THE EFFECT OF INTENDED AUDIENCE ON LANGUAGE FUNCTIONS IN WRITTEN ARGUMENT AT TWO GRADE LEVELS

by

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ABSTRACT

Despite the emphasis in current composition theory on the importance of the intended audience for written composition, there is little evidence of audience effects on written composition before students reach high-school. In contrast, there is considerable evidence of audience effects on children's oral language. The present study explores the possibility that the lack of evidence of audience effects on written composition is an artifact of the measures that have been used. Measures for this study were derived from studies of children's oral language in the hope that they might provide insight into the effects of audience on written composition.

The purpose of this study was to examine the effect of audience on the use of five language functions (Controlling, Relational, Informing and Interpreting, Theorizing and Projecting) in written arguments by students in grades 6 and 11. Students wrote four compositions, one on each of two topics for each of two audiences, with presentation of audiences and topics counterbalanced. Audiences were teacher and best friend which are differentiated in terms of relative status. One hundred nine complete sets of four compositions were subjected to functional analysis.

Statistical analysis revealed audience effects for three functions. Students at both grades used more of the Controlling function and the Relational function for the audience of best friend, and more of the Theorizing function
for the audience of teacher. Compositions intended for the high-status audience were more objective, more impersonal, and contained less diversity of function. In contrast, compositions intended for the same-status audience were more conversational, more personal, and contained more diversity of function. Analysis also revealed grade and topic effects.

Results of this study suggest that audience effects can be discerned in compositions by students in elementary school if appropriate measures are used. This study thus provides empirical support for the emphasis on audience in current composition theory. It also signals the need for new measures in further studies of audience effects on written composition.
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CHAPTER ONE

THE PROBLEM

Statement of the Problem

The problem addressed in this study is: what is the effect of audience on use of language functions in written arguments by students at two grade levels?

Background to the Problem

Current composition theory stresses the importance of providing children in school settings with an audience for written compositions. However, there have been relatively few empirical studies of audience effects on written composition: little is known about what kinds of differences occur in compositions written for different audiences, and at what age audience differences, if any, occur. The purpose of this study was to shed some light on the effect of audience by examining the effect of intended audience on the use of language functions in written argument at two grade levels. Since current research has shown that audience effects are discernible in oral language, it was concluded that measures adapted from oral language studies might reveal audience
effects in written language as well.

A focus on audience and its effect on composition is not new. Both classical and very recent rhetorical theory stress the importance of audience. For the ancients, the intended audience was as crucial for the rhetor during the initial heuristic stages as it was later in delivery (Young, 1976). For the better part of the past century, however, audience was not stressed in rhetorical theory or in composition texts. While composition texts advised writers to "consider the audience," the emphasis was on form and grammatical correctness (Berlin, 1984). It is only in the past fifteen years that an emphasis on the rhetorical situation in general, and on audience in particular, has re-emerged in theories about the teaching of writing (Odell, Cooper & Courts, 1978; Young, 1976, 1978). Recently, researchers and theorizers in the field of Language Arts have advocated providing beginning writers with a variety of audiences (Applebee, 1981; Bereiter & Scardamalia, 1982; Britton, Burgess, Martin, McLeod, & Rosen, 1975; Hayes & Flower, 1980; Judy & Judy, 1981; Moffett, 1968; Moffett & Wagner, 1976).

According to recent composition theorists and researchers, both the writing process and written texts will be affected by a writer's sense of audience. It has been suggested that intended audience may affect both a writer's purpose and decisions about content, strategies, and desired
effect (Hayes & Flower, 1980; King, 1978). Having an "authentic" audience is claimed to produce writing that is alive, purposeful, personal, and creative (Florio, 1978; Judy & Judy, 1981). In fact, the benefits of providing an authentic audience are believed to go beyond changing writing processes and products to altering the nature of subject area learning (Applebee, 1981, 1982). However, comparatively little evidence is available to support such claims.

The Braddock Report (Braddock, Lloyd-Jones, & Schoer, 1963) called for studies of the rhetorical aspects of composition, but audience effects have seldom been examined directly. Evidence of audience effects on written composition is meagre (Bracewell, Scardamalia & Bereiter, 1978; Kroll, 1985; Van de Veghe, 1978). Relatively little is known about whether school children do, in fact, write differently for different audiences and, if so, what the differences are.

The little that is known has been found in a half dozen studies. A few studies have reported differences in syntactic complexity (Crowhurst & Piche, 1979; Richardson, 1980; Rubin & Piche, 1979; Smith & Swan, 1978), and in amount of information in revisions (Prentice, 1980).

The effect of audience on oral language, on the other hand, has received more attention. There is research evidence that young children accommodate messages to listeners who do not share their perspective (Kossan & Markman, 1981; Maratsos,

Recent studies of oral language in school settings have also reported audience effects on language functions. Such differences as the following have been found: more personal language, more regulatory language, more expressive language, more questions, and more diversified word choice for peers than for teachers (Barnes, 1976; Fleming, 1980; Jensen, 1973; Pinnell, 1975).

Given the substantial evidence from oral language studies that even young children use language differently for different audiences, and the strong theoretical claims about the likelihood of audience effects, further study of audience effects in written composition seemed warranted. Some writers suggest that studies of audience effects have employed measures that are not sensitive to audience-related differences. Bracewell et al. (1978), commenting on the meagre evidence for audience effects in studies of written language, suggest the need for different measures and, in particular, for measures that regard the text as a
communicative instrument (p. 3).

Given this suggestion, the findings of oral language studies, and the hypothesis of Bereiter and Scardamalia (1982) that children adapt oral language schemata for purposes of written discourse, studies of listener effects on oral language were examined for measures that could be adapted for the study of written language. It was concluded that measures of oral language functions would be particularly appropriate for the study of audience effects in school settings for two reasons. First, language function is generally used to refer to communicative intention (Chapman, 1981; Wells, 1981). Second, virtually all writing in school settings is addressed to a teacher (Applebee, 1981; Britton et al., 1975), and there is evidence that status of audience affects language function.

Recently, numerous schemes have been devised for describing the functions of children's oral language (Dore, 1979; Halliday, 1975; Tough, 1977, 1979; Wells, 1975). Those schemes that have been applied to children's oral language in school settings have included: a *directive* or *controlling* function, an *expressive* or *personal* function, an *imaginative* function, and an *informative* or *representational* function (Halliday, 1975; Tough, 1977, 1979; Wells, 1975). In addition, Halliday argues for a *heuristic* function, Tough for a *reasoning* function and a *predicting* function, and Wells for a *ritualizing* function. No similar range of schemes exists.
for classifying functions in written language.

Conceptions of the functions of written language are much broader than are conceptions of the functions of oral language. Britton suggests only three main functions for written language (expressive, poetic, and transactional), and Kinneavy suggests four (expressive, persuasive, informative, and literary). Discourse theorists and researchers usually argue that judgments about the function of written language should be made about whole pieces of writing rather than about smaller segments of written discourse. However, reliable judgments about the function of whole pieces of discourse are difficult to achieve (Britton, Barrs, & Burgess, 1979). This, it would seem, is probably because judgments about whole pieces ignore the variety in the means by which writers achieve a particular purpose for a particular audience.

Discourse theorists have observed that writers can vary considerably in the means used to achieve a particular purpose. Kinneavy has argued that one aim or function is dominant while others are subordinate (1971, 1980), and that functions in writing are achieved through various modes such as narration, description, classification and evaluation. Martin, Medway, Smith and D'Arcy (1973) observed that young writers frequently cycle from one function to another, incorporating expressive elements in transactional writing and transactional elements in expressive writing. Recently,
Griffiths and Wells (1985) have suggested that messages are multifunctional, "different messages being determined by the relative importance of each of the functions in determining what is intended or understood" (p. 123).

The premise on which the present study is based is that adapting schemes used to describe the functions of oral language and applying them to analysis of written language will permit of capturing some of the diversity in function that global schemes ignore, and so, perhaps, provide a measure sensitive to effects of audience. In the present study, a categorization scheme used in studying the functions of oral language was adapted from one suggested by Shafer, Staab and Smith (1983) as the basis for examining the language functions used in the broad general function of persuasive writing. The purpose of the present study was to discover whether the functions used in written arguments vary with intended audience, specifically the audiences of teacher and best friend.

Need for the Study

Little is known about how young writers respond to various audiences for persuasive writing. Current curriculum theory suggests strongly that providing an authentic audience is important, but the nature of the effects of providing
different audiences has not been the subject of much investigation. Although evidence of effects for audience on syntactic complexity has been reported for students in grade 10 (Crowhurst & Piche, 1979) and first year university students (Smith & Swan, 1978), there are few reports of effects for audience in younger students.

Oral language studies show that even very young children use language differently for different audiences. This apparent discrepancy between the early emergence of audience effects on children's oral language and its relatively late emergence in written language has recently been identified as a gap in our understanding of the development of a sense of audience for written language (Kroll, 1985). By adapting a scheme from oral language for the purpose of describing audience effects in written language, this study has the potential to provide new information about audience effects, particularly in younger students, and needed validation of recent composition theory. More importantly, it could provide composition researchers with a new measure for audience effects on written language that is sensitive to audience effects in children in elementary school.
Definition of Terms

For the purpose of the present study, the following definitions were used:

1. Idea unit: the expression of a complete idea which may or may not be a complete sentence.

2. Language Functions: five functions of language have been derived from Tough (1977, 1979) and Shafer et al. (1983).
   a. Controlling
   b. Relational
   c. Informing and Interpreting
   d. Theorizing
   e. Projecting

3. Sub-Functions: each function is accomplished through a variety of sub-functions as specified in the Taxonomy of Language Functions below. For example, "Spending the money on a class pet would teach us how to care for animals" would be categorized as Function 4 (ii) (Surveying possibilities, anticipating problems and solutions, drawing conclusions).

4. Variety of Language Functions: the number of different functions in a given composition.

5. Proportion of Idea Units of a Given Function: the ratio of idea units of a given function to the total number of
idea units for a given composition.

6. Proportion of Idea Units of a Given Sub-Function: the ratio of idea units of a given sub-function and the total number of idea units for a given composition.

7. The following Taxonomy of Language Functions and Sub-Functions was derived from Shafer et al. (1983) and Tough (1977, 1979).

Taxonomy of Language Functions and Sub-Functions

Function 1 (Controlling)
   (i) Direct instructions to reader
   (ii) Attempts to control reader
   (iii) Requests for direction
   (iv) Requests for attention
   (v) Requests for collaboration

Function 2 (Relational)
   (i) Asserting negative opinions
   (ii) Asserting positive opinions
   (iii) Rhetorical requests for opinion or direction
   (iv) Incidental conversational expressions

Function 3 (Informing and Interpreting)
   (i) Reporting the present
   (ii) Recording the past
   (iii) Making comparisons
   (iv) Making generalizations
   (v) Rhetorical requests for information
   (vi) Informing about assignment
Function 4 (Theorizing)
(i) Recognizing causal and dependent relationships
(ii) Surveying possibilities, anticipating problems and solutions, drawing conclusions
(iii) Rhetorical questions involving prediction
(iv) Reflecting on reasoning, evaluating ideas

Function 5 (Projecting)
(i) Projecting self into experience of others
(ii) Projecting self into situation never experienced
(iii) Rhetorical questions involving projecting or imagining/Creating scenario

Research Hypotheses

Based on current composition theory and sociolinguistic theory, research in the fields of audience effects on written and oral language, and pilot data, the following hypotheses were made with respect to audience:

1. The variety of language functions (number of different functions used) will be greater for the audience of best friend than for the audience of teacher in compositions written by eleventh- and sixth-grade students.

2. The proportional use of Function 2 (Relational) will be greater for the audience of best friend than the audience of teacher in compositions written by eleventh- and sixth-grade students.
3. The proportional use of Function 3 (Informing and Interpreting) will be greater for the audience of best friend than the audience of teacher in compositions written by eleventh- and sixth-grade students.

4. The proportional use of Function 4 (Theorizing) will be greater for the audience of teacher than for the audience of best friend in compositions written by eleventh- and sixth-grade students.
CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviews literature in four areas: a) literature discussing the concept of audience as it appears in current composition theory; b) literature which reports empirical studies of the effect of audience on written language; c) studies from both developmental psychology and sociolinguistics of the effect of audience on oral language; and d) literature which presents schemes for describing the functions of oral and written language. The chapter concludes with a discussion of considerations of the present study.

The Effect of Audience in Written Composition

The literature on the effect of audience in the field of written composition is somewhat contradictory. On the one hand, composition theorists suggest that the intended audience is crucial for writers of all ages affecting both the writing process and written products. Yet there is little empirical evidence that audience does indeed affect written language. This apparent gap between composition theory and research is examined below. Current theoretical views on the effects of audience are reviewed as well as recent empirical studies
dealing specifically with audience effects on written language.

The Concept of Audience in Current Composition Theory

Traditionally, the concept of audience occupied a prominent place in rhetorical theory. From the time of Aristotle, rhetoric was concerned with the "studied adjustment of discourse to its audience" (Rosen, 1973, p.178). In the past century, however, considerations of audience and other aspects of the rhetorical situation have been largely neglected in composition teaching in favour of an emphasis on form--what has been described as the tyranny of "the topic sentence, the various methods of developing the paragraph ... and the holy trinity of unity, coherence and emphasis" (Corbett, 1971, pp. 626-7). According to Berlin (1984), the view that learning to write is learning matters of "practicality" and "superficial correctness" has haunted writing classes in North America for almost a century (pp. 61-2). It is only in the last twenty years that the importance of the audience and other aspects of the rhetorical situation has re-emerged in discourse theories (Odell, Cooper, & Courts, 1978; Young, 1978) and in Language Arts text books.

Since the mid-sixties, the "current traditional" model for writing instruction, with its emphasis on form and correctness of mechanics, has frequently been criticized for
failing to teach writing as an authentic communicative act. For example, James Moffett suggests that English teachers have not emphasized that writing is "about-something-for-someone" (1968, p. 8).

. . .when students make up a sentence or paragraph demonstrating such and such kind of structure, they are not learning what the teacher thinks they are: they are learning that there is such a thing as writing sentences and paragraphs for their own sake, that discourse need not be motivated or directed at anyone, that it is good to write even if you have nothing to say and no one to say it to . . . (p. 206).

Similarly, Macrorie describes composition classes as "astonishing failures" which produce themes "not meant to be read but to be corrected" (1968, p. 686). More recently, Bereiter has criticized traditional writing instruction, "with its emphasis on style manuals, models and teacher corrections," for producing writing that is performative--conforming to conventions of style and mechanics but devoid of intention to have a desired effect on an audience (1980, pp. 85-88).

Currently, there is considerable agreement in the composition field that audience considerations play an important part in the composition process. Hayes and Flower
argue that audience acts as a "constraint" upon all stages of the writing process for competent writers. Elbow likens the audience to a "magnetic field" which exerts an "organising or focusing force on our words" (p. 191). Britton and his colleagues argue that an invisible audience "impels" the writer toward choices "on every dimension of language" (Britton, Burgess, Martin, McLeod, & Rosen, 1975, p. 59). The goal of the writer, it has been said, is to achieve psychological change in the audience (Young, Becker & Pike, 1970), to make intellectual contact with the reader, and to bring about the adherence of minds. (Perelman & Olbrechts Tyteca, 1969).

Many claims are made for the values of having an "authentic" audience in school settings. An authentic audience is claimed to produce writing that is concrete, alive, purposeful, personal and creative (Florio, 1978; Judy & Judy, 1981; Moffett, 1968), and to "broaden the nature of subject area learning" (Applebee, 1981, p. 380). Among language educators, John Dixon's dictum that language is learnt in operation, not by "dummy runs," (1967, p. 6-7) has become axiomatic. Numerous recent Language Arts texts suggest that teachers must provide authentic audiences for children's writing (e.g., Fox & Allen, 1983; Judy & Judy, 1981; Moffett & Wagner, 1976; Smith, Goodman & Meredith, 1976); and recent Language Arts journals contain frequent suggestions for
providing "real" audiences both inside and outside of the classroom (e.g., Barrs, 1983; Goodman & Goodman, 1983; Hoffman & McCully, 1984; Smith, 1983).

The theoretical basis for this recent emphasis on the importance of the intended audience for written composition can be found in the seminal discourse theories for current Language Arts curricula—the works of Britton (1970, 1975), Moffett (1968), Moffett and Wagner (1976), and, to a lesser extent, Kinneavy (1971). All three are based on the semiotic relationship between writer, reader, and topic (Kinneavy, 1980; Vahapassi, 1982) as was Aristotle's theory of discourse production (Kinneavy, 1971).

This relationship frequently takes the shape of a triangle and is called the communications triangle (Kinneavy, 1971; D'Angelo, 1981). Moffett and Britton both argue that the distance between writer and reader shapes the discourse that is produced. Britton's theory is developmental. He argues that children progress from expressive personal writing for the self or a trusted adult, to writing with a poetic or transactional function for a wider and ultimately unknown audience. Moffett, too, argues for a progression from writing for a known specific audience to publishing for a wide public audience. He suggests that increased distance between writer and reader produces a need for increased levels of generalization and abstraction (1968; Moffett & Wagner, 1976).
Kinneavy is concerned with adult writers rather than the development of children's ability to write for remote audiences. However, he, too, argues that audience affects the writer's sense of purpose, and that adult writers systematically vary the function of writing with the audience for whom they are writing.

According to Freedman and Pringle (1980), the interrelationship between writer and audience is "crucial in contemporary discussions of the rhetorical act" (p. 182). Current theorists assume that choices in writing must be guided by a "complex awareness of speaker, subject and audience, not a single set of conventions" (Odell, Cooper & Courts, 1978). Odell (1981) argues that the assessment of writing ability, must include assessment of ability to write for various audiences and purposes. However, composition research does not offer a great deal of evidence that students in school settings are indeed provided with the opportunity to write for a variety of audiences (Applebee, 1981; Britton et al., 1975), or that providing students with different audiences affects their writing. There has been little empirical investigation of the question of audience effects on written language.
Studies of Audience Effect on Written Composition

In 1963 the Braddock Report (Braddock et al., 1963) called for studies of the rhetorical aspects of composition including audience. However, fifteen years later in an update of the Braddock Report, Van de Veghe (1978) identified only one study which dealt specifically with the effects of audience. In recent years, a handful of empirical studies have examined compositions written in school settings for audience effects. Only one study involving a small number of subjects reports audience effects before students reach high-school.

A small set of studies has examined the effect of audience on the syntactic complexity of compositions intended for different audiences. Using the procedure established by Hunt (1970) of asking students to rewrite a given passage, Smith and Swan (1978) examined rewrites by sixth graders and two groups of college students. Each student rewrote a selection on bees three times—once so that it "sounded better," once for a third grader, and once for a superior adult. Audience affected syntactic complexity for the college students and not for the sixth graders. The college students wrote shorter T-units for the third grade audience.

Crowhurst and Piche (1979) examined free writing of students in grades six and ten for audience effects on the syntactic complexity of narrative, descriptive and
argumentative compositions. Each student wrote six compositions in his assigned mode—three for a teacher and three for a friend. Compositions written by grade ten students for a teacher were more syntactically complex than compositions written for a best friend. There were no significant audience effects in the compositions written by students in grade six.

Rubin and Piche (1979) had students in grades four, eight and twelve, as well as a group of skilled adults, write arguments on the topic of glass recycling for audiences differentiated by degree of familiarity. Students wrote for someone they knew well (high intimacy), someone on their street whom they did not know well (intermediate intimacy), and the reader of a local newspaper (low intimacy). Compositions were examined for syntactic complexity. Only limited evidence of audience effects on syntactic complexity was found. Audience was found to affect mean clause length. Clauses directed to low intimacy audiences were longer than those directed to high and intermediate intimacy audiences.

In addition, this study examined audience effects on "appeal types." Eighteen categories of appeal were devised. Intimacy of audience was found to affect number of different appeal types, and the strategies of providing a context, asking the reader to publicize, expressing reservations, and making gratification appeals. In virtually all cases,
however, there were no differences between audiences in appeal types used at any of the three grade levels. The study concluded that fourth-grade written strategies appeared to be "rote, mechanical and lacking in interpersonal sensitivity" (p. 312). Eighth grade written strategies were seen to display some attempt to accommodate to audience predispositions, although appeals to audience values were limited to financial rewards. Twelfth grade subjects, in contrast, were seen to perform as adults producing a high proportion of reservations, and appeals to the audiences' internal gratification. For adult subjects, more different appeal types were directed to audiences of high and intermediate intimacy than to those of low intimacy.

Each of the three studies contained some evidence of an audience effect on the complexity of syntax for students in high-school and in university, but no evidence of such an effect for students in elementary grades. From these studies it can be concluded that audience affects the complexity of syntax for older subjects. The Rubin and Piche study also suggested that effects for intended audience on number of different appeals, and particular appeal strategies can not be found in the writing of students in grades 4 and 8.

Two other small sets of studies have examined questions related to the question of how audience affects written language. The first set has examined audience effects on
quality. In contrast to studies involving audience effects on syntax, studies involving audience effects on quality are either less reliable or of questionable validity.

Metviner (1981) had 124 grade nine students write opinion essays on the use of drugs by teenagers. The control group wrote for their teacher in order to receive a grade while the experimental group wrote for their school newspapers. Contrary to the investigator's expectations, the group writing for their teachers (the *rhetorically deficient* group) received significantly higher holistic ratings than did the *rhetorically based* group writing for publication in the school newspaper. However, the experimenter did not use a repeated measures design, nor does she appear to have recognized the potency of the teacher as audience for writing in her designation of the teacher audience condition as *rhetorically deficient*. Moreover, the promised grade and not the audience may have motivated more serious attention to the writing task, and, hence, may have caused the observed differences in quality. It is not possible, therefore, to conclude from this study that audience affects writing quality.

Another study which attempted to investigate the effect of audience on writing quality examined compositions written for audiences of high and low intimacy by college freshmen (Richardson, 1980). Ostensibly, the dependent variable in this study was writing quality; however, writing quality was
measured by syntactic maturity and coherence scores. Since research has failed to demonstrate a relationship between writing quality and either syntactic maturity or coherence (Crowhurst, 1980; Stewart & Grobe, 1979), this study would appear to lack validity. Results were equivocal. Syntactic maturity scores for essays written for the low intimacy audience were significantly higher than those for the high intimacy audience, supporting other findings of audience effects on syntactic complexity (Crowhurst & Piche, 1979; Smith & Swan, 1978). Coherence scores were significantly lower for the low intimacy audience than those for the high intimacy audience.

The second set of related studies has examined audience effects on the revision process. Results, though somewhat contradictory, support the general observation that audience effects do not emerge before students reach high-school.

Bracewell, Scardamalia and Bereiter (1978) addressed the question of whether students would revise compositions to comply with requests from an audience to do so. Students in grades four, eight and twelve wrote on the topic "Should students be allowed to choose the subjects they study in school?". Subjects were divided into four groups on the basis of writing condition. Students in the clarity condition were asked to revise to make their compositions more understandable, those in the interest condition to make their
compositions more interesting, those in the convincingness condition to make their compositions more convincing, and those in the control condition to make their compositions better. Pairs of compositions were then rated for quality and for other features such as interest and correctness of mechanics. Consistent differences between revised and original composition ratings were obtained only across grades. These differences were global ones that were not specific to a particular revision condition. Grade fours did not make significant revisions. Grade eights actually made revisions of lower quality. By grade twelve there was a "detectable increase" in the frequency of revisions judged to be improvements. This study suggested that the ability to respond successfully to audience requests for revision does not emerge until high school.

Monahan (1984) examined audience effect on revisions in compositions written for a teacher and a peer by "basic" and "competent" twelfth graders. Basic grade twelve writers made more revisions for a teacher audience, while competent grade twelve writers made more revisions for a peer audience. This study, thus, provides further evidence of audience effect on revisions for older students.

In a study involving thirty-six subjects, Prentice (1980) reported evidence of response to audience at an earlier age than was found by Bracewell et al. (1978). Twelve children
in each of grades three, five and seven wrote descriptions of either a simple naturalistic drawing or a geometric drawing for one of two audiences, namely, a first grader or an adult. After the first writing experience, the subjects received, as feedback, the actual drawings done by the intended audience in response to their descriptions. Subjects then wrote a second description of the same drawing for the same audience. Descriptions were scored for sentence length, vocabulary, and amount of information contained in the description. Sentence length did not vary significantly as a function of intended audience at any grade level. Subjects in grade seven simplified vocabulary for a first grade audience. Students at all grade levels provided more information for an adult than for the first grader, and also increased significantly the amount of information in their description after receiving feedback from their audience. The investigators concluded that even children in grade three made choices in their writing which took into account the communicative needs of their intended audience. The difference between this study and that of Bracewell et al. (1978) is probably attributable to the verisimilitude achieved by having the students receive feedback from a real audience.

These three studies suggest, then, that audience affects the revision process for older students, and that when attempts are made to increase the verisimilitude of the
writing situation, audience effects may be seen in the writing of younger students as well. However, it should be noted that the number of subjects involved in the Prentice study is small, and that it focuses on the effect of reader response on revision, rather than on audience effects on the production of written language. Overall, the number of studies dealing specifically with audience effects on written language is low, and evidence of audience effect is scant.

A plausible explanation for the paucity of empirical evidence of audience effect on written language was advanced by Bracewell, Scardamalia and Bereiter (1978). Using a suggestion from Nystrand (1977), they argued that the reason the data showing adaptation for audience in written language is so meagre is that "much of the data collected on writing has been concerned with dependent measures such as the size of the T-unit, rather than dependent measures which regard the text as a communicative instrument" (p. 3). They turned to Halliday's (1973) notion that any statement has an ideational, a textual and an interpersonal function as support for examining what they call "overview" or "context-creating" statements such as: "There are three main parts." Context-creating statements, they argued, inform the reader of the nature of the information to be given without giving specific details, thus serving each of the functions Halliday attributes to all utterances. That is, they name the topic or
sub-topic (*ideational*), orient the reader to the information to be presented (*interpersonal*), and establish the range of information to be given (*textual*).

They designed an experiment to test the hypothesis that the number of context-creating statements would increase with amount of specific information about audience and task. Fifteen students in each of grades four, eight, twelve and first-year-university wrote descriptions of a geometric form. Students wrote for a friend of the same age in another school so that drawings could be returned (the *letter* condition), and for someone of their own age with no expectation of feedback (the *peer* condition). In a third writing condition, there was no mention of potential audience, and no expectation of feedback (the *standard* condition). In the letter writing condition, letters were mailed to friends in other schools who then returned drawings based on the information received. Overall, there was a low number of context-creating statements per condition. As hypothesized, scores were highest for the letter condition, lowest for the standard condition, and intermediate for the peer condition.

In a variation of this experiment, 15 students in each of grades four, eight, and twelve performed the same task for audiences varied by age. Students wrote for someone in grade three (the *youth* condition), for someone of their own age (the *peer* condition), and for an adult (the *adult* condition).
Scoring procedure was the same. Specifying the age of audience did not produce more context-creating statements for students in grades four and eight. For students in grade twelve, the number of context-creating statements was lowest for the adult condition, and highest for the youth condition. Although seventy-one percent of students did not use context-creating statements under any condition, the investigators suggested that their data reveals something about the late age at which student writers begin to consider their audience.

Taken together, the experimental studies of audience effect on written language lend little support to the strong claims that are made for the importance of audience in composition theory. The number of studies is small. Reliable evidence of audience effects is scarce, and few generalizations can be made. This is particularly true for young students.

Audience has been found to affect the complexity of syntax for students in high school and university (Crowhurst & Piche, 1979; Richardson, 1980; Rubin & Piche, 1979; Smith & Swan, 1978) and number of appeal types for adults (Rubin & Piche, 1979). For younger subjects audience has been reported to affect vocabulary and amount of information (Prentice, 1980). However, it may be the case that the paucity of evidence of effect of audience on written language is an
artifact of the measures that have been used (Bracewell et al., 1978). Given the strength of claims that are made for the importance of audience in composition theory for both the writing process and written products, further study of audience effects is warranted. But studies should employ, as Bracewell et al. (1978) suggest, measures sensitive to children's attempts to communicate in written language.

The Effect of Audience on Oral Language

In contrast to the paucity of information about audience effects on written composition, audience effects on children's oral language have been documented both in developmental psychology and in sociolinguistics. In both disciplines there is evidence that children use different language to accomplish the same purpose with different audiences. Studies in each discipline are reviewed below. Sociolinguistic studies which examine language functions in school settings are reviewed separately since they are of particular importance to the present study.

Studies of Children's Cognitive Egocentricity

Based on the work of Piaget, the prevailing perspective in developmental psychology has been that young children are too egocentric to take the point of view of their listener or
reader into account in their construction of spoken or written messages. A tradition exists of studying children's ability to adapt messages to the needs of listeners in what are termed referential communication tasks. Typically, one speaker has to describe a referent in an array, or describe the rules for playing a board game in such a way that a listener will be able to duplicate the array, or play the game, respectively.

The seminal study of children's ability to perform referential tasks was conducted by Glucksberg, Krauss, and Weisberg (1966). Speaker-listener dyads, aged four and five, had to communicate about novel geometric forms. Speaker and listener were separated by a screen. The dyads were found to be incapable of "adequate communicative performance" with the novel geometric forms. For example, one child described one geometric form as "daddy's shirt," and a different geometric form as "another daddy's shirt." As such descriptions were meaningful only to the child, it was hypothesized that children encode messages for themselves rather than their listeners. When children were read their own "inadequate" descriptions, their ability to identify the geometric forms was "virtually perfect," thus supporting the investigators' hypothesis that children's messages are self-encodings.

Flavell (1975) developed a series of experimental tasks designed to test development in children's ability to construct effective listener-adapted communications. Subjects
were children in elementary schools. Tasks included teaching a game to a blindfolded or normal partner, describing a referent so that it could be selected from an array, and selecting gifts for recipients who varied in age or sex. With and without feedback, performance was found to improve with age. Throughout this series of experiments, younger subjects were characterized as being too egocentric to take the role of the listener. For example, on a task involving description of a design so a listener could reproduce it, younger children improved their communications less following negative feedback than the older ones did.

Our hypothesis is that it simply never occurred to most of the second graders, either before or after feedback, that L(listener) would require information regarding the size, position, and color in order to reproduce the design, and that it never occurred to them largely because they failed to represent to themselves in any fashion, the process of reproducing it, as experienced from L's vantage point (p. 191-2).

It was concluded that a child entering school can make "elementary inferences" about what a listener perceives, but is "markedly insensitive" to the hidden role-taking requirements of communication. However, widespread changes in role-taking and communication skills were observed to take
place during middle childhood and adolescence; leading the investigator to observe that "as he becomes older, the child becomes increasingly aware of the necessity of paying careful attention to the characteristics of the audience when communicating" (pp. 211-12).

In recent years, the relationship between the ability to role-take and the effectiveness of communication has been questioned. While children improve with age on both role-taking and communication tasks, the correlation between these two tasks is usually "modest or low" (Asher & Wigfield, 1981). Cognitive egocentricity and inability to role-take are no longer regarded as an adequate explanation for children's communication failures (Dickson, 1981; Donaldson, 1978). Indeed Masangkey, McCluskey, McIntyre, Sims-Knight, Vaughn, and Flavell (1974) reported a series of experiments in which they reevaluated the position taken by Flavell. Children aged two to five are reported to be capable of nonegocentrically inferring how an object is perceived by an observer with a perspective different from the child's.

Recently, it has been argued that children's poor performance on referential tasks is the result of experimental procedures. For example, Kossan and Markman (1981) hypothesized that the listener's proximity in most referential communication tasks might prevent children from realizing that the listener does not share information with the speaker. To
test this hypothesis, three groups of children in grade one were contrasted. Subjects in the single picture condition were shown each referent individually, and instructed to describe each picture so that an adult listener behind a screen could recognize it. The purpose of this condition was to show that subjects could describe each picture. It also served as a base from which to evaluate changes in messages when speakers had to provide messages which discriminated the referent from a set of distractors. Subjects in the standard condition had to describe a referent so a listener behind a screen could discriminate it from an array of distractors that were similar to the target item. Subjects in the radio condition performed the same task for a listener who was not in the room but was listening over a citizen's band radio. The messages of children in the standard condition were longer but no more informative than those of children in the single picture condition. In contrast, messages contained more discriminating information in the radio condition than in either the standard condition or the single picture condition. Adults were more confident in selecting referents in this condition as well. It was concluded that the standard procedure used to assess referential communication skills can lead to an underestimation of children's communicative competence.
In addition, developmental psychologists do report message adaptation in young subjects. Maratsos (1973) asked 24 three- to five-year-olds to perform a simple referential communication task under two conditions. One group addressed an experimenter who could see the referents, and one group addressed an experimenter who could not. Subjects addressing an apparently blind listener were more explicitly verbal than were those communicating to an experimenter who could see.

In a similar experiment, Meissner and Apthorp (1976) examined 39 four- and five-year-old black children of lower socio-economic status. Each subject described an array of toys to a blindfolded and a sighted experimenter. Many of the children switched from pointing, when the experimenter could see, to verbalizing when she could not.

Menig-Peterson (1976) compared the communications of three-year-olds and four-year-olds under two conditions of listener knowledge. One group talked about an earlier experience with an experimenter who had been present, and one group talked with an experimenter who had not been present. Protocols were scored for appropriate introduction or nonintroduction of "referents" (i.e., objects or persons) that needed to be named in order for a naive person to understand what was being talked about. Four-year-olds specified significantly more referents in the naive than in the knowledgeable condition. The proportion of referents
specified by three-year-olds did not differ significantly between conditions. The investigators speculated that the reason their data differs from that of Glucksberg et al. (1966), and Flavell is that the tasks employed were easier. Recent studies in developmental psychology suggest, then, that the extent of children's communicative abilities was underestimated by earlier studies. When earlier procedural weaknesses were remedied, subjects aged four and five have been found to accommodate messages to listeners who are sighted or blindfolded (Maratsos, 1973), naive or knowledgeable (Menig-Peterson, 1976), and children in grade one have been found to accommodate messages for listeners who are listening on a citizen's band radio in another room (Kossan & Markman, 1981).

Studies of Children's Sociocentrism

Another field to offer evidence of children's communicative abilities is sociolinguistics. In contrast to the referential tradition in developmental psychology, sociolinguistic research emphasizes the importance of studying children in natural settings. One of the outcomes of this approach has been "to accentuate the positive communicative competencies of young children" (Dickson, 1981, p. 5). Rather than being egocentric, children are seen as being sociocentric even in infancy.
Sociolinguistic research focuses on the relationships between social variables, such as roles and status, and linguistic expression in terms of its form and function. A principle of sociolinguistics is, first, that there is more than one way to express the same meaning and accomplish the same function, and, second, that choice of linguistic form is influenced by social and contextual factors (Cherry Wilkinson, 1981). The role-relationships and relative statuses of the participants in a discourse are generally regarded as an important feature of the social context affecting linguistic features such as formality of language, terms of address, and use of pronouns (Trudgill, 1974, pp. 105-9). Many "listener-adjusted" features of adult speech have been found in the language of young children as well.

For example, a phenomenon that has been extensively investigated is adults' use of particular language forms for children. Virtually all languages seem to have special linguistic items which adults use to address children (Hudson, 1980, p. 121). Recently, investigators have examined the language that children address to interlocutors who are both older and younger than themselves for evidence that children also adjust their language for age of listener. According to Sachs and Devin (1976), the speech children address to listeners younger than themselves has been found to exhibit many of the features of "motherese" such as abbreviated length
and syntax, attention getting devices, repetitions, a high incidence of questions, and raised intonation. For example, Shatz and Gelman (1973) compared the language which four-year-olds addressed to two-year olds, to peers, and to adults, and found that shorter sentences, fewer complex constructions, and more attention getting devices were addressed to two-year-olds than to peers or to adults.

Similar adjustments for age of listener are reported in young subjects by Sachs and Devin (1976). Four children from three to five years of age were recorded talking to their mothers, to peers, to babies, to baby dolls, and pretending to be babies themselves. Both spontaneous speech and contrived play sessions were recorded. Each child used characteristics that have been found in mothers' speech to children when addressing both a baby and a baby doll. The largest differences between speech addressed to mother, and to baby, or baby doll were in the number of words occurring before the verb, use of names, and imperatives.

Other studies have examined adjustments in children's language for relative status of listener. Status of listener has been shown to affect politeness across cultures (Brown & Levinson, 1978). Politeness is frequently studied through the indirectness of requests and directives. For example, Ervin-Tripp (1976) identified consistent features in the types of directives used as a function of the social features of the
speech situation in adult white-collar working environments. The social distribution of seven directive types was identified. For example, statements of need such as "I need a match" were found to be directed to subordinates, while imbedded imperatives such as "Could you give me a match" were directed to unfamiliars or those of different rank.

Directness and indirectness of requests and commands in children have been studied in some detail. As in the speech of adults, choice of direct or indirect form has been reported to depend on considerations of status, politeness and privilege. In a review of literature on child language, Ervin-Tripp (1977) suggests that there is considerable social differentiation in children's directives even before the age of three. She reports that children use more imperatives with children than with adults, that they use more hints with familiar than with unfamiliar adults, and more polite modifiers with unfamiliar adults (p. 184-5). She also suggests that children's request forms "respond" to age, dominance, and familiarity of addressee.

Similarly, Mitchell-Kernan and Kernan (1977) report that black children between seven and twelve years of age differentiate directives as a function of social factors. Subjects were observed in spontaneous role playing situations using hand puppets and an improvised stage. As in Ervin-Tripp's data, statements of need were directed from
persons of higher rank to persons of lower rank. Imperatives were more likely to be directed to persons of lower rank than to persons of higher rank than the speaker. Most hints occurred between persons of equal status.

Olson and Hildyard (1981) asked children in kindergarten and second grade to fill in the last line of a story involving a request for either a right or a favour from an equal, a higher status, and a lower status individual. Favours were more likely to be signaled by a conventionalized request form ("May I ...?" "Can I ...?") than were rights. In requests for rights, direct commands or threats were used when directed to a peer or individual of lower status, while conventionalized forms such as "May I please...?" were used for individuals of higher status.

Message adaptation for familiarity and status of listener is also reported in older subjects. Studies of older children have employed persuasive tasks such as convincing a stranger to take a lost puppy home. In general, children employ more sophisticated strategies in attempting to persuade an unknown rather than a known listener.

Delia, Kline and Burleson (1979) examined the persuasive strategies used by approximately sixteen students in each grade from K to 12, in two persuasive tasks. Listeners were a mother and a stranger. Messages were coded on a four point scale for the degree to which they accommodate to the
perspective of the listener. Across ages, children used significantly more higher-level persuasive strategies in addressing an audience unknown to them than in addressing a familiar audience.

In a study involving two familiar listeners differentiated by age and status, Finlay and Humphries (1974) examined rhetorical appeal used by girls aged five, nine and thirteen. Subjects attempted to persuade their mother or a best friend to watch TV rather than play a game. A greater variety of rhetorical appeals was used for a best friend than for a mother.

There is also evidence that children, like adults, use a different "register" or "code" for different situations. Gleason (1973) reported examples of code switching in the children of five families in Cambridge, Massachusetts. Subjects were recorded in their own homes. Children in the study adopted a style of language for their peer-group that was different from the language addressed to adults or to babies. Peer-group style is described as being rich in sound effects and expressive words such as "Yukk." It is also distinguished by frequent use of first names, and frequent use of copying a preceding utterance without changing emphasis or structure.

There is thus good evidence that for children, like adults, choice of linguistic form is affected by situational
and social variables including age and status of listener. Age of listener has been reported to affect phonological, lexical and syntactic features for four-year-olds (Shatz & Gelman, 1973), even when the listener is a doll assigned the role of a two-year-old (Sachs & Devin, 1976). Status and familiarity of listener have been reported to affect the politeness of strategies used to achieve particular language functions (Ervin-Tripp, 1977; Mitchell-Kernan & Kernan, 1977; Olson & Hildyard, 1981), number of rhetorical appeals (Finley & Humphries, 1974), and level of rhetorical appeals (Delia et al., 1979).

Studies of Oral Language Functions in School Settings

Still further evidence of children's responsiveness to contextual features such as status of listener can be found in recent studies of language functions in school settings. Status of listener is especially relevant in school settings where much of children's language is constrained by teachers' expectations (Barnes, 1976; Cazden, 1972 b.; Cherry-Wilkinson, 1981; Hymes, 1972). Recently, many investigators have become especially interested in teachers' effects on children's "language use" in school settings.

The terms "language use" and "language function" are frequently used synonymously. "Language function" has been defined as the communicative intent of the speaker (Chapman,
1981). Intent is not analogous to sentence type. For example the three following sentences all serve the function of requesting:

Open the door.
The door is closed.
Could you open the door?

In English function-indicating devices include mood of verb, stress, intonation, and word order.

Numerous categorization schemes for the functional analysis of children's language have been devised. Those schemes that have been used with school-aged children have included a directive or controlling function, an informing or representational function, a personal or expressive function, and an imaginative function (Halliday, 1975; Tough, 1977, 1979; Wells, 1975). In addition, Halliday suggests a heuristic function, Tough a reasoning function and a predicting function, and Wells a ritualizing function.

Four studies report audience effects on oral language functions in school settings. Fleming (1980) examined the effects of audience and interruptions on the expressive language of working-class children in grades three and four. Children were engaged in a problem solving activity with a peer and a teacher. Audience and interruption were found to affect expressional fluency. Language addressed to peers was more speculative and more expressive than language addressed
to teachers. Teachers were observed to direct language and to constrain the flow of speculative language. Interruption was found to constrain speculative language when child spoke to child, but not when child spoke to teacher.

Pinnell (1975) investigated language use in three primary class rooms. Twelve children aged six and seven were recorded in their classrooms at regular intervals over a period of four months. Statements were analysed according to Halliday's (1975) categories of language functions. Most of the language recorded was interactional. Audience-related differences are reported for the following functions: more instrumental language was addressed to teachers than to peers, more regulatory language and more personal language was addressed to peers than to teachers. Very little of the language recorded was heuristic or imaginative.

In an empirical study, Jensen (1973) examined the casual and careful oral language of average and superior boys in grade five. Randomly selected pairs of subjects were recorded discussing a problem for the casual speech condition. For the careful speech condition, an investigator entered the room, dismissed one subject and questioned the remaining subject. Topic was the same under both conditions. Casual language style was characterized by more diversified word choice, shorter communication units, more variety in syntactic patterns and standard usage. The careful style produced
greater structural complexity and more non-standard usages. Differences were also noted in language functions. The careful style contained more tentativeness than the casual style, and the casual style contained more questions than the careful style.

In school settings, language addressed to a teacher or an investigator has been reported to be different in function from language addressed to peers in amount of modality, speculativeness and expressional fluency (Fleming, 1980), amount of personal, regulatory and instrumental language (Pinnell, 1975), and amount of tentativeness and number of questions (Jensen, 1973). From these studies, it would seem that language addressed to teachers and other adults in school settings is characterized by tentativeness, while the language addressed to peers is characterized by speculativeness, expressional fluency, modal verbs, and questions. Language addressed to peers is also characterized as being both personal and regulatory. Similar differences in the functions of language have not been reported in children's writing.
Evidence of effect of audience on oral language is substantial, ranging from structural features such as length of utterance and complexity of syntax, to pragmatic features such as the adequacy of introduction of referents, the directness of requests and directives, the number and level of rhetorical appeals, the amount of personal, regulatory and expressive language, and the number of questions. In contrast, evidence of audience effects on written language is meagre (Bracewell et al., 1978; Kroll, 1985; Van de Veghe, 1978). The most reliable findings for written language involve the effect of audience on the complexity of syntax among older students (Crowhurst & Piche, 1979; Smith & Swan, 1978).

Two explanations can be posited for this apparent "anomaly." Either writing is so much more complex than speaking that students cannot accommodate written language to different audiences, or the measures that have been used in studies of audience effects on written language are insensitive to differences that are there. Given the strength of claims that are made for the importance of audience by discourse theorists, and the substantial evidence that
audience affects children's oral language, the latter explanation seems plausible. Indeed, researchers in the field do suggest that audience effects could be discerned more readily in written language if measures employed were communicative rather than structural (Bracewell et al., 1978; Nystrand, 1979).

A promising area for deriving appropriate measures of this kind is in the work that has been done on language functions in sociolinguistics and philosophy of language. While studies of the effect of audience on oral language suggest numerous measures that could also be appropriate for the study of audience effect on written language, the functions of language seem particularly appropriate for the study of audience effects in school settings for two reasons. First, language function is usually identified with communicative intention (Chapman, 1981; Wells, 1981). Second, virtually all writing in school settings is addressed to a teacher (Applebee, 1981; Britton et al., 1975), and there are both theoretical and empirical grounds for predicting that status of audience will affect language function. Accordingly, schemes describing the functions of both oral and written language are described below.
The Functions of Oral and Written Language

The functions or uses of language have recently been a subject of interest in a number of fields. Motivated in part by dissatisfaction with the Chomskyan view that language can be dissociated from the uses, users, and functions of language (Levinson, 1983), theorizers and researchers in linguistics, language acquisition, philosophy of language, and education have turned their attention from language structure to language function. A recent statement by Gordon Wells (1981) is representative of the shift that has occurred. He argues that:

... understanding language involves more than attending to the words and sentences that are spoken or written: unless we go beyond the forms to the intentions they realize, the experiences they refer to, the purposes that give rise to them and the situations in which they occur, we shall not achieve a full understanding, either of the sentences themselves, or of language as a human phenomenon. (p. 23)

Many schemes have been suggested for describing the intentions or purposes of language, but no definitive scheme exists. There is diversity in the categories that have been developed to describe a speaker's communicative intent "depending on author's purpose, data and philosophical point
of view" (Chapman, 1981). While some systems describe the function of an utterance independent of its function in relation to the prior or subsequent utterance, overall discourse structure, or the social structure of the interaction, other systems focus on these relationships (Chapman, p. 112-13). In addition, there is diversity in the basis upon which classification is made.

In the seminal work on language functions by Buhler (1934) (cited in Lyons, 1977) and Jakobson (1960) (cited in Lyons, 1977), the function of language is related to "focus" on one of the elements of the communication triangle. According to Buhler, focus on the speaker produces the expressive function, focus on the addressee the vocative function, and focus on the external situation the descriptive function (Lyons, p. 52). Jakobson modified Buhler's scheme and his terminology to include the referential function focusing on the referential context of the message, the emotive function on the speaker's state, the conative function on the speaker's wishes that the addressee do or think something, the metalinguistic function on the code being use, the phatic function on the channel, and the poetic function on the way the message is encoded (Levinson, 1983, p. 43).

The work by Austin (1962) and Searle (1969) provides a different perspective on the functions of language. In a series of lectures, aptly titled "How to do things with
words," Austin argues that utterances are used not only to
describe a state of affairs but to "do things." Every
utterance, he argues, is a speech act. Speech acts include
making statements, promising, and offering, and, according to
Austin, the number of possible speech acts is very large—as
large as the number of performative verbs in a given language.
Searle, Austin's student, simplified Austin's scheme somewhat
by suggesting that there are five speech act categories:
representatives (which commit the speaker to the truth of a
proposition), directives (which are attempts by the speaker to
get the addressee to do something), commissives (which commit
the speaker to some future course of action), expressives
(which express psychological state), and declarations (which
perform actions by being uttered such as christening, firing,
and declaring war).

The writings of Buhler, Jakobson, Austin and Searle have
been influential for studies of the functions of children's
language. Numerous schemes for describing the functions of
children's written and oral language have been developed.
Those that have been used with children in school settings
will be described below.
Schemes describing the functions of written language.
The most influential scheme for the classification of written language is that of Britton and his colleagues (1975). Drawing on the work of Hymes, Sapir and Jakobson (p. 13) on the functions of oral language, Britton et al. suggest that written language can serve three functions: the expressive, the transactional, and the poetic. Expressive writing focuses on the writer, poetic writing on the form of the message itself, and transactional writing on information. Transactional writing is further divided into referential writing which conveys information, and conative writing which attempts to persuade or convince a reader.

Applebee (1981) adapted Britton's scheme to make it more suitable for an observational study by including categories such as writing without composing (e.g., doing multiple-choice exercises), informational writing (e.g., note-taking), personal writing (e.g., diaries) and imaginative writing (e.g., stories and poems). Florio and Clark (1982) devised their own "functional" categories for an ethnographic study of the functions of writing in a grade two classroom. Their categories include writing to take part in community, to know oneself and others, to occupy free time, and to demonstrate academic competence. However, the two schemes that are most related to theories of oral language functions (i.e., Buhler, Jakobson, Hymes, Sapir) are those of Kinneavy (1971) and
Britton et al. (1975).

Kinneavy's (1971) scheme is similar to Britton's. However, it is unique in that the persuasive function is regarded as an independent function rather than as a sub-category of the transactional function. Kinneavy's scheme includes an informative function, a persuasive function, a literary function and an expressive function (p. 61).

In the two main studies of the functions of written language (Applebee, 1981; Britton et al., 1975), global judgements were made about the functions of each piece of writing. In other words, persuasive compositions containing five sentences would be included in the same category as those containing five paragraphs. Such global judgements ignore variation not only in length but in the means used to persuade. In addition, global judgements are difficult to make. Britton (1979) reports that of 2,122 scripts examined, only 694 received the same classification by three scorers. The number of scripts for which there was not three-way agreement suggests that written language can incorporate many functions.

In fact, discourse theorists suggest that all writing contains more than one function. Kinneavy (1971) suggests that one function is dominant while other functions are subordinate. Britton (1971) acknowledges the need for a dual classification of some literary works. Orwell's 1984, for
example, would be classified as poetic/conative, and Joyce's Ulysses as poetic/expressive (p.249). Martin, Medway et al. (1973) observed that young writers frequently cycle from one function to another, incorporating conversational and expressive elements in transactional writing, and transactional elements in expressive writing.

The variety of strategies within written discourse of a particular function has not been studied. The premise on which the present study is based is that adapting schemes used to describe the functions of oral language will permit of capturing some of the diversity which global schemes ignore, and also provide a measure sensitive to effects of audience.

Schemes describing the functions of oral language. Halliday (1975) derived seven functions from the early speech of his subject Nigel: instrumental, regulatory, interactional, personal, heuristic, imaginative, and representational. The last function, the representational, appears last, according to Halliday, but comes to be the dominant function in adult language. Representational language is used to inform, to express propositions, to explain, and to describe.

Nelson (1978), commenting on the weaknesses of Halliday's system, such as the lack of standardized procedures for classifying utterances into functional categories, argues, nonetheless, that his scheme is valuable for the continuity it
implies between the language of the very young child and later conventionalized language (p. 461). Halliday's general framework has been influential for recent curriculum material (e.g., Alberta Education Curriculum Guide for Elementary Language Arts, 1978) and for remedial language programs (e.g., Simon, 1980). His position on the importance of the personal and heuristic functions of language for school success (1973) is often quoted.

Another scheme that has been used to describe the functions of language used by school-aged children is that of Wells (1975). Wells' scheme includes the following "acts" or functions: controlling, feeling, informing, ritualizing and imagining. Ritualizing is close to what Jakobson calls the "phatic" function. It includes devices for initiating, maintaining and closing conversations such as greeting, farewells, and repeating.

A third scheme that has also been influential for curriculum development is that of Tough (1977, 1979). In Tough's scheme, utterances are classified according to a three-level framework of "functional uses" which include a directive function, an interpretive function, a projective function, and a relational function (1977, pp. 68-69). Each function contains sub-categories of several "language uses" and the strategies used to achieve them.
Influenced by Bernstein's (1973) hypothesis that children from homes with low socio-economic status use a "restricted code" while those from homes of high socio-economic status use an "elaborated code" which is more suited to school success, Tough devised a scheme to describe class-related differences in children's uses of language. Indeed, Tough does report significant class-related differences in children's uses of various language functions (1977, pp. 190-191), and concludes that the relationship between school success and social class is mediated by differences in language use.

Tough's conclusions and her methodology have been subjected to some scrutiny and criticism (e.g., Wells, 1977). Wells is especially critical of the non-interactive nature of her classification system (p. 21). There is, for example, no category for questions or for expressions of feeling. However, Tough's scheme has been described as valuable for the advanced semantic content it captures (Chapman, 1981). Wells certainly acknowledges that her scheme captures some of the complex purposes for which children use language, and their importance for school success.

Her scheme has been modified and adapted by researchers and practitioners. Tough herself simplified her classification system to include only two levels of uses and supporting strategies (1979, p. 36). A still further simplification of her scheme is suggested by Shafer, Staab and
Smith (1983) who reduce Tough's seven uses to five: asserting and maintaining social needs, controlling, informing, forecasting and reasoning, and projecting (1983, pp. 41-42). Shafer et al. also suggest that the terms functions and sub-functions be substituted for Tough's terms uses and strategies. Their modifications meet some of Wells' objections concerning interactive utterances which cannot be classified on Tough's original scheme. In addition, Shafer et al. suggest standardized procedures for the classification of utterances.

Although these three schemes are different, there is a core of functions which all three researchers observe in the language of school-aged children. These are: controlling or directing, reporting or commenting on past and present, expressing self and imagining. In addition, Halliday argues for a heuristic function in which language is used to investigate and to question, Tough for both a reasoning function and a predicting function, and Wells for a ritualizing function. Because Tough's scheme incorporates the functions of the other schemes used with school children (Halliday, 1975; Wells, 1975), and because in its modification by Shafer et al. (1983) procedures for identifying functions were described and tested with school-aged children, the Shafer et al. scheme seems an appropriate choice for the present study.
Considerations of the Present Study

The present study is an empirical investigation of the effect of audience on language functions used in written compositions by students at two grade levels using measures derived from oral language studies.

Argument was chosen because it is in argument that attention is most likely to be focused on audience (Kinneavy, 1971), and because audience differences have been found in argument when none were found in narration or description (Crowhurst & Piche, 1979; Smith & Swan; 1978). The audiences of teacher and best friend, which are differentiated on the basis of power and prestige, were selected for the present study because there are both theoretical and empirical grounds for predicting that status of audience will affect language use.

Two grades—six and eleven—were selected. The reason for the selection of these two grades relates to the fact that, although the few studies which have examined audience effects in writing have found an effect for upper high school grades but not for elementary classes (Crowhurst & Piche, 1979), theoretical reasons exist for believing that effects may exist for upper elementary school children and that such effects may be detected by measures which are sensitive to communicative intent. Therefore, it was decided to use one
class in the high school and one in the upper elementary school. Grade 6 was chosen in the elementary school because pilot data indicated that arguments written by grade 5 students tended to be rather short.

The adaptation of Tough's scheme by Shafer et al. (1983) was considered to be appropriate for the present study for the following reasons: first, it encompasses most of the functions included in other schemes employed with school children (Halliday, 1975; Wells, 1975), second, it is based on classroom research and experience, third it provides standardized procedures for identifying functions, and fourth it is adaptable to written language.
CHAPTER THREE

DESIGN AND PROCEDURES

The present study was designed and conducted to examine the effect of audience on language functions used in written arguments by students at two grade levels when measures of oral language functions are used to analyze written language.

Subjects

The subjects for this study were student's enrolled in two elementary schools and one high school in middle to upper-middle class schools in Vancouver, British Columbia. Writing assignments were administered to 63 students in two eleventh grade classes at the high school level, and to 80 sixth grade students in four split-grade classes at the elementary school level. The mean age of the 80 sixth grade subjects was 11.6; the mean age of the 62 grade eleven subjects was 16.4.

The Vancouver School District was chosen because of its willingness to participate in educational research. The high school classes were selected on the basis of their teacher's willingness to participate when approached by the Program Resources Liaison for the Vancouver School Board. The classes
at the elementary schools were chosen because both schools were feeder schools to the high school, thus ensuring that students in the two grades were drawn from the same socio-economic class. Complete sets of four assignments were obtained from 62 eleventh graders, and 75 sixth graders.

Twenty-five complete sets by students in grade 6 and grade 11 were discarded prior to data analysis because at least one composition in a set failed to meet minimum requirements for length, or because at least one composition in a set was judged not to be a written argument. Minimum requirement for length was set by the investigator at four idea units. Acceptability of compositions as written arguments was judged by the investigator and one other experienced teacher of English. Of the 25 complete sets discarded, 13 sets by sixth-grade students and three sets by eleventh-grade students contained compositions judged not to be written arguments, and 10 sets by sixth grade students were judged to contain compositions which failed to meet minimum criteria for length.

To determine whether the deletion of narratives/dialogues or unusually short compositions introduced bias into the sample of writing that was analysed, the distribution of narratives/dialogues and short compositions was examined. The total of narratives/dialogues for both grades was 13 for the audience of teacher and 16 for the audience of best friend;
unusually short compositions were written only by sixth graders who wrote 8 for the audience of teacher and 10 for the audience of best friend. From this distribution it would appear that the writing of narratives/dialogues or short compositions was not related to audience, and therefore that no bias was introduced by eliminating sets of compositions containing either narratives or unusually short compositions. After the discards described above, the number of complete sets available for functional analysis was 52 at grade 6, and 59 at grade 11.

**Materials**

Students in the study wrote twice on each of two topics, once for the audience of teacher and once for the audience of best friend, with the presentation of audiences and topics counterbalanced. Exact wording of topics is contained in Appendix A.

Topic One concerned the question of whether children should be allowed to go to school when they want to and do what they like when they get there. This topic was derived from Wilkinson (1980) who used this topic to elicit written opinion essays in the Crediton project, a study involving close to one hundred students in a primary and lower-secondary school in England. A similar topic was also used by Bracewell
et al. (1978). When this topic was piloted with students in grades 5 and 9, the grade nine students were confused by the term *children* and preferred to be referred to as *students*. As a result of experience gained through pilot testing, wording of both topics was appropriately adjusted for grade level.

Topic Two concerned the availability of five hundred dollars for the student's class to spend. This topic was chosen because, in the experience of the investigator, the allocation of money has been found to be an appropriate topic for written argument for both elementary and high-school students.

At each grade level, there were two different assignments for each of two topics, one assignment for a best friend audience and one for a teacher audience. Each assignment was stapled to two pieces of legal size paper lined on both sides.

**Procedure**

Prior to the first writing assignment, the investigator visited each participating teacher to ensure that students would receive the same instructions. The teachers were to explain to their students that they were going to take part in a study of the writing of students at elementary and secondary schools in Vancouver; they were going to write four compositions on two topics for different audiences; their
writing would not be returned to them; the investigator would inform their teacher about how they had performed; and they were to do their best writing at all times.

The investigator delivered the appropriate number of assignments to each teacher each week. As the number of students in each of the two grade eleven classes was approximately the same, and the number of students in each of the two elementary schools was approximately the same, counterbalancing was achieved by administering the same assignment to all of the students in intact classes at both grades 6 and 11. Only one form of a given assignment was administered to a given class in a given session.

Assignments were administered by the regular teacher who distributed the assignments and issued brief, standardized instructions on each of the four weekly writing occasions. The investigator visited each classroom on one of four writing occasions to ensure that instructions were uniformly adhered to.

Each subject wrote one composition on each of four sessions within a four week period. Each writing session lasted forty minutes. Not all subjects required the full time. No assistance was given by the teacher unless a student was unable to read the assignment. Help was then given only in reading the assignment. No feedback was given to the students while the experiment was in process. Students who
missed writing assignments were allowed to make up assignments in class time under the supervision of their teacher.

Within a two-week period following the final writing assignment, the investigator visited each classroom to thank the students for their co-operation and to read examples of convincing arguments to them. To comply with the grade 11 teacher’s request that students receive a grade for their writing, the investigator assigned one grade covering all four compositions for each student in grade 11.

Scoring

The Taxonomy of Language Functions and Sub-Functions

A modified form of the scheme developed by Shafer et al. (1983) was used in the present study. Because the Shafer et al. system was intended for the analysis of oral rather than written language, the following modifications were made: a) the categories Shafer et al. label Asserting and Maintaining Social Needs and Forecasting and Reasoning were labeled Relational (after Tough, 1977) and Theorizing (after Kinneavy, 1971) respectively because these terms are appropriate to written language; and b) the category Shafer et al. label Informing was broadened to include Interpreting (after Tough, 1977). The following Taxonomy of Language Functions and Sub-Functions was derived from experience with pilot data:
Taxonomy of Language Functions and Sub-Functions

Function 1 (Controlling)
(i) Direct instructions to reader
(ii) Attempts to control reader
(iii) Requests for direction
(iv) Requests for attention
(v) Requests for collaboration

Function 2 (Relational)
(i) Asserting negative opinions
(ii) Asserting positive opinions
(iii) Rhetorical requests for opinion or direction
(iv) Incidental conversational expressions

Function 3 (Informing and Interpreting)
(i) Reporting the present
(ii) Recording the past
(iii) Making comparisons
(iv) Making generalizations
(v) Rhetorical requests for information
(vi) Informing about assignment

Function 4 (Theorizing)
(i) Recognizing causal and dependent relationships
(ii) Surveying possibilities, anticipating problems and solutions, drawing conclusions
(iii) Rhetorical questions involving predictions
(iv) Reflecting on reasoning, evaluating ideas

Function 5 (Projecting)
(i) Projecting self into experience of others
(ii) Projecting self into situation never experienced
(iii) Rhetorical questions involving projecting or imagining/ Creating scenario
Material for Scorers

Two packages of material were prepared for scorers. One package contained an instruction sheet entitled *Instructions for Dividing Compositions into Idea Units*, and a sample of a composition divided into idea units. Copies are contained in Appendices B and C. The second package contained two instruction sheets entitled *Instructions for Identifying Language Functions*, and *Examples of Language Functions and Sub-Functions*, and a sample of a scored composition. These materials were derived from Shafer et al. (1983). Copies of these materials are contained in Appendices D, E, and F.

Scoring Procedure

In preparation for scoring, original written compositions were typed. No changes were made to original compositions in spelling. Garbles were duplicated as close to the original as was possible. All names were removed or changed. All salutations and closings were deleted.

Each composition was first segmented into idea units, a slight departure from Shafer et al. (1983) who suggest that discourse should be segmented into *statements* before it is analysed according to function. Because the term could be interpreted to mean a type of sentence, it was decided that the more general term *idea unit* should be used. The idea unit is commonly used in reading research (Fodor & Bever, 1965;
Johnson, 1965), and is defined as a phrase or sentence that represents a single thought or unit of information (Reynolds & Schwartz, 1979). Chafe (1982) suggests that the idea unit in written language is characterized by "integrative" grammatical devices such as nominalization, participles, conjoined phrases, series, sequences of prepositional phrases, complement clauses and relative clauses (p. 44). Chafe's definition of the idea unit was incorporated in the material for scorers used in the present study. Rules for segmenting are contained in Appendix B.

Segmentation was performed by two experienced teachers of English who had advanced degrees in education and extensive teaching experience, one at both the secondary and the university level, and the other at the elementary and the university level. Scorers were blind with respect to hypotheses of the study. Both scorers segmented all compositions.

After a training session using pilot data, inter-scorer reliability coefficients were calculated as .88 using the commonly accepted general formula agrees/(agrees + disagrees) (House, House & Campbell, 1981). Inter-scorer reliability when approximately half of the compositions had been divided into idea units was .86. Inter-scorer reliability for the entire corpus was .93.

Disagreements were resolved through three-way negotiation.
involving both scorers and the investigator. Procedures for negotiation were derived from Keisler (1973). Resolution was achieved by discussion, and by reference to material used in training sessions. The investigator took part only when scorers could not achieve resolution. With the exception of at least one composition by each of two students, scorers were able to resolve virtually all disagreements, the majority resulting from failure to recognize compound sentences.

Two complete sets by sixth grade students were discarded at this phase because of a high rate of inter-scorer disagreement on segmentation, and a consensus that at least one composition in each set was incomprehensible. After the discards described above, the number of complete sets available for further analysis was 50 at grade 6 and 59 at grade 11.

Idea units were then categorized according to sub-function on the Taxonomy of Language Functions. Procedures for identifying the sub-function used were based on the work of Shafer et al. (1983). Appendix D contains a copy of Instructions for Identifying Language Functions.

Categorization was performed by two experienced teachers of English who had advanced degrees and extensive teaching experience. Both had some familiarity with theories about language functions, and an interest in written language. Scorers were blind with respect to hypotheses of the study.
Both scorers categorized all compositions.

After a training session using pilot data, inter-scorer reliability was .80. Both scorers scored all compositions. Because scoring took many weeks, two weeks after the initial training, a brief retraining session was held using pilot data to ensure that "scorer drift" had not occurred. Inter-scorer reliability when approximately half of the compositions had been scored was .79. Inter-scorer reliability for the entire corpus was .83.

Of a total of 5813 units, agreement on sub-function and function was reached on 4877 (83%) units. Agreement on function and disagreement on sub-function occurred for 181 (3%) units, and disagreement on both sub-function and function occurred on 755 (13%) units. Where there was initial disagreement, agreement was reached through negotiation involving both scorers and the investigator using procedures described by Keisler, 1973. Agreement was reached by discussion and by reference to training material. The investigator took part only when scorers could not achieve resolution.
Data

Each composition in its entirety was examined for variation in language function. The following scores were calculated for each composition:

1. Total number of idea units.
2. Number of idea units of each of the five language functions: Function 1 (Controlling), Function 2 (Relational), Function 3 (Informing and Interpreting), Function 4 (Theorizing), Function 5 (Projecting).
3. The ratio of idea units of a given function to the total number of idea units.
4. Number of idea units of each of the sub-functions of the five language functions.
5. Number of language functions used.

Experimental Design

The design was a mixed factorial experiment with repeated measures on audience and topic. Grade served as a between subjects factor. The independent variables were grade, audience and topic. The dependent variables were the proportion of idea units belonging to each of the five language functions: (a) Controlling, (b) Relational, (c)
Informing and Interpreting, (d) Theorizing and (e) Projecting; and the number of different language functions used. Two topics were used because topic effects are common in research on composition; as long ago as the Braddock Report (Braddock et al., 1963), researchers have been advised to use at least two topics.

Analysis of the Data

The following analyses were performed:

1. An analysis of variance (ANOVA) was used to examine the effects of audience, at two levels, and topic, at two levels, as within subjects factors, and grade, at two levels, as a between subjects factor, on the number of different functions used. Results were tested at the .05 level of significance.

2. A multivariate analysis of variance (MANOVA) was used to examine the effects of audience, at two levels, and topic, at two levels, as within subjects factors, and grade, at two levels, as a between subjects factor, on the proportion of idea units for each of the five functions. The dependent variables were:
   a. The proportion of idea units categorized as Function 1 (Controlling)
   b. The proportion of idea units categorized as Function
2 (Relational)
c. The proportion of idea units categorized as Function 3 (Informing and Interpreting)
d. The proportion of idea units categorized as Function 4 (Theorizing)
e. The proportion of idea units categorized as Function 5 (Projecting)

Follow-up ANOVAs were used to identify the functions which were the sources of significant MANOVA effects. Results were tested for significance at the .05 level of significance.

3. A MANOVA was used for each language function for which there was a significant main effect in (2) above in order to identify the sub-functions responsible for the main effects. The analysis was used to examine the effects of audience, at two levels, and topic, at two levels, as within subjects factors, and grade, at two levels, as a between subjects factor, on the proportion of idea units for each of the sub-functions. The dependent variables for each of these MANOVAs were the proportions of idea units for each sub-function of the relevant language function. Follow-up ANOVAs were used to identify the sub-functions which were the sources of significant MANOVA effects. Results were tested at the .01 level of significance. Since a number of MANOVAs were done, a
more stringent alpha level was used in testing these effects to reduce the probability of a Type I error.
CHAPTER FOUR

RESULTS OF THE STUDY

The purpose of this study was to examine the effect of audience on the use of five language functions (Controlling, Relational, Informing and Interpreting, Theorizing, and Projecting) in written arguments for each of two audiences by students in grades 6 and 11. Students in the study wrote twice on each of two topics, once for the audience of teacher and once for the audience of best friend, with the order of presentation of audiences and topics counterbalanced.

One-hundred-nine complete sets of written arguments, 50 from students in grade 6 and 59 by students in grade 11, were subjected to functional analysis using a modified form of a scheme suggested by Shafer, Staab and Smith (1983) for the analysis of children's oral language. Compositions were first divided into idea units; each unit was then categorized according to function and sub-function using the Instructions for Identifying Language Functions described in detail in Appendix D.

The overall mean length of compositions was 14.0 idea units. Mean length, in idea units, of grade 6 compositions for teacher was 9.9 and for best friend 9.9 with an overall mean of 9.9. Mean length, in idea units, of grade 11
compositions for teacher was 17.6 and for best friend 17.3 with an overall mean of 17.5. Table 1 provides means and standard deviations for the number of idea units per composition for conditions varying by grade, topic and audience.

Table 1
Means and Standard Deviations for Idea Units in Grade by Topic by Audience Cells

<table>
<thead>
<tr>
<th>Group</th>
<th>Grade</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Six</td>
<td>Eleven</td>
</tr>
<tr>
<td>Teacher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(T 1)</td>
<td>10.8</td>
<td>18.7</td>
<td>15.1</td>
</tr>
<tr>
<td>(T 2)</td>
<td>9.1</td>
<td>16.4</td>
<td>13.1</td>
</tr>
<tr>
<td>(M)</td>
<td>9.9</td>
<td>17.6</td>
<td>14.1</td>
</tr>
<tr>
<td>Friend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(T 1)</td>
<td>9.5</td>
<td>18.4</td>
<td>14.3</td>
</tr>
<tr>
<td>(T 2)</td>
<td>10.3</td>
<td>16.3</td>
<td>13.5</td>
</tr>
<tr>
<td>(M)</td>
<td>9.9</td>
<td>17.3</td>
<td>13.9</td>
</tr>
<tr>
<td>Marginals</td>
<td>9.9</td>
<td>17.5</td>
<td>14.0</td>
</tr>
</tbody>
</table>

T 1: Topic One (School)
T 2: Topic Two (Money)
(M): Mean
*: Means in this column are weighted for different sample sizes in the two grades
Three analyses were performed.

1. The number of different functions used was examined by an analysis of variance (ANOVA) with audience, at two levels, and topic, at two levels, as within-subjects factors, and grade, at two levels, as a between-subjects factor.

2. The proportional use of each of the five language functions was examined by a multivariate analysis of variance (MANOVA) with audience, at two levels, and topic, at two levels, as within-subjects factors, and grade, at two levels, as a between-subjects factor. Follow-up ANOVAs were used to identify the functions which were the sources of significant MANOVA effects.

3. The proportional use of each of the sub-functions of functions for which there was a main effect in (2) above was examined using multivariate analysis of variance (MANOVA) with audience, at two levels, and topic, at two levels, as within-subjects factors, and grade, at two levels as a between-subjects factor. Follow-up ANOVAs were used to identify the sub-functions which were the sources of significant MANOVA effects.

Four hypotheses were tested with respect to audience effects. No hypotheses were formulated with respect to grade or topic. However, grade and topic effects were found. Accordingly, the findings of the study are reported under the
In the following sections, only those effects for which there was a significant finding are reported. Non-significant findings are not reported.

**Audience Effect**

**Hypothesis 1** The variety of language functions (number of different functions used) will be greater for the audience of best friend than for the audience of teacher in compositions written by eleventh- and sixth-grade students.

The ANOVA used to examine the number of different functions used showed a significant effect for audience. Inspection of the means revealed that for students in both grades, more different language functions were used in compositions written for the audience of best friend than in compositions written for the audience of teacher (2.6 versus 2.3) \((F=14.98, df=1,107, p<.01)\). Hypothesis 1 was therefore accepted.

**Hypothesis 2** The proportion of idea units of Function 2 (Relational) will be greater for the audience of best friend than the audience of teacher in compositions written by eleventh- and sixth-grade students.
Hypothesis 3  The proportion of idea units of Function 3 (Informing and Interpreting) will be greater for the audience of best friend than the audience of teacher in compositions written by eleventh- and sixth-grade students.

Hypothesis 4  The proportion of idea units of Function 4 (Theorizing) will be greater for the audience of teacher than for the audience of best friend in compositions written by eleventh- and sixth-grade students.

The MANOVA used to examine the proportional use of language functions showed a significant effect for audience ($F=5.98$, $df=6,102$, $p<.01$). The follow-up univariate ANOVAs indicated significant audience effects for Function 1 (Controlling) ($F=9.19$, $df=1,107$, $p<.01$), Function 2 (Relational) ($F=8.76$, $df=1,107$, $p<.01$), and Function 4 (Theorizing) ($F=15.39$, $df=1,107$, $p<.01$).

Inspection of the means (reported in Table 2) revealed that, for the Relational function, the proportion of idea units in writing addressed to a best-friend audience was significantly greater than the proportion of idea units addressed to a teacher audience (.08 versus .03). Hypothesis 2 was therefore accepted. For the Theorizing function, the proportion of idea units in writing addressed to a teacher was significantly greater than the proportion of idea units addressed to a best friend (.56 versus .47). Hypothesis 4 was therefore accepted.
There was no significant audience effect for Function 3 (Informing and Interpreting). Therefore, hypothesis 3 was rejected.

In addition to the hypothesized differences, there was a significant audience effect for the Controlling function ($F=9.19$, $df=1.107$, $p<.01$.) Inspection of the means revealed that the proportion of idea units with a Controlling function was significantly greater in compositions addressed to a best friend than in compositions addressed to a teacher (.08 versus .05).

Table 2
Means, Standard Deviations, and F Statistics for Use of Functions for Two Audiences

<table>
<thead>
<tr>
<th>Function</th>
<th>Audience</th>
<th>Follow-up</th>
<th>ANOVAs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Teacher</td>
<td>Friend</td>
<td>F</td>
</tr>
<tr>
<td>F 1</td>
<td>.05 (.10)</td>
<td>.08 (.12)</td>
<td>9.19</td>
</tr>
<tr>
<td>F 2</td>
<td>.03 (.09)</td>
<td>.08 (.21)</td>
<td>8.76</td>
</tr>
<tr>
<td>F 3</td>
<td>.28 (.27)</td>
<td>.27 (.27)</td>
<td>.16</td>
</tr>
<tr>
<td>F 4</td>
<td>.56 (.33)</td>
<td>.47 (.34)</td>
<td>15.39</td>
</tr>
<tr>
<td>F 5</td>
<td>.07 (.20)</td>
<td>.11 (.26)</td>
<td>3.11</td>
</tr>
</tbody>
</table>

F 1: Function 1 (Controlling)
F 2: Function 2 (Relational)
F 3: Function 3 (Informing and Interpreting)
F 4: Function 4 (Theorizing)
F 5: Function 5 (Projecting)
In the secondary analysis, for each of the language functions for which there was a significant audience effect (namely Function 1, Function 2 and Function 4), a separate MANOVA with follow-up ANOVAs was used to identify the sub-functions responsible for the main effect for audience on the respective function. A significant audience effect was found for the MANOVAs on Function 1 (Controlling) \((F=3.92, \text{df}=5,103, p<.01)\), Function 2 (Relational) \((F=4.15, \text{df}=4,104, p<.01)\), and Function 4 (Theorizing) \((F=4.77, \text{df}=4,104, p<.01)\). The follow-up univariate ANOVAs revealed that, for Function 1 (Controlling), Audience exerted a significant effect on Function 1 (v). For Function 2 (Relational), audience exerted a significant effect on F 2 (iii). For Function 4, audience exerted a significant effect on F 4 (ii). (See Table G2).

Inspection of the means (reported in Tables G3, G4 and G5 in Appendix G) revealed that students at both grades used more of F 1 (v) (requests for collaboration), and F 2 (iii) (rhetorical requests for opinion or direction) for the audience of best friend than for the audience of teacher (.02 versus .01, and .02 versus .01, respectively). Students at both grades used more of F 4 (ii) (surveying possibilities, anticipating problems and solutions, drawing conclusions) for the audience of teacher than for the audience of best friend (.36 versus .28).
Grade Effect

The ANOVA used to examine the number of different functions used did not show a significant effect for grade.

The MANOVA used to examine the proportional use of language functions showed significant effects for grade ($F=12.78$, df=6,102, $p<.01$). The follow-up univariate ANOVAs of grade effects indicated significant grade effects for Function 2 (Relational) ($F=11.62$, df=1,107, $p<.01$), Function 3 (Informing and Interpreting) ($F=36.58$, df=1,107, $p<.01$), and Function 4 (Theorizing) ($F=38.12$, df=1,107, $p<.01$).

Inspection of the means (reported in Table 3) revealed that sixth-grade students used F 2 (Relational) and F 3 (Informing and Interpreting) proportionally more often than did, eleventh-grade students (.09 versus .03, and .36 versus .19 respectively). Eleventh-grade students used F 4 (Theorizing) proportionally more often than did sixth-grade students (.63 versus .40).
Table 3
Means, Standard Deviations and F Statistics for Use of Functions at Two Grades

<table>
<thead>
<tr>
<th>Functions</th>
<th>Grade</th>
<th>Follow-up</th>
<th>ANOVAs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Six</td>
<td>Eleven</td>
<td>F</td>
</tr>
<tr>
<td>F 1</td>
<td>.08 (.08)</td>
<td>.05 (.08)</td>
<td>2.86</td>
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<tr>
<td>F 2</td>
<td>.09 (.22)</td>
<td>.03 (.07)</td>
<td>11.62</td>
</tr>
<tr>
<td>F 3</td>
<td>.36 (.29)</td>
<td>.19 (.21)</td>
<td>36.58</td>
</tr>
<tr>
<td>F 4</td>
<td>.40 (.31)</td>
<td>.63 (.33)</td>
<td>38.12</td>
</tr>
<tr>
<td>F 5</td>
<td>.08 (.21)</td>
<td>.10 (.24)</td>
<td>.68</td>
</tr>
</tbody>
</table>

F 1: Function 1 (Controlling)
F 2: Function 2 (Relational)
F 3: Function 3 (Informing and Interpreting)
F 4: Function 4 (Theorizing)
F 5: Function 5 (Projecting)

In the secondary analysis using sub-functions, a significant grade effect was found for the MANOVAs of Function 2 (Relational) ($F=5.95$, $df=4,104$, $p<.01$), Function 3 (Informing and Interpreting) ($F=11.54$, $df=6,102$, $p<.01$), and Function 4 (Theorizing) ($F=24.52$, $df=4,104$, $p<.01$). The follow-up ANOVAs revealed that for Function 2 (Relational), grade exerted a significant effect on F 2 (ii), and F 2 (iii). For Function 3 (Informing and Interpreting), grade exerted a significant effect on F 3 (vi); for Function 4 (Theorizing), grade exerted a significant effect on F 4 (ii) and F 4 (iv).
Inspection of the means (reported in Tables G6, G7 and G8 in Appendix G) revealed that students in grade 6 used proportionally more of F 2 (ii) (asserting positive opinions), F 2 (iii) (rhetorical requests for opinion or direction), and F 3 (vi) (informing about topic) than did grade 11 students (.02 versus .01, and .02 versus <.01, and .19 versus .05, respectively); students in grade 11 used more of F 4 (ii) (surveying possibilities, anticipating problems and solutions, drawing conclusions), and F 4 (iv) (reflecting on reasoning, evaluating ideas) (.40 versus .24, and .11 versus .04) than did grade 6 students.

**Topic Effect**

The ANOVA used to examine the number of different functions used showed a significant effect for topic. Inspection of the means revealed that for students at both grades, more different functions were used in compositions on Topic 2 (Money) than on Topic 1 (School) (2.54 versus 2.39) ($F=4.26, \, df=1,107, \, p<.05$).

The MANOVA used to examine the proportional use of the language functions showed significant effects for topic ($F=20.32, \, df=6,102, \, p<.01$). Follow-up univariate ANOVAs of topic effects indicated significant univariate effects for Function 1 (Controlling) ($F=44.29, \, df=1,107, \, p<.01$), Function 3 (Informing and Interpreting), ($F=52.62, \, df=1,107, \, p<.01$),
and Function 4 (Theorizing) ($F=43.76$, $df=1,107$, $p<.01$).

Inspection of the means (reported in Table 4) revealed that Topic 2 (Money) produced significantly greater use of the Controlling function (.09 versus .04), and the Informing and Interpreting function (.36 versus .19), while Topic 1 (School) produced significantly greater use of the Theorizing function (.62 versus .41).

**Table 4**

Means, Standard Deviations and F Statistics for Use of Functions Across Audiences and Grades

<table>
<thead>
<tr>
<th>Function</th>
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<th>Follow-up</th>
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<td>F 5:</td>
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In the secondary analysis using sub-functions, a significant topic effect was found for the MANOVAs of Function 1 (Controlling) ($F=11.41$, $df=5,103$, $p<.01$), Function 2
(Relational) ($F=4.97$, $df=4,104$, $p<.01$), Function 3 (Informing and Interpreting) ($F=21.02$, $df=6,102$, $p<.01$), and Function 4 (Theorizing) ($F=17.63$, $df=4,104$, $p<.01$). The follow-up ANOVAs revealed that for Function 1, topic exerted a significant effect on $F_1$ (ii), and $F_1$ (v). For Function 3, topic exerted a significant effect on $F_3$ (i), $F_3$ (ii), and $F_3$ (vi). For Function 4, topic exerted a significant effect on $F_4$ (i), $F_4$ (iii), and $F_4$ (iv).

Inspection of the means (reported in Tables G9, G10 and G11 in Appendix G) revealed that for Function 1, students used proportionally more of Function 1 (ii) (attempts to control reader), and Function 1 (v) (requests for collaboration) for T2 (Money) than for T1 (School) (.05 versus .02, and .03 versus .01, respectively). For Function 3, students used more of $F_3$ (i) (reporting the present), $F_3$ (ii) (recording the past) and $F_3$ (vi) (informing about assignment) for T2 (Money) than for T1 (School) (.07 versus .02, .02 versus <.01, and .18 versus .06, respectively). For F 4, students used more of F 4 (i) (recognizing causal and dependent relationships), F 4 (iii) (rhetorical questions involving prediction), and F 4 (iv) (reflecting on reasoning, evaluating ideas) for T 1 (School) than for T 2 (Money) (.16 versus .06, .02 versus .01, and .09 versus .05, respectively).
Summary of Main Findings

Audience Effect

Audience was found to affect the use of language functions in written arguments by students in both sixth grade and eleventh grade. More different functions were used in compositions written for the audience of best friend than in compositions written for the audience of teacher. Writing addressed to a friend contained more of Function 1 (Controlling) and Function 2 (Relational), while writing addressed to a teacher contained more of Function 4 (Theorizing). The sub-function accounting for the effect of the audience of best friend on the Controlling function was 1 (v) (requests for collaboration). The sub-function accounting for the effect of the audience of best friend on the Relational function was 2 (iii) (rhetorical requests for opinion or direction). The sub-function accounting for the effect of audience of teacher on the Theorizing function was 4 (ii) (surveying possibilities, anticipating problems and solutions and drawing conclusions).

Grade Effect

Grade was found to affect the use of language functions in written arguments. Students in grade 6 used more of Function 2 (Relational) and Function 3 (Informing and Interpreting) than did grade 11 students, and grade 11
students used more of the Function 4 (Theorizing) than did grade 6 students. The sub-function accounting for the effect of grade on Function 2 (Relational) was F 2 (ii) (asserting positive opinions). The sub-function accounting for the effect of grade on Function 3 (Informing and Interpreting) was F 3 (vi) (informing about assignment). Sub-functions accounting for the effect of grade on the Function 4 (Theorizing) were 4 (ii) (surveying possibilities, anticipating problems and solutions, drawing conclusions), and 4 (iv) (reflecting on reasoning, evaluating ideas).

**Topic Effect**

Topic was found to affect the use of language functions in compositions written by students at both grade levels. More different functions were used in compositions on Topic 2 (Money) than on Topic 1 (School). Students used more of Function 4 (Theorizing) for Topic 1 (School), and more of Function 1 (Controlling) and Function 3 (Informing and Interpreting) for Topic 2 (Money). Sub-functions accounting for the effect of T 1 (School) on Function 4 (Theorizing) were 4 (i) (recognizing causal and dependent relationships), 4 (iii) rhetorical questions involving prediction, and 4 (iv) (reflecting on reasoning, evaluating ideas). Sub-functions accounting for the effects of Topic 2 (Money) on F 1 (Controlling) were 1 (ii) (attempts to control reader), and 1 (v) (requests for collaboration). Sub-functions accounting
for the effect of Topic 2 on Function 3 (Informing and Interpreting) were 3 (i) (reporting the present), 3 (ii) (recording the past), and 3 (vi) (informing about assignment).

Interactions

It should be noted that all interactions were nonsignificant (see Table G1). The following conclusions regarding audience effects can be drawn: the absence of a significant Audience by Grade interaction indicates that the audience effects did not differ between sixth-grade and eleventh-grade students; the absence of a significant Audience by Topic interaction indicates that the audience effects did not differ between compositions written on Topic 1 (Money) and Topic 2 (School).
CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

The question examined in this study was: Are there audience-related differences in compositions written by sixth and eleventh graders? The measures used to examine hypothesized differences were five language functions, measures derived from oral language studies.

In this chapter, the findings in regard to the above question are discussed within the context of related research, current composition theory and sociolinguistic theory. Findings with regard to grade and topic differences are also discussed. Conclusions are presented followed by a discussion of implications for further research.

The Effect of Audience on Use of Language Functions

Audience effects were found in this study across both grades. Two of the five language functions, Controlling and Relational, were used more in compositions intended for the audience of best friend, while one function, Theorizing, was used more in compositions intended for the audience of teacher. In addition, more different functions were used in compositions intended for the audience of best friend than in
compositions intended for the audience of teacher.

Although the overall use of the Controlling function was low at both grades (see Table 3 in Chapter Four), the effect for audience was significant (see Table 2 in Chapter Four). The audience difference was found to be due, primarily, to the sub-function requests for collaboration, although there were minimal differences in favour of the best-friend audience for the sub-functions direct instructions to reader, attempts to control reader, and requests for attention as well (See Table G3 in Appendix G).

Typically, requests for collaboration occurred at the end of what would conventionally be called the argument:

... if you agree I will gladly say yes to something that is reasonable. (Grade 6)

... Let's ask the committee tomorrow, and we'll decide if we'll get a computer. (Grade 6)

... I hope you agree because I think education is the most important thing in our lives, so please agree with me if you think the same. (Grade 6)

... I hope you agree with me Janie because I couldn't do it without you. (Grade 11)

... Since we are both on the team, we should spend the money on the things I have suggested. (Grade 11)

The use of requests for collaboration in compositions intended for the audience of best friend means that there were more references to a shared relationship, and more suggestions for
compromise than in compositions intended for the audience of teacher.

It is to be noted that this sub-function does not include direct imperatives, greater use of which might have been expected in compositions intended for the same status audience, given that, in oral language, imperatives have been found to be more frequent for a same- or lower-status audience than for a higher-status audience (Ervin-Tripp, 1977). Rather than using direct imperatives, students in this study used modified or "polite" imperatives (for example using please, and hints which avoid the agent such as "Lets go to the committee with our decision.").

The use of polite directive forms for the same status audience in this study may be attributed to differences between speech and writing. Writing is generally regarded as more elaborated and formal in usage than spoken language (Chafe, 1982). The audience is inevitably more "distant" because it is not present. It is, therefore, not surprising that writing is more formal than spoken language. The use of polite directive forms for the same-status audience may also be partially due to the temporary rift in the solidarity of the friendship implied by the writing topics. The assignments, by asking the students to "convince your reader that your opinion is right," implied disagreement. It is possible that students were more polite with the same-status
audience than they might otherwise have been because of this imaginary disagreement.

The overall use of the Relational function, like that of the Controlling function, was relatively low at both grades (see Table 3 in Chapter Four); the effect for audience, nonetheless, was significant (See Table 2 in Chapter Four). The audience difference was found to be due, primarily, to the sub-function *rhetorical requests for opinion or direction*, although there were differences in favour of the best-friend audience for the sub-function *asserting negative opinions* as well (See Table G4 in Appendix G).

The following are examples of the sub-function *rhetorical requests for opinion or direction* occurring in compositions intended for the audience of best friend.

... The money should go towards things that we need. *Don't you agree?*(Grade 6)

... I think I like school just the way it is. Even if we do get tests and homework. *What do you think about tests and homework? I like school but I hate tests and homework.* (Grade 6)

... I think the most important use for the money is field trips, we haven't had one all year! *Now wouldn't it be great to be able to get out of school for a while some special days?* (Grade 6)

... Everyday one can hear the same words, "You people must study harder." *Well who needs it Pete.* (Grade 11)

... If they (students) did what they want to do
when they get to school, they would probably chew gum, sit on top of the desk, rip their textbooks, do everything. Do you think so Caitlin? (Grade 6)

Do you want your school to have uniforms that are ragged and old? (Grade 11)

Cindi, what do you think about students being allowed to come to school when they want to and do whatever they want when they get there? I think it would be great! . . . (Grade 11)

Shafer et al. (1983) suggest that, in oral language, requests for opinion serve the purpose of clarifying the opinion of the speaker, presumably because the answer received helps to clarify personal opinion. As writers receive no response, it is unlikely that requests for opinion serve this purpose in writing.

In oral discussions, such questions also serve to give the addressee a chance to speak. Their appearance in written compositions for the audience of best friend suggests that the writers might be drawing from numerous oral arguments with peers. Use of the sub-function, rhetorical requests for opinion, like use of requests for collaboration, gave compositions intended for the audience of best friend an oral quality lacking in compositions intended for the audience of teacher. Overall, compositions intended for the audience of best friend tended to be more conversational and personal than compositions intended for the audience of teacher, a difference which seems appropriate to the presumed difference
in status and distance between a teacher-audience and a best-friend audience.

In contrast to both the Controlling function and the Relational function, the use of the Theorizing function was relatively high at both grades (see Table 3 in Chapter Four). The significance level of the audience effect, like that of the effect for both the Controlling function and the Relational function, was high (See Table 2 in Chapter Four). The audience difference was found to be due primarily to the sub-function *surveying possibilities, anticipating problems, solutions and consequences, and drawing conclusions*, although there were also minimal differences in favour of the teacher audience for the sub-functions *recognizing causal and dependent relationships*, and *reflecting on reasoning, evaluating ideas*. (See Table G5 in Appendix G). The following are examples of the sub-function *surveying possibilities, anticipating problems, solutions and consequences, and coming to conclusions* used in compositions intended for the audience of teacher by students at both grades.

... *I know five hundred dollars wouldn't be enough for an expensive computer but we could get a simple one. Then in the future we could expand and get more things for the computer*. (Grade 6)

... *You would probably end up having no money or clothes or any furniture. Also you would probably end up living on a park bench somewhere*. (Grade 6)
... The blind students could use the money to buy equipment which they could put to much use. Books and typewriters could be purchased. With this new equipment, our school would be one of the most capable to receive and teach blind students. (Grade 11)

... This sort of attitude would rub off on students making them irresponsible people. It would also make them wonder how important school really is. (Grade 11)

The Theorizing function was used when students were attempting to be objective and impersonal. In the above examples, it should be noted that the students dealt in generalities such as the average student or the school system, rather than in feelings or personal consequences.

Making predictions and coming to conclusions would seem to be appropriate in compositions intended for the audience of teacher, while personal opinion or requests for collaboration are not. Considering possibilities, making predictions, and coming to conclusions are strategies that are traditionally associated with written argument. From this study, it would appear that written arguments intended for the audience of teacher are more objective and impersonal, and more likely to conform to the genre of written argument than are arguments written for the audience of best friend.

This conclusion is supported by the finding that students used more different functions in compositions intended for the audience of best friend than in compositions intended for the audience of teacher. As analysis revealed, compositions
intended for the audience of teacher focused on one function, Theorizing; compositions intended for the audience of best friend contained effects for audience on two functions, Controlling and Relational. It is as if, when writing for the audience of best friend, students felt less need to demonstrate the validity, or logic of their arguments because they can appeal to loyalty and shared opinion to win their case.

Based on experience with pilot data, it was also hypothesized that compositions intended for the audience of best friend would contain more Informing and Interpreting than compositions intended for the audience of teacher. The assumption that there would be more reference to shared common experience in compositions intended for the audience of best friend proved not to be the case. There was no effect for audience on this function at either grade.

The effect for audience on the Controlling function, the Relational function and the Theorizing function, however, was unequivocal at both grades. For the audience of the same status, students employed more Controlling strategies and Relational strategies which produced compositions with a direct, personal and conversational quality; for the audience of a high status, they focused on Theorizing strategies thus producing compositions with a more formal tone, which conformed more to the conventional definition of written
Measures used in this study thus produced evidence of audience effects for both sixth graders and eleventh graders. This overall finding is divergent from other studies which report little evidence of effects for intended audience in compositions by students in elementary schools (Crowhurst & Piche, 1979; Rubin & Piche, 1979; Smith & Swan, 1975). The fact that results were found for elementary students whereas none were found by Crowhurst and Piche, Rubin and Piche, and Smith and Swan is attributed to the use of measures derived from studies of children's oral language functions.

The measures used in the present study were selected because they had the potential of capturing diversity of purpose which structural measures such as the size of the T-unit ignore. It was reasoned that the sensitivity to audience which children display in their oral language might well be discerned in their written language as well, if measures were sensitive to communicative intent as measures derived from oral language were likely to be.

The findings of the present study are consistent with oral language studies of language functions in school settings. The following differences have been observed in language addressed to peers as opposed to teachers. Pinnell (1975) found language addressed to peers to be more personal; Fleming (1980) found language addressed to peers to be more
expressive; and Jensen (1973) found language addressed to peers to contain more questions. Oral language studies, thus, are consistent with observations in this study regarding the use of personal and conversational language for the audience of best friend. Findings of the present study suggest that the sensitivity to status of audience which children display in their oral language is evident in their written language as well, if measures employed are sensitive to communicative intention. Further studies of audience effects employing communicative measures seem warranted.

The present study, thus, raises questions regarding the measurement of audience effects on written language, and the age at which audience effects can be discerned. Adapting a scheme used to describe the functions of children's oral language provided considerable insight into audience effects on written language for students in elementary school and high school.

The present study also raises questions regarding the effect of status of audience. According to sociolinguistic theory and research, status has a major impact on language use (Brown & Levinson, 1979; Trudgill, 1974), yet only one previous study of audience effects on written language has differentiated intended audiences on this dimension (Crowhurst & Piche, 1979). Given the pervasive practice of having students in school settings write almost exclusively for the
teacher—a high-status audience (Britton et al., 1975; Applebee, 1981, 1982)—further study of status effects on written language are warranted.

The Effect of Grade on Use of Language Functions

While no hypotheses were made with respect to grade effects on the use of language functions, grade differences in the use of language functions were found. The Relational function and the Informing and Interpreting function were used more by students in grade 6, while the Theorizing function was used more by students in grade 11.

The overall use of the Relational function by students in grade six was due, primarily, to the sub-function asserting positive opinions, although there were differences in favour of sixth graders for the other sub-functions asserting positive opinions, rhetorical requests for opinion and direction, and incidental conversational expressions as well. (See Table G6 in Appendix G).

Greater use of the sub-functions asserting positive opinions and rhetorical requests for opinion by sixth graders is not surprising and could be attributed to lack of training in the writing of argument, and lack of exposure to argument in reading material. Older students have greater sophistication in writing an argument. Rather than simply
stating an opinion, such as *I think this idea is great*, or asking the reader for an opinion, they give reasons, make predictions, and draw conclusions—in short, attempt to convince the reader rationally rather than by simply expressing a personal opinion.

The overall use of the Informing and Interpreting function by students in grade 6 was due primarily to the sub-function *informing about assignment*. The following is an example of a sixth grade composition which relies heavily on this sub-function:

*I think the money should be spent on school goods. The school goods that I am talking about are pens, pencils, rulers, note books, erasers, paper and field trips. Those things would be useful and helpful to the kids and teachers in the school. I do not think it should be spent on parties. I also think it should be spent on chalk, chalk erasers, and desks*

The student makes only one attempt to justify the opinion that the money should be spent on school goods ("Those thing would be useful . . ."). As a result, the composition is more informative than persuasive, a characteristic of many sixth-grade compositions. The tendency for sixth-graders to rely on informing more than did eleventh graders can probably be attributed to their relative lack of skill in developing an argument (Crowhurst, 1983; Wilkinson, Barnsley, Hannah, & Swan, 1980).

The overall use of the Theorizing function by students in grade 11 was due, primarily, to the sub-functions *surveying*
possibilities, anticipating problems, solutions and consequences, and coming to conclusions; and evaluating ideas, reflecting on reasoning, although there was a difference in favour of eleventh graders in rhetorical questions involving prediction as well. Compositions by eleventh-grade students, therefore, tended to be considerably more theoretical than were compositions by sixth-grade students. The ability to reason at an abstract level is thought to appear in a preliminary form at about the age of 11 or 12 (Case, 1985), precisely the age of the sixth-grade students in this study. It is likely, therefore, that the fact eleventh-grade students engaged in more theorizing than did sixth-grade students is due to their greater ability to engage in abstract reasoning.

A number of studies have indicated that younger students do not perform well when asked to write argument. Instead, they tend to lapse into narrative anecdote (Crowhurst, 1983; Wilkinson, Barnsley, Hannah & Swan, 1980), or to write extremely short compositions (Bereiter & Scardamalia, 1982). Moffett (1968) has suggested that discourse is hierarchically arranged from narrative, to generalizing, to theorizing, and that narrative is the most natural form for young writers to adopt. The difficulty younger writers experience with argumentative writing, therefore, may be attributed to the cognitive difficulty of adopting a theoretical point of view. Results of this study suggest that rather than engaging in
higher level discourse strategies, younger writers rely on relational strategies and informing strategies.

Results of this study also suggest that, in the writing of argument, younger students drew more upon social experiences than did older students who, it can be assumed, have acquired more familiarity with the genre of written argument. This interpretation is consistent with traditional explanations for the development of written language, and with more recent theories of cognitive developmental psychologists as well. Traditionally, language arts theorists have argued that written language grows out of oral language. Special emphasis has been placed on the importance of conversational experiences for the development of written language (Britton et al., 1975; Moffett, 1968). More recently, Bereiter and Scardamalia (1982) hypothesized that because children do not have a schema for written argument in the way that they have a schema for narration or for direction giving, they must adapt the strategies used in oral argument for written argument. Results of the present study suggest that an evolution from oral and conversational language to theorizing language takes place between the latter years of elementary school and high school.

The ability to write argument is generally considered an important skill for students to acquire; final examinations in English universally include an opinion essay. Despite the
importance attached to the writing of argument, *conative* or *persuasive* writing accounts for a very low percentage of the writing done in secondary schools on both sides of the Atlantic (Applebee, 1980; Britton et al., 1975). Few studies have examined how skill in the writing of argument develops. Results of the present study suggest that an evolution from the Relational and the Informing and Interpreting function to the Theorizing function occurs between sixth grade and eleventh grade. Given the emphasis placed on argumentative writing in most assessments of written language, further research is needed to delineate the development that occurs in students' ability to write persuasively.

**The Effect of Topic on Use of Language Functions**

The likelihood of topic effects in research on written composition has long been recognized. The Braddock Report (Braddock et al., 1963) advised that researchers always use at least two topics precisely because writing performance can differ markedly from one piece of writing to the next. For this reason, two topics were used in the present study. It is to be noted that there were no interactions between topic effects and audience effects in the present study; these effects can therefore be assumed to be independent. The Informing and Interpreting function was used more in
compositions on Topic 2 (Money), and the Theorizing function was used more in compositions on Topic 1 (School).

The finding that Topic 1 (School) produced more of Function 4 (Theorizing) and Topic 2 (Money) produced more of Function 3 (Informing and Interpreting) and Function 1 (Controlling) can best be interpreted by reference to the wording of the topics themselves. It could be argued that the implied situation for Topic 1 (School) Would it work if . . . ? was more theoretical than was Topic 2 (Money) Five hundred dollars is available for your class to spend. . . . Topic 2 tended to produce informative descriptions of present need--supply shortages in classrooms for example, or what coders described as shopping lists, and requests that the reader agree with the writer on how the money should be spent. Topic 1 (School), on the other hand, produced more speculation and hypothesizing, an effect which is evident in the main effect for topic on the sub-functions recognizing causal and dependent relationships, rhetorical questions involving predictions, and reflecting on reasoning, evaluating ideas. Wilkinson et al. (1980), from whom this topic was derived, observed that this topic produced hypothetical syntactic constructions even in young subjects (p. 127). Results of the present study confirm the widely held view that topic affects language use.
Summary and Implications for Educational Practice

Contrary to previous research, the present study provides evidence of effects for intended audience in written arguments by students in elementary school as well as in secondary school. Compositions intended for the audience of teacher contained more Theorizing, were more objective and impersonal, and contained less variety of language function. In contrast, compositions intended for the audience of best friend contained more of the Controlling and Relational functions, were less objective and more personal, contained more variety of language function, and more interactive, conversational strategies.

The present study, therefore, provides empirical support for composition researchers and theorists who suggest that writing for a variety of real or authentic audiences is important for students in school settings because assigned writing frequently occurs in an arhetorical situation. All too often, students are writing to inform a teacher who is already informed about a topic (Applebee, 1982, Rosen, 1973). What is important, recent theorists suggest, is creating opportunities for genuine communication (Martin, 1983). The present study supports that point of view by providing empirical evidence that students do write differently for different audiences.
In regard to the development of writing ability, the present study provides insight into age-related differences in the use of language functions in written argument. From this study it would appear, as Bereiter and Scardamalia (1982) suggest, that younger writers rely more on the strategies learned in oral argument such as expressing opinions, and requesting opinions of the reader than do older writers who have learned a *schema* for written argument. Pedagogically, this study suggests that the distinction between oral argument and written argument could be clarified for young writers. In addition, curriculum designed to teach written argument should build on, rather than ignore, children's experiences in oral argument.

The present study also provides evidence of topic effects on language functions. Students performed differently on different topics. The present study, thus, reinforces a common notion in composition assessment that writing performance should not be judged on the basis of one writing sample only (Braddock et al. 1963; Odell, 1981). The present study also points out the need for educators and researchers to employ more than one topic, and the importance of equating topics.
Conclusions

Based on the results of the present study and the discussion of results presented in this chapter, the following conclusions can be drawn:

1. For both sixth- and eleventh-grade students, status of audience affected the use of language functions in written argument. The Controlling and the Relational functions were used proportionally more often in compositions written for a best friend, and the Theorizing function was used proportionally more often in compositions written for a teacher. Compositions intended for a same-status audience, therefore, were more diverse, more directive, more relational and conversational, in contrast to compositions intended for a high-status audience which were less diverse, more objective and impersonal.

2. Grade affected the use of language functions in written arguments. Sixth-grade students used proportionally more of the Relational function and the Informing and Interpreting function; eleventh-grade students use more of the Theorizing function. Written arguments by younger students contained more expressions of positive opinion, requests for the reader's opinion, and informative responses to the topic, in contrast to compositions by
older students which contained more speculation, prediction and evaluation.

3. Topic affected the use of language functions in written arguments. The topic suggesting a hypothetical situation produced greater use of the Theorizing function than did the topic which was related to past and present experience which produced the use of more different functions, and greater use of the Informing and Interpreting function, and the Controlling function.

Implications for Further Research

The present study suggests that, when measures are sensitive to communicative intention, audience effects can be discerned in compositions by students in elementary schools. The present study, therefore, has implications for the sort of measures that could be used in further studies of audience effects, and raises questions about the age at which audience effects can be discerned in written language.

In regard to measures, it seems appropriate that further studies of audience effects should examine differences that are communicative rather than structural. Because both are concerned with the impact of context on language, rhetorical theory and
sociolinguistic theory and research could well provide measures that are meaningful and profitable.

For example, sociolinguistic research suggests that audience affects number of rhetorical appeals, and level of rhetorical appeals. It is ironic, given the traditional emphasis on appeal and appeal types in rhetorical theory, that only one study of audience effects on written language has attempted to examine appeal types (Rubin & Piche, 1979). A similar argument can be made for the examination of questions in written argument. Even though, traditionally, rhetorical theory has advised writers to use the question for a variety of purposes, use of questions in written language has not been studied. From the present study, the question would seem to be a sensitive, easily identifiable index of audience effects.

In regard to the age at which audience effects can be discerned, the present study reveals the possibility that audience effects can indeed be discerned in children in elementary schools. Very little is known about the age at which audience effects emerge in written language, or how audience effects develop. Because this study diverges from previous studies of audience effect on written compositions, it could well be replicated. Subsequently, students younger than sixth graders and
students in grades between sixth- and eleventh-grade could be examined.

Methodologically, further studies of audience effects could attempt to introduce verisimilitude as did Prentice (1980). In that study, the simple strategem of mailing compositions to "real" readers produced evidence of audience effects in young writers. Students in the present study wrote differently for different audiences despite the artificiality of the experimental situation. No prewriting activities occurred. Students were simply told to write. One can only speculate about what the magnitude of the audience effects would have been if the audiences had indeed been real audiences, or if some form of audience sensitization such as listing adjectives to describe, or drawing a picture of the intended audience had occurred.

Given the strong theoretical claims that authenticity of audience is important for both the writing process and written products, further studies of audience effects could profit from employing quasi-experimental designs which incorporate naturally occurring authentic audiences where possible. For example, teachers are frequently advised to have students write for small peer groups called writing groups, for school newspapers, and for publication. Writing done in
classrooms in which writing is read regularly by readers other than the teacher could provide a rich source of information about audience effects on written language without the need for tightly controlled experimental design.

The coding scheme used in the present study provides considerable insight into audience effects on language functions. It also contributes to our knowledge about the differences that exist between sixth-grade and eleventh-grade in students’ ability to write written argument. This coding scheme could be used to delineate the effects of audience on language functions in written arguments by even younger students. It could also be used to delineate development in students’ ability to write persuasively.
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APPENDICES

APPENDIX A: WRITING ASSIGNMENTS
APPENDIX B: INSTRUCTIONS FOR DIVIDING COMPOSITIONS INTO IDEA UNITS
APPENDIX C: SAMPLE COMPOSITION DIVIDED INTO IDEA UNITS
APPENDIX D: INSTRUCTIONS FOR IDENTIFYING LANGUAGE FUNCTIONS
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APPENDIX A

WRITING ASSIGNMENTS

**Topic One (Grade 6)**

Should children be allowed to come to school when they want to, and do whatever they want when they get there?

Decide whether or not this should be allowed to happen. Then write a composition which will convince your teacher/best friend that your opinion is right. You have plenty of time. Write as much as you can.

Remember to write for your teacher/best friend.

**Topic Two (Grade 6)**

The sum of five hundred dollars is available for your class to spend. You are a member of the class committee which will decide how it should be spent. Your teacher/best friend is also a member of the committee.

Decide what you think about how the money should be spent. Then write a composition which will convince your teacher/best friend to agree with you. You have plenty of time. Write as much as you can.

Remember to write for your teacher/best friend.
**Topic One (Grade 11)**

Should students be allowed to come to school when they want to and do whatever they want when they get there?

Decide whether or not this should be allowed to happen. Write a composition which will convince your teacher/best friend that your opinion is right. You have plenty of time, so write as much as you can.

Remember to write for your teacher/best friend.

**Topic Two (Grade 11)**

Five hundred dollars has been allocated to your class to spend. You are a member of a class committee which will decide how it should be spent. Your teacher/best friend is also a member of the committee.

Decide what your opinion is about how the money should be spent. Then write a composition which will convince your teacher/best friend to agree with you. You have plenty of time, so write as much as you can.

Remember to write for your teacher/best friend.
APPENDIX B

INSTRUCTIONS FOR DIVIDING COMPOSITIONS INTO IDEA UNITS

Definition: One clear idea—may or may not be a grammatical sentence.

Children should not have to come to school./
Super duper milkshakes instead of old milk./

Guidelines:
Complex sentences containing dependent clauses are one unit. 

I think that if children come to school when they wanted then people wouldn't learn anything because they wouldn't come often enough./

Exception: If the student constructs a complex sentence that clearly contains more than one idea, count as more than one unit.
If they could do what they want there it would be even worse because the kids that wanted to do work wouldn't know what to do without a teacher's advice / because the teacher studied many years to become a teacher so she knows how to teach / but a kid does not know how to teach himself./

Compound sentences clearly containing two (or more) ideas are counted as two (or more) units.
I don't think children should go to school whenever they
want because they'll get bad marks / and when they go to high school they would not know how to do the work.

Items in series will be counted as one unit unless the writer indicates that they are separate ideas by punctuating them as separate ideas.

If the teacher didn't come we would throw spitballs, eat lunch in the classroom, write on the boards, and talk all day. /

Super duper chocolate milkshakes instead of old milk. /

Bubble gum and chocolate and pizza. /

Roller coaster rides, / and all of it totally free. /

Incidental expressions such as "no way," "so there" and "egad-zooks" will be counted as one unit when they are punctuated with a period or an exclamation mark.
If children could come to school whenever they liked, and more importantly not come to school whenever they didn't, the education system would suffer greatly. Of course a few teachers would improve their classes by cutting off tedious work in an effort to get students to attend their class, but education should not be geared in this direction. I can just forsee a group of teachers huddled in a circle comparing attendance figures in an effort to prove who is the most popular. If I weren't forced to go to school, I know that I lack the willpower to do so. As it is now my attendance, although better than some, is far from perfect, and that is not entirely due to illness. If students were allowed to do whatever they liked when in school, attendance would be more regular than it is now. The classroom would turn into a zoo or jungle, and I would be sure to be the head ape. Those few who would truly wish to do their work and learn would be unable to do so because of people like me who would interfere with loud noise and zaniness. Education would be unable to function under these circumstances, but it would be a heck of a lot of fun.
APPENDIX D

INSTRUCTIONS FOR IDENTIFYING LANGUAGE FUNCTIONS

Derived from Tough (1977, 1979) and Shafer et al. (1983)

Leaves 133-37 not filmed; permission not obtained.
INSTRUCTIONS FOR IDENTIFYING LANGUAGE FUNCTIONS

Derived from Tough (1977, 1979) and Shafer et al. (1983)

Function 1: Controlling

Controlling language is used to direct, or control the behaviour of the reader. Usually, it is direct (e.g. "Don't spend the money on more books./Spend it on a field trip instead./"), and has a conversational quality. Writers can also be less direct in their attempts to control their readers. For example, flattery ("You are a wise person,"") can be used by the writer in an attempt to control the reader's actions.

Direct requests such as "Write back,/ and tell us what to do."/ are classified as controlling if the writer wants the reader to do something and if the reader is able to fulfill the request. Instructions to the reader to imagine are regarded as requests the reader could fulfill. Most questions are regarded as rhetorical rather than as controlling and are classified according to the functions they perform.

The following paragraph contains examples of controlling language:

APPENDIX D
Ok Joe/ We have got to decide what to do with the money./ Let's take a poll/ You talk to the boys/ and I'll talk to the girls./

**Function 2: Relational**

Relational language is used to "relate" to the reader and has a conversational tone. It is both personal and social. Relational language is used to express personal preferences and opinions ("I think this is a crazy idea."/), and to open, close or maintain communication. Rhetorical requests for opinion such as "What do you think?" are included in this category.

Incidental conversational expressions such as "good grief", "Hi.", "Thank you." and "I'll phone you later" are included in this category because of their social or interactional function.

The following paragraph opens with examples of language which is relational.

Hi Melissa/ How are you?/ What do you think of this silly idea?/ I think it is plain silly./ That's what I think./ I mean, gad-zooks just think what would happen./
Function 3: Informing and Interpreting

Language in this category is used to report on past and present events. The writer informs the reader about what he/she has observed and believes to be true ("We have to share our Social Studies books./ I am allergic to gerbils."/ "We have five hundred dollars to spend."/). The writer can also make generalizations about past and present experience ("Five hundred dollars is a lot of money."/ Children have to go to school.").

Statements related directly to the writing assignment are also regarded as informing (e.g. "I think the answer is yes./")
Function 4: Theorizing

Language in this category is used to reason, to predict, and to make hypotheses based on past experiences or observations. Often it is impersonal and lacking in feeling. The following paragraph contains examples of language used for this function.

Children go to school because their parents and teachers make them go. If children were able to come to school when they want to go, most children would not come at all, Those that did come would not come at the same time, and the teacher would have to teach the same lesson over and over again. If this were allowed to go on for very long, the whole school system would collapse. So, even though it may seem like a good idea, it would not work and should not be allowed to happen.
Function 5: Projecting and Imagining

Tough calls this use of language "going beyond first hand experience" (1979, p 168). This category includes language used to project into others' experiences in the present ("As you are a teacher, you know how distracting spitballs can be."), and into experiences of self and others in an imagined context ("If this were to happen, we would never come. We would go off to the movies. We would go to Stanley Park and feed the ducks. Then we would ride on the train. I would like that.").

Instructions to the reader to imagine or project are included in this category if the writer creates a scenario.
APPENDIX E

EXAMPLES OF LANGUAGE FUNCTIONS AND SUB-FUNCTIONS

Adapted from Tough (1977, 1979) and Shafer, Staab and Smith (1983)

Leaves 138-42 not filmed; permission not obtained.
APPENDIX E

EXAMPLES OF LANGUAGE FUNCTIONS AND SUB-FUNCTIONS

Adapted from Tough (1977, 1979) and Shafer, Staab and Smith (1983)

Function 1: Controlling

1. Direct instructions to reader
   a. Write back./
   b. Change the Program./
   c. Have joke sheets./
   d. Listen to this./

2. Attempts to control reader
   a. You're a wise man./

3. Requests for direction
   a. Tell us what to do now./

4. Requests for attention
   a. Hey Linda!/
   b. O K Kari!/
   c. Do you understand?/

5. Requests for collaboration
   a. We have got to decide what to do with the money./
   b. Let's have a movie and charge admission./
   c. We should suggest that the money be given to the Red Cross./
Function 2: Relational

1. Asserting negative opinions
   a. Do you know what I think about this silly idea?/ I think it is plain silly./ That's what I think./

2. Asserting positive opinions
   a. I think it is a wonderful idea./
   b. I am so excited./
   c. I'm right./ I'm right./

3. Rhetorical requests for opinion or direction
   a. What do you think?/
   b. What should we do?/

4. Incidental conversational expressions
   a. No way!/ 
   b. So there!/
   c. Egad-zooks!/
   d. I've got to go now./ I'll phone you after school./
   e. Guess what we did in school today./
Function 3: Informing and Interpreting

1. Reporting the present
   a. I want a gerbil./ You want a field trip./

2. Recording the past
   a. Last year we had no field trips./

3. Making comparisons
   a. School is a five and a half hour duel./

4. Making generalizations
   a. Children have to go to school./
   b. A young child lives from day to day./
   c. School should be taken serious./
   d. People have different ways of thinking./

5. Rhetorical requests for information
   a. Who do you know that would rather go to school than to a movie?/

6. Informing about assignment
   a. I think the answer is no./
   b. These are the things we could spend the money on .. . . /
Function 4: Theorizing

1. Recognizing causal and dependent relationships
   a. When you don't learn anything you can't get a job./
   b. No education, no medical staff./
   c. If the money is spent on a class pet, then we would all learn how to take care of it./
   d. If children came to school when they wanted, then they wouldn't learn anything because they wouldn't come./

2. Surveying possibilities, anticipating problems solutions and consequences, drawing conclusions
   a. The unemployment rate would be higher than it now, and the government would have to create jobs./
   b. The children wouldn't come at the same time, so the teachers would have to teach the same lesson over and over./
   c. So in the long run it would not work if . . . /

3. Rhetorical questions involving prediction
   a. If they don't learn, how are they going to survive?/

4. Reflecting on idea, recognizing principles
   a. I would be illogical to expect this to work./
   b. Wasted time would be inconsequential compared to time wasted now./
   c. It would be nice, but it would not work./
Function 5: Projecting and Imagining

1. Projecting self into experiences of others
   a. As you are a teacher, you know how distracting spitballs can be./

2. Projecting self into situation never experienced
   a. I would talk all day to my friends./
   b. The teachers would probably hate it./

3. Rhetorical questions involving projecting or imagining
   a. Why would they bother to go to class when they could go outside and do what they want?/
Susan, the decision over how to use the money has split up the class. (3 (i)) Everybody has a different idea which they think is best. (3 (i)) Don't you think we should unite and work for one plan and stop fighting each other (1 (v)). Remember when we had to research and talk about the state of Human Rights before Christmas? (3 (v)) We all chose different countries, (3 (ii)) but a name that came up quite often was Amnesty International. (3 (ii)) Everyone agreed that the work they did was important, and that they deserved our praise and our help, if possible. (3(ii)) We decided to write letters saying what we felt about the state of Human Right in the area we chose. (3 (ii)) Unfortunately, many of our classmates did not do this, either because they were too lazy, or they simply forgot about it. (3 (2)) But now we have money which we can use to help Amnesty International, and people all over the world. (3 (vi)).

Phone me Sue, (1 (i)) and tell me what you think. (1 (iii)) I am sure that when you consider it, you will realize that this option will make the best possible use for the money. (1 (v))
APPENDIX G

STATISTICAL TABLES

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Table G11: Means and Standard Deviations and F Statistics for Use of Sub-Functions of Function 4 (Theorizing) for Two Topics
Table G1

Results of MANOVA Analysing Proportional Use of the Five Language Functions

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Table G2

Summary of ANOVAs in Follow-Up Analysis of Sub-Functions

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<td>*</td>
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<td>(ii) **</td>
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(* Not Analysed) (** Not Significant)
Table G3

Means, Standard Deviations and F Statistics
for Use of Sub-Functions of Function 1 (Controlling)
for Two Audiences

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1 (i): Direct instructions to reader
1 (ii): Attempts to control reader
1 (iii): Requests for direction
1 (iv): Requests for attention
1 (v): Requests for collaboration
Table G4

Means, Standard Deviations and F Statistics
for Use of Sub-Functions of Function 2 (Relational)
for Two Audiences

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2 (i): Asserting negative opinions
2 (ii): Asserting positive opinions
2 (iii): Rhetorical requests for opinion or direction
2 (iv): Incidental conversational expressions
Table G5

Means, Standard Deviations and F Statistics

for Use of Sub-Functions of Function 4 (Theorizing)

for Two Audiences

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4 (i): Recognizing causal and dependent relationships
4 (ii): Surveying possibilities, anticipating problems, solutions and consequences, drawing conclusions
4 (iii): Rhetorical questions involving prediction
4 (iv): Reflecting on reasoning, evaluating ideas
Table G6
Means, Standard Deviations and F Statistics
for Use of Sub-Functions of F 2 (Relational)
at two Grade Levels

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2 (i): Asserting negative opinions
2 (ii): Asserting positive opinions
2 (iii): Rhetorical requests for opinion or direction
2 (iv): Incidental conversational expressions
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<td>3 (vi)</td>
<td>.19(.20)</td>
<td>.05(.09)</td>
<td>65.48</td>
</tr>
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</table>

3 (i): Reporting the present  
3 (ii): Recording the past  
3 (iii): Making comparisons  
3 (iv): Making generalizations  
3 (v): Rhetorical requests for information  
3 (vi): Informing about assignment
Table G8
Means, Standard Deviations and F Statistics for Use of Sub-Functions of F 4 (Theorizing) at two Grade Levels

<table>
<thead>
<tr>
<th>Sub-Function</th>
<th>Grade</th>
<th>Follow-up</th>
<th>ANOVAs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>p</td>
</tr>
<tr>
<td>4 (i)</td>
<td>Six</td>
<td>.11 (.15)</td>
<td>.14</td>
</tr>
<tr>
<td></td>
<td>Eleven</td>
<td>.10 (.11)</td>
<td></td>
</tr>
<tr>
<td>4 (ii)</td>
<td>Six</td>
<td>.24 (.25)</td>
<td>38.17</td>
</tr>
<tr>
<td></td>
<td>Eleven</td>
<td>.40 (.26)</td>
<td></td>
</tr>
<tr>
<td>4 (iii)</td>
<td>Six</td>
<td>&lt;.01 (.04)</td>
<td>3.85</td>
</tr>
<tr>
<td></td>
<td>Eleven</td>
<td>.02 (.04)</td>
<td></td>
</tr>
<tr>
<td>4 (iv)</td>
<td>Six</td>
<td>.04 (.07)</td>
<td>45.15</td>
</tr>
<tr>
<td></td>
<td>Eleven</td>
<td>.11 (.11)</td>
<td></td>
</tr>
</tbody>
</table>

4 (i): Recognizing causal and dependent relationships
4 (ii): Surveying possibilities, anticipating problems, solutions and consequences, drawing conclusions
4 (iii): Rhetorical questions involving prediction
4 (iv): Reflecting on reasoning, evaluating ideas
Table G9
Means, Standard Deviations and F Statistics
for Use of Sub-Functions of F 1 (Controlling)
for Two Topics

<table>
<thead>
<tr>
<th>Sub-Function</th>
<th>Topic</th>
<th>School</th>
<th>Money</th>
<th>Follow-up</th>
<th>ANOVAs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p</td>
</tr>
<tr>
<td>1 (i)</td>
<td></td>
<td>&lt;.01(.02)</td>
<td>.01(.03)</td>
<td>3.71</td>
<td>.057</td>
</tr>
<tr>
<td>1 (ii)</td>
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<td>.02(.05)</td>
<td>.05(.09)</td>
<td>22.17</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>1 (iii)</td>
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<td>&lt;.01(.01)</td>
<td>.01(.05)</td>
<td>3.59</td>
<td>.061</td>
</tr>
<tr>
<td>1 (iv)</td>
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<td>.01(.05)</td>
<td>.01(.04)</td>
<td>.02</td>
<td>.896</td>
</tr>
<tr>
<td>1 (v)</td>
<td></td>
<td>.01</td>
<td>.03(.06)</td>
<td>17.02</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

1 (i): Direct instructions to reader
1 (ii): Attempts to control reader
1 (iii): Requests for direction
1 (iv): Requests for attention
1 (v): Requests for collaboration
Table G10
Means, Standard Deviations and F Statistics
for Use of Sub-Functions of F 3 (Informing and Interpreting
for Two Topics)

<table>
<thead>
<tr>
<th>Sub-Function</th>
<th>Topic</th>
<th>School</th>
<th>Money</th>
<th>F</th>
<th>ANOVAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 (i)</td>
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<td>.02(.05)</td>
<td>.07(.11)</td>
<td>34.11</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>3 (ii)</td>
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<td>.02(.01)</td>
<td>8.13</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>3 (iii)</td>
<td>Money</td>
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<td>&lt;.01(.01)</td>
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<td>.646</td>
</tr>
<tr>
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<td>Money</td>
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<td>.04(.07)</td>
<td>5.00</td>
<td>.028</td>
</tr>
<tr>
<td>3 (v)</td>
<td>Money</td>
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<td>.01(.02)</td>
<td>1.57</td>
<td>.213</td>
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<tr>
<td>3 (vi)</td>
<td>Money</td>
<td>.06(.09)</td>
<td>.18(.20)</td>
<td>61.04</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

3 (i): Reporting the present
3 (ii): Recording the past
3 (iii): Making comparisons
3 (iv): Making generalizations
3 (v): Rhetorical requests for information
3 (vi): Informing about assignment
Table G11
Means, Standard Deviations and F Statistics
for Use of Sub-Functions of F 4 (Theorizing)
for Two Topics

<table>
<thead>
<tr>
<th>Sub-Function</th>
<th>Topic</th>
<th>Follow-up</th>
<th>ANOVAs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>School</td>
<td>Money</td>
<td>F</td>
</tr>
<tr>
<td>4 (i)</td>
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<td>.06(.09)</td>
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<tr>
<td>4 (ii)</td>
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<td>.30(.27)</td>
<td>3.01</td>
</tr>
<tr>
<td>4 (iii)</td>
<td>.02(.04)</td>
<td>.01(.03)</td>
<td>9.11</td>
</tr>
<tr>
<td>4 (iv)</td>
<td>.09(.11)</td>
<td>.05(.09)</td>
<td>23.25</td>
</tr>
</tbody>
</table>

4 (i): Recognizing causal and dependent relationships
4 (ii): Surveying possibilities, anticipating problems, solutions and consequences, drawing conclusions
4 (iii): Rhetorical questions involving prediction
4 (iv): Reflecting on reasoning, evaluating ideas