience underlying each is different" (p.52).

This distinction appears to be similar to that of Britton (1975), who categorizes language as transactional, expressive, or poetic. The distinction between Britton's expressive category and his other two appears to relate to the audience dimension of Moffett's theory, but the distinction between transactional writing and poetic writing is at least in part similar to Moffett's distinction between narrative reportage and fictive stories.

Watson (1980) examined the relationship of syntactic complexity to three differing rhetorical purposes based partly on Britton's distinctions, those being self-expression, persuasion, and explanation. Her subjects were high school seniors and college English majors. She found that syntactic differences among discourse types equaled or exceeded the differences between the two maturity levels. Hennig (1980) carried out a similar study in which the three discourse types were personal journals, letters, and formal essays. The mean length of T-Units was much longer in essay-writing than with letter or journal writing. In terms of Britton's categories, essays would probably fall into the transactional category; journals would certainly be expressive, and letters could be either. Hennig concludes:

> As students shift from the familiar informal style of journals and letters, they need to learn a more skillful use of noun substitutes (phrases and clauses). They need to learn when coordinations within T-Units are appropriate. In short, it's not enough just to teach students to write longer T-Units. They need to learn specific kinds of constructions that are appropriate for their purpose (p.16).

Britton's theories of transactional, expressive, and poetic language have been found useful as a basis for the study of syntactical variations. However, at the elementary school level, Moffett's additional basic distinction between factual narrative and fictive narrative may bear a closer relationship to the actual types of writing most frequently assigned. Also, because Moffett's discourse categories are somewhat more closely related to the traditional rhetorical categories of description, narration, exposition, and argument, they may be easier for the classroom teacher to relate to than are Britton's categorizations.

Moffett's discussion of exposition and argument was in accord with traditional understandings of these terms, but he emphasizes their relationship to drama and narration as being one of increased abstraction or further time-space distance between writer and subject. Exposition he defines in terms of what was happening or what happens -- the speaker follows "the analogic of classification," in which the selectivity of reason is employed. At the top of the abstraction hierarchy is argument, which he defines in terms of what may happen or "The tautologic of transformation."

Moffett and Wagner (1976) express skepticism about any curricular practices which would remove sentence production or manipulation from the context of a total discourse. They imply that if schools encourage students to discourse at varying abstractive levels, growth in syntax will occur:

> Working within discourses of different abstractive levels ensures that students will come to grips with all the issues of diction, sentence construction, and organization (p.458).

Moffett's (1968) belief in the integral interrelationships that exist between cognition, the level of abstraction used by students in language, and syntactic complexity, is revealed in these statements:

> There is good reason to believe that the final answer to linguistic elaboration lies beyond language in general cognitive development, and that intellectual stimulation is far more likely to accelerate syntactic growth than grammar knowledge . . . The only reason for encouraging a student to elaborate his sentence structures, aside from stylistic variation and rhetorical effect, is to enable him to qualify his information and communication. The less facility one has with conjoining and embedding, the more one's thought is likely to remain crude. Again, discourse does not just convey thought, it forges it (p.163).

Thus it is clear that Moffett would not advocate drill exercises as a means of improving syntactic complexity; rather he would advocate having students do a lot of writing of different types for differing purposes. A recent study by Hughes (1978) would support this. Hughes did a comparative study of 516 children from the Nottingham area of England and from the Kalamazoo, Michigan area of the U.S.A. Results of the study indicate that the average time spent in writing for British children was nine and one-fourth hours per week against the average for U.S. children of one and one-third hours per week. British children were found superior to U.S. children in syntactic maturity. Thus Hughes suggests that extensive free-writing alone can improve syntactic maturity.

Perron (1976) related Piaget's theories of equilibration to the ideas of Moffett expressed above:

> Piaget portrays intellectual development as a process of equilibration, with cognitive structures moving from organization to reorganization. This equilibrum-disequilibrium-equilibrium process is affected by outside intrusions of experience. With each cognitive reorganization, the old structural operations are integrated into the newer, more complex ones. This can be compared to linguistic development, in that children attain higher levels of syntactic complexity by incorporating previous syntactic structures into more advanced ones (p.7)

This Piagetion position, combined with Moffett's ideas, lends strong support to the possibility that writing assignments of higher levels of abstraction elicit more complex syntactic structures from students. As Perron went on to state:

> The various modes of discourse may have their linguistic and cognitive requirements, which appear to underlie writing and thinking, producing a developmental connection that stands behind surface production of language (p.8).

Moffett has attempted to convey his position diagramatically, but in so doing has not dealt with fictional and factual discourse on one abstractive plane. To provide a research theory base for this study, fictional stories have been related to other types of discourse in Figure 1. The relationships depicted are no doubt an oversimplification of Moffett's theory, as he stated that there may be many differing levels of abstraction within fictive narration. However, it is suggested that the relationships could hold true for elementary school students.

Methodology and Empirical Support for Theory

Several studies have been carried out which lend credence to the theoretical position outlined in the previous section. These studies also have had methodological implications for the present

THEORETICAL MODEL

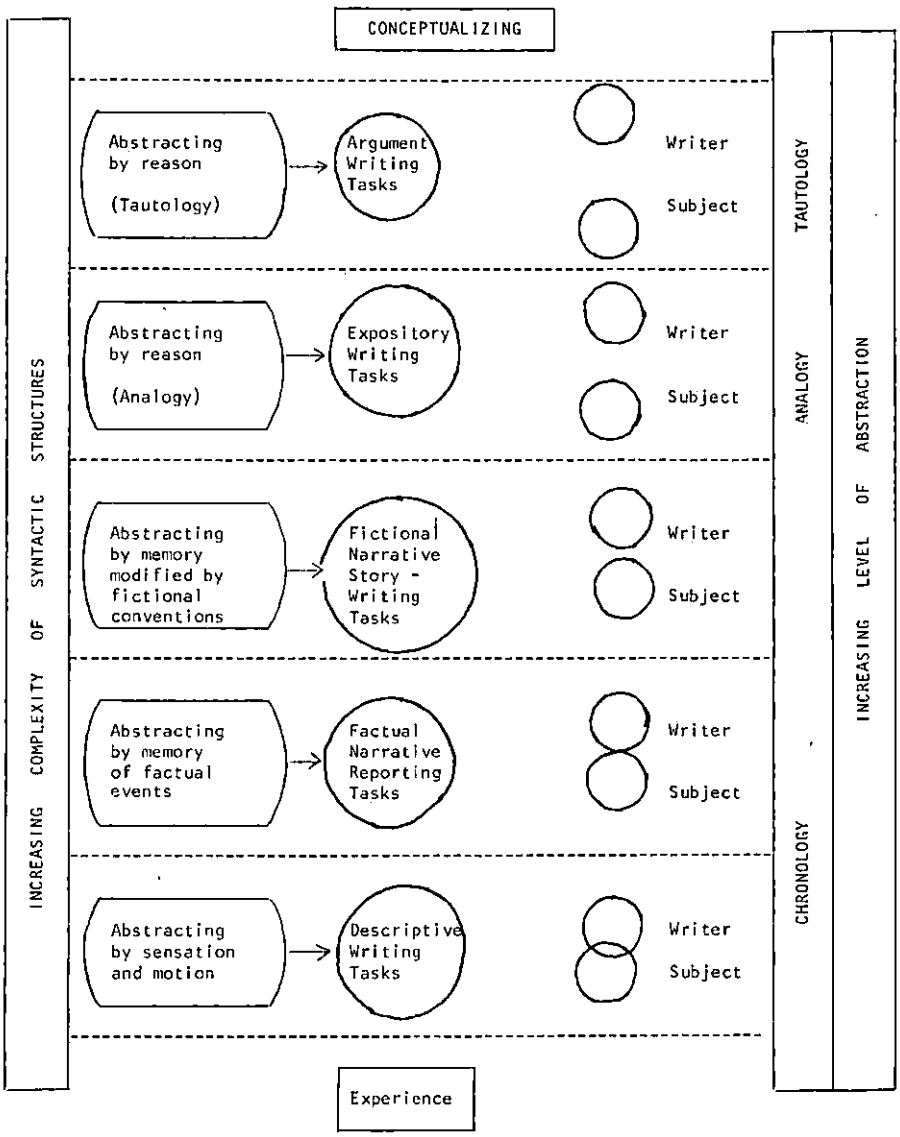

Figure 1: Adapted from Moffett and Wagner Pages 456 and 461.

study. Studies conducted some time ago, which relied on traditional grammar for the methodology of analysis of syntactic complexity, probably contributed to the development of Moffett's theory. More recent studies, which use the techniques of transformational grammar for analysis, appear to have derived their models from that theory.

Frogner (1933) conducted a study involving one thousand children from the seventh to the eleventh grades. Three compositions, a narrative, a social newsletter, and an exposition, were obtained from each pupil. The narrative samples contained a slightly higher percentage of sentences with dependent clauses than the letter, and the expository samples had a considerably higher percentage than the narrative samples. Frogner concluded that the kind of writing done had an effect on the complexity of sentence structure. The lack of complexity in the social newsletter assignment could be explained by Moffett's audience dimension or "abstracting for" concept, and the greater complexity in exposition than in narration fits the theory of levels of abstraction from experience. Methodologically, it would seem that the audience dimension should be controlled when the effects of abstracting from experience are examined. In their much more recent study, Smith and Combs (1980) state:

> this research seems to indicate that students do not have a well-formed concept of audience, but that they can alter their writing when given highly specific descriptors of an audience (p.38).

A contemporary of Frogner's, Seegars (1933) conducted a similar study in Grades Four, Five, Six. Seegars used the ratio of dependent clauses per 100 independent clauses as his index of

complexity. Because he felt that children in these grades tended to merge narration and description, he treated these modes as one, and compared them to exposition and argumentation. A total of 604 compositions was examined. It appears that there was no control for subject or audience. Seegars found that writing exposition resulted in the use of more dependent clauses than writing narration and description, but fewer dependent clauses than in writing argument. Once again, the findings are consistent with the theory developed later by Moffett.

A much later study, but one comparable to those of Frogner and Seegars in that techniques arising from traditional grammar were used for analysis, is that of Johnson (1967). Johnson obtained two samples of writing for each of the three categories of narration, description, explanation for thirty-two third grade students. The narrative topics were of a fictional nature. There was no control of subject across the modes of discourse. Students wrote the largest number of sentences in narration, with fewer sentences in description and explanation. It was found that students used the fewest simple sentences in explanation, followed by description and narration. Thus the complexity produced by the expository mode appears consistent with the theory outlined, but the complexity produced by narration and description is inconsistent. Johnson's explanation of her findings is certainly consistent with Moffett's theory:

> The requirements of the thought processes in explanation may be causative in this finding. The use of dependent clauses is usually recognized as an indication of growth in intellectual ability and thought processes (p.267).

The study done by Pope (1974), although based on oral language rather than written language, uses a method of analysis based on the more recent theory of transformational grammar. Pope selected thirty black and thirty white fourth graders randomly from six schools in Tallahassee, Florida. From each he collected two oral speech samples using a fictional narrative film, "The Ant and the Dove," as a stimulus for one sample and an expository film, "Animals Protect Themselves," as the stimulus for the other. One-half of the subjects did the narrative oral composition first, while the other half did the exposition first. On three indices of complexity, ratio of clauses per T-Unit, length of T-Units, and number of sentence-combining transformations per T-Unit, the expository samples were significantly more syntactically complex than were the narrative samples. An outstanding characteristic of the expository speech noted by Pope was that it contained more than twice as many subordinate clauses per T-Unit than narrative speech. Pope made a significant suggestion for future research designs:

> The results obtained may not be simply due to the difference in the types of discourse. Future studies of this nature could eliminate subject as a variable by using stimulus materials that lend themselves to a narrative response as well as an explanatory one (p.223).

Martinez San Jose´ (1972), like Pope, chose her sample from the fourth grade. Twenty boys and twenty girls were selected from two classes in a school in a white working-class community near Syracuse, New York. Over a five week period, the students wrote letters to children in a school in England; thus the audience dimension was controlled. Students first wrote narrative summaries of their

favorite television shows. In the second week, they wrote descriptions of people, places, and things in the U.S.A. Then they wrote expositions explaining how Americans do a variety of everday tasks such as shopping. In the fourth week, they wrote in the argumentative mode, presenting their views on such matters as the wearing of school uniforms. During the final week, they were give a free choice of writing topic. The compositions were analyzed in terms of thirty different variables, the first eight of which related to such factors as T-Unit length and subordination ratio. Other variables included such factors as kinds and uses of clauses, type and extent of modification, nominalization, and non-clause, non-complement adverbials. Other dependent variables examined were language functions (tentative statements, generalizations, figurative language, irrelevancies), grades as determined by four independent raters, and the students' attitudes toward the writing they did. Interactions of sex, intelligence, and reading achievement were also examined.

Martinez San Jose's findings are definitely supportive of the theory outlined earlier. She states:

> The different modes were found to differ significantly in all four T-Unit measures. Further, in all of them, the pattern is the same: argument elicits the most mature language, exposition the next most mature, narrative comes some way behind, and the least mature occurs in description (p.86).

In the analysis of clause length and subordination, Martinez San Jose' found that it was primarily the difference in subordination ratio that produced the above noted effect. Further, she found that it was largely a more frequent occurrence of adverbial clauses in exposition and argument that accounted for this. In addition, she

found that none of the other variables, sex, intelligence, or reading scores, was shown to show the strong, comprehensive significant relationship to syntactic complexity that was shown by mode.

In her analysis of language functions, Martinez San Jose' found that generalization constituted the main body of both exposition and argument. She comments:

> It was in no way suggested to the students that they should approach the argumentative mode in this way and the investigator can advance no strong reason why they should have done so (pp.181-182).

It is suggested that the "strong reason" lies in the theory that argument and exposition are by their very nature higher levels of abstraction, and consequently elicit greater numbers of statements that could be classified as generalities.

Critics could possibly attack Martinez San Jose' on two fronts. First, she did not control for topic, and it could be argued that the results observed were the result of topic variation rather than mode variation. Kincaid's (1953) study suggested this possibility, as did a study by Witte and Davis (1980), who state:

> It is possible, of course, that different subject matters systematically elicit different ranges and kinds of syntactic structures and thus affect individual stability of mean T-Unit length, even when the aim and mode of the resultant discourse is controlled (p.14).

Secondly, the sequence of students' writing was not controlled, and it might be argued that a practice effect produced the greater syntactic complexity evident in the expository and argumentative modes. She admitted that an observed decline in the total number of words may be due to sequence, but did not comment on

the possible effect of sequence on mean length of T-Units or on subordination ratios. While such an effect is unlikely in such a short time span, it would appear desirable in studies of this nature to control the sequence of writing assignments.

Heil (1976) conducted a study similar to that of Martinez San Jose' but with younger children. Her subjects were 150 students from the first, second, and third grades of a primary school in Garden City, New York, a suburban, upper middle class, all white district. One of Heil's purposes was to examine the differences in the syntactic characteristics of narrative and expository writing. The seven written language variables she examined included such common indices as mean length of T-Unit, ratio of various types of embedding transformations per T-Unit, and ratio of clauses to T-Units. Two expository writing samples were collected by having students explain how to play a game and how to assemble an aquarium. Two narrative samples were collected using short film sequences as the stimulus. Thus there was no control for topic, and as in the Martinez San Jose' study, there appears to have been no control for sequence of writing task.

Even with these young students, Heil's findings were consistent with those already reported. In Grade One, expository writing produced significantly greater complexity in all but one of the seven language measures; in Grades Two and Three the expository writing produced significantly greater complexity on all seven variables. In particular, the most pronounced difference was the

greater frequency of use of the conditional clause in expository writing. Heil concludes:

> Writing in a mode other than narration is not usually considered within the capabilities of the younger primary child. The findings of the present study suggest that exposition seems to offer more opportunity to use more complex structures than narration, and that primary youngsters, even the younger ones, are capable of writing in this mode, if given the opportunity (p.214).

Another extensive study relating mode of writing to syntax carried out to date is that of Perron (1976). He selected 153 third, fourth, and fifth graders from white rural, small town, and urban communities near Atlanta, Georgia. They were assigned writing tasks in description, narration, exposition, and argument over a period of two weeks. Unlike Martinez San Jose´ and Heil, Perron varied the sequence of tasks; however, he did not control for subject. His descriptive task involved the students in describing themselves. The narrative task required students to tell about their favorite television program. The expository task required students to tell where they went and what they did after school. The argumentative task required students to discuss whether schools should be open all year long. Besides providing no control for subject, Perron´s writing tasks appear to be somewhat poorly chosen in that they seem to invite students to mix modes. Also, the expository task appears to be more likely to elicit narrative reportage than true exposition. For purposes of experimentation, it would seem desirable to set tasks which would encourage distinctness of mode.

Perron used T-Unit length as the major index of syntactic complexity. With the exception of a reversal in high and middle ability group means at the fourth grade level in argument, Perron found that all means were shown to be consistently higher from mode, to mode, from ability group to ability group, and from grade to grade. At all grade levels, argumentation was shown to account for the highest syntactic complexity, while description accounted for the lowest. Perron concludes:

> Apparently, the modes of discourse present different syntactic challenges to writers in the elementary grades studied here .... The competent writing teacher would be one who not only encouraged enjoyable, in-context writing experiences for children, but who saw to it that those experiences reflected a content base which covered all four modes. This point has been made in a different way by Moffett, but the syntactic evidence here suggests that there may be more than just logical sense to his whole discourse approach (pp.16-17).

Smith and Combs (1980) studied the effects of overt and covert cues on written syntax in college Freshman classes. They defined "overt cue" as directly telling students to write long, complex sentences and a covert cue as the limited use of a sentence-combining activity shortly prior to a free-writing assignment. Both types of cues were found to elicit more complex writing. Smith and Combs conclude:

> All types of instruction in writing provide cues concerning what the teacher values and therefore what is expected of the students. Consequently, all research should make an attempt to distinguish what the students learn as a direct result of instruction from what they perceive as teacher desired (p.35).

Thus, in the present study, teachers were advised not to comment regarding sentence structure when giving data collection assignments to students, nor to teach any sentence improvement related activities during the course of the units used to generate the writing assignments.

The most recent studies relating mode of writing to syntactical complexity were done by Crowhurst in 1977 and in 1980. The 1977 study examined the effect of audience and mode of discourse on the syntactic complexity of the writing of sixth and tenth graders. Three modes of discourse, narration, description, and argument, had a significant effect on mean T-Unit for the total sample and at each grade level. Consistent with earlier studies, argument was the most syntactical complex. However, in her study, narration elicited the least syntactically complex structures. Tenth graders manifested significantly greater syntactic complexity in argument when writing for a more formal audience (teacher) than for a less formal audience (best friend). Crowhurst (1980) examined the effect of the narrative and argumentative modes on the syntactic complexity of students in Grades Six, Ten, and Twelve. Once again, at each grade level, T-Unit length in argument was significantly greater than in narration. In argument, there were significant increases in T-Unit length between Grades Six and Ten and between Grades Ten and Twelve; in narration there was a significant increase between Grades Six and Ten but not between Grades Ten and Twelve, Crowhurst (1980) states:

> Narrative writing appears to be less suitable for studies of syntactic development both because it tends not to require writers to make maximum use of their syntactic resources and because it appears that increases in syntactic complexity from grade to grade may level off earlier in narration than in some other kinds of writing (pp.10-11).

However, Crowhurst did not distinguish between factual narrative reporting and fictional story writing. In accordance with Moffett's theory of levels of abstraction, it is useful to make that distinction, and this study did so.

In the design of both Crowhurst studies, three 35mm color slides were used to elicit writing samples. Crowhurst stated that these pictorial stimuli were used to control topic across mode. The slides were of three differing topics, a canoeing scene, a classroom scene, and a scene of a performing whale in mid-air. However, no other pre-writing activities were employed. Meyers (1979) found that the compositions of freshman college students could be improved on several measures, including grammar and sentence structure, by requiring students to discuss their topics with a peer prior to writing. This oral pre-writing activity is also recommended as an instructional technique in Elementary Language Arts Curriculum Guide, Alberta (1978):

> Oral language is the basis for written language. Children need to talk about their ideas before they write about them (p.55).

Thus, in the present study, topic was controlled by having the students write about two different topics, but by having them write in five different modes about each topic. Also, students were required

to discuss each mode assignment for each topic with a small group of peers prior to writing.

Crowhurst, unlike several earlier researchers, recognized the need to control for audience. This need is reinforced by Prentice (1980) who examined the ability of students in Grades Three, Five and Seven to modify their writing to fit the needs of the intended audience and their ability to profit from reader feedback. Prentice concluded that writing performance cannot be accurately assessed without considering the intended audience, the cognitive demands of the writing task, the nature of the feedback, and the purpose for writing.

In summary, it is evident that there is mounting empirical support for the hypothesis that writing tasks of increasing abstractness elicit syntactic structures of increasing complexity. However, the differences in syntactic complexity which might result from writing in a factual reporting type narrative mode as opposed to a fictional narrative mode have not been examined. Also, these reviews have highlighted the need for the following considerations in an experimental design:

1. The sequence of writing activities should be randomly varied to control for practice effect.
2. The audience dimension must be controlled.
3. The topic dimension must be controlled.

4. Cues regarding teacher expectations should not be present.
5. If students' best writing is to be sampled, opportunities should be provided for oral discussion in the pre-writing activities.

The present study has considered all the above. (See Chapter III - Design).

Indices of Syntactic Complexity

Over the years since Chomsky (1965) developed his theories of transformational grammar, techniques based on that grammar have been found useful in numerous studies. Different units have been used as measurement indices that are indicative of increasing amounts of embedding and other transformations. These units have evolved as researchers have attempted to trace developmental sequences, or to document evidence of the effect of such rhetorical teaching methodologies as sentence-combining. In addition, some investigators have focused their attention exclusively on the measurement problem.

Hunt (1965) defined the T-Unit as one main or independent clause plus the subordinate clauses attached to or embedded within it. He found that T-Unit length was the best index of syntactic growth in Grades Four, Eight and Twelve, the second and third best being clause length and clauses per T-Unit respectively. Hunt's additional finding that with adults, words per clause is as good an indication of complexity would not seem applicable to studies at the elementary school level. Hunt (1977) reviewed his studies of 1965, 1970 and 1974, plus other related studies, and made the following conclusions:

T-Unit length is still the most valuable index; when writers consolidate, they employ some sentence-combining transformation; coordination between T-Units blooms early and dies early; coordination between predicates blooms early but fades little thereafter; transformation of predicate adjectives to prenominal adjectives increases steadily with age; transformation of finite verb phrases to prepositional phrases or to adjectives increases steadily with age and is quite common by twelfth grade; conversion of finite verbs to free modifying verbal phrases does not become common until university or adulthood.

Loban's communication unit (C-Unit), which he defined as "each independent clause with its modifiers," is nearly synonymous with Hunt's T-Unit. However, since Loban examined oral as well as written language, he included answers to questions lacking only the repetition of the question elements to satisfy the criterion of independent predication, including "Yes" and "No" answers, as legitimate C-Units. In his study, he also devised a complex elaboration index in which he attached weightings ranging from one half for adjectives to five for first order participial phrases. He found, however, that the elaboration index yielded results almost identical to the C-Unit length index. He concludes:

> Schools wishing to ascertain language growth can by-pass the time-consuming elaboration analysis, and many aspects of research can rely upon the simpler count (p.58).

However, some of Loban's other findings suggest value in more intensive syntactic analysis than C-Unit length. For example, he stated that dependent clauses are not the only nor always the best syntactic strategy; appositives, nominative absolutes, modifying clusters in cumulative sentences, and verbals are also evidence of maturity. In addition, he found that the uses of dependent clauses varied with ability and age.

> Clauses requiring rigorous attention to relationships will appear less frequently in all language and will be employed more often by those who are skilled in expression (p.57).

O'Donnell, Griffin, and Norris (1967) used Hunt's T-Unit to examine the speech of students in Grades One, Two, Three, Five, and Seven, and the writing of students in the latter three grades. They found that the average length of T-Unit increased at each grade level. They also examined nominal, adverbial, and intra-T-Unit coordinating sentence-combining transformations, and found that the relative density of these transformations increased with age. They also suggest that it was useful to examine increments in specific types of structures:

> Greatest overall increases and most frequently significant increments from grade level to adjacent grade level were found in the use of adverbial infinitives, sentence adverbials, coordinations within T-Units, and modification of nouns by adjectives, participles, and prepositional phrases. In the theory of transformational grammar, all these constructions are explained as being produced by the application of deletion rules (p.90).

Several studies have examined the usefulness of the types of indices used in the above three studies, and have attempted to devise new indices of syntactic complexity. Calvert (1971) used a measure

known as the K-Ratio, which he computed by dividing the number of T-Units in a speech sample by the number of kernel structures. He found the K-Ratio to be a better predictor of reading achievement than T-Unit length. Endicott (1973) developed another scale based on a combination of transformational and morphemic analysis. Cumbersome in nature, it also seems open to some subjectivity, and appears not to have been verified empirically. Botel and Granowsky (1972) developed a Syntactic Complexity Formula for determining readability levels. It was based on the assigning of specified weightings to different syntactic structures in much the same manner as the elaboration index developed by Loban, and Loban's later finding that nearly as much is revealed about complexity by C-Unit length would also likely apply to it. Golub (1973) also developed what he referred to as a "syntactic density scale." A number of factors, including frequency of complex sentences, prepositional phrases, expanded verbs, possessives, adverbs of time, and sentence length, were given factor loadings, and resultant scores were related to a grade level conversion chart. Dixon (1970) developed indices of syntactic maturity which, based on the rhetorical principles espoused by Christenson (1968), included such factors as number of words in free modifiers, especially final free modifiers, and total number of instances of free modifiers. Since these occur relatively infrequently in the writing of elementary school children, it is questionable whether Dixon's index would be useful at that level.

O'Donnell (1976) reviewed a number of indices referred to above, and concludes:

> It may turn out in spite of lack of precision, T-Unit length is still the most useful and useable index of syntactic development over a wide age-range and that mean clause length is the best single measure of syntactic complexity at the high school level and beyond (p.38).

Other more recent studies tended to confirm this. Belanger (1978) found problems with Golub's scale in that the syntactic density score received by a writing sample depends more on the number of T-Units analyzed than on any factor of syntactic density. Gebhard (1978), comparing the writing of high and low ability freshmen college students, found mean clause length to be a better indicator of quality than mean T-Unit length. However, Stewart (1978a) found that T-Unit length increased in Grades Ten, Eleven, and Twelve, leveled off in the first year of university, and picked up again in fifth and sixth year university. He also concluded that words per T-Unit is the best of three measures of syntactic maturity (p.45).

More recently, Witte and Davis (1982) conducted a study to investigate the question of T-Unit length stability in informative discourse written by freshmen near the end of an intensive course in college writing. They found that T-Unit length was a stable trait within both classification essays and comparison essays.

In summary, it appears that mean T-Unit length remains the best overall measure of syntactic complexity, especially at lower grade levels. In addition, however, there is evidence to suggest that specific transformational structures are characteristic of different

developmental levels, and that they may vary with the writing task. Thus both the general index of mean T-Unit length and the more specific indices of ratio of varying types of transformations per T-Unit warrant investigation.

Size of Written Language Samples

The size of sample that must be collected from each subject in order to obtain a reliable estimate of the complexity of the language used is somewhat related to the aforementioned study regarding stability of T-Unit length. Although this question appears not to have received extensive study, the literature does provide some direction.

Darley and Moll (1960) studied this problem using the oral language of kindergarten children. Their findings indicated that a sample of approximately 300 words yielded a syntactic complexity score reliability coefficient of approximately .70, while doubling the size of sample to approximately 600 words resulted in an increase to .80 in reliability coefficient. It would seem logical that written samples might be somewhat more consistent in complexity than would oral samples; therefore, a 300 word written sample should be adequate. Martinez San Jose´ (1972) worked with writing samples that averaged from 303 words in argument to 440 words in narration. O´Hare (1973) discovered that a sample of just over 400 words in length was as reliable an indicator of average T-Unit length as was a 1,000 word sample; consequently, he used samples of 50 T-Units or approximately

500 words. Heil (1976) obtained Grade Three samples averaging approximately 250 words in narration and 200 words in exposition; samples from her Grade One and Two subjects were somewhat shorter.

Wynn (1977), in investigating this issue, found a correlation of between .80 and .90 between mean T-Unit length of the first twenty sentences of written compositions and mean T-Unit length of the entire composition. Crowhurst (1977) states:

> On the basis of available evidence it seems that writing samples of something over 400 words should be used in order for mean T-Unit length to be a reliable measure of syntactic complexity in writing corpora composed of writing in various mode (p.27).

Based on the researcher's experience, children in Grade Six seldom write compositions as long as 400 words. Thus, in the present study, students were asked to write two compositions in each mode. In addition to providing greater assurance that samples would be representative, this allowed for the use of two differing topics, a technique which should also have helped to control for the possible effect of topic.

Importance of Syntactic Structures

The importance of complexity of syntax to overall quality of writing is reflected in the debates about definitions that have occurred among researchers. Is syntactic complexity to be equated with syntactic maturity? The relationship between complexity and holistic grading has also been the major concern of some studies, and a peripheral concern of many others.

Loban (1976) implied that one would be quite justified in using the term "mature" to characterize those structures which have a relatively high number of words per T-Unit and relatively dense embedding of kernel structures. He conceded that syntactically complex statements can be cumbersome rather than effective. However, he states:

> Research has established by now the fact that elaboration and complexity of syntax are clearly measures of development in oral and written language (p.35).

The developmental studies conducted by both Hunt (1965,1970) and O'Donnell, Griffin, and Norris (1967) would tend to support Loban's use of "mature". Christensen (1968), however, argued that simple thoughts may call for complex grammatical structures, and vice-versa. He also suggested that the increase in T-Unit length proposed by Hunt and others, especially that due to increased length of nominals, is not indicative of a mature style, rather that it is inept and hard to read. He suggested that a truly mature style is characterized by an abundance of free modifiers. (Dixon's indices of syntactical maturity mentioned earlier were based on this rationale). Christensen, of course, based his comments on studies of mature adult writing. Although Moffett (1968) is opposed to a-rhetorical means of extending T-Unit length, he quite rightly suggests that Christensen overlooked developmental stages:

> But I think Christensen fails to allow for the dynamics of language growth. He is assuming that instruction can short-cut develoment so that, for example, a student can be deflected from relative clauses to appositives, or from adverbial clauses to absolutes. But children's sentences must grow rank before they can be trimmed (p.172).

Veal (1974) not only indicated that T-Unit length is the most effective syntactic marker of quality, but that it and other syntactic measures clearly distinguish between high and low quality writing in the second, fourth, and sixth grades.

O'Hare (1973) found that students exposed to sentence-combining practice wrote compositions that were syntactically more complex, and that their compositions were judged to be significantly better in overall quality than those written by students in a control group. Stotsky (1975) reported a study done by Sampson (1964) in England in which Sampson examined the written compositions of fifty 10-year-old children and found the highest correlation between the degree of subordination and children's overall ability in composition as rated by three independent judges. Combs (1976) also found that sentence-combining practice resulted in increased syntactic complexity and better overall quality. He states:

> This finding is of considerable significance. Skepticism about SC practice derives from a belief that syntactic manipulation encourages over-complicated, badly-conceived prose. Unless one is willing to entertain the counter-intuitive assumption that such prose is consistently preferred by teacher raters, the present study shows that students in the experimental group wrote sentences of improved quality (p.148).

Two recent studies of sentence-combining at college level reached similar conclusions. Stewart (1978) suggested that sentence-combining modules similar to those developed by Strong can be used with definite expectations of positive effects in syntactic growth and a good likelihood of consequent improvement in writing quality. Morenberg (1978) states of his study:

> That SC practice resulted in improved writing quality may well be the most telling result of the study (p.253).

Thus it is evident that researchers in the area of effects of sentence-combining tended to relate syntactic complexity with maturity and consequent overall quality of written composition.

Martinez San Jose´ (1972) discussed the implications of using the term "syntactic maturity". She mentions early in her dissertation that:

> The word ´maturity´ is intended to designate nothing more than the observed characteristics of writers in an older grade. It has nothing to do with whether older students write better in any general stylistic sense (p.6).

Contrary to the studies reviewed above, she found that maturity of syntax did not coincide with superiority of overall grades awarded by four experienced raters. She concluded that since "syntactic complexity" is a more objective term than "syntactic maturity", it is probably a better research term. However, she also astutely points out that graders of compositions may intuitively expect or demand greater complexity in some modes than in others to justify an equal mark:

> However, it might also be argued that since the argumentative mode showed much greater maturity on almost every syntactic item and still gained no higher grade, in fact these structures are essential to argument if the writing in this mode is to be rated as high as writing in another mode. There is, therefore, one conclusion that syntactic maturity is immaterial to effectiveness of expression, and another that is essential to it. But these possible conclusions are not in fact contradictory when we realize that what we are dealing with here is a set, writing, and a subset, mode; the first conclusion applies to the set; the second to the subset (p.178).

The above viewpoint is further supported by Crowhurst (1980), in a study which specifically examined the relationship between syntactic complexity and quality ratings of narrative and argumentative writing of pupils in Grades Six, Ten, and Twelve. Crowhurst's findings were that arguments of high syntactic complexity were rated significantly higher than arguments of low syntactic complexity at both Grades Ten and Twelve, that there was no significant difference at Grade Six, and that narrations of high syntactic complexity were not rated higher than narrations of low syntactic complexity at any grade level. Thus, although syntactic complexity cannot be equated with maturity in all modes, it does seem that there is a positive relationship between effective argumentative discourse and the ability to relate propositions syntactically.

The importance of syntactic complexity as a language variable which correlates highly with other language variables is also emphasized by Bushner (1979). She found that reading comprehension correlated highly with syntactic maturity in a study of those abilities in sixty Grade Seven and sixty Grade Eight students.

In summary, it appears that the present study, and other studies examining syntax, are of importance inasmuch as syntactical maturity is considered an important language variable. Also, while it may not be totally justifiable to refer to children's written syntax characterized by long T-Units and multiple transformations as being mature, it does seem that the ability to control transformations for discourse effect is a mark of maturity. Finally, the importance of

the present study can be related to an idea first expressed by Veal and Tillman (1971).

> If certain sentence types or structures are related to both mode and quality, and if the findings of this study indicate a general development trend, it should be possible to identify appropriately combined instruction in syntax and mode of discourse to improve writing quality at the most desirable time developmentally (p.45).

Relationship of Sex to Language Variables

Popular belief or "conventional wisdom" has long maintained that girls' achievement exceeds that of boys in language related tasks. Empirical studies have yielded conflicting evidence in this area. Because the expectations of teachers can be affected by such beliefs, and can in turn affect students' achievement, the use of sex as a variable is warranted.

Loban (1976) examined the effect of sex because he believed it to be one variable which could affect language behaviour. In the main, however, he did not find that sex produced significant variation in most language behaviours examined. He does comment that except for the random ability group at the high school level, boys used more transformations than girls. However, his study of transformations was based on only six selected students. Loban also found that in general, boys in low ability groups perform less well than girls, while boys in high ability groups outperform girls. Hunt (1965) found that girls used more subordination than boys at the fourth grade level, but by the eighth grade the boys were outperforming the girls on most structures analyzed. O'Donnell, Griffin, and Norris (1967)

found that girls do seem to acquire writing skills more rapidly than boys, and that there were other specific differences which did not fall into any consistent pattern favoring either sex. They concluded that any assumptions that more be expected from girls than from boys should be re-examined.

Martinez San Jose´ (1972) found sex to be an interesting and complex variable. She found that even the fourth grade boys achieved significantly higher than girls on eight out of thirty measures of syntactic maturity. She found no discernible relationship between mode and sex, nor were there any differences in overall grades received by boys and girls. She commented that boys seemed to have found the tasks set to be very interesting. She concludes her discussion of the variable of sex with two interesting questions:

> The most obvious question posed is whether this finding (syntactic maturity of boys) would be supported by replication. In addition, how important a factor is interest in the writing project when comparing the work of boys and girls (p.173).

Perron (1976) did replicate the work of Martinez San Jose´ by examining the interaction of sex with syntactic complexity, but he found no differences in complexity between boys and girls in any mode of writing nor at any of the three grade levels investigated.

In the Language B.C. Study (Evanechko, et al, 1976), girls outperformed boys in nearly all measures of reading skill at the Grade Four level. At the Grade Eight level, girls outscored boys in all thirteen measures of quality for written composition, and in Grade Twelve, females scored higher in all but three areas: developed argument, appropriate substantiation and sophisticated vocabulary.

However, Price and Graves (1980) in a study examining sex differences in syntax and usage in oral and written language, found that with Grade Eight students there were no differences in language abilities of males and females as indicated by measures of syntactic maturity.

The uncertainty about the effect of sex on syntactic complexity remains; evidence to date is inconclusive. Thus it was considered desirable to treat sex as a variable in the present study.

Summary

This chapter has reviewed relevant literature. It was established that there was a theoretical basis which might account for expected increase in syntactic complexity as level of abstraction increases. Other empirical studies reviewed have also pointed in this direction. Other studies have been useful additionally in providing direction regarding the design of the present study. They have shown that the T-Unit is a valuable measure of syntactic complexity, that syntactic complexity and what affects it is an important area of study, and that it is desirable to use sex as a variable in such studies. This review should provide a valuable background for the reader in understanding the design and results of the present study which follow in Chapters III and IV respectively.

CHAPTER III

DESIGN OF THE STUDY

Chapter I provided an introduction and established the hypotheses for the present study. In Chapter II, relevant literature was reviewed, and from the literature, precautions regarding the design of the present research study were highlighted. This chapter provides a detailed explanation of the design used in this study.

The Subjects and Participants

Pupils from Sixth Grade classes in the Grande Prairie Public School District #2357 in Grande Prairie, Alberta, Canada were used as subjects in this study. Sixth Grade was chosen because this grade level has been studied recently (Crowhurst, 1977) and thus comparable data would be available. Also, in the judgement of this researcher, sixth graders were more likely to be able to sustain a writing mode than younger children would be. Grande Prairie Public School District #2357 was chosen because this researcher had worked in that district as a Deputy Superintendent of Schools (Curriculum) for three years prior to the study, and consequently knew the teachers and administrators personally, and was quite sure that most of them would cooperate.

At the time that the study was carried out, the District administered four elementary schools ranging in size from 300 to 500 hundred students per school, as well as a larger junior high school and a composite high school. Grade Six was the highest grade taught

in each of the elementary schools, and at the time of the study, each of the four elementary schools enrolled two heterogeneous classes of Grade Six students ranging in size from twenty-two to thirty students.

On January 15, 1979, the researcher met with the eight Grade Six teachers in the District and explained what would be required of them. The teachers were aware that the requirements related to a research project, but were not informed of the nature of the project or its hypotheses. They were assured that their involvement would be voluntary. Seven of the eight teachers agreed to participate. One teacher, who was in her first year of teaching, later requested and was granted permission to opt out of the project because she was having difficulty scheduling the lessons as required. The remaining six teachers were all highly qualified; five had Bachelor of Education degrees and one had a Master of Education degree. Their teaching experience ranged from three to over twenty years.

Formal letters of permission from the Superintendent of Schools and the principals of the four schools were not required; all had agreed to the research study as early as October, 1978, in discussions at a District Administrators' meeting.

Table 1 below provides details regarding the class enrolments and the numbers of usable subjects in each of the six participating classes.

Students having incomplete data were those who, because of absences, had not written one or more of the required ten compositions. The compositions of those who wrote all ten compositions (seventy-one students) were read by this researcher to

Table 1

Summary of Class Enrollment at Beginning of Study and After Students Having Insufficient Data Are Removed

	Class No.	Enrollment	Incomplete Data	Usable Cases
	1	28	14	14
	2	22	15	7
	3	30	20	10
	4	28	15	13
	5	28	13	15
	6	30	18	12
Totals:	6	166	95	71

determine whether they had in fact written in the required discourse mode. Perron (1976) had pointed out that the fact that children were stimulated to write in the mode of argumentation did not mean that they would write in the argumentative mode exclusively. Crowhurst (1977) also found that she had to eliminate some possible subjects because they had not written in the required mode. This researcher found that all seventy-one students had written in the required mode. This may have been because of the fact that students were taught an introductory lesson for the purpose of familiarizing them with the differing modes (see Appendix A), and that directions for each composition may have been somewhat more explicit than those provided by Perron or Crowhurst. The fact that there were also many students with incomplete data (95) in this study may relate to the data's having been collected over a long time frame, from March 12, 1979 to June 5, 1979. This period allowed for several student absences.

A further stratified random selection was made from among the seventy-one usable cases in the following manner. Within each of the six classes, all names of usable boys were placed in a hat, and three were drawn out. The same was done for girls. The resultant final sample consisted of three boys and three girls from each of the six classes in four different schools, for a total of eighteen boys and eighteen girls, or thirty-six subjects.

No data regarding the I.Q. or socio-economic level of the final selection of subjects was collected. The randomization process should have ensured that students with a wide range of I.Q.'s were included in the final sample. It is unlikely that there were any

students with I.Q.'s less than 80, as most students with I.Q.'s less than 80 are assigned to special classes in the Grande Prairie School District.

Socioeconomically, the city of Grande Prairie is a small urban area, which at the time of the study had a population of approximately 19,000 people. The city was dependent on the agricultural, lumbering and oil industries. The parents of the students were primarily lower middle class working people engaged in such employment as forestry and the manufacture of wood pulp, or upper middle class engaged in businesses or professions. Because regularity of school attendance was a factor determining usable subjects, and because it is likely to be correlated with social class, the subjects may be somewhat more representative of the upper end of the middle class.

The Task or Treatment

First, all subjects were taught to distinguish among the five modes of writing involved, those being description, factual narrative reporting, fictional narrative story writing, exposition, and argument. A deductive lesson designed for this purpose (Appendix A) was taught, and the follow-up assignment corrected and discussed with students. It was made clear to the students that many selections of written work that they might encounter contain examples of more than one mode, or of mixed modes, but that it is possible to write primarily in one mode. After this lesson, students were informed that they would be doing two language arts units in which they would be reading or listening to stories, viewing films or videotapes, carrying

on some discussions, and then doing some writing assignments in the different modes, with all activities centring around the two unit topics, hockey and clothing.

From March 19th to April 6th, 1979, all subjects in the six classes were taught the hockey unit. From May 1st to June 1st, 1979, all subjects were taught the clothing unit. These units followed a similar format; each began with an introductory lesson intended to develop interest in the topic and to allow those students who were more interested or knowledgeable to share some of their knowledge with others. After this common introductory lesson, each unit consisted of a series of five additional lessons, with each lesson requiring three class periods. These lessons were designed to elicit compositions in each of the five modes of writing. All of the lessons within each unit followed a common format; the students were provided an input of experience (forty - eighty minutes) they were given opportunity to discuss this experience with a small group of their peers (twenty - thirty minutes), they wrote the compositions independently with no teacher or peer assistance (forty - sixty minutes), and then they were allowed a revision-rewrite period (thirty - forty minutes), again with no teacher or peer assistance.

All compositions in each unit were written as part of letters to an imaginary pen friend, Boomer, who lived in northern Australia. Thus the audience was controlled, and would be what Britton (1975) would characterize as "the wider unknown audience." Students were informed that "Boomer" would not know much about Canada, and that they should therefore be as explicit as possible in their writing.

To control for a possible practice effect, four differing sequences of lessons within each unit were used in each of the four schools. Randomization of sequence was achieved by drawing the names of the five writing modes from a hat for each of the four schools. Schools were used as a basis for randomization rather than classes so that the two teachers in the two schools with two participating classes could share materials.

An outline of the experiential input and the nature of the composition task for the ten compositions in the two units is provided in Table 2. Memos to teachers outlining the order and details of lesson presentation may be found in Appendix B; Appendix C contains the actual lesson plans that teachers were asked to use.

Teachers were asked to keep a log detailing when they actually taught the lessons and outlining any unusual circumstances that arose. The main purpose of this was to ensure that instructions were actually followed. A sample copy of this log is included as Appendix D. The main departures from lesson instructions were as follows:

1. In several instances, it was not possible for the teachers to do Periods 1, 2, and 3 of the lessons (the experience input, the group discussion, and the first draft) in one day. These periods were often spread out over two or three days.
2. In the clothing unit, one class did not do the actual tie-dying activity as the input of experience for the expository composition. The teacher demonstrated the activity instead.

Table 2

Composition Lesson Inputs and Tasks

Unit and Lesson	Input	Task
Hockey Description	View slides of hockey arena Listen to tape of sounds in game; view and handle uniform	Describe sights and sounds of hockey arena, or describe a hockey uniform
Hockey Factual Narrative	View a videotape of a hockey game	Write a narrative account of the game similar to a sports report
Hockey Fictional Narrative	Listen to an audiotape of the story The Wild Canadians Hockey's Bush League Champs	Write an imaginative, fictionalized story about a hockey game
Hockey Exposition	View a chalktalk explanation and videotapes on hockey strategy	Write an explanation of how hockey is played
Hockey Argument	View NFB film "It's Winning That Counts"	Write an argument for or against peewees playing in highly organized competition
Clothing Description	Listen to tape of Australian describing school uniform; View student model in typical Canadian dress	Describe boys' and girls' summer and winter dress in Canada
Clothing Factual Narrative	View videotape of fashion show, or recall actual experience	Write a narrative account of the fashion show, or of a real experience

Table 2 (Continued)

Composition Lesson Inputs and Tasks

Unit and Lesson	Input	Task
Clothing Fictional Narrative	Listen to excerpt from book *Me and Fat Glenda*	Write an imaginary continuation of the story they listened to
Clothing Exposition	Read explanation of tie-dying and do some tie-dying activity	Write an explanation of how to tie-dye
Clothing Argument	Listen to audio-tape of others' opinions regarding school uniforms	Write an argument for or against school uniforms

After students had completed both units, they were asked to complete a questionnaire expressing their feelings about the writing assignments. Although the results of these questionnaires did not relate directly to any of the variables under study, it was of interest to the researcher to get a general impression of the students' attitudes toward the assignments. This was felt to be important because Grade Six students are not normally required to write as extensively as they did in these units, and if they disliked the activity strongly, they may not have been doing their best work. The questionnaire and results are included as Appendix E. It appears that the students' attitudes towards the units were no more nor less favorable than towards other language arts activities: 65% said they liked them about the same as other activities; 20% said they liked them better than other activities; and 16% said they did not like them. Fictional narration was the most popular discourse mode; 63% liked this mode best in the hockey unit; 51% liked it best in the clothing unit. The least liked modes were description, factual narration, and argument. As might have been expected, the boys found the hockey unit the most interesting and enjoyable, while the girls preferred the clothing unit.

Analysis of Data

As the subjects completed the composition assignments elicited by the lessons described in the previous section, the teachers forwarded them to the Central Administrative Office of the School District and they were photocopied. The photocopies were sent to the

researcher. The final corpus consisted of 360 letter format compositions, two compositions for each of the five modes for every one of the thirty-six subjects. The compositions averaged approximately 200 words in length; thus the final corpus consisted of approximately 72,000 words of text.

The researcher then did a detailed analysis of each composition. A count was done of the number of words and the number of T-Units. In addition, a tally was made of the frequency of occurrence of each of thirteen nominal transformations, eight adverbial transformations, and four coordinating transformations. These tallies and counts were entered on the Data Analysis Form (Table 3) which was adapted from a similar form used by O'Donnell, Griffin, and Norris (1967).

In the analysis referred to above, the following kinds of word counting and segmentation procedures and interpretations were used.

1. Contractions were counted as two words. e.g. There's (there is), don't (do not)
2. Proper names were counted as one word. e.g. Madison Square Gardens, Gerry Cheevers, Tinks Creek
3. Dates were counted as one word, as were times. e.g. 7:00 a.m., July 21

   If days were included with a date, they were counted separately. e.g. Saturday, June 1 (two words)
4. Compound nouns written as one word were counted as one word. Compound nouns written as two words and hyphenated word pairs were counted as two words.

Table 3

Data Analysis Form

(Adapted from O'Donnell, Griffin, Norris, 1967, pp. 113-115)

Student I.D. No. _____

Sex Male 1, Female 2,

Task Desc. 1, Narr. 2, Narr. 3, Exp. 4, Arg.5

No. of words _____ No. of T-Units _____ Words/T-Unit _____

_____ Noun clause
_____ Prep. phrase
_____ Inf. Phrase
_____ Gerund phrase
_____ Other non-headed
_____ N+ N adjunct
_____ N+ Adj.
_____ N+ Poss.
_____ N+ Rel Clause
_____ N+ Prep. Phrase
_____ N+ Part. Phrase
_____ N+ Adverbial
_____ Other

_____ Coordinated Nominal
_____ Coordinated Adjectival
_____ Coordinated Adverbial
_____ Coordinated Finite Verb

[ ] Total Coordinations

[ ] Total Transformations (Nominal, Adverbial, Coordination)

[ ] Transformations/T-Unit

[ ] Total Nominal

_____ Adv. cl. (time)
_____ Adv. cl. (place)
_____ Adv. cl. (manner)
_____ Adv. cl. (cause)
_____ Adv. cl. (condition)
_____ Adv. cl. (comparison)
_____ Adverbial Infinitive
_____ Sentence Adverbial

[ ] Total Adverbial

e.g. blueline (one word)

knee-pads (two words)

elbow pads (two words)

5. Any single words which were obvious from context but were accidentally omitted were supplied and counted in the total. In situations wherein the omitted word resulted in a fragment the necessary word was added and the fragment was counted as an independent T-Unit.

   e.g. Then comes the shoulder pads protecting the upper part of the chest and shoulders. Next, comes (added) the elbow pads to protect the elbows.

6. Standard format letter openings and closings were omitted from the word count and analysis.

   e.g. Bye, and hope to hear from you soon.

7. Unintelligible word groupings, words, or unattached fragments, what Hunt (1965) referred to as "garbles", were omitted from the word count and the analysis.

   e.g. A heavy, down-filled coat.

8. Adverbs of negation, fillers like now and well, and exclamatory words that introduced longer expressions were included in the word count.

9. A T-Unit was considered to consist of one independent clause with all the subordinate clauses attached to it. Punctuation errors were ignored. Sentence fragments, if they were intelligible and syntactically related to another T-Unit, were included as part of that T-Unit.

10. T-Units were marked by placing square brackets around them. The number of T-Units in each composition was recorded, and the total number of words. The number of words in each individual T-Unit was not counted.

11. Lists set out in a numbered or listed format were considered as though they were items in a series separated by commas in a T-Unit.

    e.g. For the creative art of tie-dying you should have these items:

    - a cotton cloth or shirt
    - some dye
    - pots and pans
    - hot and cold water
    - newspaper
    - clothespins and line
    - and a measuring cup

12. A direct quotation which was a part of a sentence containing a speaker tag was included along with the speaker tag as part of the same T-Unit. (Usually these were noun clauses functioning as the object of the verb in the speaker tag). Direct quotations which had no speaker tag or which occurred in sentences separated from their speaker tag were considered as separate T-Units.

13. When the conjunction "so" was used to join two otherwise independent clauses, and when it was clear that there was a causal relationship between the two clauses or that "so" was equivalent to "in order that", it was considered to be a

subordinating conjunction and the two clauses it joined were considered to be one T-Unit.

e.g. Stir the cloth around so it soaks up the die quicker.

14. Imperative sentences in which the subject "you" is understood and which contain coordinate predicates, were considered to be one T-Unit with a coordinated finite verb transformation if a coordinate conjunction was used; if there was no coordinate conjunction, they were considered to be two or more T-Units. (As many T-Units as there were finite verbs).

An example of a scored composition and its accompanying Data Analysis Form is included as Appendix F.

The data from the Analysis Sheets was transferred to eighty-column computer sheets and was then keypunched. An SPSS program was then used to generate means, standard deviations, ranges, minimums, and maximums for the following dependent variables:

1. Total number of words
2. Words per T-Unit
3. Noun clauses per T-Unit
4. Non-headed prepositional phrases per T-Unit
5. Infinitive phrases (nominal per T-Unit
6. Gerund phrases per T-Unit
7. Other non-headed nominals per T-Unit
8. Noun plus noun adjuncts per T-Unit
9. Noun plus adjectives per T-Unit

10. Noun plus possessives per T-Unit
11. Noun plus relative clauses per T-Unit
12. Noun plus prepositional phrase per T-Unit
13. Noun plus participial phrase per T-Unit
14. Noun plus other adverbial phrases per T-Unit
15. Other nominal transformations per T-Unit
16. Total nominal transformations per T-Unit
17. Adverbial clauses of time per T-Unit
18. Adverbial clause of place per T-Unit
19. Adverbial clause of manner per T-Unit
20. Adverbial clause of causation per T-Unit
21. Adverbial clause of condition per T-Unit
22. Adverbial clause of comparison per T-Unit
23. Adverbial infinitives per T-Unit
24. Sentence adverbials per T-Unit
25. Total adverbial transformations per T-Unit
26. Coordinated nominals per T-Unit
27. Coordinated adjectivals per T-Unit
28. Coordinated adverbials per T-Unit
29. Coordinated finite verbs per T-Unit
30. Total coordination transformations per T-Unit
31. Total combined (nominal, adverbial, coordinating) transformations per T-Unit

Following this, the ANOV 23 program was used to determine F ratios and significance levels for each of the above dependent variables, with mode and sex used as the two factors or independent

variables. Thus the design is a repeated measures factorial or multiple classification analysis of variance with two factors, sex (2) and mode of writing (5), or 2 X 5 factorial design. (See Table 4 below). After the ANOV 23 revealed which dependent variables yielded significant differences, the Scheffe technique was used to determine significance levels between cells. In all the statistical analysis, the .05 level was accepted.

The results of this analysis are reported in detail in Chapter IV.

Summary

This chapter has provided a detailed explanation of the design of this study. The basis of the selection of subjects was described. The locale of the study was outlined. The nature of the lessons used to generate the written data (the treatment) was described, as were the procedures used in analysing the resultant written data. Background was given regarding the nature of the statistical analysis of data. The chapter should provide the reader with the necessary background to understand the results which follow in the next chapter.

Table 4

Factorial Design 2 X 5

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male						
Female						
Totals (Mode)						

CHAPTER IV

ANALYSIS OF THE DATA

This chapter presents an analysis of the data collected as a result of carrying out the study procedures outlined in Chapter III. First, information regarding the quantity of writing collected is presented. Secondly, the results of the two measures of syntactic complexity are provided and the statistical analysis and procedures used to test the hypotheses are described. Finally, the data regarding the effect of mode of writing on the frequency of occurrence of twenty-one different sentence-combining transformations are presented.

Quantity of Writing

A review of related research literature indicated that approximately 400 words of written composition in each mode should be collected and analysed for each subject in order to provide a reliable sample of each subject's writing. Based on the researcher's experience, Grade Six students seldom write 400 words compositions; therefore, students were asked to write about two different topics in each of the five modes. Table 5 on page 65 presents data regarding the mean number of words in each composition. To determine the mean number of words written in each mode, the means in Table 5 should be doubled.

Table 5

Mean Number of Words per Composition

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	$\bar{X}$=177.64 SD=66.59	$\bar{X}$=177.86 SD=125.01	$\bar{X}$=209.50 SD=82.36	$\bar{X}$=183.42 82.15	$\bar{X}$=150.53 SD=53.48	$\bar{X}$=179.79 SD=86.50
Female	$\bar{X}$=213.03 SD=117.13	$\bar{X}$=211.11 SD=112.85	$\bar{X}$=273.25 SD=111.36	$\bar{X}$=211.11 SD=77.40	$\bar{X}$=184.47 SD=75.46	$\bar{X}$=218.59 SD=103.66
	$\bar{X}$=195.33 SD=96.30	$\bar{X}$=194.49 SD=119.42	$\bar{X}$=241.37 SD=102.41	$\bar{X}$=197.26 SD=80.46	$\bar{X}$=167.50 SD=67.15	$\bar{X}$=199.19 SD=97.29

As can be seen from Table 5, approximately 400 words of written composition in each mode was produced by each subject. In the five modes combined, each subject wrote an average of approximately 1991 words. Thus the total length of the corpus of writing analysed for the thirty-six subjects was approximately 71,676 words.

It can also be seen that on average, females wrote slightly longer compositions than males in every mode of writing. Both males and females wrote the longest compositions in fictional narration and the shortest compositions in argument. The length of the compositions in the other three modes was almost identical.

Although no statistical tests of significance were applied to the above data, it is of some interest to observe that both males and females preferred to write in the fictional narrative mode (see Appendix E and Chapter III, p.55), the mode in which they in fact wrote the longest compositions. Although fictional narrative was the preferred writing mode and the one in which the subjects wrote the greatest quantity, it is the mode which elicited the least syntactic complexity on nearly all measures, as indicated in the following sections.

Statistical analysis of data

In order to test the hypotheses, means for all measures of syntactic complexity were calculated using the University of Victoria Faculty of Education's ANOV23 program. This program was also used to carry out a 2 X 5 analysis of variance with repeated measures on the

second factor (mode). The level of significance accepted was $p < .05$. Following this, the University of Victoria Faculty of Education's Scheffe' program was used to test for differences between the means of the various writing modes. Again, the level of significance accepted was $p < .05$. The following sections report the results of these analyses, and more detailed results may be found in Appendix G.

Syntactic complexity as measured by T-Unit length

Hypotheses 1, 4, and 6 related to syntactic complexity as measured by T-Unit length.

> Hypothesis 1: The mean T-Unit length will increase progressively as students perform written tasks requiring them to describe, to narrate factually, to narrate fictionally, to explain, and to argue or persuade.

i.e. Argument > Exposition > Factual Narration > Fictional Narration > Description

> Hypothesis 4: There will be no difference in mean T-Unit length for boys and girls in any of the five discourse modes.
>
> Hypothesis 6: There will be no difference in mean T-Unit length for boys and girls in the five discourse modes combined.

Table 6 on page 68 presents the mean T-Unit length by mode and sex, and the ANOVA. Table 7 on page 69 presents the levels of significance of the differences between the mean T-Unit lengths for the various modes of discourse.

Table 6

ANOVA: Mean Words Per T-Unit

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	11.68	10.99	9.14	13.04	14.26	11.82
Female	11.38	10.10	9.24	12.65	13.97	11.47
Totals/Mode	11.53	10.54	9.19	12.85	14.11	11.64

Summary of Anova

Source of Variation	DF	MS	F	P
Sex	1	5.67	0.66	0.421
Error	34	8.54		
Mode	4	133.27	57.54	<0.001
Sex/Mode	4	1.13	0.49	0.746
Error	136	2.32		

Table 7

Probability Matrix for Scheffe Multiple Comp. of Means

T-Unit Length

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description	1.0000	0.1151	0.0000	0.0109	0.0000
Factual Narration	0.1151	1.0000	0.0079	0.0000	0.0000
Fictional Narration	0.0000	0.0079	1.0000	0.0000	0.0000
Exposition	0.0109	0.0000	0.0000	1.0000	0.0164
Argument	0.0000	0.0000	0.0000	0.0164	1.0000

Argument > Exposition > Description = Factual Narration > Fictional Narration

From Table 6 it can be seen that null hypotheses 4 and 6 are accepted. There are no significant differences in mean T-Unit length for boys and girls in any writing mode (sex X mode interaction), or in all the modes combined (sex main effect).

From Tables 6 and 7 it can be seen that research hypothesis 1 must be rejected. The ANOVA indicates that there are statistically significant differences in mean T-Unit length produced by the main effect of mode, and the Scheffe' tests indicated that there are statistically significant differences between all pairs of means except description and factual narration. However, the differences did not follow the progression that was hypothesized. It was hypothesized that description would elicit the lowest number of words per T-Unit, followed by fictional narration and factual narration. It was found that fictional narration elicited the lowest number of words per T-Unit, and that there was no significant difference in the number of words per T-Unit elicited by factual narration and description.

Syntactic-Complexity as measured by sentence-combining transformations per T-Unit

Hypotheses 2, 5, and 7 of this study, which are restated below, related to syntactic complexity as measured by the mean number of sentence-combining transformations per T-Unit.

> Hypothesis 2: The mean number of sentence-combining transformations per T-Unit will increase progressively as students perform written tasks requiring them to describe, to

narrate factually, to narrate fictionally, to explain, and to argue or persuade.

i.e. Argument > Exposition > Fictional Narration > Factual Narration > Description

Hypothesis 5: There will be no difference in mean number of sentence-combining transformations per T-Unit for boys and girls in any of the five discourse modes.

Hypothesis 7: There will be no difference in mean number of sentence-combining transformations per T-Unit for boys and girls in the five discourse modes combined.

Table 8 on page 72 presents the mean number of transformations per T-Unit by mode and sex, and the ANOVA. Table 9 on page 73 presents the levels of significance of the differences between the mean number of transformations per T-Unit for the various modes of discourse.

From Table 8 it can be seen that null hypotheses 5 and 7 are accepted. There are no significant differences in the mean number of sentence-combining transformations per T-Unit for boys and girls in any writing mode (sex X mode interaction), or in all of the modes combined (sex main effect).

From Tables 8 and 9, it can be seen that research hypothesis 2 must be rejected. The ANOVA indicates that there are statistically significant differences in the mean number of sentence-combining transformations per T-Unit due to the main effect of mode, but the Scheffe test shows that the differences between argument, exposition, and description are not statistically significant. Also, description,

Table 8

ANOVA: Mean Sentence-Combining Transformation Per T-Unit

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	3.13	2.34	1.50	3.29	2.98	2.65
Female	2.84	2.04	1.66	2.93	2.91	2.48
Totals/Mode	2.99	2.19	1.58	3.11	2.94	2.56

Summary of Anova

Source of Variation	DF	MS	F	P
Sex	1	1.33	0.73	0.398
Error	34	1.82		
Mode	4	15.53	37.93	< 0.001
Sex/Mode	4	0.40	0.98	0.418
Error	136	0.41		

Table 9

Probability Matrix for Scheffe Multiple Comp. of Means

Sentence-Combining Transformations Per T-Unit

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description	1.0000	0.0000	0.0000	0.9577	0.9989
Factual Narration	0.0000	1.0000	0.0033	0.0000	0.0001
Fictional Narration	0.0000	0.0033	1.0000	0.0000	0.0000
Exposition	0.9577	0.0000	0.0000	1.0000	0.8731
Argument	0.9989	0.0001	0.0000	0.8731	1.0000

.Argument = Exposition = Description > Factual Narration > Fictional Narration

factual narration, and fictional narration did not follow the progression that was hypothesized. It was hypothesized that description would elicit the lowest number of transformations per T-Unit; in fact it was found to be equal to argument and exposition in eliciting the highest number. It was hypothesized that fictional narration would elicit more transformations per T-Unit than either factual narration or description; it turned out that fictional narration elicited the least transformations per T-Unit of all of the modes.

As can be seen in the above analysis, the findings for syntactic complexity as measured by mean T-Unit length and as measured by mean number of sentence-combining transformations per T-Unit are consistent in revealing that fictional narration is the mode which elicited the least complexity. They are also consistent in revealing that factual narration elicited greater syntactic complexity than fictional narration but less syntactic complexity than the other three modes.

There is however, an inconsistency in the measures of complexity. Description elicited shorter T-Units than argument or exposition. However, the differences in the number of sentence-combining transformations elicited by description, argument, and exposition are not statistically significant. A closer examination of the specific types of transformations elicited by each mode explains the apparent inconsistency. Argument elicited more of the types of transformations that occur least frequently but are most likely to result in long T-Units, eg. adverb clauses of cause or

condition. Description elicited more of the types of transformations that occur most frequently but are less likely to result in long T-Units, eg. adjectives. Exposition elicited some of each, eg. adverbial infinitives and adjectives. These findings are reported in more detail in the following section of this data analysis.

Frequency of occurrence of specific types of sentence-combining transformations

Hypotheses 3 and 8 of this study related to the mean frequency of occurrence of specific types of sentence-combining transformations elicited by mode and sex. These hypotheses are restated below.

> Hypothesis 3: The mean frequency of occurrence of specific types of sentence-combining transformations per T-Unit will be significantly different for writing in the descriptive, factual narrative, fictional narrative, expository, and argumentative modes.
>
> Hypothesis 8: There will be no difference in the mean frequency of occurrence of specific types of sentence-combining transformations per T-Unit for boys and girls in any of the individual modes, or in the modes combined.

Hypotheses 3 and 8 are complex in that they referred to a number of types of sentence-combining transformations. In the study, a count of twenty-five different types of transformations was done. As well, counts were made of the totals for the three different categories of transformations, nominal transformations, adverbial

transformations, and coordinating transformations. (See Table 3, p.57)

Three types of transformations were not reported because their frequency of occurrence was so low - less than .1 occurrences per 100 T-Units. These were other non-headed nominals, other nominals, and adverb clauses of place. The low frequency of occurrence of the "other" categories indicated that the listing of transformations chosen was adequate to account for the kinds of structures used by the Grade Six subjects in this study.

Null hypothesis 8 above was accepted for all of the various types of sentence-combining transformations with the exception of adverb clauses of condition. For all other types of transformations, there was no statistically significant difference for the sex variable. For adverb clauses of condition, males produced .057 transformations per T-Unit, and females produced .079 transformations per T-Unit. This difference was significant at the level $p < .05$. (see Appendix G)

Research hypothesis 3 above was accepted for several of the variables but rejected for several others. The ones for which it was accepted; that is, those for which the mode of writing resulted in a statistically significant difference in the number of transformations per T-Unit, were as follows: adjectives, coordinated nominals, prepositional phrases modifying nouns, noun plus noun adjuncts, noun clauses, coordinated finite verbs, nominal infinitive phrases, relative clauses, adverb clauses of time, adverb clauses of condition, nouns plus participial phrases, adverb clauses of cause, adverbial

infinitives, coordinated adjectivals, nominal gerund phrases, and noun plus adverbial phrase. The types of transformations for which research hypothesis 3 must be rejected; that is, those for which the mode of writing did not result in a statistically significant difference in the number of transformations per T-Unit, were as follows: nouns plus possession (genitives), nominal or non-headed prepositional phrases , coordinated adverbials, adverb clauses of comparison, sentence adverbials, and adverb clauses of manner.

The above information is summarized in Table 10 on page 78. In Table 10, the various types of transformations are listed in the order of frequency of occurrence. The frequency of occurrence has been based on 100 T-Units, or multiplied by 100, for ease of comparison. The mode or modes of writing which elicited the greatest number of each type of transformation per T-Unit were also listed. The latter was determined from the Scheffe' tests for differences between means. The ANOVA and Scheffe' program results for all the various types of transformations were reported in Appendix G.

Summary of Findings

This chapter has reported the findings related to the effect of the independent variables of sex and mode on the dependent variables of mean length of T-Units, mean number of sentence-combining transformations per T-Unit, and the frequency of occurrence of specific types of sentence-combining transformations. The following summarizes these relationships:

Table 10

Frequency of Occurrence of Types of Sentence-Combining Transformations

	Type of Transformations	Per 100 T-Units	Mode(s) Which Elicit Greatest Number
1.	Adjectives modifying nouns	58.9	Description and Exposition
2.	Coordinated nominals	31.4	Description and Exposition
3.	Prepositional phrases modifying nouns	24.5	Description and Exposition
4.	Noun plus noun adjunct	21.7	Description
5.	Noun clauses	21.6	Argument
6.	Noun plus possessives	20.5	*No differences
7.	Coordinated finite verbs	11.9	Argument and Exposition
8.	Nominal infinite phrases	9.9	Argument
9.	Relative clauses	9.2	Description/Exposition Argument
10.	Adverb clause of time	7.3	Argument
11.	Adverb clause of condition	6.8	Argument
12.	Participial modifying nouns	6.3	Description
13.	Adverb clause of causation	5.8	Argument
14.	Adverbial infinitives	5.0	Argument and Exposition
15.	Coordinated adjectivals	5.0	Description
16.	Nominal prepositional phrases	4.7	*No differences
17.	Nominal gerund phrases	3.8	Argument
18.	Other adverbial phrases modifying nouns	3.8	*Fictional narrative lowest, others, no difference
19.	Coordinated adverbials	2.2	No differences
20.	Adverb clause of comparison	1.8	No differences
21.	Sentence adverbials	1.1	No differences
22.	Adverb clause of manner	0.8	No differences

1. Sex had no effect on mean length of T-Units.
2. Sex had no effect on mean number of sentence-combining transformations per T-Unit.
3. Sex had no effect on the frequency of occurrence of any type of sentence-combining transformation, with the exception of adverb clauses of condition. Females exhibited a higher number of adverb clauses of condition than did males.
4. There were no significant interactions of mode and sex for any of the dependent variable measures.
5. Mode of writing had a significant effect on mean length of T-Units. The direction of the effect was as follows: Argument > Exposition > Description = Factual Narration > Fictional Narration.
6. Mode of writing had a significant effect on mean number of sentence combining transformations per T-Unit. The direction of the effect was as follows: Description = Argument = Exposition > Factual Narration > Fictional Narration.
7. Mode of writing had a significant effect on the mean number per T-Unit of sixteen of twenty-two specific types of sentence-combining transformations. Argument elicited the greatest number per T-Unit of six types of transformation; description elicited the greatest number of three types of transformations; exposition and argument elicited the greatest number of two types of transformations; exposition and description elicited the greatest number of three types of transformations.

8. Fictional narration was the mode that elicited the least syntactic complexity on all measures. Factual narration elicited greater syntactic complexity than fictional narration on most measures, but less syntactic complexity than argument, description, or exposition.

A discussion of these results and their implications follows in Chapter V.

CHAPTER V

DISCUSSION, CONCLUSIONS AND IMPLICATIONS

This chapter discusses the results reported in Chapter IV, and compares the results to those of related studies which were reviewed in Chapter II. Aspects discussed are the length of the compositions, the relationships among the variables, and the relationships of the findings to the theoretical framework. The chapter concludes with a statement of implications for further research and for instruction.

Quantity of Writing - Length of Compositions

Length of compositions was of interest for two reasons - pedagogical and research. The average length of the compositions was 199 words; since each student wrote two compositions in each mode, this was long enough to provide reliable samples for research purposes.

Pedagogically, it was of some interest that females wrote longer compositions than did males, the average length for females being 219 words and for males 180 words. It is also of interest that the shortest compositions were in the argumentative mode with an average of 168 words while the longest were in the fictional narrative mode with an average of 241 words. The other modes yielded compositions of very similar length, all quite close to the mean Fictional narration was the students' preferred writing mode, but the one in which they produced the least syntactically complex structures.

Argument was the least liked mode, but the one in which students produced the most syntactically complex structures. Thus it appears that students produce the greatest quantity of writing but not the most syntactically complex writing in their preferred modes. It may be that the syntactic demand of argument is one reason that students do not favor that mode.

The above findings are similar to those of Martinez San Jose' (1972), who also found that students wrote the longest compositions in fictional narration and the shortest in argument. Similarly, Crowhurst's (1977) Grade Six subjects averaged 310 word compositions in narration, but only 127 word compositions in argument.

This overall writing fluency, which is certainly an important pedagogical concern in elementary schools, merits further study as it may be affected by at least two other variables. Firstly, it may be that elementary school students are most fluent in fictional narration only because that is the mode in which they have had most practice in writing and in reading. The situation might change somewhat if students were provided extensive practice in other modes. Secondly, the differences seem much greater in Crowhurst's study, which used pictures only as motivation for writing, than in this study, which used more extensive pre-writing experiences. Overall fluency, and the interaction of mode and fluency, may well be influenced by the nature of the pre-writing experiences.

Syntactic Complexity - T-Unit Length

In this study, T-Unit length was used as one measure of the dependent variable, syntactic complexity. Argument was found to produce the longest T-Units, exposition the next longest, description and factual narration next longest, and fictional narration produced the shortest T-Units. Mean T-Unit length overall was 11.64 words. Sex of the subjects did not produce significant variation in T-Unit length.

It appears that students in this study wrote longer T-Units than did Grade Six students in other studies. In Loban's (1976) study, Grade Six students averaged 9.04 words per T-Unit. Veal (1971) found that Grade Six students averaged 9.48 words per T-Unit. These differences might be accounted for by the fact that the predominant mode in the Loban study and the Veal study was narration. However, in Crowhurst's (1977) study, the mean words per T-Unit for narration, description, and argument combined at the Grade Six level was 10.77. There were also substantial differences in T-unit length between the present study and Crowhurst's within each mode. Students in her study actually produced more words per T-Unit in fictional narration than in this study, 10.13 compared to 9.19. In description, Crowhurst's subjects produced shorter T-Units than those in this study, 10.45 compared to 11.53, and in argument, the difference was even greater, 11.75 compared to 14.11. The difference in the overall mean, although quite large, may of course be accounted for by the fact the the sample population was different. However, the relative differences in means

among the three modes are less easy to explain. Perhaps the syntactic complexity of argument and description are affected to a greater extent than is narration by the more extensive pre-writing experiences in this study. Therefore, further study into the relative effects of pre-writing experiences on the syntactic complexity of various modes of writing is indicated.

As the various studies relating mode and syntactic complexity are reviewed, both commonalities and inconsistencies of results appear. The commonality of such studies as Seegars (1933), Johnson (1967), Martinez San Jose´ (1972), Heil (1976), Perron (1976), Crowhurst (1977) and the present study is that exposition and argument yield writing that is more syntactically complex than is fictional narration. The inconsistency appears in the relative syntactical complexity of description and narration. Martinez San Jose´ and Perron both found that description yielded the lowest level of syntactic complexity, lower even than narration. Crowhurst, however, found that description yielded writing that was more syntactically complex than fictional narration, which was also the case in the present study.

The inconsistency noted above may in part be due to the failure of previous researchers to distinguish between factual narrative reporting and fictional narration as modes. In both the Martinez San Jose´ study and the Perron study, the narrative task was the writing of a summary of a favorite television show which is probably more similar to the factual narration than to the fictional narration of the present study. On the contrary, Crowhurst´s

narrative tasks were probably more similar to the fictional narration of the present study, and her results were more similar in that description yielded longer T-Units than did narration. The foregoing discussion underscores the importance of distinguishing factual narrative reporting from fictional narration. This distinction was overlooked in previous empirical studies, but was considered by Moffett in his theoretical treatment of the issue of modes.

Syntactic Complexity - Sentence Combining Transformations

In this study, the overall number of sentence-combining transformations per T-Unit was used as an additional measure of syntactic complexity. Overall, it was found that students produced 2.56 transformations per T-Unit. There was no statistically significant difference in transformations per T-Unit in argument, exposition, and description. However, all of these modes were found to yield more transformations per T-Unit than did factual narration, and factual narration yielded more than did fictional narration. The inconsistency between the results obtained using this measure of complexity and T-Unit length has already been explained (page 74). Some types of transformations are more likely to result in long T-Units than are others.

The overall result, 2.56 transformations per T-Unit, is substantially higher than that found in the O'Donnell, Griffin, Norris (1967) study. In that study, Grade Five students produced 1.41 transformations per T-Unit, and Grade Seven students produced 1.61. O'Donnell, Griffin and Norris concluded:

> The number of sentence-combining transformations absorbed by T-Units increased (proportionally to the number of T-Units) with every advance in grade level (p.77).

However, the present study has shown that one must be cautious in using sentence-combining transformations per T-Unit as a normative measure of growth. Mode must be considered. In the present study, the fictional narrative mode yielded 1.58 transformations per T-Unit; quite comparable to the result of the O'Donnell, Griffin, Norris study, which also used a narrative corpus. However, the present study has also shown that the results will be much higher if the corpus includes other modes.

Hypothesis 3 "the mean frequency of occurence of specific types of sentence-combining transformations per T-Unit will be significantly different for writing in the descriptive, factual narrative, fictional narrative, expository, and argumentative modes" was confirmed in this study. (See Table 10, page 78). This confirms empirically what Moffett (1976) stated:

> Working within discourses of different abstractive levels ensures that students will come to grips with all the issues of diction, sentence construction, and organization .... adverbial phrases and clauses of time, place, and manner that abound in recording and reporting give way, in generalization and theory, to phrases and clauses of qualification; temporal connectives, transitions and organization perforce yield to logical ones (p.458).

The results indicated in Table 10 provide further specifics to Moffett's thesis as stated above. Also, they could provide useful direction to teachers wishing to set assignments in such a way as to encourage the use of specific structures.

Discussion of Theoretical Background

This study is consistent with earlier studies in that it provides further confirmation that different modes of writing yield different levels of syntactic complexity. At the outset of this study, an attempt was made to set the hypotheses in a theoretical framework, drawing on Moffett's notion of a "hierarchy of abstraction." It was assumed that there might be a relationship between level of abstraction and syntactic complexity; that increasing levels of abstraction might make greater syntactic demands. Although Moffett (1968) indicated that fiction must be dealt with on a different abstractive plane than factual writing, it was assumed that for elementary school students, fictional narration might logically be placed between factual narration and exposition on the hierarchy of abstracting (See Figure 1, page 20). This assumption was made because fictional narration demands some internalized knowledge of story conventions in addition to abstracting from raw experience by memory.

The results of the study were not entirely consistent with the hypothesized direction of increase in syntactic complexity. In particular, fictional narration yielded less complex structures than was hypothesized; in fact, it yielded the least complex structures on both measures of syntactic complexity. Thus, even for elementary school students, Moffett may have been correct in theorizing that fictive narration must be dealt with on a different abstractive plane. In this sense, Britton et.al. (1975) is consistent with Moffett in categorizing fictional narrative differently from factual narration:

fictional narration was categorized in the poetic category; factual narration was categorized as a subset of the transactional category. Further research could focus on differing levels of syntactic complexity produced by differing forms of fictional narration.

The study results were also inconsistent with hypothesized hierarchical directions of syntactic complexity in that description, which was hypothesized as yielding the least complex structures, was found to yield as complex structures as factual narration on one measure, T-Unit length, and greater complexity than factual narration on the other measure of complexity, sentence-combining transformations per T-Unit. In fact, on the latter measure, there was no statistically significant difference between description and exposition, or between description and argument.

The fact that in this study, the assumed hierarchy of abstraction did not match the hierarchy of increase in syntactic complexity may be due to at least two different factors. First, there may in fact be no relationship between level of abstraction and syntactic complexity. Logically, it may be assumed that there should be such a relationship, but empirically, that may not be the case. Mathematicians could well argue that statements that are syntactically very simple may well contain information that is highly abstract. "$E = MC^2$" may be a case in point. Linguistically, abstraction level may well be reflected in the semantics of a written composition to an extent equal to or even greater than is reflected in the syntax. Furthermore, many of the complexities of a written composition are to be found in inter-sentence syntactical relationships rather than in

intra-sentence syntax. While Moffett (1968) certainly made the point that mature and abstract relationships are necessarily expressed by syntactic structures:

> Syntax speaks; implicitly, it conveys the more abstract, less palpable information of larger meanings (p.75),

he also qualified himself:

> I should add, that some sentences containing references to other sentences may remain linguistically simple while actually achieving cognitive complexity. Thus: 'I like that' when 'that' refers to the whole preceding idea ... Or 'They disagreed nevertheless' nevertheless acting as an inter-sentence connector. Since such referencing merely entails pronouns, adverbs, and adverbial phrases, it may not technically change the status of a kernel sentence, and yet it is clear that a previously predicated idea is being either incorporated into the kernel or joined to it. In effect, a sort of direct embedding or conjoining has taken place, discernible at the semantic but not at the linguistic level (p.77).

Perhaps it is that the above qualification is equally as important as the assertion that it qualified. Thus, further research should take inter-sentence connectors into account as an additional measure of complexity.

It may also be possible that description as a mode of writing does not represent the lowest level of abstraction, even in Moffett's scheme of things. Moffett certainly does not equate the two; he calls "drama" the lowest level of abstraction. This researcher, searching for a way of operationalizing a schema, chose the descriptive mode as possibly representing the closest and simplest manifestation of what Moffett defines as drama. Moffett (1968) did make these statements:

> Drama is any raw phenomena as they are first being converted to information by some observer (p.61).

> Drama is the matrix of discourse. As information, it is the inner speech of the observer at the moment of coding raw phenomena. The corresponding educational activity is recording (p.88).

> For recording, the student is placed in an observer relation to some phenomena and asked to dictate or write down what he registers with his senses at a particular time and place (p.101).

Moffett's emphasis on the senses led this researcher to believe that the closest corresponding mode would be description. However, Moffett (1968) goes on to say:

> the student is verbalizing as he registers, and that is the definition of recording. The records thus produced are aimed at no other audience than himself and are not to be judged as communications, which they do not purport to be (p.103).

In this research project, the descriptive passages were rewritten and reworked by the students as communications. To be truly drama, or the lowest level of abstraction in the Moffett sense, a more journalistic type of descriptive recording should perhaps have been used.

In the light of the foregoing comments, further research into relationships of levels of abstraction and syntax should use more direct measures of abstraction, rather than relying on assumptions that some modes of writing are inherently more or less abstract than other modes.

Sex and Syntactic Complexity

In this study, it was hypothesized that there would be no significant differences in the syntactic complexity of compositions produced by males and females in any mode (interaction) or in all the

modes combined (main effect). This null hypothesis was confirmed by both of the measures of syntactic complexity.

The grade level may be of importance here. Hunt (1965) found that girls used more subordination than boys at the fourth grade level, but by the eighth grade boys were outperforming girls. This finding, combined with the no difference finding of the present study, suggests that girls may develop more rapidly than boys initially, but that there is a crossover point, which may in fact occur somewhere around the sixth grade.

However, in the light of Martinez San Jose' (1972) finding of male superiority on several measures of syntactic complexity in Grade Four, and Perron's (1976) finding of no differences in any of Grades Four, Five or Six, and Price and Graves (1980) finding of no differences in Grade Eight, it is difficult to generalize that there are any real differences at all.

An examination of the effect of sex on specific structures in the present study does little to modify the above statement. Twenty-two different structures were examined, and sex had a significant effect on only one. Females produced a significantly higher number of adverb clauses than did males.

Martinez San Jose' (1972) suggested that interest in topic might be sex-related, and might in turn have some impact on syntactical complexity. In this study, students wrote about each of two topics (hockey and clothing) in each of the five modes examined. As expected, a student questionnaire (Appendix E) indicated that boys

were generally more interested in the hockey unit and that girls were more interested in the clothing unit. However, since the compositions for each topic individually were shorter than required for reliable samples, no statistical examination of possible interaction effects was carried out. This would, however, be an interesting area for further research.

Conclusions

On the basis of the results presented in Chapter IV and the foregoing discussion, the following conclusions are presented:

1. Grade Six students are most fluent in their preferred mode of writing, fictional narration.
2. Mode of writing has an effect on syntactic complexity and on the frequency of occurence of several kinds of sentence-combining transformations.
3. The argumentative mode produces the most syntactically complex writing; fictional narrations produces the least complex writing. The syntactic complexity of factual narrative writing is greater than that of fictional narrative writing.
4. Establishment of a relationship between syntactic complexity and level of abstraction must await further, more sophisticated research.
5. Sex is not significantly related to syntactic complexity.

Implications for Further Research

1. Since fluency or overall quantity of writing is an important consideration, and since it appears that some modes of writing result in greater fluency than others, the effect of practice in writing in different modes on fluency in those modes merits further study.
2. Since the differences in fluency in writing in different modes appears to be moderated by differences in pre-writing experiences, further research into the effect of pre-writing experiences on fluency is also indicate.
3. Since the impact of mode of writing on syntactic complexity confirmed by previous studies has been reaffirmed in this study, and since this study has added the information that fictional narration and factual narration yield differing levels of complexity, future normative studies of age - grade growth in syntactic complexity must take the mode of writing, including the distinction between fictional and factual narration as modes, into account.
4. Since certain modes of writing are most likely to elicit certain types of transformations, the effect of practice in specific modes as a means toward producing greater transformational variety would warrant further study.
5. Since both Moffett and Britton have treated fictional narration as a categorization of writing distinct from factual narration, and since factual narration has been found to produce a different

level of complexity than fictional narration, and since fictional narration itself is capable of further sub-division, further research on the effect of different types of fictional narration on syntactic complexity would be of interest.

6. Since the Grade Six subjects of this study appeared to produce writing that was more syntactically complex overall than similar Grade Six students in other studies, and since the major difference in this study compared to other similar studies was in the nature of the pre-writing experiences provided, further study into the effect on syntactic complexity of varied pre-writing experiences, especially the opportunity for prior oral discussion of the topic, would be warranted.
7. Since increasing levels of abstraction may not have been truly reflected by the writing mode hierarchy selected in this study, further study of relationship between level of abstraction and syntactic complexity using more direct measures of level of abstraction is warranted.
8. Since inter-sentence considerations may well reflect syntactic complexity, future research studies using syntactic complexity as a variable should attempt to include some measure of these considerations.

Implications for Instruction

This study has added further support to the growing body of evidence that there is value in having students practice a variety of

modes of writing. Echoing Perron, there is more than logical sense to Moffett's whole discourse approach.

Other researchers have demonstrated the value of having students experience the four traditional modes of writing: description, narration, exposition, and argument. This study has added the value of distinguishing between factual and fictional narrative, and of assigning both.

For instructional purposes, it probably matters not which modes elicit the most complex structures; what matters is that different modes elicit different structures. If teachers wish students to be placed in circumstances which demand a full variety of sentence structures, they will assign different modes of writing. They may find that some modes, argument in particular, make demands on students that lead to some awkwardness as unfamiliar structures are called upon. If such be the case, it may be useful to have students engage in a limited amount of sentence-combining directly related to the structures demanded by the more unfamiliar modes. Further composition assignments in these modes would then provide practice in unfamiliar structures in a rhetorical setting.

The above considerations also have implications for a "language across the curriculum" emphasis. Most language arts programs at the elementary school level have tended to emphasize reading, and the reading and related writing has tended to emphasize fictional narration very heavily.. However, composition assignments in other subject areas such as science and social studies can more naturally emphasize modes such s description, factual narration, and

argument. Descriptive writing can relate closely to the development of observational skills in science. Reports of field experiences in both subjects call upon factual narrative reporting. The discussion of value issues in social studies calls upon the argumentative mode. Thus elementary school teachers, rather than regarding these subjects as competition for the language arts, might well regard them as opportunities for allowing students to experience the full spectrum of linguistic and rhetorical demands which may well lead to the development of more competent users of language.

BIBLIOGRAPHY

Belanger, J.F. "Calculating the Syntactic Density Score: A Mathematical Problem," Research in the Teaching of English, Volume 12, No.2 (May 1978), pp.149-153.

Botel, M. and Granowsky, A. "A Formula for Measuring Syntactic Complexity: A Directional Effort," Elementary English, April, 1972.

Braddock, R., et al. Research in Written Composition NCTE, Champaign, Illinois, 1963.

Britton, J., et al. The Development of Writing Abilities. (Schools Council Publications), London: MacMillan Education Limited, 1975.

Brooks, C. and Warren, R. Modern Rhetoric. New York: Harcourt, Brace, World, 1970.

Burrows, A.T., et al. Children's Writings: Research in Composition and Related Skills. Champaign, Illinois: NCTE, 1960.

Bushner, D.E. The Relationship Between the Reading Comprehension Ability of Seventh and Eighth Grade Subjects and the Syntactic Complexity of Their Written Language, Unpublished Ph.D. Dissertation, Boston University School of Education, 1979.

Calvert, K.H. "Kernel Structures Index," from An Investigation of Relationships Between the Syntactic Maturity of Oral Language and Reading Comprehension Scores. (Ph.D. Dissertation), University of Alabama, 1971, (Ed. 091 722).

Chomsky, N. Aspects of the Theory of Syntax. Cambridge, Massachusetts: The M.I.T. Press, 1965.

Christensen, F. "The Problem of Defining a Mature Style," English Journal, Volume 57, No. 4 (April, 1968), pp. 572-579.

----------. Notes Toward a New Rhetoric. New York: Harper and Row, 1967.

Combs, W.E. "Further Effects of Sentence-Combining Practice on Writing Ability," Research in the Teaching of English, Volume 10, Number 2 (Fall, 1976).

Cossitt, M. Curriculum Guide for Elementary Language Arts, Alberta Education, Edmonton, 1978.

Courts, C. "Syntax, Intellectual Strategies, and Larger Rhetorical Patterns in the Writing of Superior Twelfth Graders and College English Majors in Three Discourse Categories: Expressive, Explanatory, Persuasive", Paper delivered to American Educational Research Association, April 1977 (Ed. 139030).

Crowhurst, M. "Syntactic Complexity and Teachers' Quality Ratings of Narrations and Arguments," Research in the Teaching of English, Volume 14, No. 3 (October 1980), pp. 223-231.

Crowhurst, M. The Effect of Audience and Mode of Discourse on the Syntactic Complexity of the Writing of Sixth and Tenth-Graders, Unpublished Ph.D. Dissertation, University of Minnesota, 1977.

Crowhurst, M. "Syntactic Complexity in Narration and Argument at Three Grade Levels," Canadian Journal of Education, Volume 5, No. 1, 1980.

Darley, F.L. and Moll, K.L. "Reliability of Language Measures and Size of Language Sample," Journal of Speech and Hearing Research, Volume 3, No. 2 (June, 1960).

Dixon, E. "Indexes of Syntactic Maturity," ERIC document ED 091 748, 1970.

----------. "Syntactic Indexes and Student Writing Performance," Elementary English, Volume 49, (May, 1972).

Endicott, A.L. "A Proposed Scale for Syntactic Complexity," Research in the Teaching of English, Volume 7, No. 1, (Spring, 1973), pp. 5-12.

Evanechko, P. (Chairman). Language B.C. Instructional Practices 2, Victoria, The Department of Education, Province of British Columbia, 1976.

Frogner, E. "Problems of Sentence Structure in Pupil's Themes," English Journal, Volume 22, (November 1933), pp. 742-749.

Gebhard, A.O. "Writing Quality and Syntax: A Transformational Analysis of Three Prose Samples," Research in the Teaching of English, Volume 12, No. 3, 1978, pp. 211-232.

Glass, G.V. and Stanley, J.C. Statistical Methods in Education and Psychology, Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1970.

Golub, L.S. "Syntactic Density Score with Some Aids for Tabulating," ERIC document ED 091 741, 1973.

Heil, H.F. The Development of Selected Language Variables in Two Modes of Writing and Their Relationship to Reading Comprehension in the Primary Grades, Ph.D. Dissertation, Hofstra University, 1976.

Hennig, K.R. Syntactic Variations and the Functions of Language, ERIC Document ED 203 319, 1980.

Hughes, T. What the British Tell the U.S. About Writing and Reading, ERIC Document ED 175 020, 1978.

Hunt, K. Grammatical Structures Written at Three Grade Levels, Champaign, Illinois, NCTE, 1965.

----------. "Early Blooming and Late Blooming Syntactic Structures," Evaluating Writing (Cooper C., and Odell R.) Urbana, Illinois: NCTE, 1977, pp.91-104.

Johnson, L.V. "Children's Writing in Three Forms of Composition," Elementary English, XLIV, (March 1976), pp. 265-269.

Kincaid, G.L. Some Factors Affecting Variations in the Quality of Students' Writing. Unpublished doctoral dissertation, Michigan State University, 1953.

King, M.L. "Research in Composition: A Need for Theory," Research in the Teaching of English, Volume 12, No. 8, (October 1978), pp. 193-202.

Loban, W. Language Development: Kindergarten Through Grade Twelve. Urbana, Illinois: NCTE, 1976.

Lundsteen, S. Help For the Teacher of Written Composition: New Directions in Research. Urbana, Illinois: ERIC, 1976.

Martinez San Jose', C.P. Grammatical Structures in Four Modes of Writing at Fourth Grade Level, Ph.D. Dissertation, Syracuse University, New York, 1972.

Meyers, D. The Influence of Using Speaking as a Pre-Writing Activity on Community College Freshmen Composition Pupils' Performance in Writing, ERIC Document ED 203 316, 1979.

Moffett, J. Teaching the Universe of Discourse. New York: Houghton-Mifflin Company, 1968.

Moffett, J. and Wagner, B.J. Student-Centred Language Arts and Reading, K-13. Boston: Houghton-Mifflin Company, 1976.

Morenberg, M., et al. "Sentence-Combining at the College Level, An Experimental Study," Research in the Teaching Of English, Volume 12, No. 3, (October, 1978), pp. 245-256.

O'Donnell, R.C. "A Critique of Some Indices of Syntactic Maturity," Research in the Teaching of English, Volume 10, No. 1, (Spring, 1976), pp. 31-38.

O'Donnell, R.C.; Griffin, W.J.' and Norris, R.C. Syntax of Kindergarten and Elementary School Children: A Transformational Analysis. Champaign, Illinois: NCTE, 1967.

O'Donnell, R.C., and Smith, W.L. "Use of an Instructional Module to Heighten Awareness of Syntactic Structure," Studies in Language Education Report #3, University of Georgia, 1973.

O'Hare, F. Sentence-Combining: Improving Students Writing Without Formal Grammar Instruction. Urbana, Illinois: NCTE, 1971.

Perron, J.D. Written Syntactic Complexity and the Modes of Discourse, ERIC Document ED 138 009, 1976.

----------. The Impact of Mode on Written Syntactic Complexity, Part III, Fifth Grade, ERIC Document Ed 128 827, 1976.

Pope, M. "The Syntax of Fourth Graders Narrative and Explanatory Speech", Research in the Teaching of English, Volume 8, No. 2 (Summer, 1974), pp. 219-227.

Popham, W.J., and Sirotnik, K.A. Educational Statistics: Use and Interpretation. New York: Harper and Row, 1973.

Prentice, W.C. The Effects of Intended Audience and Feedback on the Writings of Middle Grade Pupils, Unpublished Ph.D. Dissertation, The University of North Dakota, 1980.

Seegars, J.C. "Form of Discourse and Sentence Structure," The Elementary English Review, Volume X, No. 3, (March, 1933), pp. 51-54.

Smith, W.L., and Combs, W.E. "The Effects of Overt and Covert Cues on Written Syntax," Research in the Teaching of English, Volume 14, No. 1 (February 1980), pp. 19-38.

Stewart, M.F. "Syntactic Maturity from High School to University: A First Look," Research in the Teaching of English, Volume 12, Number 1, (February, 1978a), pp. 37-46.

Stewart, M.F. "Freshman Sentence-Combining: A Canadian Project," Research in the Teaching of English, Volume 12, No. 3 (October, 1978b), pp. 257-268.

Stotsky, S.L. "Sentence-Combining as Curricular Activity: Its Effect on Written Language Development and Reading Comprehension," Research in the Teaching of English, Volume 9, No. 1, (Spring, 1975). pp. 30-71.

Tuckman, B.W. Conducting Educational Research. New York: Harcourt, Brace, Johanovich, 1978.

Veal, L.R. "Syntactic Measures and Rated Quality in the Writing of Young Children," Studies in Language Education Report #8, University of Georgia, 1974.

Veal, L.R. and Tillman, M. "Mode of Discourse Variation in the Evaluation of Children's Writing," Research in the Teaching of English, Spring, 1971, pp. 37-45.

Watson, C. The Effects of Maturity and Discourse Type on the Written Syntax of Superior High School Seniors and Upper Level College English Majors, Unpublished Ph.D. Dissertation, State University of New York at Buffalo, 1980.

Winer, R.J. Statistical Principles in Experimental Design. New York: McGraw Hill Company, 1962.

Witte, S.P., and Davis, A.S. "The Stability of T-Unit Length in the Written Discourse of College Freshmen: A Second Study," Research in the Teaching of English, Volume 16, No. 1, (February, 1982) pp.71-84.

Wynn, J.H. Determining the Internal Consistency of English Compositions Using Selected Criteria, Unpublished Ph.D. Dissertation, The Louisiana State University, 1977.

APPENDIX A

INTRODUCTORY LESSON PLAN

Introductory Lesson Plan No. 1

(March 12 and 13, 1979)

I. Purpose of Lesson

To provide conceptual background to students to increase the likelihood that they will write compositions in the designated mode of discourse in later lessons.

II. Student Outcomes

1. Given a set of short written compositions of varying modes of discourse, the students will correctly identify them as being (1) descriptive (2) factual narrative report (3) fictional narrative story - writing (4) exposition (5) argument.
2. Given a written composition requirement, the student will correctly identify it as one requiring writing that is primarily in the (1) descriptive (2) factual narrative report (3) fictional narrative story - writing (4) exposition (5) argument mode.
3. Given a familiar topic, the students will write a one sentence composition of each of the above identified modes about that topic.

   NOTE: It is acknowledged that it would be impossible at times to distinguish between factual narrative report and fictional narrative story - writing unless one knew that background of the writing situation. In the lesson, most of the fictional examples are of the fanciful type to simplify the task and avoid unnecessary confusion. This information

could be shared with the students at whatever point seems appropriate.

III. Teaching Procedures

Generally, it is intended that the teacher would have students examine samples of each type of writing, and through questionning have them inductively arrive at definitions, characteristics, and purposes of each type of writing. This done, the prepared outline of same would be given to the students, and they would be encouraged to compare this to what they had arrived at inductively. The lesson then switched to a deductive mode, and students are asked to apply the definitions and characteristics to tasks of identifying different modes and generating single sentence statements in each of the five modes.

1. Hand out copies of Sheet A, or project it or write on chalkboard, and ask students to state the differences in the sentences. Through questioning, establish that statement 1 presents an argument or opinion, statement 2 a description, statement 3 action or narration which could be factual, statement 4 action or narration which is obviously fictitious, and statement 5 an explanation or exposition. Ask them what the author's purpose likely was in each statement.
2. Do the same with Sheet B. Try to extend the questionning so that students themselves arrive at the sorts of statements about each mode that are contained on Sheet C.

3. Hand out Sheet C. Read through it with the students, comparing the ideas to those that the students have arrived at inductively. Try to get them to state more examples of each type of writing as you go through it with them.
4. Working together in class, take two topics of your own choosing and have students suggest one sentence statement that might be representative of each mode of discourse for each topic.

Possible topics could be:

Cars

School

Easter

5. Distribute the student assignment. Allow them time to complete it, and discuss the results. After the results have been discussed, collect the assignments. Make sure each student's name is on them. Retain these for use by the researcher, please.

IV. Evaluation

It is not necessary that all students demonstrate success on this task, nor that follow-up lessons be taught. If the assignments are forwarded to the researcher, he will be able to determine the extent to which students appear to have been able to respond to the task.

Lesson I - Sheet A

Read the following statements about basketball. Discuss how they are different.

1. Basketball is a more exciting sport to watch than volleyball because it is faster moving.

2. A basketball is a brown, spherical leather ball approximately one foot in diameter.

3. Yesterday the Montrose Rovers boys basketball team defeated the Wembley team by a score of sixty-two to twenty-four.

4. His bionic legs trailing jets of steam, Superwilt flew down the basketball court, leaped to the incredible height of six feet, and skillfully dropped the ball through the hoop.

5. In basketball, there are five players on each team: a centre, two forwards, and two guards.

Lesson I - Sheet B

Read the following short written passages and discuss how they differ. How would you define the type of writing in each? What are the characteristics of that type of writing? What do you think the writer's purpose was?

Passage 1 *

(There is a) level plain cratered with a fairly large number of craters of the 5- to 50- foot variety. And some ridges, small, 20 to 30 feet high, I would guess. An illiterally thousands of little one- and two-foot craters around the area. We see some angular blocks out several hundred feet in front of us that are probably two feet in size and have angular edges. There is a hill in view just about on the ground track ahead of us. Difficult to estimate, but might be half a mile or a mile ... I'd say the color of the local surface is very comparable to that we observed from orbit at this sun angle-about 10 degrees sun angle or that nature. It's pretty much without color. It's gray and it's very white as you look into the zero phase line. And it's

considerably darker gray, more like an ashen gray, as you look out 90 degrees to the sun. Some of the surface rocks in close here that have been fractured or disturbed by the rocket engine plume are coated with this light gray on the outside. But where they've been broken, they display a dark, very dark, gray interior and it looks like it could be country basalt.

* Passage 1 from Communication 4 (MacMillan)

Lesson I - Sheet B

Passage 2 *

Last night, I was playing in the back yard with my cat, Oliver, when suddenly he stopped short. I turned, and there, standing behind me was our neighbor's fat, old beagle, who had crawled through a hole in the fence. He was wagging his tail and looking at Oliver, as if he had come to pay a friendly visit. Oliver stiffened, and the fur on his back stood up like a brush. From his throat came a long, low growl. Before I could stop him, Oliver jumped at the beagle's neck, catching him off guard.

The fight was on! Over and over rolled the cat and the dog in a big ball of snarling, spitting fur. Sometimes the beagle was on top, and sometimes Oliver was on top. But everything happened so fast that I couldn't tell who was winning. I didn't know what to do. All I

knew was that I didn't want to get mixed up in the fight, too.

* Passage 2 from New Directions in English: Evidence and Evaluation (Harper and Row), p.316

Passage 3 *

A Kite's Tale

As I went sailing through the sky, a funny feeling went through my paper skin. My stick bones seemed out of place. Then I knew what was wrong. My tail was loose. I bent down to tie it, but before I even got hold of it, it was scurrying down to earth.

I didn't know what to do. In front of me was that horrible-looking rain cloud and behind me was a telephone pole. I dodged the rain cloud by an inch. I was safe! Or was I? For in front of me now was a big spruce tree. I tried to escape. Crash! Bang! Rattle! Clank! I was sitting in a sparrow's nest.

Before I knew what was happening, Mrs. Sparrow was pecking away at me. A squirrel was taking what little stick bones I had left. In a few minutes it was all done and I was too. Those spruce needles had finished me.

* Passage 3 from Creative English 6 (Copp Clark), p.114

Lesson 1 - Sheet B

Passage 4 *

A Most Successful Animal

Turtles are dismal fails at fighting and running. They haven't much in the way of brains. They're almost deaf. Their eyesight is inferrior. Their sense of smell is no cause for pride. But they are probably the biggest animal success story in the world.

Turtles are the oldest of living backboned animals. They were on earth long before the great dinosaurs, and they haven't changed much in 200 million years.

Animals that have survived by speed, cunning, strength, or keen senses might wonder how turtles do it. The truth is that they survive by not doing; the turtle is a model of passive resistance. That, plus his mobile shelter, is his salvation. Faced with trouble, the turtle is already halfway indoors. A common box turtle can withdraw and clamp his shell so tightly shut that a knife blade won't pry the sections apart.

* Passage 4 from World of Language, Book I, (McGraw Hill), p.177-178

Lesson 1 - Sheet B

Passage 5 *

"Children should be in school the year round. Each year our schools close from the end of June to the beginning of September. To close schools in the summer for two months is a colossal waste of the taxpayer's money. Why should an expensive building be kept closed for two whole months? Children forget some things that they learned in the school year. They learn nothing new. The students have nothing to do. Because they become idle and bored, more mischief is done in the summer months than throughout the whole school year. There is only one solution - twelve months of schooling."

* Passage 5 from Communication 3, (MacMillan), p.147-148

Lesson 1 - Sheet C

Modes or Types of Writing

You have examined different modes of writing. No doubt you have given them names and listed some of the characteristics of each. Read the following notes, and compare the ideas to your discussion.

I. Descriptive Writing

A. Definition - Writing that depicts people, places, or things in detail, usually by creating sensory images (telling how things look, sound, smell, feel, or taste).

B. Characteristics

1. It may appeal to one or to many senses.
2. It paints pictures in words.
3. It can be organized in different ways but often uses a spatial organization or a part-whole organization.

C. Author's Purpose

In general, the purpose is to describe. The author may simply want to entertain people with a brilliant description. He may wish to inform them, as in Sheet B, Passage 1. In narrative books, author's often include passages of description to create a mood. For example, in horror story, a description of a haunted house may develop a mood of fear.

D. Examples

1. Describe the outside of your school in such a way that the reader could tell it from other elementary schools in Grande Prairie.
2. Tell about the Grande Prairie Farmer's Market in such a way as to communicate an atmosphere of hustle-bustle.
3. Your bicycle has been stolen. Write about it in such a way that the police would be assisted in finding it.

II. Factual Narrative Reporting

A. Definition - Writing that relates an actual sequence of events, observances, or experiences without the writer adding actions or details from other experiences he has had or from his imagination.

B. Characteristics

1. The emphasis is on action. Something happens.
2. The author may select some details and leave out others to make the story interesting.

C. Author's Purpose

The author may be trying to entertain you, inform you, or both. He is trying to recreate an event that he has witnessed to share that event with you.

D. Examples

1. Reporting an accident that happened on the playground to the teacher on supervision.

2. Writing an account, possibly for a newspaper, of a sports event that you have observed.
3. Writing about an exciting experience you have had (Sheet B, Passage 2).

II. Fictional Narrative Story-Writing

A. Definition - Writing that relates a sequence of events, observances, or experiences which are drawn from several real or imagined experiences of the author and recombined by him imaginatively.

B. Characteristics

1. The emphasis is on action. Something happens.
2. The story is not true.
3. Characters are free to do things that would not normally happen, for example, kites can talk.
4. The story usually follows some common recognized form such as a fable, a myth, a legend, or a short story in which the characters have some problem or some conflict and the readers wonder how it will all end.
5. If the author keeps it true to life, it may be hard to tell from factual narrative reportage.

C. Author's Purpose

The writer is usually trying to entertain, but he might also be suggesting some fact about life, as in the moral of a short story.

D. Examples

1. Write a story about a horse that could talk.
2. Write a fable that illustrates the moral that crime doesn't pay.
3. Write a legend which explains how a moose got his antlers.

IV. Expository Writing

A. Definition - Writing that mainly explains a procedure or an experience in general terms.

B. Characteristics

1. It can be organized a number of ways: cause-effect, statement illustrated by examples, etc.
2. It is often called reporting, but is different from factual narrative reporting in that it doesn't just tell about one event.

C. Author's Purpose

The author is usually trying to inform other people to explain how to do or make something, or to add to other's knowledge.

D. Examples

1. Tell about how to do your hobby.
2. Write about how birds are adapted to their environment.
3. Give a complete written explanation of how to repair a flat bicycle tire.

Lesson 1 - Sheet C

V. Argumentative Writing

A. Definition - Writing that argues a point of view, defends a position, or expresses feelings or emotions about a topic.

B. Characteristics

1. Reasons are usually stated why the writer is arguing as he is.
2. It is organized around one main idea, the author's opinion.

C. Purpose

1. The writer is trying to persuade or convince the readers to believe in something or do something.

D. Examples

1. Write a letter to your parents in which you try to convince them that you should only stay at camp two weeks rather than six weeks.
2. Write a paragraph requesting your teacher to allow the class to organize a field trip to Jasper.
3. Write a letter to the editor of the Herald Tribune giving support for the idea that city council should build a skateboard park.

Name _____

School _____

Lesson 1 - Assignment

I. Read the following passages. In the space after each, write the mode or type of writing that you think the passage represents.

Passage 1 *

Blasting out a tunnel requires that explosives be placed in a pattern designed so that the right amount of rock will break. The drillers try to do this using as little dynamite as possible. The number and depth of the holes they prepare depends on the size of the tunnel and the kind of rock being blasted.

* Passage 1 from Elementary English Book 6 (Ginn), p.310

Passage 2 *

Johnny Woodchuck sat erect in front of a mound of fresh earth, too tired to move. It had taken him all morning to finish a new tunnel running between the two deepest rooms in his burrow. The claws on his front feet were muddy and he knew that soon he would have to clean them. But the tunnel was done, and that was what counted.

* Passage 2 from Elementary English Book 6 (Ginn), p.310

Lesson 1 - Assignment

Passage 3 *

A bright red sea serpent with one eye rose out of the water. The eye perfectly round and was located in the middle of the serpent's forehead. The eye was made up of many circles of different colors, each of which reflected the sunlight like a mirror. From the centre of the eye a ray of bluish light sweeping out over the waves to the shore. When the blue light reached a group of trees, there was a short burst of fire. Only a puff of smoke remained where the trees had stood. The serpent yawned and closed its eyes.

* Passage 3 from New Directions in English: Evidence and Evaluation (Harper and Row), p.310

Passage 4 *

The best place in Canada for a summer vacation is Victoria, British Columbia. For one reason, there are many different things to do, such as boat rides, carriage tours, or visits to museums. Another reason is that the weather is so pleasant in the summer time. Furthermore, the nice climate means beautiful flowers and gardens. In summary, anyone would enjoy a summer visit to Victoria.

* Passage 4 from English Skills Program 1 (Gage), p.29

Lesson 1 - Assignment

Passage 5 *

Fire Raging Out of Control

Groves Valley, B.C. (CP) A major brush fire raged on two fronts today, one heading toward the rugged timberlands of Sherwood National Park, the other toward the town of 8,000 persons.

The fire was about a quarter of a mile from outlying homes which are protected by damp vegetation lining Crystal Creek. Six hundred fire-fighters struggled on both fronts through the night as the toll of charred land grew to 3,000 acres reported Carl Milson of the B.C. Forest Service.

Fire-fighters strained to keep the flames from timber stands near Groves Valley. Between 500 and 600 acres of brush in the national park were destroyed, according to Milson.

If the fire gets into timber it will be inaccessible to ground fire-fighting efforts because there are no roads or fire-breaks, Milson warned.

* Passage 5 from English Through Experience (Copp-Clark), p.2

Passage 6 *

When they pulled into the Fair Grounds, they could hear music and see the Ferris wheel turning in the sky. They could smell the dust of the race track where the sprinkling cart had moistened it; and they could smell hamburgers frying and see balloons aloft. They could hear sheep blatting in their pens. An enormous voice over the loudspeaker said: "Attention, please! Will the owner of a Pontiac car, licence number H-2439, please move your car away from the fireworks shed!"

From Charlotte's Web

by E. B. White

Lesson I - Assignment

Passage 7 *

A trapper in the Yukon owned a cat who was an excellent mouser. The cat loved to accompany him as he checked his trapline, even in the winter. One extremely cold day, the trapper noticed that the cat was no longer following him. He backtracked along his trail and discovered that she had got caught in one of his steel traps. With the circulation cut off, the cat's leg had frozen, so that when the trapper released the trap, the leg broke off at the knee.

The trapper took the cat home and fashioned an artificial leg which worked reasonably well, except that she could be heard clomping along the floor.

Yet oddly enough, the mouse population did not increase. Curious, the trapper stayed up one night to watch the cat. He saw her station herself by a mouse-hole.

A mouse peeked out.

The cat didn't move.

The mouse ventured out further.

The cat didn't move.

The mouse stepped completely out onto the floor.

Like a flash the cat's good paw encircled the mouse's neck and with her wooden leg she proceeded to club the mouse to death!

* Passage 7 from English Through Experience (Copp-Clark), p.57

Passage 8 *

Childhood is the best time of life. You have very few responsibilities, as your parents take care of you basic needs. Life is full of challenges and learning new things. For a child, life is good.

* Passage 8 from English Skills Program 1 (Gage), p.28

Lesson 1 - Assignment

II. Look through the material you have taken so far in Starting Points in Reading and Starting Points in Language. Try to find one example of each type of writing, and write the book and page number for each below.

	Book	Page
1. Description		
2. Factual Narrative Reportage		
3. Fictional Narrative Story-Writing		
4. Exposition		
5. Argument		

Lesson 1 - Assignment

III. Write five sentences about the following topic. Write one sentence in each mode of writing.

Topic: Grande Prairie County Fair

1. Description _____

_____

_____

2. Factual Narrative Report _____

_____

_____

3. Fictional Narrative Story-telling _____

_____

_____

4. Exposition _____

_____

_____

5. Argument _____

_____

_____

APPENDIX B

MEMOS
PROVIDING INSTRUCTIONS
TO
PARTICIPATING TEACHERS

MEMO No. 1 January 30, 1979

FROM: Keith Wagner, Graduate Student
University of Victoria

TO: Derek Taylor, Superintendent of Schools

Neil Dobson - Parkside
Carol Mitchell - Parkside

Lionel Kyle - Avondale

Henry Schellenberg - Hillside
Guy Spencer - Hillside

Linda Patterson - Swanavon
Len Toews - Swanavon

RE: Masters Research Project

Thank you very much for agreeing to assist me by participating in this project. I hope that it will not place too many extra demands on your already busy schedules.

Although we had tentatively agreed in our meeting on January 15 that you would teach both research units, "Hockey" and "Clothing" prior to Easter, I am now finding that my schedule will not permit this. As an alternative, I am recommending the schedule outlined below as being more realistic.

Research Data Collecting Schedule

March 12 - 16: Teach the common introductory lessons: One lesson on recognizing and defining differing modes of discourse (approximately three class periods), and two lessons introducing the unit on hockey (approximately four class periods).

March 19 - April 6: Teach the composition lessons which comprise the body of the "Hockey" unit. Each composition lesson will require four class periods of approximately the following nature:

Period 1 (40-50 minutes): Input of experience; (film, video tape, reading or whatever form it takes).

Period 2 (20-30 minutes): Discussing the input of experience and clarifying the writing task.

Period 3 (40-50 minutes): Writing lab period; unassisted work on the writing task.

Period 4 (30-40 minutes): Revision period; students rewrite the composition on common supplied format paper; teacher may assist with spelling and mechanical matters, But must not comment on or assist with basic organization or sentence structure.

April 9 - May 4: Intrusion of Easter holidays and Music Festival activities.

May 7 - May 25: Teach the five composition lessons which comprise the "Clothing" unit. The format will be the same as for the "Hockey" unit.

Please do not teach the Starting Points in Reading - Starting Points in Language Arts Unit entitled "But Everyone's Wearing It" prior to this time as some of the activities will be used in the "Clothing" unit.

Once again, thank you for agreeing to assist in this project. Problems or concerns should be directed through Mr. Taylor or me. More details will follow soon.

Yours truly,

Keith Wagner
4160 Morris Drive
Victoria, B.C. V8X 2K2
(479-5392)

or

Room 362, MacLaurin Building
University of Victoria
(477-6911, Local 4866)

MEMO No. 2 February 1, 1979

FROM: Keith Wagner, Graduate Student
University of Victoria

TO: Research Study Participants
Derek Taylor, Lionel Kyle, Linda Patterson, Len Toews, Neil Dobson, Carol Mitchell, Guy Spencer, Henry Schellenberg

RE: Teaching the Body (Central Five Lessons) of the Research Unit "Hockey"

During the week of March 12-16, you will have taught introductory Lessons 1 and 2. Starting on March 19, you will teach the five composition lessons. Because of the experimental design, it is necessary that each school teach the lessons in a different order. The order was determined by a random process, and is as follows:

Avondale: First - Lesson 3, Descriptive Writing

Second - Lesson 5, Fictional Narrative Story-Writing

Third - Lesson 7, Argumentative Writing

Fourth - Lesson 4, Factual Narrative Report Writing

Fifth - Lesson 6, Expository Writing

Hillside: First - Lesson 7, Argumentative Writing

Second - Lesson 5, Fictional Narrative Story-Writing

Third - Lesson 6, Expository Writing

Fourth - Lesson 3, Descriptive Writing

Fifth - Lesson 4, Factual Narrative Report Writing

Swanavon: First - Lesson 3, Descriptive Writing

Second - Lesson 4, Factual Narrative Report Writing

Third - Lesson 5, Fictional Narrative Story-Writing

Fourth - Lesson 6, Expository Writing

Fifth - Lesson 7, Argumentative Writing

Parkside: First - Lesson 6, Expository Writing

Second - Lesson 4, Factual Narrative Report Writing

Third - Lesson 7, Argumentative Writing

Fourth - Lesson 3, Descriptive Writing

Fifth - Lesson 5, Fictional Narrative Story-Writing

Although the order of lessons may seem quite illogical in some instances, each lesson should be possible to teach as a separate entity. Besides providing an experimental control, varying the order of lessons should facilitate the sharing of required stimulus materials such as films and videotapes.

It is also necessary in a project of this nature to control for audience. Consequently, the students will be asked to assume that they have a penpal, Bill Jones, who is twelve years old and lives in Cairns, North Queensland, Australia. Cairns is about the same size as Grande Prairie, but is a seacoast town in the tropics. It never freezes there, and Bill will have no idea what hockey is all about or how to play it. He will play such games as soccer and rugby league football, and will probably be an avid swimmer. To make Bill understand what they are talking about, it will be necessary for the kids to be very explicit. Please share this context with the students at the outset of the unit. The writing assignment formats that will be used will be designed as hypothetical letters, with a brief introduction provided.

Good luck, and thanks again for your assistance.

Yours truly,

Keith Wagner
4160 Morris Drive
Victoria, B.C. V8X 2K2
(479-5392)

or

Room 362, MacLaurin Building
University of Victoria
(477-6911, Local 4866)

MEMO No. 3 March 1, 1979

FROM: Keith Wagner, Graduate Student
University of Victoria

TO: Derek Taylor, Superintendent of Schools
Neil Dobson, Carol Mitchell - Parkside
Lionel Kyle - Avondale
Henry Schellenberg, Guy Spencer - Hillside
Linda Patterson, Len Toews - Swanavon

RE: Masters Research Project

By now you will have received Introductory Lessons 1 and 2 and will have had time to peruse those lessons. Since I have received no queries about them, I assume that you are ready to teach the lessons in the week of March 12 - 16 as outlined in the schedule in Memo No. 1.

At this point, it appears that the schedule outlined in Memo No. 2 will be suitable, and I request you to follow that schedule. On this date, I am forwarding the five lesson plans that comprise the body of the Hockey unit to Central Office, and they will be distributed to you. Each lesson contains information about the materials necessary, and I ask you to read over the set of lesson plans in advance. Access of materials may require some local phone calls on your behalf; I trust that it will not cause anyone really great inconveniences.

Central Office will also be xeroxing 30 copies of the letter-assignment format for each teacher/class, and will be advising you regarding what type of writing instrument the students should use so that their assignments may be readily xeroxed.

You will note that students have been asked to put their names and schools on each assignment. After the name of the school, please have them put some class identification. This can consist of the teacher's name or simply Class A or B or Class 1 or 2; anything which will allow me to keep the classes separated when I select my stratified random sample. In our conversations we discussed using a code, but I decided that it would be simpler for students to state their names and schools; I will code them after I select the stratified random sample.

You will also note that the maximum time designations for each Period in the lessons is a bit different from those outlined in Memo No. 1. I found that some of the stimulus material is longer than I anticipated. Therefore, the times outlined in Memo 1 should be revised as follows:

Period 1 (Maximum of 80 minutes)
Period 2 (No change - 20-30 minutes)
Period 3 (Maximum of 60 minutes)
Period 4 (No change - 30-40 minutes)

You will note that it does not matter what day you teach a given lesson, as long as the order of lessons is as outlined for your school. Neither does it matter what times of the day you use for the lesson periods. So that I have some record of the above, I would ask that you maintain the attached log and forward it to me (through Central Office) so that I might be able to note these details in my description of research.

Thank you once again, and have fun with the lessons. If you weren't a hockey fan before, you will be now.

Yours truly,

Keith Wagner
4160 Morris Drive
Victoria, B.C. V8X 2K2
(497-5392)

or

Room 362, MacLaurin Building
University of Victoria
(477-6911, Local 4866)

Hockey Unit - Teachers' Log

School _____

Teacher _____

I. Descriptive Writing Lesson (3)

A. Teaching Time _____ Day _____ Time _____

Period 1 _____

Period 2 _____

Period 3 _____

Period 4 _____

B. Unusual Circumstances - if any

_____

_____

_____

II. Factual Narrative Report Lesson (4)

A. Teaching Time _____ Day _____ Time _____

Period 1 _____

Period 2 _____

Period 3 _____

Period 4 _____

B. Unusual Circumstances - if any

_____

_____

_____

III. Fictional Narrative Lesson (5)

A. Teaching Time _____ Day _____ Time _____

Period 1 _____

Period 2 _____

Period 3 _____

Period 4 _____

B. Unusual Circumstances - if any

_____

_____

_____

IV. Expository Lesson (6)

A. Teaching Time _____ Day _____ Time _____

Period 1 _____

Period 2 _____

Period 3 _____

Period 4 _____

B. Unusual Circumstances - if any

_____

_____

_____

V. Argumentative Lesson (7)

A. Teaching Time _____ Day _____ Time _____

Period 1 _____

Period 2 _____

Period 3 _____

Period 4 _____

B. Unusual Circumstances - if any

_____

_____

_____

MEMO No. 4 March 14, 1979

FROM: Keith Wagner, Graduate Student
University of Victoria

TO: Derek Taylor, Superintendent of Schools

Neil Dobson - Parkside
Sharon Mitchell - Parkside

Lionel Kyle - Avondale

Henry Schellenberg - Hillside
Guy Spencer - Hillside

Linda Patterson - Swanavon
Len Toews - Swanavon

RE: Masters Research Project
Clothing Unit "Everyone's Wearing It"

By now you will be well into the Hockey Unit. I hope that it is going well for you. As outlined in Memo No. 1, I will be asking that you teach the Clothing unit from May 7 to May 25. If some of you find it necessary to extend the unit into the week of May 28 - June 1, no great harm should be done.

At this time I would like your reaction to the following lesson ideas for the unit. Please forward your reaction to Mr. Taylor on the form provided no later than March 23. The format of writing letters to Boomer would be continued

1. Descriptive Writing Lesson: Australian school children wear uniforms. Your children imagine they have received a letter from Boomer describing their school uniforms. Boomer has asked for a description of what Canadian school children wear. The class selects four representative students, and discusses how they would describe their clothing. They then write the description.

2. Factual Narrative Report: Linda Patterson has volunteered to arrange for a videotape to be made of a fashion show by a Grande Prairie clothing store. Students would view the tape, discuss it, and then write an account of what happened.

3. Fictional Narrative Story: You would read to the students the excerpt from "Me and Fat Glenda (page 212, Starting Points in Language). Students would discuss possible story sequels, and would then write a story sequel.

4. Exposition: You would involve the students in a tie - dying activity. They would discuss what they did, and then write an explanation of how to do tie - dying.

5. Argument: Students would listen to a tape-recorded interview of how some students feel about wearing school uniforms. They would then discuss the pros and cons of school uniforms. They would then write an argument either pro or con on the issue.

Once again, the order in which you do the assignments would be chosen randomly and assigned to you.

Thank you for your continuing time and efforts.

Yours truly,

Keith Wagner
4160 Morris Drive
Victoria, B.C. V8X 2K2
(497-5392)

or

Room 362, MacLaurin Building
University of Victoria
(477-6911, Local 4866)

Name: _____

Clothing Unit - Reaction Sheet
(Return to Derek Taylor by March 23, please)

1. Descriptive Writing Lesson

Would be alright as suggested.

Should be changed in this way.

_____

_____

_____

_____

2. Factual Narrative Report Lesson

Would be alright as suggested.

Should be changed in this way.

_____

_____

_____

_____

3. Fictional Narrative Story Lesson

Would be alright as suggested.

Should be changed in this way.

_____

_____

_____

_____

4. Expository Lesson

Would be alright as suggested.

Should be changed in this way.

5. Argument Lesson

Would be alright as suggested.

Should be changed in this way.

MEMO No.5 April 20, 1979

FROM: Keith Wagner, Graduate Student
University of Victoria

TO: Derek Taylor, Superintendent of Schools

Neil Dobson - Parkside

Lionel Kyle - Avondale

Henry Schellenberg - Hillside
Guy Spencer - Hillside

Linda Patterson - Swanavon
Len Toews - Swanavon

RE: Masters Research Project - Clothing Unit

Along with this memo you will be receiving a materials package containing such items as the lesson plans, slides and audiotapes, a teacher's log, and a student questionnaire.

I. Lesson Schedule

Although the lessons are numbered, once again you will not necessarily teach them in consecutive order. This order was drawn randomly as this is part of the research design. A notation about the order is included with each lesson plan, and a summary is as follows: (Dates are suggestions only; the sequence is mandatory).

May 1 - 8: Everyone teaches Lesson 8, the introductory lesson first.

Parkside: Description (May 7 - 8 - 9)
Factual Narrative Report (May 10 - 11)
Fictional Narrative Story (May 15 - 16)
Exposition (May 17 - 18)
Argument (May 22 - 25)

Swanavon: Fictional Narrative (May 7 - 8 - 9)
Description (May 10 - 11)
Argument (May 14 - 15 - 16)

Factual Narrative Report (May 17 - 18)
Exposition (May 22 - 25)

Avondale: Argument (May 7 - 8 - 9)
Exposition (May - 10 -11)
Factual Narrative Report (May 14 - 15 - 16)
Fictional Narrative Story (May 17 - 18)
Description (May 22 - 25)

Hillside: Exposition (May 7 - 8 - 9)
Description (May 10 - 11)
Factual Narrative Report (May 14 - 15 - 16)
Fictional Narrative Story (May 17 - 18)
Argument (May 22 - 25)

II. Materials Required

I hope you did not experience undue difficulty with the logistics of sharing materials for the Hockey Unit. It should be easier with this unit.

1. For Lessons 8, 10, 11, and 12 you will need various portions of the unit "Everyone's Wearing It" in Starting Points. Details are provided in lesson plans.

2. For Lesson 9 you need a set of slides. One set per school is supplied in the teacher kits. (Toews and Patterson will share, Spencer and Schellenberg will share).

3. For Lessons 11 and 13 you need audiotapes. One per school is supplied in the kits. (Sharing as above).

4. For Lesson 10 you may need a videotape depending which of two alternatives you choose. The tape will be available from Linda Patterson at Swanavon (Thanks, Linda) or from Central Office.

III. Length of Periods

You should not require quite as much time for Period 1 as was usually necessary in the Hockey Unit (80 minutes). Most of the lessons in the Clothing Unit should require around 40 minutes for Period 1. There is some variability from lesson to lesson here, and the research design permits this. Don't worry about it.

However, the length of time outlined for Period 2 (20-30 minutes), Period 3 (60 minutes), and Period 4 (40 minutes) should be adhered to closely if at all possible.

IV. Teacher's Log

Please complete the teacher's log (which accompanied Memo 3) now if you haven't already done so, and forward it to Mr. Taylor so he can forward them all to me. A similar log for the Clothing Unit is attached; it might be easiest to complete it as you go along. It should be forwarded to Mr. Taylor by May 30 if possible.

V. Student Questionnaire

Please have the students complete the questionnaire as soon as they are finished the Clothing Unit. Explain it to them as a class as they work through it individually. Send to Central Office by May 30 if possible.

VI. Lesson 10 - Factual Narrative Report

You will note that there are alternative ways of doing this lesson, dependent on which you feel is best for your class. You should read over the plan and make your choice well in advance of teaching the lesson so that you can get the necessary materials, etc.

I hope that I have covered all the "loose ends" in this memo. From April 23 to May 15 I will be in the Prince Rupert - Kitimat area supervising student teachers for University of Victoria. I will phone Mr. Taylor periodically to see whether there are any problems arising. Many thanks for your continued efforts on my behalf.

Yours truly,

Keith Wagner
4160 Morris Drive
Victoria, B.C. V8X 2K2
(479-5392)

or

Room 362, MacLaurin Building
University of Victoria
(477-6911, Local 4866)

Clothing Unit - Teacher's Log

School_____

Teacher_____

I. Descriptive Writing Lesson (9)

A. Teaching Time _____ Day _____ Time _____

Period 1 _____

Period 2 _____

Period 3 _____

Period 4 _____

B. Unusual Circumstances - if any

_____

_____

_____

II. Factual Narrative Report Lesson (10)

A. Teaching Time _____ Day _____ Time _____

Period 1 _____

Period 2 _____

Period 3 _____

Period 4 _____

B. Unusual Circumstances - if any

_____

_____

_____

III. Fictional Narrative Lesson (11)

A. Teaching Time _____ Day _____ Time _____

Period 1 _____

Period 2 _____

Period 3 _____

Period 4 _____

B. Unusual Circumstances - if any

_____

_____

_____

IV. Expository Lesson (12)

A. Teaching Time _____ Day _____ Time _____

Period 1 _____

Period 2 _____

Period 3 _____

Period 4 _____

B. Unusual Circumstances - if any

_____

_____

_____

Argumentative Lesson (13)

A. Teaching Time Day Time

Period 1

Period 2

Period 3

Period 4

B. Unusual Circumstances - if any

APPENDIX C

LESSON PLANS

FOR

HOCKEY AND CLOTHING UNITS

Language Arts Unit - Hockey

Introductory Lesson Plan (No. 2)

(March 14 - 16, 1979)

NOTE: All students will be taught this lesson in the week of March 12 - 16. There are no written composition expectations in this lesson. It may be considered a "warm up" lesson. Teachers may depart from or add to the suggested outline to serve whatever purposes in reading skills instruction that are desired. The lesson may require five or six periods and should be extended over two or three days of instruction.

I. Purpose

To whet students' interest in the topic of hockey and to provide some knowledge background for the unit.

To develop and extend whatever reading skills are seen appropriate by the teacher.

To provide an enjoyable reading experience for students.

II. Student Outcomes

1. The student will indicate an interest in the topic of hockey by showing willingness to discuss it and read about it.
2. Whatever specific reading skill outcomes are deemed appropriate by the teacher.

III. Teaching Procedures

1. Conduct a general class discussion about hockey. Have those students who play hockey tell about their experiences.

1. When did they start?
2. What team do they play with?
3. What are the basic rules of the game?
4. What are some playing strategies?
5. How could the game be compared to (a) floor hockey (b) basketball - or any other sport?
6. What do they enjoy most about playing the game?
7. Who are their favorite professional teams and players?

Encourage those students who don't know much about hockey to ask a lot of questions. You could have a large diagram of an ice surface handy for ready reference.

2. Have students read the story "Hockey Fever in Goganne Falls" on pages 208 - 235 of Starting Points in Reading C2 (Teaching notes on Pages 186 - 192 of teacher's guide).

   NOTE: Teaching the research units will probably not allow you time to complete all the Starting Points material anyway. Although there are writing activities suggested in the Teacher's Guide, do not have students do these, as they will be doing quite enough writing as they launch into the main body of the unit.

3. Have students read the story "Hockey's Big "M", copies of which will be provided to you.

   You might have them discuss what mode of writing different parts of the story represent. Most of it is factual narrative reportage or exposition.

Vocabulary that might be discussed would include:

p. 326 - scout

p. 327 - O.H.A. N.H.L.

p. 328 - pro game

p. 331 - potential big leaguer

4. Have students read "The High Art of Playing Hockey", copies of which will be provided to you.

Vocabulary that might be discussed would include:

p. 97 - playmaking

defenseman

forechecking

p. 98 - the Rocket (Maurice Richard)

face - offs

house - league

minor - league

p. 99 - slapshot

wrist shot

backhand

As a general comprehension exercise, you might pose the question "What can you learn about hockey playing from reading this article?"

NOTE: If questions arise about the technicalities of hockey that you feel you can't answer, try Guy Spencer at Hillside School or Lorne Radbourne at Montrose.

IV. Evaluation

It is not necessary that you conduct any formal evaluation of this lesson. Hopefully, students will be showing interest in the topic and will be ready to launch into Lesson 5 - 9 in whatever order you have been assigned to do them. Bon Chance!

Language Arts Unit - Hockey

Descriptive Writing Lesson Plan (No. 3)

Materials Required: (1) slides of the Recplex by Neil Dobson (2) tape recording of sounds inside a hockey arena (The tape will be provided to you) (3) complete hockey uniform supplied by one of the students plus (if possible) a mannequin to wear it.

I. Purpose

To provide the stimulus for a descriptive writing experience, and opportunity for students to write in a descriptive mode.

II. Students Outcome

Given a stimulus consisting of an input of experience and opportunity to discuss that experience, students will write an explicit description of a minimum of one-hundred fifty words.

III. Teaching Activities

Period 1 Inform the students that they will be expected to write a description of the sights and sounds of a hockey arena in a letter to Bill Jones (nicknamed Boomer). Have them briefly refer back to Introductory Lesson 1 to review the definition and characteristics of descriptive writing.

Tell students that in order to assist them to generate some ideas, they will be (1) looking at slides of an arena (2) looking at and handling hockey uniform equipment (3) listening to the sounds that might be heard in an arena.

Show the slides, and ask them to be thinking of how they might describe what they see. Encourage them to think of such aspects as size of objects, color, texture, etc. If they are doubtful about the names of objects, these may be placed on the board as single words. Do not place whole phrases or sentences on the board.

Then have students listen to the tape and think about the sounds.

Then show them the hockey uniform. They could also handle the separate parts of the uniform, and once again, names of objects may be placed on the board (no phrases or sentences).

Period 2 (Should be on the same day as Period 1; it could follow it directly or there might be a recess break or another class period between Period 1 and Period 2).

Divide students into groups of from three to five per group. Have them discuss with one another how they might describe a hockey arena and the hockey players in it to someone who had never seen an arena nor a hockey player. Remind them that they are to tell what they see at one point in time; they are not to tell about action or what happens.

Hand out the assignment sheets and explain the assignment to them. Explain that in the next period they will write their descriptions on looseleaf or foolscap, and that they will be given a final period to rewrite the assignments on the assignment sheet. Allow them time to ask questions so that they are clear about what they are to do. Reemphasize that it is description that is expected.

Period 3 (Should be on the same day as Periods 1 and 2. It could follow Period 2 directly or there might be a recess or noon break or another class period between Period 2 and Period 3).

Provide a full sixty minutes for writing. An alternate activity such as free reading can be set for those who finish early. Explain that they should write as complete a description as possible, but that they should finish a first draft in this period. Do not set a minimum or maximum length in terms of number of words or pages. You may provide assistance in spelling if requested, but do not assist with basic content, organization, or structure. In particular, do not assist with sentence structure.

Period 4 (Should be on the day after Periods 1, 2, and 3).

Allow time for rewriting on the format paper supplied. Remind students to use their best handwriting, sentence structure, etc. Provide assistance with spelling if requested. Do not provide other forms of assistance, especially not with sentence structure.

The maximum time provision should be forty minutes; collect assignments then even if students are not fully finished.

Make sure that they put their name and school on the format paper.

IV. Evaluation

Forward the papers to Central Office for xeroxing. They will be returned to you. Keep all five assignments until the unit is complete. Then you may return them to the students. You may grade them in any way you wish, except that you are requested not to make to comments about sentence structure, nor should you do any teaching about sentence structure, until after the second unit on Clothing is completed.

Hockey Unit - Descriptive Writing Lesson

Your Name _____

Your School _____

Grande Prairie, Alberta
March 25, 1979

Dear Boomer:

It was good to hear from you again. It is interesting to have a penpal who lives in such a different area from where I live. Thanks for describing the city of Cairns for me. It gave me a very good picture of where you live. You really seem to be interested in hockey, and want to know what a hockey arena and hockey players are like.

Language Arts Unit - Hockey

Factual Narrative Report Writing Lesson Plan (No. 4)

NOTE: This lesson is to be taught as the second lesson in the body of the unit by Parkside and Swanavon, probably in the latter part of the week of March 19-23. It is to be taught as the fourth lesson in Avondale, probably in the week of March 26-30. It is to be the last lesson in Hillside School probably in the week of April 2-5. (See Memos #1 and #2).

Materials Required: The videotape of a hockey game, available from Gerry Mazer in Central Office.

I. Purpose

To provide the stimulus for a factual narrative report writing experience, and opportunity for students to write in the factual narrative report mode.

II. Student Outcomes

Given a stimulus consisting of an input of experience and opportunity to discuss that experience, students will write an explicit factual narrative report of a minimum of one-hundred fifty words.

III. Teaching Activities

Period 1 (May require more than fifty minutes of time - Do not extend it beyond eighty minutes)

Inform the students that they will be expected to write a factual narrative report of a hockey game which they will see on T.V. Have them briefly refer back to Introductory Lesson 1 to review the definition and characteristics of factual narrative report writing with them.

Hand out the news report of a hockey game and read through it with them to provide an example. If necessary, discuss some of the terminology such as "starting line", "ceremonial first shift", "pinpoint pass", "hooking", "power play", "backhand", "forechecking", and "veteran line".

Provide the students with a list of players' names and numbers. Have them view the videotape. You may wish to use "fast forward" to skip over some of the rather uneventful portions of the game.

Period 2 (Should be on the same day as Period 1; if Period 1 is from 9:00 - 10:20 a.m., Period 2 could follow after recess).

Divide students into groups of from three to five per group. Try to put one student who is somewhat knowledgeable about hockey in each group. Have them discuss what they feel were highlights of the game and how they might report on it to someone who had not seen it. Remind them that they are to report what happened - the action game.

A brief whole class discussion could follow, and a point form summary of goals and penalties could be placed on the chalkboard. Be sure to use point form, not sentences.

Hand out the assignment sheets and explain the assignment to them. Explain that in the next period they will write their narrative reports on looseleaf or foolscap, and that they will be given a final period to rewrite the assignments of the letter format assignment sheets.

Period 3 (Should be on the same day as Periods 1 and 2; probably in the afternoon).

Provide a full sixty minutes for writing. Students may have access to the names of players and to the point form outline summary of goals and penalties. Explain that they should write as complete a report as possible, and that they needn't worry too much about accuracy of details. Do not set a minimum or maximum length. You may provide assistance with spelling if requested, but do not provide further assistance with basic content, organization, or structure. In particular, do not assist with sentence structure.

Period 4 (Should be on the day after Periods 1, 2, and 3).

Allow time for rewriting on the format paper supplied. Remind students to use their best handwriting, sentence structure, etc. Provide assistance with spelling if requested. Do not provide other forms of assistance, especially not with sentence structure.

The maximum time would be forty minutes; collect assignments then even if students are not fully finished.

Make sure they put their name and school on the format paper.

IV. Evaluation

Forward papers to the Central Office for xeroxing. They will be returned to you. Keep all five assignments until the unit is complete. Then you may return them to the students. You may grade them in any way you wish, except that you are requested to make no comments about sentence structure, nor should you do any teaching about sentence structure, until after the second unit (Clothing) is completed.

Hockey Unit - Factual Narrative Writing Lesson

Your Name _____

Your School _____

Grande Prairie, Alberta
March 25, 1979

Dear Boomer:

Thank you for your last letter. I really enjoyed your report about the World Cup Rugby League play off games between England and Australia. In this letter I'll tell you about an exciting hockey game.

Language Arts Unit - Hockey

Fictional Narrative Story - Writing Lesson Plan (No. 5)

This lesson is to be taught as the second lesson in the body of the unit by Avondale and Hillside, probably in the latter part of the week of March 19-23. It is to be taught as the third lesson by Swanavon, probably in the week of March 26-30, and as the last lesson in Parkside, probably in the week of April 2-5 (See Memos #1 #2).

Materials Required: The audio-taped reading of the book The Wild Canadians: Hockey's Bush League Champs by Chip Young. This audio-tape will be forwarded to each school by Central Office.

I. Purpose

To provide the stimulus for a fictional narrative story-writing experience, and opportunity for students to write in the fictional narrative mode.

II. Student Outcome

Given a stimulus consisting of an input of experience and opportunity to discuss that experience, students will write an interesting fictional story at least one hundred-fifty words in length.

III. Teaching Activities

Period 1 Inform students that they will be expected to write a fictional narrative story about hockey in a letter to their Australian penpal, Bill Jones. Have them briefly refer back to Introductory Lesson 1 to review the definition and characteristics of the fictional narrative mode.

Tell them that in order to help them generate some ideas, they will be listening to a tape-recording of a fictional story about hockey, The Wild Canadians: Hockey's Bush League Champs. Warn them that the story was probably written for younger children, but that it might still be fun for them to listen to. Explain that the two teams involved are made up of bush animals. The Canadian team consists of Rink Rat (Captain), Uncle Shack Rat (Coach), Grandpa Groundhog (Goalie), SLick Otter, Digger Wolverine, Elmwood Beaver, and Skinny Weasel. The American team consists of Boom Boom Bear (Coach), Flash Badger (Captain), Coy Bobcat (Goalie), Rascal Coon, Beanblossum Polecat, Buck Rabbit, and Sully Possum.

So that students listen attentively, pose the following questions:

1. In what way is the story fictionalized?
2. In what ways is the story based on details that could be true?
3. How does the author of the story maintain the listener's interest?

Than have the students listen to the story.

Period 2 (Should be on the same day as Period 1; it could follow it directly or there might be a recess break or another class period between Period 1 and Period 2).

Divide students into groups of from three to five per group. Have them discuss the questions which were posed at the start of the listening experience. Also, have them brainstorm other ideas for fictionalizing a story about hockey, for example, writing from the point of view of the puck, or signing up a "bionic" player to assist an underdog team.

After about 15 minutes of such discussion, each group could report to the whole class.

Then hand out the assignment sheets and explain the assignment to them. Explain that in the next period they will write their stories on looseleaf or foolscap, and that they will be given a final period to rewrite the assignments on the assignment sheet. Allow them time to ask questions so that they are clear about what they are to do. Reemphasize that it is a fictional story that is expected.

Period 3 (Should be on the same day as Periods 1 and 2; it could follow Period 2 directly or there might be a recess or noon break or another class period between Period 2 and Period 3).

Provide a full sixty minutes for writing. Students may write the story any way they like, as long as it is fictional and it is about hockey in some way. Explain that they should finish

their first draft in this period. Do not set a minimum or maximum length. You may provide assistance in spelling if requested, but do not assist with basic content, organization, or structure. In particular, do not assist with sentence structure.

Period 4 (Should be on the day after Periods 1, 2, and 3).

Allow time for rewriting on the format paper supplied. Remind students to use their best handwriting, sentence structure, etc. Provide assistance with spelling if requested. Do not provide other forms of assistance, especially not with sentence structure.

The maximum time provision should be forty minutes; collect assignments then even if students are not fully finished.

Make sure they put their name and school on the format paper.

IV. Evaluation

Forward the papers to Central Office for xeroxing. They will be returned to you. Keep all five assignments until the unit is complete. Then you may return them to the students. You may grade them in any way you wish, except that you are requested to make no comments about sentence structure, nor should you do any teaching about sentence structure, until after the second unit (Clothing) is completed.

Hockey Unit - Fictional Story - Writing Lesson

Your Name _____

Your School _____

_____

Grande Prairie, Alberta
March 25, 1979

Dear Boomer:

Hi! How are things in Australia? It's getting warmer here now as we enter the spring season. I guess it is autumn there now. If you lived here in Canada, you would be getting excited because the hockey playing season starts in the autumn season.

Since I haven't done anything very exciting since I wrote last, I'm going to share with you a story I wrote. As usual, it's about hockey, but I'm warning you, this one isn't all true! Here goes!

_____

_____

_____

_____

_____

Language Arts Unit - Hockey

Expository Writing Lesson Plan (No. 6)

NOTE: This lesson is to be taught as the first lesson in the body of the unit by Parkside, probably early in the week of March 19-23. It will be the third lesson in Hillside School, probably in the week of March 26-30. It will be the fourth lesson in Swanavon School, probably late in the week of March 26-30 or early in the week of April 2-5. It will be the last lesson in Avondale School, probably late in the week of April 2-5.

Materials Required: Guy Spencer (Hillside) will prepare and distribute a short outline for a chalktalk explanation about the basics of hockey. In addition, he has available a series of four short (12 minute) videotapes which explain various aspects of hockey strategy. (Playing Your Position - Penalty Killing - The Power Play - Refereeing).

I. Purpose

To provide the stimulus for an expository writing experience, and opportunity for students to write in the expository mode.

II. Student Outcome

Given a stimulus consisting of an input of experience and opportunity to discuss that experience, students will write an

explicit explanation of how to play hockey, using a minimum of one hundred fifty words.

III. Teaching Activities

Period 1 Inform the students that they will be expected to write an explanation of how to play hockey in a letter to their Australian penpal. Suggest that since Boomer would know very little about hockey, they may wish to concentrate on the basic ideas and elaborate a bit on one or two of the "finer points". Have them briefly refer back to Introductory Lesson 1 to review the definition of expository writing.

Tell students that in order to assist them to generate some ideas, you will be providing a brief explanation and showing them four videotapes.

Using chalkboard diagrams and/or overhead projector, explain the basic ideas of playing surface, number and position of players, off side rule, etc. (5-10 minutes) Then show the first videotape "Playing Your Position". You may wish to follow this up by a further bit of explanation. Then show the remaining three videotapes.

(The above sequence of instruction may require more than 50 minutes - but do not extend it beyond 80 minutes).

Period 2 (Should be on the same day as Period 1; it could follow it directly or there might be a recess break or another class period between Periods 1 and 2).

Divide students into groups of from three to five per group. Try to put one student who is somewhat knowledgeable about hockey in each group. Direct them to discuss what would be the most essential things to tell someone who knew nothing about hockey so that he could understand the game. After approximately 10-15 minutes of such discussion, a brief whole class discussion could follow. Each group could report briefly one or two things that they thought would be important.

Hand out the assignment sheets and explain the assignment to them. Explain that in the next period they will write their expository reports on looseleaf or foolscap, and that they will be given a final period to rewrite the assignments on the letter format assignment sheets.

Period 3 (Should be on the same day as Periods 1 and 2; it could follow Period 2 directly or there might be a recess or noon break or another class period between Periods 2 and 3)

Provide a full sixty minutes for writing. An alternative activity such as free reading can be set for those who finish early. Explain that they should write as complete an explanation as possible, but that they should finish a first draft in this period. Do not set a minimum or maximum length in terms of numbers of words or pages. You may provide assistance in spelling, if requested, but do not assist with basic content, organization, or structure. In particular, do not assist with sentence structure.

Period 4 (Should be on the day after Periods 1, 2, and 3)

Allow time for rewriting in the format paper supplied. Remind students to use their best handwriting, sentence structure, etc. Provide assistance with spelling if requested. Do not provide other forms of assistance, especially not with sentence structure.

The maximum time provision should be forty minutes; collect assignments then even if students are not fully finished.

Make sure they put their name and school on the format paper.

IV. Evaluation

Forward the papers to Central Office for xeroxing. They will be returned to you. Keep all five assignments until the unit is complete. Then you may return them to the students. You may grade them in any way you wish, except that you are requested to make no comments about sentence structure, nor should you do any teaching about sentence structure, until after the second unit (Clothing) is completed.

Hockey Unit - Expository Writing Lesson

Your Name _____

Your School _____

Grande Prairie, Alberta
March 25, 1979

Dear Boomer:

Hi! Thank you for your last letter. I really enjoyed your explanation of how cricket is played. It isn't played much here in Canada, and I've never seen a match. I guess you have never seen hockey played either. Do you ever see a game on T.V.? In case you don't know how it is played, I'll explain it to you.

Language Arts Unit - Hockey

Argumentative Writing Lesson Plan (No. 7)

NOTE: This lesson is to be taught as the first lesson in the body of the unit by Hillside, probably early in the week of March 19-23. It will be the third lesson in Avondale and Parkside, and will probably be taught in the week of March 26-30 in those schools. It will be the final lesson of the Hockey unit in Swanavon, and will probably be taught in the week of APril 2-5 there.

Materials Required: The National Film Board 16mm film "It's Winning That Counts" (playing time approximately 56 minutes) is available from Central Office. Request it as required.

I. Purpose

To provide the stimulus for an argumentative or persuasive writing experience, and opportunity for students to write in the argumentative mode.

II. Student Outcome

Given a stimulus consisting of an input of experience and opportunity to discuss that experience, students will write a convincing argument of at least one hundred fifty words in length.

III. Teaching Activities

Period 1 Inform the students that they will be expected to write an argument expressing their view about whether hockey for peewee age children (10-12 years) should be highly organized in leagues with a lot of emphasis placed on winning and excellence of play. Have them briefly refer back to Introductory Lesson 1 to review the definition and characteristics of the argumentative mode of writing. Their argument will be expressed in a letter to their fictional Australian penpal, Boomer. (Bill Jones)

Tell them that in order to help them generate some ideas, they will be viewing a film entitled "It's Winning That Counts." In this film two things happen which will provide them with ideas for their arguments. First, the film follows one team, the Shopsy Pee Wees of Toronto, through a season of play to their final high pressure involvement in the Pee Wee Hockey Tournament held along with the Quebec Winter Carnival. In connection with this aspect of the film, you might pose the following questions prior to the film:

1. What do you think of the coach, Curly Davis? How does he treat the kids?
2. Two players were injured before the Quebec tournament (wrist-casts), but they played anyway. What do you think of this?

3. What do you think of the team manager and his treatment of the kids?
4. How much pressure do crowds put on the kids in these tournaments?
5. Before the final game against the Toronto Blues, the coach described the trophies. Was this a good thing to do?
6. How do you think the Shopsy goalie felt at the end of the final game?

The second aspect of the film is the opinions expressed throughout by noted hockey figures. Prior to the film, tell the students who these people are, and ask them to note which way they argue, and some of the reasons they give to support their arguments. The characters and some of the reasons are listed below for your information.

1. BILL STEVENSON - TORONTO SPORTSCASTER (Against)
   - 10-12 year olds are not mature enough
   - Many drop out of hockey because of the pressure
   - You don't have to play hockey four or five times a week at that age to develop potential
   - Adults "use" kids for a big entertainment kick
   - Kids are able to take trips to Quebec without the pressure of playing in hockey tournaments
2. ALAN EAGLESON - PLAYER REPRESENTATIVE (Against)
   - Practices are at bad times for the family

- Parents use the kids to recreate their own dreams
- Kids have enough problems already
- Whether a kid is going to be good or not is determined later
- Someone has to lose, and for kids this age it seems like the end of the world

3. STAN OBODIAC - PUBLIC MANAGER, MAPLE LEAF GARDENS (For)
   - Professional hockey status is the peak of life and culture in this country
   - Anyone who is good in an endeavor must work at it (Russian ballet)
   - The aggressive thrust of hockey helps this country in time of war
   - The Tournament does a lot for Quebec
   - Kids who play get to travel, and this is a unifier of Canada
4. JEAN BELIVEAU - NHL STAR (Fence Sitter?)
   - Mentions both sides, but doesn't seem to take a strong position either way

After setting the stage by providing some of the above background and posing some questions, show the film. Between reels, you may wish to have brief discussion related to the questions. Period 1 should not exceed 80 minutes in length.

Period 2 (Should be on the same day as Period 1; it could follow directly or there might be a recess break or another class period between Periods 1 and 2).

Divide students into groups of from three to five per group. Try to include students who are for and against organization and competition in each group. Ask them to discuss the questions in the film, and any other ideas they might have about the issue. After 10-15 minutes of such discussion, each group could report to the whole class.

Then hand out the assignment sheets and explain the assignment to them. Explain that in the next period they will write their arguments on looseleaf or foolscap, and that they will be given a final period to rewrite the assignments on the format sheets. Allow some time for questions so that they are clear about what to do. Reemphasize that it is an argument that is expected.

Period 3 (Should be on the same day as Periods 1 and 2; it could follow Period 2 directly or there might be a recess or noon break or another class period between Period 2 and 3).

Provide a full sixty minutes for writing. Explain that they should finish their first draft in this period. Do not set a minimum or maximum length. You may provide assistance with spelling if requested, but do not assist with basic content, organization, or structure. In particular, do not assist with sentence structure.

Period 4 (Should be on the day after Periods 1, 2, and 3).

Allow time for rewriting on the format paper supplied. Remind students to use their best handwriting, sentence structure, etc. Provide assistance with spelling if requested. Do not provide other forms of assistance, especially not with sentence structure.

The maximum time provision should be forty minutes; collect assignments then even if students are not fully finished.

Make sure they put their name and school on the format paper.

IV. Evaluation

Forward the papers to Central Office for xeroxing. They will be returned to you. Keep all five assignments until the unit is complete. Then you may return them to the students. You may grade them in any way you wish, except that you are requested to make no comments about sentence structure, nor should you do any teaching about sentence structure, until after the second unit on Clothing is completed.

It's Winning That Counts

---

55 min.24sec.
Color
16mm: 106C0175200
D-P: Grahame Woods

Have children's hockey teams become too organized, too high-pressured, too competitive? With these questions in mind, this film follows one team - the Shopsy Pee Wees of the Metropolitan Toronto Hockey League - through a season of triumph and heartbreak to the ultimate test: participation in the Annual Pee Wee Hockey Tournament held in conjunction with the Quebec Winter Carnival.

Advantages and disadvantages of the pee wee hockey system are discussed by such well-known sports figures as Alan Eagleson, Director of the National Hockey League Players' Association; Stan Obodiac, Publicity Director for Maple Leaf Gardens; Bill Stevenson, Toronto sportscaster; and Jean Beliveau, former Montreal Canadiens star.

National Film Board of Canada

Hockey Unit - Argumentative Writing Lesson

Your Name _____

Your School _____

_____

Grande Prairie, Alberta
March 25, 1979

Dear Boomer:

Hi! I was happy to get your last letter and to hear that you have been enjoying your soccer playoffs. We play some soccer here, but mostly just for fun. We don't have highly organized tournaments in Pee Wee hockey.

_____

_____

_____

_____

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_____

Language Arts Unit - Clothing

Introductory Lesson Plan (No. 8)

NOTE: This lesson should be taught by all schools during the latter part of the week of April 30 - May 4, or early in the week of May 7-11. No writing should be assigned as part of the lesson, as students will be doing a lot of writing in the next lessons.

Material Required: Ginn Starting Points, Level C, Section 5.

I. Purpose

1. To introduce the unit on Clothing and begin to develop the students' interest in the topic.
2. To accomplish the language art objectives determined by Ginn Program for the selections used.

II. Student Outcome

1. The student will demonstrate through discussion that he comprehends a short Haiku poem.
2. The student will state the moral of a common folk tale.
3. The student will correctly identify the mode of writing evident in short selected passages.

III. Teaching Activities

1. Inform students that the class will be doing a unit related to the topic of clothing, and that they will be sharing some selections from Ginn Starting Points and doing some more of the letter writing to Boomer as they did in the Hockey unit. (Hopefully the groans will not be too loud).

2. On the chalkboard, write the statement:

   "Clothes make the man."

   Have students discuss briefly what the statement means and whether they agree with it.

3. Ask students to turn to page 145 of Starting Points in Reading C: Second Book, and read the short poem. Choose a volunteer to read it out loud.

   Ask "Why does the poet think he must look like someone else in his new clothing?"

   and "Do you ever feel you must look like someone else when you wear new clothing? Why?"

4. (Optional)

   1. Discuss the Haiku format of the poem.
   2. Discuss the title on Page 144, "But Everyone's Wearing It!"
   5. Introduce and have the students read the folktale, "The Emperor's New Clothes" (p.156 Ginn)

Select from the guidebook whatever activities you see fit, but emphasize the discussion of the moral of the story.

(Note: Since this is a rather difficult story, some of your weaker readers may have difficulty with it. It would be quite acceptable to have a strong reader read it orally to a weak reader)

6. Review briefly with students the definitions and characteristics of the five modes of writing: (1) description (2) factual narrative report (3) fictional narrative story writing (4) exposition (5) argument.

   Place the assignment on the chalkboard or overhead, or ditto it for students, have them attempt to do it, and then discuss in class: (a) exposition (b) description (c) factual narrative report, or could be fiction (d) argument (e) description.

IV. Evaluation

Base on assessment of how well the student has met the outcomes.

NOTE: (No part of this lesson need be forwarded to Central Office).

Language Arts Unit - Clothing

Introductory Lesson Assignment

1. Which of these modes or types of writing does the folktale "The Emperor's New Clothes" belong to?

   (1) description (2) factual narrative report (3) fictional narrative story - writing (4) exposition (5) argument

2. Which modes of the five listed above in question #1 would best describe the following statement?

   a. Modern day clothing is made from a variety of different kinds of fabrics. Many of the fabrics are made from oil. Most are quite easy to care for.

   _____

   b. "How beautiful the Emperor's new clothes are! What a splendid train! And they fit to perfection!"

   _____

   c. Yesterday Bill Jones spent the afternoon shopping for new clothes in the mall.

   _____

   d. People should not follow fads in clothing because it is very expensive.

   _____

   e. "Green it might be called, if it were a earthly color - a queer, dull, bronzy green, with streaks here and there of the original red to heighten the ghastly effect. Never

in all her life had Marilla seen anything so grotesque as Anne´s hair at that moment."

Language Arts Unit - Clothing

Descriptive Writing Lesson Plan (No.9)

NOTE: This lesson is to be taught as the first lesson after the introductory lesson at Parkside School (probably from May 7-9); as the second lesson after the introductory lesson in Swanavon and Hillside (probably May 10-11), and as the last lesson in Avondale (probably May 22-25).

Materials Required: (1) Slides of girls in a private school in their school uniforms (courtesy St. Margaret's School, Victoria) (2) a boy and a girl in your class to bring complete winter dress (parka or ski-doo suit, overshoes. etc.) (Assuming that not everyone is still in full winter dress in Grande Prairie at this time).

I. Purpose

To provide the stimulus for a descriptive writing experience, and opportunity for students to write in the descriptive mode.

II. Student Outcome

Given a stimulus consisting of a real observational experience and opportunity to discuss that experience, students will write an accurate, detailed rich description at least one hundred fifty words in length.

III. Teaching Activities

Period 1 Inform the students that they will be expected to write a description of the way that Canadian school children dress in a letter to their imaginary Australian penpal, Bill Jones, (Boomer). Boomer will be interested in this because most Australian children wear school uniforms.

Tell them that in order to help them generate ideas for writing description, they will be doing two things; listening to a short tape of an Australian describing his school uniform, and observing slides of school uniforms.

Have them listen to the tape after setting a purpose by the question "What kinds of things do we learn about the uniform from the description?" After the students listen to the tape, discuss the question, and ask "What things could have been described that weren't?"

Then, using the slides, develop together in class a list of words or phrases that might be used to describe the uniforms seen on the slides. Develop the concept that in a description, one can mention such features as (1) colors (2) texture (3) shape (4) fabric (5) number of parts, etc.

Period 2 (Should be on the same day as Period 1; it could follow it directly or there might be a recess break or another class period between Period 1 and 2).

Select four student volunteers as "models." (Two boys and two girls). Two should be dressed in full winter dress and two in lighter spring or summer dress. Divide the class into

groups of three to five students. Each group should develop cooperatively a list of words and phrases that one could use to describe the clothing of the four models. Take a bit of time for each group to report back orally to the whole class.

Hand out the assignment sheets and explain them. Remind students that in Period 3 they will do a first draft of a description on looseleaf or foolscap, and that the final copy will be placed on the assignment sheet in Period 4.

Period 3 (Should be on the same day as Periods 1 and 2; it could follow Period 2 directly or there might be a recess, noon break, or another class period between Period 2 and 3).

Ask students to write a description of the way Canadian students dress so that Boomer would get a clear idea of it. Tell them they need not limit themselves to the four "models" but that they should provide a good starting point.

Provide a full sixty minutes for writing. Do not set a minimum or maximum length. You may provide assistance in spelling, if requested, but do not assist with basic content, organization, or structure. In particular, do not assist with sentence structure.

Period 4 (Should be on the day after periods 1, 2, and 3).

Allow time for rewriting on the format paper supplied. Remind students to use their best handwriting, sentence structure, etc. Provide assistance with spelling if requested.

Do not provide other forms of assistance, particularly, with sentence structure.

The maximum time provision should be forty minutes; collect assignments then even if students are not fully finished.

Make sure they put their name, school, and class on the format paper.

IV. Evaluation

Forward the papers to Central Office for xeroxing. They will be returned to you. Keep all five assignments until the unit is complete. Then you may return them to the students. You may grade them in any way you wish.

Clothing Unit - Descriptive Writing Lesson

Your Name _____

Your School _____

_____

Grande Prairie, Alberta
May __, 1979

Dear Boomer:

Greetings from your Grande Prairie, Alberta, penpal. It's really interesting to write letters to you and even more so to get letters from you. I really enjoyed that part in your last letter where you described your school uniforms. Those short pants for boys and skirts for girls would be hard to take in a Canadian winter!

We don't wear school uniforms, but I'll describe for you how kids usually dress for school here.

_____

_____

_____

_____

_____

_____

Language Arts Unit - Clothing

Factual Narrative Report Writing Lesson Plan (No.10)

NOTE: This lesson is to be taught as the second lesson after the introductory lesson in Parkside School (probably May 10-11), as the third lesson after the introductory lesson in Avondale and Hillside (probably May 14-16), and as the fourth lesson after the introductory lesson in Swanavon (probably May 17-18)

Since there are alternate ways that this lesson may be approached, please read the plan carefully.

Materials Required: (1) Videotape of a fashion show filmed in Grande Prairie, courtesy of Linda Patterson at Swanavon (please talk to Linda about the background and details), and/or (2) Starting Points in Reading C, the story "The Sneaker Crisis", pages 146-153. (3) If possible, a fashion column from a newspaper reporting a fashion show.

I. Purpose

To provide the stimulus for a factual narrative report writing experience, and opportunity for students to write in the factual narrative mode.

II. Student Outcome

Given a stimulus consisting of an input of vicarious or real experience and opportunity to discuss that experience,

students will write an interesting factual report at least one-hundred fifty words in length.

III. Teaching Activities

(Note that there are alternatives)

Alternative 1

1. You may wish to first find out how many of your students have had disagreements around home that relate to clothing. Possible areas of disagreement include not keeping rooms tidy, not being able to choose clothing, losing clothing, or disagreements among siblings about wearing clothing. If all students can recall such an actual experience which they think they could write about, you may choose not to use the videotaped fashion show. Instead you could follow this sequence:

   Period 1 Have students read "The Sneaker Crisis" and discuss the related questions. Ask whether this story could be true, and if so, why do they think so?

   Period 2 Divide students into Groups of three to five, and direct them to share with each other any similar experience that may have happened to them. Select two or three students to share orally with the class.

   Pass out the assignment sheets and explain the assignment.

   Period 3 Provide time for the students to write the first draft.

Period 4 Students write final copy on the form provided.

Alternative 2

1. If some of your students can't recall any actual experiences around home that involve clothing, or if you prefer this lesson idea, you could follow this sequence:

   Period 1 Explain to the class the purpose of fashion shows, and explain why many people are interested in them (some of your students may not be - accept that as natural). Ask whether any of them have seen a live fashion show, and let them report on it briefly. Explain that news reporters often write reports about fashion shows, just as they write reports about sporting events. If possible, read them an example. Then tell them that they will be asked to write an account of a fashion show in a letter to Boomer. Show the videotape.

   Period 2 Divide students in groups of three to five, and direct them to discuss what they could report happened in the fashion show. It would be wise to put one student who does have an interest in the event in each group. Take some time to allow each group to report back to the whole class orally. Pass out the assignment sheets and explain the assignment.

   Period 3 Provide time for the students to write the first draft.

   Period 4 Students write final copy on the form provided.

Alternative 3

1. You may wish to combine the above approaches, which would be quite acceptable. Do two Period 1's, one in which you cover "The Sneaker Crisis" as a reading lesson, the other in which you show the videotape.

   Explain the choices students have for a writing assignment, and split them into appropriate groups for Period 2. Then in Periods 3 and 4 they can write about the topic of their choice.

IV. Evaluation

Forward the papers to Central Office for xeroxing. They will be returned to you. Keep all five writing assignments until the unit is complete. Then you may grade them in any way you wish and return them to the students.

Clothing Unit - Factual Narrative Report Writing

Your Name _____

Your School _____

Grande Prairie, Alberta
May ___, 1979

Dear Boomer:

Hello again from your Canadian penpal. As usual, I was happy to get your last letter. It was interesting to hear that you are a member of the Junior Reporters' Club. Being a boy, you would probably never report fashion shows. I went to one recently and would like to tell you about what happened.

Clothing Unit - Factual Narrative Report Writing

Your Name _____

Your School _____

_____

Grande Prairie, Alberta
May __, 1979

Dear Boomer:

Hello again from your Canadian penpal. As usual, I was happy to get your last letter. It was interesting to hear that you get in some fights at home once in a while. It seems that I get in some too and they often involve clothing. Let me tell you about a good one!

_____

_____

_____

_____

_____

_____

_____

Language Arts Unit - Clothing

Fictional Narrative Story - Writing Lesson Plan (No. 11)

NOTE: This lesson is to be taught as the first lesson after the introductory lesson in Swanavon School (probably from May 7-9); as the third lesson after the introductory lesson in Parkside School (probably on May 13-15); and as the fourth lesson after the introductory lesson in Avondale and Hillside Schools (probably from May 17-23).

Materials Required: Audio tape recording supplied by K. Wagner. Starting Points in Language C, Ginn.

I. Purpose

To provide the stimulus for a fictional narrative story-writing experience, and opportunity for students to write in the fictional narrative mode.

II. Student Outcome

Given a stimulus consisting of an input of vicarious experiences and opportunity to discuss that experience and to role-play its possible sequel, students will write an interesting fictional story at least one-hundred fifty words in length.

III. Teaching Activities

Period 1 Inform the students that they will be expected to write a fictional narrative story about clothing in a letter to their imagined Australian penpal, Bill Jones (Boomer).

Tell them that in order to help them generate a story idea, they will be listening to an excerpt from a book, Me and Fat Glenda, by Lila Perl.

So that students listen attentively, pose the following questions:

1. Why did Glenda get dressed up?
2. Why did she choose the clothing and make-up she did?

Then have the students listen to the story on the tape. They should have Starting Points in Language C on their desks, open at page 212-213. They should turn the books face down to listen to the first part of the story, and at the appropriate point they will be directed to turn their books over and follow along.

Period 2 (Should be on the same day as Period 1; it could follow it directly or there might be a recess break or another class period between Period 1 and 2).

Divide the class into groups of three. Have each group discuss questions 1, 2, 4, and 5 on page 213 of Starting Points in Language C. Someone in each group should act as a recorder. After about 10 minutes, have each recorder report back to the whole class.

Then have each group attempt to do the dramatic role play activity outlined in #3 on page 213. Select two or three groups to dramatize the meeting for the class.

Hand out the writing assignment sheets and explain them. Remind students that in Period 3 they will do a first draft of a story on looseleaf of foolscap, and that the final copy will be placed on the assignment sheet in Period 4.

Period 3 (Should be on the same day as Periods 1 and 2; it could follow Period 2 directly or there might be a recess or noon break or another class period between Period 2 and 3).

Ask students to write their own story about what happens when Glenda meets Tony, and what Glenda, Sara, and Toby do after they meet. Tell them that their stories do not have to be the same as the ones they acted out in their groups, and that they should add more events. Suggest that their story should focus on what can possibly happen when people try to impress others by not being themselves.

Provide a full sixty minutes for writing. Do not set a minimum or maximum length. You may provide assistance in spelling, if requested, but do not assist with basic content, organization, or structure. In particular, do not assist with sentence structure.

Period 4 (Should be on the day after Periods 1, 2, and 3).

Allow time for rewriting on the format paper supplied. Remind students to use their best handwriting, sentence structure, etc. Provide assistance with spelling if requested. Do not provide other forms of assistance, particularly with sentence structure.

The maximum time provision should be forty minutes; collect assignments then even if students are not fully finished.

Make sure they put their name, school, and class on the format paper.

IV. Evaluation

Forward papers to Central Office for xeroxing. They will be returned to you. Keep all five assignments until the unit is complete. Then you may return them to the students. You may grade them in any way you wish.

Clothing Unit - Fictional Narrative Writing Lesson

Your Name _____

Your School _____

Grande Prairie, Alberta
May ___, 1979

Dear Boomer:

Hi! How are things in Australia? Now that it's May I guess it will soon be winter there. You're lucky that your winters aren't as cold as ours! We're glad it's spring.

I haven't done many really interesting things since I wrote my last letter. We're talking about Clothing now in language arts, and I did write an interesting story about a girl who made herself problems by the way she dressed. I thought you might find it interesting, so here it is!

Language Arts Unit - Clothing

Expository Writing Lesson Plan (No. 12)

NOTE: This lesson is to be taught as the first lesson after the introductory lesson at Hillside School (probably May7-9), as the second lesson after the introductory lesson in Avondale School (probably May 10-11), as the fourth lesson after the introductory lesson in Parkside School (probably May 17-18), and as final lesson in Swanavon School (probably May 22-25).

Materials Required: (1) Starting Points in Reading C, pages 162-163 "How To Tie Dye" (2) dies, dishpan, etc., as required (3) Students might bring some old T-Shirts or whatever from home to practice tie-dying.

I. Purpose

To provide the stimulus for an expository writing experience, and opportunity for students to write in the expository mode.

II. Student Outcome

Given a stimulus consisting of opportunity to engage in a real experience, and opportunity to discuss that experience, students will write a clear, detailed explanation of at least one-hundred fifty words telling how to carry out the process of tie-dying.

III. Teaching Activities

Period 1 (Note: This may require more than one period. You may wish to take an art period or two plus a language arts period and spend a whole afternoon on the project).

Students will have to be prepared in advance and have the necessary materials on hand. Read through pages 162-163 with them, and go beyond this to other suggestions about tie-dying from other sources if you wish.

Then have the students actually do the activity.

Period 2 (In this case may have to be on the day after Period 1).

Allow students a few minutes to share their products from the previous day and discuss what worked well and what didn't work so well and why.

Inform the students that you want them to write an explanation of how to do tie-dying in a letter to Boomer. Clarify that (1) the explanation should be in paragraph form and not in point form (2) the explanation should be an explanation of a general method to follow in doing tie-dying, and should not be a story about what they did.

Put them in groups of 3-5 and have them discuss how they might explain the process. Each in turn could attempt to explain the process orally to his peers. They should not use the Starting Points article during any of this process.

Hand out the assignment sheets and make sure that they are clear about the assignment.

Period 3 (Should be on the same day as Period 2)

Provide the full sixty minutes usually allotted for writing. You may provide assistance only with spelling. You may give reminders that it should not be in point form.

Period 4 (SHould be on the day after Period 3)

Provide the usual forty minutes for rewriting.

IV. Evaluation

Forward the papers to Central Office for xeroxing. They will be returned to you. Keep all five assignments until the unit is complete. Then you may return them to the students. You may grade them in any way you wish.

Clothing Unit - Expository Writing Lesson

Your Name _____

Your School _____

_____

Grande Prairie, Alberta
May __, 1979

Dear Boomer:

Hello again. Thank you for your last letter in which you explained how to carve boomerangs. It was really interesting! Did you get the nickname "Boomer" because you're so good at it? We've been making some interesting things in school too. Let me tell you about how to do one thing we've learned.

_____

_____

_____

_____

_____

_____

_____

_____

_____

Language Arts Unit - Clothing

Argumentative Writing Lesson Plan (No. 13)

NOTE: This lesson is to be taught as the first lesson after the introductory lesson in Avondale School (probably May 7-9); as the third lesson after the introductory lesson in Swanavon School (probably May 14-16); and as the final lesson in Parkside and Hillside Schools (probably May 22-25).

Materials Required: Audio tape recording supplied by K. Wagner; "Opinions of students in Ruth King and St. Margaret's Schools regarding School Uniforms".

I. Purpose

To provide the stimulus for an argumentative writing experience, and opportunity for students to write in the argumentative mode.

II. Student Outcome

Given a stimulus consisting of a listening experience and opportunity to discuss that experience, students will write a reason-supported argument at least one-hundred fifty words in length.

III. Teaching Activities

Period 1 Inform the students that they will be expected to write an argument or opinion statement in a letter to their imagined Australian penpal, Bill Jones (Boomer). In their letter

they may take one of the following three positions, but whatever position they take they must defend it by stating reasons for it and against the alternatives. The positions are:

1. That school uniforms should be required
2. That uniforms should not be required, but that there should be dress rules in a school
3. That students should be able to wear whatever they please.

Tell them that in order to help them generate some ideas, they will be listening to a tape in which several students and some adults discuss the issue. Ask them to listen carefully to pick out arguments for and against the wearing of uniforms.

Period 2 (Should be on the same day as Period 1; it could follow it directly or there might be a recess break or another class period between Period 1 and 2).

Divide the class into groups of three to five. Try to place some pro and some con people in each group. Direct them to discuss the issues as set out in Period 1. One person in each group could act as a recorder to set out in point form the reasons for and against each of the three alternatives.

After adequate group discussion time (probably 10-15 minutes) take some time for each group to report back orally to the whole class.

Hand out the writing assignment sheets and explain them. Remind the students that in Period 3 they will do a first draft of a story on looseleaf or foolscap, and that the final copy will be rewritten on the assignment sheet in Period 4.

Period 3 (Should be on the same day as Periods 1 and 2; it could follow Period 2 directly or there might be a recess or noon break or another class period between Periods 2 and 3).

Ask students to write their argument. Remind them that they should choose one of the alternatives and support it as well as they can by explaining why they favor it and are not in favor of the other two positions.

Provide a full sixty minutes for writing. Do not set a minimum or maximum length. You may provide assistance with spelling, if requested, but do not assist further with content, organization, or structure. In particular, do not assist with sentence structure.

Period 4 (Should be on the day after Periods 1, 2, and 3).

Allow time for rewriting on the format paper supplied. Remind students to use their best handwriting, sentence structure, etc. Provide assistance with spelling if requested. Do not provide other forms of assistance, particularly with sentence structure.

The maximum time provision should be forty minutes; collect assignments then even if students are not fully finished.

Make sure they put their name, school, and class on the format paper.

IV. Evaluation

Forward the papers to Central Office for xeroxing. They will be returned to you. Keep all five assignments until the unit is complete. Then you may return them to the students. You may grade them in any way you wish.

Clothing Unit - Argumentative Writing Lesson

Your Name _____

Your School _____

_____

Grande Prairie, Alberta
May __, 1979

Dear Boomer:

Hi! Once again it was good to hear from you. Thank you for telling me all about your school. I was really surprised that you have to wear a school uniform, and interested to hear your opinions about it. We don't wear uniforms here in public schools.

_____

_____

_____

_____

_____

_____

APPENDIX D

SAMPLE OF TEACHERS' LOGS

Hockey Unit - Teachers' Log

School Swanavon

Teacher Miss Linda Patterson

I. Descriptive Writing Lesson (3)

A. Teaching Time	Day	Time
Period 1	March 21	10:50-11:50
Period 2	March 22	9:45-10:15
Period 3	March 23	11:10-11:50
Period 4	March 23	2:30- 3:10

B. Unusual Circumstances - if any

Swimming and Music classes interrupted the normal progression of lesson 2-3-4 being on the same day.

II. Factual Narrative Report Lesson (4)

A. Teaching Time	Day	Time
Period 1	March 27	10:50-11:50
Period 2	March 28	10:50-11:20
Period 3	March 28	2:35- 3:25
Period 4	March 29	9:45-10:35

B. Unusual Circumstances - if any

III. Fictional Narrative Lesson (5)

A. Teaching Time	Day	Time
Period 1	March 30	10:55-11:50
Period 2	March 30	1:15- 1:45
Period 3	March 30	2:30- 3:30
Period 4	April 2	10:50-11:30

B. Unusual Circumstances - if any

Listening tape was not very clear audibly. We had to switch mid-stream with Mr. Toew's tape.

IV. Expository Lesson (6)

A. Teaching Time	Day	Time
Period 1	April 3	9:45-10:35
Period 2	April 3	1:15- 1:45
Period 3	April 4	2:30- 3:30
Period 4	April 6	9:00- 9:40

B. Unusual Circumstances - if any

V. Argumentative Lesson (7)

A. Teaching Time	Day	Time
Period 1	April 6	10:50-11:50
Period 2	April 6	1:00- 1:20

Period 3	April 6	1:20- 2:15
Period 4	April 9	10:50-11:35

B. Unusual Circumstances - if any

_____

_____

_____

APPENDIX E

STUDENT QUESTIONNAIRES
UNIT AND WRITING ASSIGNMENT
PREFERENCES

Student Questionnaire

Name _____

School and Class _____

I am a: boy girl (Circle one)

During the past two months you have done several writing activities centred around the topics of "Hockey" and "Clothing".

Please answer the following questions by circling the statments you agree with most.

---

1. My feeling about the "Hockey" and "Clothing" unit was:

   a) I hated them; they were the worst thing we've had to do.

   b) They were alright; about the same as other lessons in reading and language.

   c) I liked them; they were more enjoyable than most lessons in reading and language.

2. Of the two units, the one I found most interesting and enjoyable was:

   a) The Hockey Unit

   b) The Clothing Unit

3. The writing assignment in the Hockey Unit that I enjoyed most was:

   a) the descriptive writing - describing the hockey arena and/or hockey uniforms.

b) the factual narrative - telling what happened in the Russia - Team Canada game.

c) the fictional narrative - writing about an imaginary hockey game.

d) the expository writing - explaining how hockey is played.

e) the argumentative writing - telling why or why not kids should play in highly organized leagues.

4. The writing assignment I disliked most in the Hockey Unit was:

a) the descriptive writing - describing the hockey arena and/or hockey uniforms.

b) the factual narrative - telling what happened in the Russia - Team Canada game.

c) the fictional narrative - writing about an imaginary hockey game.

d) the expository writing - explaining how hockey is played.

e) the argumentative writing - telling why or why not kids should play in highly organized leagues.

5. The writing assignment in the Clothing Unit I enjoyed most was:

a) the descriptive writing - telling about what kids wear to school.

b) the factual narrative - telling what happens in a fashion show, or in a fight about clothing at home.

c) the fictional narrative - telling what happens next to Fat Glenda.

d) the expository writing - telling how to do the tie - dying process.

e) the argumentative writing - telling why or why not kids should wear school uniforms.

6. The writing assignment in the Clothing Unit I disliked most was:

   a) the descriptive writing - telling about what kids wear to school.

   b) the factual narrative - telling what happens in a fashion show, or in a fight about clothing at home.

   c) the fictional narrative - telling what happens next to Fat Glenda.

   d) the expository writing - telling how to do the tie-dying process.

   e) the argumentative writing - telling why or why not kids should wear school uniforms.

Thank you for your opinions.

Class Totals

Boys		Girls		Totals
1.	a) 13	1.	a) 10	23
	b) 44		b) 50	94
	c) 16		c) 14	30
2.	a) 53	2.	a) 12	65
	b) 20		b) 62	82
3.	a) 5	3.	a) 6	11
	b) 20		b) 6	26
	c) 40		c) 52	92
	d) 5		d) 4	9
	e) 3		e) 7	10
4.	a) 21	4.	a) 18	39
	b) 16		b) 29	45
	c) 11		c) 4	15
	d) 12		d) 16	28
	e) 13		e) 5	18
5.	a) 9	5.	a) 6	15
	b) 9		b) 9	18
	c) 34		c) 41	75
	d) 7		d) 6	13
	e) 12		e) 8	20
6.	a) 21	6.	a) 21	42
	b) 15		b) 17	32
	c) 9		c) 7	16
	d) 7		d) 8	15
	e) 19		e) 21	40

APPENDIX F

SAMPLE COMPOSITION AND DATA ANALYSIS FORM

Fictional Narration: Writing Sample

The following was written by a male subject on the topic of hockey. It has been typed with all errors in mechanics and usage removed. It has also been segmented into T-Units. The data analysis form which follows indicates the numbers of the various transformations in the composition.

[It's not easy being a puck.]

[With as many whacks, slaps, and bangs as I get, it's a wonder that I'm still alive.]

[Maybe I'm just used to it.]

[But still, those slapshots are murder.]

[Well, anyway, what I want to tell you about is my first game and how I came to be what I am.]

[It all started in the rubber factory.]

[Our noble, flexible family had a new member, me.]

[I was always the jock (of the family).]

[So when mom became a ball, dad became a tire, and my brother became a fan belt, I became a puck.]

[Now things really got boring.]

[I sat in the store for months.]

[But time passed.]

[And one day I was purchased by the Toronto Maple Leafs.]

[This started my career.]

[Now, all I had to do was wait for my first game.]

[Then, it happened.]

[After a week (of travelling,) we arrived in New York to play against the Islanders.]

ADV. CL. POSS. ADJ.
[When I got to the game, I was brought to the puck's dressing

room.]

NOUN CL.
[Personally, I think it's the pits.]

ADJ.
[It was about three stories high.]

ADJ.
[I was put on the top floor.]

[It was terrible.]

C. NOMINAL 4
[There were no benches, no lockers, no uniforms, no showers, and

no bathrooms.]

PART.
[And it was freezing cold.]

[Next, I was brought out onto the ice.]

PREP. ADJ. PH. ADJ. C. NOMINAL 2
[I was carried out by a man (with a whistle, a striped shirt, and

ADJ. ADJ.
strange bladed shoes).]

ADJ.
[The next part was terrifying.]

C. FINITE VERB PART. PART. ADJ. CLAUSE
[I looked around and saw a sneering, jeering crowd that looked

ADV. CL.
like they were going to mob me.]

ADJ. POSS. ADJ. CLAUSE PART.
[The striped man blew his whistle, which made an ear-splitting

sound.]

[Next, I was falling to the ground.]

C. Adj.
[It felt icy and cold.]

[Then I was hit by a stick.]

C. Finite Verb
[I went flying into the boards and was knocked cold.]

Adv. Cl. POSS.
[When I came to, a man was pushing me around with his stick.]

[I resisted,]

part. ph.
[And he tripped over me, hitting me.]

Argument: Writing Sample

The following sample was written by a female subject on the topic of clothing. It has been typed with all errors in mechanics and usage removed. It has also been segmented into T-Units. The data analysis form which follows indicates the numbers of the various transformations in the composition.

[I am glad that we do not have to wear uniforms.]

[It is not the tradition in Alberta to wear uniforms in public schools.]

[I think kids should be able to wear their choice of clothing to school.]

[Uniforms also must be drycleaned and are quite expensive.]

[Lots of uniforms also are made so that they are too cold in the winter and too warm in the summer.]

ADV. CL. Reason

[Some uniforms are also not stylish because skirts are going out

C. Adv. ADV. CL. Reason

of style now and the ties are not fashionable.]

ADV. CL. - COND. INF. PH. Cord. Nom.

[If we had to wear uniforms, I would like them to be pants and a

shirt.]

ADJ. ADV CL - M

[Also, so few uniforms are worn in public schools here that you

PART. PH.

feel funny wearing them in public.]

ADJ INF. PH. C. Nom.

[Lots of times the girls like to wear a choker or rings]

INF. PH.

[And you are not allowed to wear jewellry with uniforms.]

NOUN CL. INF. PH. PREP. ADJ. PH. INF. PH.

[I agree it helps to make decisions (of what to wear every day) and

NOUN CL.

it makes for no jealousy.]

C. Finite Verb PREP. PH. NOUN CL.

[Probably, they are neat and have an effect (on how kids in school

C. Finite Vb.

work and get along with other kids).]

NOUN CL. POSS.

[I still think, though, that I would rather wear my own choice to school.]

N+N ADJ. PH.

[They are also not good for sports activities (like running, GERUND PH CN.

soccer, football, etc).]

NOUN CL.

N+N

[That's what I think about school uniforms in Alberta.]

Table 3

Data Analysis Form

(Adapted from O'Donnell, Griffin, Norris, 1967, pp. 113-115)

Student I.D. No. MALE WRITING SAMPLE:

Sex [Male 1,] Female 2,

Task Desc. 1, Narr. 2, [Narr. 3,] Exp. 4, Arg.5

No. of words 328 No. of T-Units 36 Words/T-Unit 9.11

5 ||||_	Noun clause
_____	Prep. phrase
3 |||_	Inf. Phrase
1 |_	Gerund phrase
_____	Other non-headed
4 ||||_	N+ N adjunct
15 ||||_ ||||_	N+ Adj. ||||_
8 ||||_ |||_	N+ Poss.
3 |||_	N+ Rel Clause
3 |||_	N+ Prep. Phrase
1 |_	N+ Part. Phrase
4 ||||_	N+ Adverbial
_____	Other

9 ||||_ ||||_	Coordinated Nominal
1 |_	Coordinated Adjectival
2 ||_	Coordinated Adverbial
2 ||_	Coordinated Finite Verb

[14] Total Coordinations

[69] Total Transformations (Nominal, Adverbial, Coordination)

[1.92] Transformations/T-Unit

[47] Total Nominal

5 ||||_	Adv. cl. (time)
_____	Adv. cl. (place)
1 |_	Adv. cl. (manner)
_____	Adv. cl. (cause)
_____	Adv. cl. (condition)
1 |_	Adv. cl. (comparison)
1 |_	Adverbial Infinitive
_____	Sentence Adverbial

[8] Total Adverbial

Table 3

Data Analysis Form

(Adapted from O'Donnell, Griffin, Norris, 1967, pp. 113-115)

Student I.D. No. FEMALE WRITING SAMPLE:

Sex Male 1, [Female 2,]

Task Desc. 1, Narr. 2, Narr. 3, Exp. 4, [Arg.5]

No. of words 220 No. of T-Units 15 Words/T-Unit 14.67

6 ||||	Noun clause
	Prep. phrase
7 ||||	Inf. Phrase
1 |	Gerund phrase
	Other non-headed
2 ||	N+ N adjunct
4 ||||	N+ Adj.
2 ||	N+ Poss.
	N+ Rel Clause
4 ||||	N+ Prep. Phrase
1 |	N+ Part. Phrase
	N+ Adverbial
	Other

3 |||	Coordinated Nominal
1 |	Coordinated Adjectival
1 |	Coordinated Adverbial
3 |||	Coordinated Finite Verb

[8] Total Coordinations

[41] Total Transformations (Nominal, Adverbial, Coordination)

[2.73] Transformations/T-Unit

[27] Total Nominal

	Adv. cl. (time)
	Adv. cl. (place)
3 |||	Adv. cl. (manner)
2 ||	Adv. cl. (cause)
1 |	Adv. cl. (condition)
	Adv. cl. (comparison)
	Adverbial Infinitive
	Sentence Adverbial

[6] Total Adverbial

APPENDIX G
STATISTICAL ANALYSES

ANALYSIS OF VARIANCE
(REPEATED MEASURES)
AND
SCHEFFE TESTS

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Words Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	11.68	10.99	9.14	13.04	14.26	11.82
Female	11.38	10.10	9.24	12.65	13.97	11.47
Totals/Mode	11.53	10.54	9.19	12.85	14.11	11.64

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	5.67	1	5.67	0.66	0.421
Error	290.37	34	8.54		
Mode	533.09	4	133.27	57.54	0.000
Sex/Mode	4.50	4	1.13	0.49	0.746
Error	314.98	136	2.32		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.1151	0.0000	0.0109	0.0000
Factual Narration	0.1151		0.0079	0.0000	0.0000
Fictional Narration	0.0000	0.0079		0.0000	0.0000
Exposition	0.0109	0.0000	0.0000		0.0164
Argument	0.0000	0.0000	0.0000	0.0164	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Total Number of Sentence - Combining Transformations Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	3.13	2.34	1.50	3.29	2.98	2.65
Female	2.84	2.04	1.66	2.93	2.91	2.48
Totals/Mode	2.99	2.19	1.58	3.11	2.94	2.56

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	1.33	1	1.33	0.73	0.398
Error	61.83	34	1.82		
Mode	62.11	4	15.53	37.93	0.000
Sex/Mode	1.61	4	0.40	0.98	0.418
Error	55.68	136	0.41		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.0000	0.0000	0.9577	0.9989
Factual Narration	0.0000		0.0033	0.0000	0.0001
Fictional Narration	0.0000	0.0033		0.0000	0.0000
Exposition	0.9577	0.0000	0.0000		0.8731
Argument	0.9989	0.0001	0.0000	0.8731	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Noun Clauses Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.032	0.102	0.190	0.417	0.341	0.216
Female	0.061	0.115	0.334	0.138	0.432	0.216
Totals/Mode	0.047	0.109	0.262	0.278	0.387	0.216

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.00	1	0.00	0.00	1.000
Error	7.02	34	0.21		
Mode	2.71	4	0.68	3.40	0.011
Sex/Mode	0.97	4	0.24	1.21	0.308
Error	27.13	136	0.20		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9865	0.3880	0.3123	0.0378
Factual Narration	0.9865		0.7162	0.6328	0.1435
Fictional Narration	0.3880	0.7162		0.9999	0.8427
Exposition	0.3123	0.6328	0.9999		0.8987
Argument	0.0378	0.1435	0.8427	0.8987	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Nominal Prepositional Phrases Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.032	0.033	0.032	0.175	0.076	0.070
Female	0.038	0.011	0.022	0.019	0.028	0.024
Totals/Mode	0.035	0.022	0.027	0.097	0.052	0.047

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.10	1	0.10	1.88	0.179
Error	1.71	34	0.05		
Mode	0.13	4	0.03	0.71	0.588
Sex/Mode	0.15	4	0.04	0.80	0.527
Error	6.35	136	0.05		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9995	0.9999	0.8312	0.9985
Factual Narration	0.9995		1.0000	0.7076	0.9866
Fictional Narration	0.9999	1.0000		0.7583	0.9933
Exposition	0.8312	0.7076	0.7583		0.9413
Argument	0.9985	0.9866	0.9933	0.9413	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Nominal Infinitive Phrases Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.015	0.037	0.080	0.148	0.180	0.092
Female	0.034	0.045	0.071	0.152	0.222	0.105
Totals/Mode	0.025	0.041	0.076	0.150	0.201	0.099

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.01	1	0.01	0.85	0.364
Error	0.30	34	0.01		
Mode	0.81	4	0.20	24.55	0.000
Sex/Mode	0.01	4	0.003	0.40	0.807
Error	1.12	136	0.01		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9654	0.2154	0.0000	0.0000
Factual Narration	0.9654		0.6004	0.0000	0.0000
Fictional Narration	0.2154	0.6004		0.0175	0.0000
Exposition	0.0000	0.0000	0.0175		0.2154
Argument	0.0000	0.0000	0.0000	0.2154	

Repeated Measures Analysis of Variance and Probability

Matrix for Scheffe Multiple Comparison of Means for

Gerund Phrases Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.007	0.015	0.014	0.041	0.091	0.034
Female	0.021	0.009	0.029	0.078	0.068	0.041
Totals/Mode	0.014	0.012	0.022	0.060	0.080	0.038

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.003	1	0.003	0.69	0.411
Error	0.131	34	0.004		
Mode	0.130	4	0.030	11.94	0.000
Sex/Mode	0.020	4	0.010	1.63	0.170
Error	0.380	136	0.003		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9999	0.9836	0.0151	0.0001
Factual Narration	0.9999		0.9628	0.0096	0.0000
Fictional Narration	0.9836	0.9628		0.0748	0.0007
Exposition	0.0151	0.0096	0.0748		0.6631
Argument	0.0001	0.0000	0.0007	0.6631	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Noun + Noun Adjunct Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.431	0.269	0.128	0.240	0.185	0.251
Female	0.355	0.164	0.101	0.158	0.137	0.183
Totals/Mode	0.393	0.217	0.115	0.199	0.161	0.217

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.21	1	0.21	3.21	0.082
Error	2.17	34	0.06		
Mode	1.62	4	0.40	19.75	0.000
Sex/Mode	0.03	4	0.01	0.41	0.804
Error	2.78	136	0.02		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.0000	0.0000	0.0000	0.0000
Factual Narration	0.0000		0.0569	0.9903	0.5891
Fictional Narration	0.0000	0.0569		0.1796	0.7532
Exposition	0.0000	0.9903	0.1796		0.8610
Argument	0.0000	0.5891	0.7532	0.8610	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Noun + Adjective Modifiers Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.873	0.620	0.286	0.888	0.500	0.633
Female	0.771	0.558	0.264	0.696	0.432	0.544
Totals/Mode	0.822	0.589	0.275	0.792	0.466	0.589

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.36	1	0.36	2.02	0.164
Error	6.03	34	0.18		
Mode	7.53	4	1.88	40.60	0.000
Sex/Mode	0.15	4	0.04	0.80	0.525
Error	6.31	136	0.05		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.0005	0.0000	0.9861	0.0000
Factual Narration	0.0005		0.0000	0.0038	0.2102
Fictional Narration	0.0000	0.0000		0.0000	0.0080
Exposition	0.9861	0.0038	0.0000		0.0000
Argument	0.0000	0.2102	0.0080	0.0000	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Noun + Possessives Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.187	0.236	0.172	0.386	0.174	0.231
Female	0.127	0.223	0.196	0.146	0.205	0.179
Totals/Mode	0.157	0.230	0.184	0.266	0.190	0.205

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.12	1	0.12	0.75	0.393
Error	5.43	34	0.16		
Mode	0.26	4	0.07	0.59	0.674
Sex/Mode	0.45	4	0.11	0.10	0.413
Error	15.37	136	0.11		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9314	0.9984	0.7554	0.9964
Factual Narration	0.9314		0.9872	0.9950	0.9925
Fictional Narration	0.9984	0.9872		0.8984	1.0000
Exposition	0.7554	0.9950	0.8984		0.9212
Argument	0.9964	0.9925	1.0000	0.9212	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Relative (Adjective) Clauses Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.137	0.039	0.041	0.122	0.098	0.087
Female	0.119	0.060	0.034	0.153	0.114	0.096
Totals/Mode	0.128	0.050	0.038	0.138	0.106	0.092

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.003	1	0.003	0.28	0.599
Error	0.408	34	0.012		
Mode	0.301	4	0.075	17.75	0.000
Sex/Mode	0.015	4	0.004	0.89	0.471
Error	0.577	136	0.004		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.0000	0.0000	0.9780	0.7032
Factual Narration	0.0000		0.9573	0.0000	0.0085
Fictional Narration	0.0000	0.9573		0.0000	0.0006
Exposition	0.9780	0.0000	0.0000		0.3338
Argument	0.7032	0.0085	0.0006	0.3338	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Nouns + Prepositional Adjective Phrases Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.293	0.331	0.128	0.343	0.236	0.266
Female	0.271	0.265	0.121	0.287	0.171	0.223
Totals/Mode	0.282	0.298	0.125	0.315	0.204	0.245

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.08	1	0.08	2.15	0.152
Error	1.33	34	0.04		
Mode	0.91	4	0.23	13.55	0.000
Sex/Mode	0.03	4	0.01	0.39	0.813
Error	2.28	136	0.02		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9915	0.0001	0.8853	0.1737
Factual Narration	0.9915		0.0000	0.9893	0.0571
Fictional Narration	0.0001	0.0000		0.0000	0.1633
Exposition	0.8853	0.9893	0.0000		0.0131
Argument	0.1737	0.0571	0.1633	0.0131	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Noun + Participial Phrases Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.124	0.072	0.045	0.042	0.037	0.064
Female	0.105	0.034	0.066	0.049	0.055	0.062
Totals/Mode	0.115	0.053	0.056	0.046	0.046	0.063

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.000	1	0.000	0.024	0.878
Error	0.273	34	0.008		
Mode	0.123	4	0.031	6.299	0.000
Sex/Mode	0.023	4	0.006	1.197	0.315
Error	0.663	136	0.005		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.0095	0.0161	0.0025	0.0025
Factual Narration	0.0095		0.9999	0.9963	0.9963
Fictional Narration	0.0161	0.9999		0.9855	0.9855
Exposition	0.0025	0.9963	0.9855		1.0000
Argument	0.0025	0.9963	0.9855	1.0000	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Noun + Other Adverbial Phrase Modifiers Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.056	0.027	0.014	0.066	0.044	0.041
Female	0.040	0.023	0.017	0.041	0.042	0.033
Totals/Mode	0.048	0.025	0.016	0.054	0.043	0.037

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.004	1	0.004	1.05	0.313
Error	0.122	34	0.004		
Mode	0.038	4	0.009	4.26	0.003
Sex/Mode	0.005	4	0.001	0.55	0.698
Error	0.301	136	0.002		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.3168	0.0603	0.9881	0.9941
Factual Narration	0.3168		0.9474	0.1138	0.5732
Fictional Narration	0.0603	0.9474		0.0134	0.1662
Exposition	0.9881	0.1138	0.0134		0.8956
Argument	0.9941	0.5732	0.1662	0.8956	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Adverb Clauses of Time/T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.046	0.060	0.073	0.101	0.068	0.070
Female	0.049	0.079	0.087	0.095	0.073	0.077
Totals/Mode	0.048	0.070	0.080	0.098	0.071	0.073

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.002	1	0.002	0.38	0.542
Error	0.201	34	0.006		
Mode	0.049	4	0.012	3.34	0.012
Sex/Mode	0.004	4	0.001	0.25	0.907
Error	0.494	136	0.004		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.7032	0.3338	0.0270	0.6666
Factual Narration	0.7032		0.9780	0.4759	1.0000
Fictional Narration	0.3338	0.9780		0.8336	0.9851
Exposition	0.0270	0.4759	0.8336		0.5139
Argument	0.6666	1.0000	0.9851	0.5139	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Adverb Clauses of Manner/T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.001	0.007	0.012	0.013	0.009	0.008
Female	0.006	0.005	0.010	0.011	0.006	0.008
Totals/Mode	0.004	0.006	0.011	0.012	0.008	0.008

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.000	1	0.000	0.04	0.850
Error	0.018	34	0.001		
Mode	0.002	4	0.000	1.65	0.164
Sex/Mode	0.000	4	0.000	0.32	0.865
Error	0.038	136	0.000		

Scheffe Test (Not Required)

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description					
Factual Narration					
Fictional Narration					
Exposition					
Argument					

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Adverb Clauses of Cause/T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.016	0.031	0.018	0.034	0.228	0.065
Female	0.037	0.036	0.033	0.040	0.104	0.050
Totals/Mode	0.027	0.034	0.026	0.037	0.166	0.058

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.011	1	0.011	1.90	0.177
Error	0.198	34	0.006		
Mode	0.531	4	0.133	26.18	0.000
Sex/Mode	0.132	4	0.033	6.51	0.000
Error	0.690	136	0.005		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9963	1.0000	0.9855	0.0000
Factual Narration	0.9963		0.9938	0.9999	0.0000
Fictional Narration	1.0000	0.9938		0.9793	0.0000
Exposition	0.9855	0.9999	0.9793		0.0000
Argument	0.0000	0.0000	0.0000	0.0000	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Adverb Clauses of Condition/T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.023	0.010	0.008	0.046	0.198	0.057
Female	0.029	0.011	0.016	0.065	0.276	0.079
Totals/Mode	0.026	0.011	0.012	0.056	0.237	0.068

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.023	1	0.023	4.18	0.049
Error	0.188	34	0.006		
Mode	1.327	4	0.332	58.25	0.000
Sex/Mode	0.037	4	0.009	1.61	0.176
Error	0.775	136	0.006		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9541	0.9641	0.6101	0.0000
Factual Narration	0.9541		1.0000	0.1987	0.0000
Fictional Narration	0.9641	1.0000		0.2189	0.0000
Exposition	0.6101	0.1987	0.2189		0.0000
Argument	0.0000	0.0000	0.0000	0.0000	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Adverb Clauses of Comparison/T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.025	0.007	0.011	0.040	0.012	0.019
Female	0.016	0.012	0.007	0.016	0.030	0.016
Totals/Mode	0.021	0.010	0.009	0.028	0.021	0.018

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.000	1	0.000	0.21	0.653
Error	0.061	34	0.002		
Mode	0.010	4	0.002	2.35	0.058
Sex/Mode	0.009	4	0.002	2.07	0.088
Error	0.143	136	0.001		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.7032	0.6290	0.9267	1.0000
Factual Narration	0.7032		1.0000	0.2170	0.7032
Fictional Narration	0.6290	1.0000		0.1701	0.6290
Exposition	0.9267	0.2170	0.1701		0.9267
Argument	1.0000	0.7032	0.6290	0.9267	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Adverbial Infinitives Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.036	0.021	0.032	0.112	0.064	0.053
Female	0.037	0.021	0.024	0.101	0.053	0.047
Totals/Mode	0.037	0.021	0.028	0.107	0.059	0.050

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.001	1	0.001	0.35	0.560
Error	0.143	34	0.004		
Mode	0.172	4	0.043	13.14	0.000
Sex/Mode	0.001	4	0.000	0.10	0.983
Error	0.444	136	0.003		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.8199	0.9746	0.0000	0.5753
Factual Narration	0.8199		0.9901	0.0000	0.0748
Fictional Narration	0.9746	0.9901		0.0000	0.2223
Exposition	0.0000	0.0000	0.0000		0.0096
Argument	0.5753	0.0748	0.2223	0.0096	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Sentence Adverbials Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.005	0.017	0.010	0.015	0.017	0.013
Female	0.005	0.004	0.014	0.012	0.011	0.009
Totals/Mode	0.005	0.011	0.012	0.014	0.014	0.011

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.001	1	0.001	0.72	0.403
Error	0.029	34	0.001		
Mode	0.002	4	0.000	0.88	0.476
Sex/Mode	0.001	4	0.000	0.64	0.635
Error	0.072	136	0.001		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9573	0.9267	0.8336	0.8336
Factual Narration	0.9573		1.0000	0.9969	0.9969
Fictional Narration	0.9267	1.0000		0.9994	0.9994
Exposition	0.8336	0.9969	0.9994		1.0000
Argument	0.8336	0.9969	0.9994	1.0000	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Coordinated Nominals Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.584	0.222	0.074	0.558	0.197	0.327
Female	0.525	0.197	0.072	0.463	0.241	0.300
Totals/Mode	0.555	0.210	0.073	0.511	0.219	0.314

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.034	1	0.034	0.17	0.687
Error	7.019	34	0.206		
Mode	6.282	4	1.571	21.56	0.000
Sex/Mode	0.100	4	0.025	0.35	0.847
Error	9.908	136	0.073		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.0000	0.0000	0.9755	0.0000
Factual Narration	0.0000		0.3316	0.0003	1.0000
Fictional Narration	0.0000	0.3316		0.0000	0.2666
Exposition	0.9755	0.0003	0.0000		0.0005
Argument	0.0000	1.0000	0.2666	0.0005	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Coordinated Adjectivals Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.123	0.023	0.011	0.050	0.056	0.053
Female	0.125	0.023	0.007	0.031	0.050	0.047
Totals/Mode	0.124	0.023	0.009	0.041	0.053	0.050

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.001	1	0.001	0.21	0.653
Error	0.216	34	0.006		
Mode	0.287	4	0.072	12.78	0.000
Sex/Mode	0.003	4	0.001	0.12	0.977
Error	0.763	136	0.006		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.0000	0.0000	0.0006	0.0056
Factual Narration	0.0000		0.9641	0.9136	0.6101
Fictional Narration	0.0000	0.9641		0.5474	0.2189
Exposition	0.0006	0.9136	0.5474		0.9796
Argument	0.0056	0.6101	0.2189	0.9796	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Coordinated Adverbials Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.006	0.016	0.008	0.024	0.043	0.019
Female	0.011	0.022	0.011	0.023	0.053	0.024
Totals/Mode	0.009	0.019	0.010	0.024	0.048	0.022

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.001	1	0.001	0.40	0.530
Error	0.079	34	0.002		
Mode	0.037	4	0.009	3.46	0.010
Sex/Mode	0.001	4	0.000	0.06	0.994
Error	0.362	136	0.003		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.9628	1.0000	0.8524	0.0624
Factual Narration	0.9628		0.9746	0.9973	0.2870
Fictional Narration	1.0000	0.9746		0.8816	0.0748
Exposition	0.8524	0.9973	0.8816		0.4868
Argument	0.0624	0.2870	0.0748	0.4868	

Repeated Measures Analysis of Variance and Probability Matrix for Scheffe Multiple Comparison of Means for Coordinated Finite Verbs Per T-Unit

Cell Means

	Description	Factual Narration	Fictional Narration	Exposition	Argument	Totals/Sex
Male	0.078	0.147	0.117	0.169	0.119	0.126
Female	0.066	0.122	0.116	0.151	0.102	0.111
Totals/Mode	0.072	0.135	0.117	0.160	0.111	0.119

Summary of Anova

Source of Variation	SS	DF	MS	F	P
Sex	0.010	1	0.010	0.62	0.437
Error	0.556	34	0.016		
Mode	0.153	4	0.038	6.95	0.000
Sex/Mode	0.003	4	0.001	0.13	0.972
Error	0.750	136	0.006		

Scheffe Test

	Description	Factual Narration	Fictional Narration	Exposition	Argument
Description		0.0207	0.1987	0.0002	0.3390
Factual Narration	0.0207		0.9136	0.7586	0.7854
Fictional Narration	0.1987	0.9136		0.2404	0.9986
Exposition	0.0002	0.7586	0.2404		0.1308
Argument	0.3390	0.7854	0.9986	0.1308	

VITA

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Title of Thesis

The Effect of Abstraction Level on Syntactic Structures In Written Composition At The Sixth Grade Level

Author [redacted]

KEITH ANTHONY WAGNER
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April 15, 1983
Date