

AN EXPLORATION OF DEVELOPMENTAL RECIPROCAL COMMUNICATION  
IN THE DIALOGUE JOURNALS OF THIRD GRADERS

by

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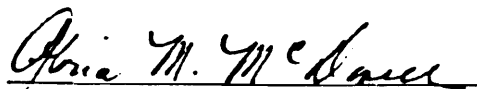
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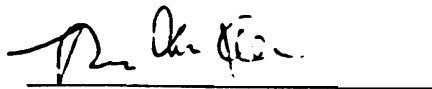
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(ABSTRACT)

Dialogue journal writing is a form of reciprocal communication in which pupils and teachers inform, and react to the entries of, the partner in a nonevaluative, familiar dialogue. Journals were analyzed in terms of three dependent variables: detail, response complexity, and reference.

To study the relationship of journal writing to other characteristics, three independent variables were assessed-- audience awareness, by an adaptation of Braig's (1984) audience awareness categories; social cognition, by Miller, Kessel & Flavell's (1970) assessment of social cognitive development; and writing ability, by an evaluation developed by McCaig (1984).

Entries from the dialogue journals of 21 3rd grade students were rated at 3 times--10 consecutive from the

beginning, middle, and end of the year. Questions asked were:

1. Do dialogue journals have separate, unique elements, or do they have a single domain?
2. Is there a relationship between the dependent and independent measures?
3. Does skill increase over time for the dependent variables?
4. What is the effect of gender, use of English as a second language, or minority status over time for each of the dependent variables?

Spearman rho correlations addressed the first and second questions. Stepwise regression analyses was also completed. Question three was investigated using repeated measures ANOVA. Repeated measures first order interactions and between-subjects differences on dialogue journal scales were used to answer the fourth question.

Results of this study indicate that at there are at least three relatively independent components for dialogue journal writing with a large proportion of the variance in detail related to audience awareness and social cognition, and somewhat less to writing ability. There were significant time effects for response complexity and reference. Detail increased, but not significantly. There were no significant first order interactions with time for any of the three

demographic variables. However, between-subject differences on dialogue journal scales suggest directions for further study of group and individual differences in dialogue journal writing as reciprocal communication.

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## CHAPTER 1

### Introduction

Journal writing is flourishing from kindergarten through university levels. Journal writing in the school setting is defined as a personal account of activities, concerns and feelings written in a permanent notebook or binder. This is done daily or several times a week. There is a growing appreciation of the idea that even beginning writers can benefit from exposure to this informal setting for expressive, functional writing.

Journal writing is, above all, communication. Hipple described it as an expression of "child-communicated ideas and feelings" (1985, p. 255). Journal writing appears in different forms in the elementary classroom. Some teachers provide time for writing, but the product is unshared. In other classrooms pupils select entries they wish to read to peers.

One form of this writing, dialogue journal writing, is considered a valuable addition to classroom experience. Staton (1988) defines dialogue journal writing as interactive, functional writing which occurs between students and their teachers--often on a daily basis--about self-generated topics of interest to each other. It is a form of pupil-teacher sharing time, a communicative

relationship, for, as Bernstein (1972) wrote: "If the teacher is to become part of the culture of the child, then the culture of the child must first be in the consciousness of the teacher" (p. 239).

### Reciprocal Communication

Communication, therefore, implies reciprocity. For many years research has been gathered that demonstrates the significance of adult involvement in the development of child discourse (Cochran-Smith 1983; Garvey 1974; Keenan 1974; Bloom, Rocissano & Hood 1976). In his comparison of child discourse and dialogue journal writing Shuy (1982) concluded that the opportunity to interact with an adult model provides the same advantages to the development of a child's written competency as it does for the development of oral language.

This study of reciprocal communication in the classroom setting begins with examination of what the dialogue between pupil and teacher implies. Focus is on the concepts of audience awareness, social cognition, and writing ability.

#### Audience Awareness

In order to respond to an audience it is first necessary to be aware of that audience--to acknowledge that the writing is intended for someone else and that informational needs must be met. Successful communication involves exchanges which provide awareness of these needs.



When children write for themselves, it need not be all-explicit. They can fill in the missing details, for their own experiences will supply the meaning. This is not so when they convey this experience to another. Here we have the kernel of success in dialogue - the ability to recognize audience as apart from self, and to engage in adequate, meaningful response (Rosen & Rosen 1973; Cazden 1972).

Piaget: Egocentrism and decentration. Successful communication requires that each participant be developmentally capable of identifying and taking the perspective of the other. Flavell (1968), Elkind (1970) and Kroll (1978) have written on this subject, basing their theories on the Piagetian principle of "egocentrism" or the ability to take the view of another. They identify egocentrism as the cause of lack of audience perception and audience sensitivity.

Light (1979, p. 6) points out that:

In his early writings Piaget clearly took the view that the recognition of inter-individual reciprocity was achieved by the child directly through social experience and that intellectual decentration followed from social decentration: "In fact, it is precisely by a constant interchange of thought with others that we are able to decentrize ourselves in this way" (Piaget, 1950, p. 194).

A central concept of this cognitive development theory, therefore, is Piaget's identification of egocentrism, or the inability to perceive from a perspective other than one's own. Elkind (1970) notes that Piaget's use of the term egocentrism has nothing negative in its connotation, but refers only to the "lack of differentiation characteristic of any particular state of development" (p. 74). Piaget (1962) also made this distinction in his Comments on Vygotsky's Critical Remarks.

As we can determine from Light's quote, Piaget sees childhood as a time of gradual emergence from concentration with self to a "decentering that is at once cognitive, social and moral" (Piaget & Inhelder 1969). As centration is identified as a focus on one aspect or view of a situation, decentration permits consideration of more than one aspect or viewpoint (Kurdek, 1979).

Piaget sees a child who has arrived at the operational stage (age 9-11) as capable of demonstrating social reciprocity or reversability in language use. Long & Bulgarella (1985) follow Piaget's lead when they state that interaction encourages the development of individuality, creativity, and the ability to think, as well as encouraging the learning of technical aspects of writing as they are modeled by the teacher.

Vygotsky: Social to internalized speech. A somewhat different view of this was presented by the Russian psychologist Vygotsky. He questioned Piaget's view that egocentric thought was asocial and personal in the beginning, developing later into social. Vygotsky (1934) theorized in a different way. To him speech began as social and developed as it became an internalized "inner voice". Vygotsky viewed writing as a product of this internal voice, with symbols substituted for sensory aspects. He did agree that full development of abilities was not necessary to begin writing activities and concluded that this development could evolve during ongoing interaction.

Piaget (1962) later addressed Vygotsky's differences, and noted that they were made in reference to his [Piaget's] very early writings. Piaget's later works resolved some of the exceptions made by Vygotsky. For example, although there were still differences regarding mode of development, Braig (1984) notes that Piaget and Vygotsky agree that "cognitive abilities required for language use exist along some developmental continuum" (p. 63).

### Social Cognition

Social cognition is defined by Shantz (1975) as "... how children conceptualize other people and how they come to understand the thoughts, emotions, intentions, and viewpoints of others" (p. 258). This is based on Piaget's

theory that interpersonal action plays an important role in the cognitive and social development of the child and is therefore also known as "role-taking" or "perspective-taking" (Mead, 1934).

There is here a distinct connection with the audience awareness discussed previously. It is through repeated interaction with others that the child decenters and the perspective of egocentrism is gradually abandoned. Awareness of others - the audience - slowly develops, for participants in a communicative exchange must be aware of, meet the needs of, and accommodate to the views of others. This makes role-taking central to the achievement of a smooth, effective exchange. Adjustments can be made to adapt to the needs of the listener only if the participants are able to "see" the viewpoint of the other, or, as Light suggests, "putting yourself in somebody else's shoes" (1979, p. 17). It is important to note here that neither maturation nor learning are seen in social cognition as the direct cause of success. Rather, it is the interaction between the child and the outside forces.

### Writing Ability

The third component of reciprocal communication included in this study is writing ability. It is possible to link aspects of audience awareness and social cognition with theory in the field of writing itself. In his study of

the process of communication Moffett (1968) wrote about "abstraction" --a mental mapping of reality which applies to thought as well as language. Moffett proposed three levels of coding: non-verbal experience, verbalization, and literacy. Communication results from "abstraction" for others, creating a relationship between the communicants. To the degree that the sender meets the needs of the receiver, audience awareness is present.

Britton, Burgess, Martin, McLeod and Rosen (1975) also focused on the process of writing. They developed an analysis on the developmental progression of language to categorize the strategies used in writing as transactional, expressive, and poetic. It is the expressive mode that appears to best describe dialogue journal writing.

The information presented portrays the child as an active participant in the development of expressive, interactive language. Dialogue journal writing provides a most suitable vehicle for an investigation of the development of the reciprocal nature of this experience by virtue of its reliance on the student as author and reactor.

#### Study Focus

This study has two primary points of focus. The first is the nature and development of journal writing per se. The dialogue journals kept by twenty-one third grade students and their teacher are categorized in respect to

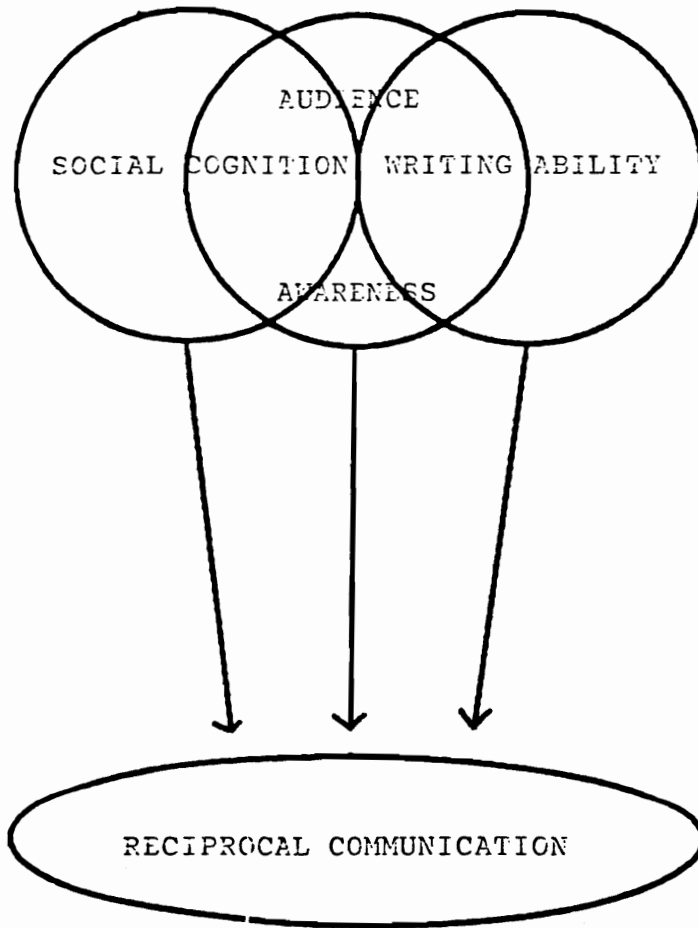


Figure 1. Components of reciprocal communication.

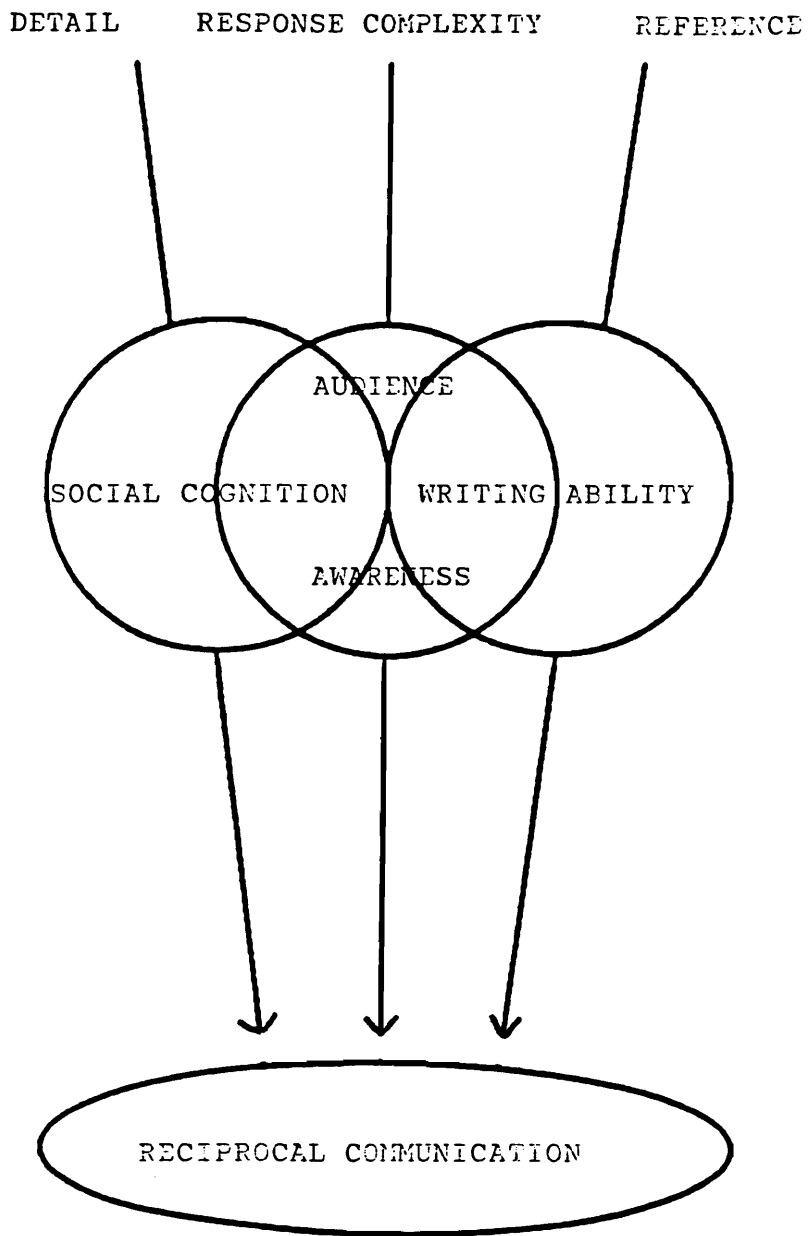


Figure 2. Areas of response used as study variables.

three elements: reference (topics referred to), response complexity (student answers to teacher comments), and detail (content of student dialogue journal entries). These are the dependent variables:

REFERENCE	RESPONSE COMPLEXITY	DETAIL
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The second primary point of focus is the relationship between these aspects of dialogue journal writing and the more general concepts of reciprocal communication identified --audience awareness, social cognition, and writing ability

Figure 1 shows one possible relationship among the independent variables, based upon any hints in the literature plus some degree of speculation. The study would show whether this or some other relationship more clearly matches reality.

Figure 2 depicts the dependent and independent variables in a relationship visualized at the onset of the investigation. It was anticipated that each of the scales derived from the journals would be significantly correlated with one of the independent variables of social cognition, audience awareness, and writing ability.

#### Research Questions

Four questions concerning the identified variables are responded to in the study:

1. Are there separate, unique elements within dialogue journal writing or is dialogue journal writing in effect



essentially an inseparable whole?

2. Is there a relationship between measures of reference, response complexity, and detail, and the independent measures of audience awareness, social cognition, and writing ability?

3. Is there an increase over time in skill in the use of the three identified internal elements of dialogue journal writing?

4. What is the effect of gender, ESL and minority status over time for each of the dependent measures?

#### Summary

The study generated testable hypotheses regarding three elements of children's reciprocal dialogue journal writing and the independent aspects of audience awareness, social cognition and writing ability. The three internal elements are identified as reference, response complexity and detail. These elements were studied as to their relation with one another as well as with the general concepts of audience awareness, social cognition, and writing ability.

## CHAPTER 2

### REVIEW OF THE LITERATURE

#### Introduction

This review of literature will begin with a discussion of the constructs of egocentrism and decentration presented by Piaget, and the work of Vygotsky on the development of expression in the child. A review of the theory of social cognition, based on the work of Piaget, and recent work in the field of writing process follows. Sections on audience awareness in writing and the dialogue journal studies of Staton, Shuy, Braig and others completes the review. The final section expresses concerns related to the study questions of this dissertation.

#### Piaget

In the first chapter Piaget's theories of egocentrism and subsequent decentering were identified as prime players in successful communication between child and audience. These tenets are the theoretic basis for two of the components of reciprocal communication identified in this study--social cognition and audience awareness. Piaget has also made other contributions which are important to this study of the development of the child's ability to contribute successfully to reciprocal dialogue.

Piaget divided child language into two main groups--egocentric and socialized. As discussed in chapter one, he

theorized that egocentric speech precedes socialized speech and is the result of the child's concentration with self and inability to focus on the "other". The gradual emergence of the ability to decenter makes the second group--socialized speech--possible.

Piaget (1969) identified three categories of egocentric speech:

1. Repetition--repeating words or syllables not understood by another.
2. Monologue--talking to oneself or thinking aloud.
3. Dual or collective monologue--conversation in the presence of another, with no expectation of involvement of the other.

The following categories come under Piaget's socialized speech group:

4. Adapted information--exchange of thoughts with others.
5. Criticism--exchange of information with others which argues the superiority of the speaker's position over other opinions.
6. Commands, requests, threats--interaction with others.
7. Questions--statement which calls for an answer.
8. Answers--Responses to questions and commands.

Although Piaget's categories were derived from observations of oral language these categories are potentially applicable to dialogue journal writing as well.

Students are capable of keeping a journal if they fall within the category of dual or collective monologue, but to be involved in dialogue they must have advanced at least to the socialized speech category of adapted information. Piaget (1969) provides the following expansion for adapted information:

Here the child really exchanges his thoughts with others, either by telling his hearers something that will interest him and influence his actions, or by actual interchange of ideas by argument or even by collaboration in pursuit of a common aim.

Adapted information takes place when the child adopts the point of view of his hearer, and when the latter is not chosen at random. On the other hand, collective monologues (category 3) occur when the child talks only about himself, regardless of his hearer's point of view, and very often without making sure whether he is being attended to or understood (p. 33).

#### Vygotsky

Vygotsky's posture was that in the very young child all speech is the same--used for both personal and public utterances. As the child develops and gains experience he/she becomes more adept at verbal expression. Gradually some speech attains a personal, private character which exists alongside the maturing, more complex verbalizations.

This private speech is described by Flavell (1968) as highly abbreviated and quite condensed when compared with social speech. Private, or "inner speech" contains a special type of verbal coding and could not be understood by a listener in its unedited form. Vygotsky (1962) calls it a "complex, dynamic process involving transformation of the predictive idiomatic structure of inner speech into syntactically articulated speech intelligible to others" (p. 148).

So, to Vygotsky egocentric speech does not just disappear because the child has matured and moved on to social speech. Rather, it is stored within the child. It becomes inner speech. Egocentric speech is a link, then, between vocal and inner speech.

As Vygotsky (1986) wrote: "... we have attempted to show that egocentric speech by no means is a mere by-product of the child's activity. On the contrary...egocentric speech is actively involved in the child's activity, facilitating the transition from overt to inner speech" (p. 36).

In Mind in Society (1978) Vygotsky presented his theory of zone of proximal development, which proposes what teaching and learning are all about. In this theory, human relations are presented as the key to human development, and learning is proposed as not found in the head, but in the relations between people. Beginning at the level of competence of the child, the teacher models the next step

which is organized to provide a link in learning. When that next step is in place and has been mastered by the child, he/she has independent knowledge and can move to the next task. This "zone of proximal development" holds a point of interest for those investigating the development of dialogue journal writing in the elementary classroom. (Cazden 1979; Staton 1983). Vygotsky has made further contribution to the study of dialogue journal writing in his exploration of the relationship of speech to writing in the development of the young child. While granting its use of language, Vygotsky (1986) nevertheless notes the fact that "written speech is a separate linguistic function, differing from oral speech in both structure and mode of functioning" (pp. 180-181). Since it is a new and separate function it must be learned in developmental stages as speech was learned.

Vygotsky further noted that writing is isolated, abstract, and completed with great difficulty because of the need to supply more words than are necessary in oral dialogue. This is done, Vygotsky writes, through remapping the social speech that has been stored in abbreviated form in the mind. He likens the development of the young writer to practice in "symbol-using behavior--apprenticeship to mastery of written language" (p.76).

For present purposes, differences between Vygotsky and Piaget about the early development of speech are less

important than their agreement that, by the early school years, students are developmentally capable of engaging in some form of dialogue.

### Social Cognition

Social cognition theory is founded on a central concept of Piaget's work--that just as a child's ideas about the physical world go through qualitative change, so do his/her ideas about the social world. Interaction is seen as a major influence on that social development. This theory is also grounded in Piaget's notions of egocentrism and decentration, as is audience awareness. However, studies in social cognition predate serious analysis of audience awareness, and social cognition is recognized as an independent branch of cognitive developmental research.

### Social Reciprocity

When the child arrives at the operational thinking stage, about the age of seven, Piaget describes him as beginning to be capable of social reciprocity, or mutual exchange. Piaget believed that social interaction and experience were responsible for this development, and he also considered "logical thought to be necessarily social" (1950, p.165).

G. H. Mead (1934) also placed great emphasis on the part that social interaction plays, both in cognitive development and the child's knowledge of self. Mead

believed that the involvement of the child with others provided experience that contributes to his/her self knowledge--that "self-consciousness is developed through social interaction, and that one may know oneself only to the extent that one knows others" (Light, 1979, p. 8). Mead viewed the child's ability to view self as object as "role-taking" or "entering into the perspective of the other" (p. 183), and is responsible for these terms being closely associated with social cognition theory.

Flavell (1968, p. 22) quoted Cameron's (1954) reflection:

Social communication depends upon the development of an ability to take the role of other persons, to be able to reproduce their attitudes in one's own response, and so learn how to react to one's own behavior as others are reacting to it... (p. 60).

Social cognition was first identified in the 1960's and is described by Shantz (1975) as "how children conceptualize other people and how they come to understand the thoughts, emotions, intentions, and viewpoints of others" (p. 258). It also refers to the ability of the child to assign the motives of another, and to correctly characterize unspoken intentions and feelings.

In addition to the term social cognition, concentration in this field is also known as role-taking, perspective-



taking, social inferencing, and referential communication. Shantz (1975) notes that these labels are generally applied in reference to the particular type of study and/or theoretical orientation of the researcher.

### Flavell

Flavell (1968) credits improved "role-taking" skills with improved perception of audience in the young child. Through repeated interaction with peers and trusted adults the child decenters and the perspective of egocentrism is gradually abandoned. Awareness of others--the audience--slowly develops, for participants in a communicative exchange must accommodate to each other's views. This makes role-taking central to the achievement of a smooth, effective exchange. Adjustments can be made to adapt to the needs of the listener only if the participants are able to "see" the viewpoint of the other. Shantz (1975) notes that it is important to understand that neither maturity nor learning are seen by students of cognition as the direct cause of success in this area. It is, rather, the interaction between "the organism and the environment" (p. 266).

Flavell (1968, 1974) has conducted extensive research in the area of social cognition and has completed the following general model of interpersonal inference:

1. Existence--The child is aware that he/she and others might have covert psychological events.

2. Need--The child recognizes that the present situation requires some inference about the psychological experiences of the other.

3. Inference--The child is able to engage in mental activities that result in a representation of another person's subjective experiences.

4. Application--The child is capable of applying the information gained from inferencing to adjust or adapt his/her message to better meet the needs of the task.

This model goes beyond the use of "inference" in a strict sense, to include information that goes beyond what is specifically given. Thus, Flavell includes discrimination, probability judgments, and logical abilities. Glucksburg and Krauss (1967), and Glucksburg, Krauss and Higgins (1975) have conducted extensive research in the field of referential communication skills, with similar results.

Miller, Kessell, and Flavell (1970) have designed a test of inferential thinking about interpersonal situations which looks at student understanding of the recursive nature of thought. Students are presented with sketches of human actions within four levels of complexity. The performance measures the stage of recursive thinking development of the

school-age child. The test is a part of this research.

Feffer (1959) and Flavell (1968) identified three steps in the development of role-taking ability that are a "sequence of developmental age-related and logically related structures or forms that an individual displays in his understanding of another's point of view" (Selman and Byrne 1974, p. 804). Selman and Byrne (1974), working with children's play groups, identified steps in the development of social cognition:

Level 0: Egocentric Role Taking (4 years) The child is unable to make a distinction between a personal interpretation of social action and what he considers the true or correct perspective.

Level 1: Subjective Role Taking (6 to 8 years) The child realizes that others may feel or think differently, but is unable to maintain his/her own perspective while putting self in the place of others and attempting to judge their actions.

Level 2: Self-reflective Role Taking (8 to 10 years) The child is clearly aware that another can think of his/her inner thoughts, feelings and intentions. However, the child cannot view the situation from a third person perspective.

Level 3: Mutual Role Taking (10 to 12 years) The child can conceive of the concept of "spectator" and

maintain a disinterested point of view.

DeVries (1970) and Feffer (1970), have presented other stage levels which, in general, correspond to the model of Selman and Byrne (1974).

#### Importance of social cognition

Why is it important to consider social cognition in this study of developmental reciprocal communication?

Shantz (1975) has written that social cognition provides a more complete picture of the concepts and processes that are found in both the social and nonsocial domains at particular age periods. Further, the behavior displayed by a child in dealing with others is presumably affected by the way that the child conceptualizes others and their motivation and intent. Correctly assuming the role of the other is important to the interaction between two dialoguers.

#### Audience Awareness and Writing

A further consideration that follows from the Piagetian constructs of egocentrism and decentration concerns application of the principle of audience awareness, or the ability of the speaker or writer to accommodate the point of view and/or prior knowledge of the listener or reader. This has been cited by Vygotsky (1986), Flavell (1968), Britton et al. (1975), Moffett (1983), Kroll (1978), Staton, Shuy and Kreeft (1982), and Braig (1984) as crucial to successful communication.

### Vygotsky and writing

Vygotsky addressed the difficulties encountered by a young child when beginning the writing process. While oral speech is "spontaneous, involuntary and nonconscious" writing is "abstract, voluntary and conscious" (1986, p. 183). Inner speech, which is abbreviated and compact, must be made intelligible through "deliberate structuring of the web of meaning" (p. 182).

Vygotsky (1986) observes that it is "the abstract quality of written language that is the main stumbling block" to success:

Writing is also speech without an interlocutor, addressed to an absent or an imaginary person or to no one in particular--a situation new and strange to the child. Written speech is monologous; it is conversation with a blank sheet of paper. Thus, writing requires a double abstraction: abstraction from the sound of speech and abstraction from the interlocutor (p. 181).

Elsasser & John-Steiner (1977) remind us that in discussing this abstraction Vygotsky is commenting on the need for the writer to "elaborate for an unknown audience" and to provide for the missing "immediate clues of audience response--facial expressions, sounds, pitch and intonation--all of which are characteristics of oral dialogue (p.358).

Moffett

In his study of the process of communication, Moffett (1983) raised the consideration that discourse involves a speaker, a listener, and subject matter--"somebody-talking-to-somebody-about-something" (p. 10). He commented on the effects of egocentrism in children's writing:

The majority of communication problems are caused by egocentrism--the writer's assumption that the reader thinks and feels as he does, has had the same experience, and hears in his head when he is reading, the same voice that the writer does when he is writing" (p. 95).

Again, Moffett states his belief:

Writing mistakes are not made in ignorance of common-sense requirements, they are made for other reasons that advice cannot prevent. Usually, the student thinks he has made a logical transaction or a narrative point, which means again, he is deceived by his egocentricity. What he needs is not rules but awareness (1983, p.202).

The elements of discourse, Moffett (1983) proposes, come primarily from the interactional relationship that exists between a speaker, and a listener about a subject--referred to as a communication triad by Moffett and Wagner (1983).

Moffett noted that the primary purpose of dialogue is the interactional relationship that exists because the participating parties are able to "see" the relationship between them.

### Britton

Britton, Burgess, Martin, McLeod and Rosen (1975) focused on the process of writing, rather than the product. They wrote that by looking at what writers are doing we can more accurately assess their successes. The more formal writing categories were replaced with a scale for the use of language. This scale identified three modes--transactional, expressive, and poetic. It is the expressive, or informal, mode which includes dialogue journal writing. The research investigating the writing abilities of children from ages eleven to eighteen resulted in the identification of audience awareness as a major explanation of growth in writing skill. The audience categories developed by Britton and associates included two which accounted for almost 90 percent of the writing examined--pupil to teacher and pupil to examiner. (See appendix A).

### Kroll

Kroll has also written of the importance of audience awareness (1978, 1980). In his 1980 article he proposed that an interactionist approach to writing place communication as the primary point of focus. He points out

that message construction is made successful by emphasizing two kinds of awareness--"the writer's awareness of a purpose for communicating, and the writer's awareness of the reader's needs and expectations" (p. 751)

#### Development of Children's Writing

In dealing with children's writing it is possible to link aspects of what has already been noted about audience awareness and social cognition with theory in the field of writing itself.

As discussed previously, Vygotsky (1986) addressed the difficulties the child encounters when beginning the writing process. While oral speech is "spontaneous, involuntary and nonconscious", writing is "abstract, voluntary and conscious" (p.183). Inner speech, which is abbreviated and compact must be made intelligible through "deliberate structuring of the web of meaning" (p. 182).

This must be done, Vygotsky writes, through remapping the social speech that has been stored in abbreviated form in the mind. Vygotsky describes the beginning of writing as a period of practice in "symbol-using behavior--apprenticeship to mastery of the written language (p. 76).

Shuy (1988) adds another consideration to this difficulty for the young student. Social speech, as seen by Piaget, has to this point been the only means of expression for the child. It has been informal, familiar, and reserved



for an audience that is, for the most part well known to the child. When writing is introduced to the child in school, he/she finds that there is the expectation of a more formal routine, complete with concerns about topic, grammar, spelling, handwriting, and an unknown audience.

Clay (1975), Calkins (1986), and Harste, Woodward and Burke (1984) have conducted research that demonstrates how young children--even before formal instruction--are aware of the conventions of print and apply what they have observed and sensed to compose meaningfully.

Clay (1975), McDonell and Osburn (1978), Loban (1976), and Hunt (1965), among others, suggest that the writing of young children goes through clearly defined stages. Among the stages identified by McDonell and Osburn are readiness (scribble, trace-copy, inventory and word space); sentence (single sentences, unconnected sentences, repetitive patterns); description (central idea, no time sequence, experience description); and beginning discourse, which includes narration and exposition.

The research and writings of Graves (1981, 1983) have increased interest in the process of writing in the development of young writers. Graves advocates initial control by the child so that the beginning experience allows for drawing, discussion with peers and teacher, and opportunity to revise. Graves also notes that initially

writing is a "highly egocentric exercise" (1981 p. 23), and that through experience and interaction with others the child comes to realize the importance of adjusting text to meet audience needs.

Tierney & Pearson (1983) call writing a "multi-dimensional, multi-modal process" (p. 568). They touch on cognitive development, social cognition and audience awareness when they continue that:

"In a sense both reader and writer adapt their perceptions about their partner in negotiating what a text means" (p. 568).... "Goals are a symbolic relationship with the knowledge they mobilize and together they influence what is produced or understood in a text" (p. 570).... [and] "The writer aligns with the reader for the purpose of creating a foothold from which meaning can be more readily negotiated" (p. 573).

#### Dialogue Journal Writing

Although journal writing is documented to have existed in China from at least 56 AD, it has undergone many changes in purpose and form (Lowenstein, 1987). The first documented use of dialogue journals in the elementary classroom is described in the works of Staton, Shuy, and Kreeft (1982 and 1988), as well as in separately published material by Staton (1984, 1987); Shuy (1987), Kreeft (1988), and Reed (1988).

As reported previously, Shuy (1988) has identified dialogue journal writing as a suitable vehicle for a more gradual transition from the informal speech of the preschool child to the formal, precise style of writing demanded of the young student. While noting the work done in identifying the differences between oral and written language, Shuy notes that there are more similarities than differences. He observes that oral language is "functional, interactive and self-generated" (p. 74) and that dialogue journal writing serves to introduce the young student to writing in the familiar style of oral language. This serves as a natural transition, and is, in Shuy's words, "developmentally appropriate" (p.86).

In addition, Shuy identifies seven categories of oral language found in dialogue journals not often found in more formal writing. They are: oral vocabulary and expression, oral expletives, interruptions, telescopic syntax, address forms used as introducers or openings, loudness, and meta comments.

Shuy also identified and analyzed 15 language functions found in a study of 10 journals kept over a two week period. Included in this list are: responding to questions, reporting facts, complaining, thanking, and evaluating.

Staton, Shuy and Kreeft's 1982 research was conducted with a class of fifth and sixth graders and involved the analyses of over 4,400 pages of handwritten conversations between the students and their teacher. Among the themes identified from these dialogue journals is the acknowledgement of dialogue as a vehicle for developing knowledge through the interaction of student and teacher. In addition to calling attention to the interactive nature of dialogue journal writing, Staton concluded that this activity is student generated and therefore stresses ownership by the child. Further, the writing is functional in that it provides the opportunity and freedom for the student to discuss, complain, ask advice and take charge, while practicing a vital skill. There is also the opportunity for the teacher to informally model language and give feedback to the student. This is traced by Staton back to the "zone of proximal development" of Vygotsky previously referred to and expanded by Cazden (1979), among others. In discussing the theory, refined under the term "interactional scaffolding", Staton writes "that only through a social dialogue can young students learn how to think about experience" (1983, p. 18).

The interaction advocated is a particular interaction, involving a "goal-directed use of language" that "allows the student to build on and use the teacher's actual thinking

process (or that of a more advanced peer) to reach a goal or solve a problem which the student could not do unaided" (p. 14).

Staton, Shuy and Kreeft (1982) identified topic as the focal point of dialogue journal organization. The "dynamic, functional nature of a topic" (p. 69) is responsible for a growth that develops over different levels, representing smaller units and providing "strong clues to the writers' intentions and goals" (p. 71).

The work of Braig (1984) is an ethnographic examination of audience awareness in the dialogue journal writing of six students age six to eight. Braig detailed the development of the writing of the students and examined the patterns of audience awareness that manifested themselves during one school year. The research included interviews during which the children expressed their intent as they wrote.

Braig concluded that these students, contrary to Piaget's tenet, did reveal a sense of audience at their young age. Further, the evidence presented validated the hypotheses of Staton, Shuy and Kreeft (1982) that dialogue journals, with their opportunity for topic choice and interactional scaffolding, are an appropriate, helpful tool for primary as well as upper level classroom use.

Dialogue journals use has also been reported in specialized areas of education: hearing impaired students

(Staton, 1985), and students learning English as a second language (Kreeft [Peyton], 1983; Gutstein, 1987). Use of dialogue journals has also been reported in the areas of marketing education (Anderson & Smith, 1986), the educably mentally retarded (Farley, 1986), gifted children (Farley & Farley, 1987), learning disabled students (Maguire, 1989) and in mathematics classes (Rose, 1989).

The nature of dialogue journal writing has been addressed by Staton and associates (1982) and by Staton (1984; 1988), Shuy (1988); Kreeft (1984); and Reed (1988). Braig (1984) has dealt with audience awareness over time in her work, and the appropriateness of dialogue journal writing in specific instructional settings has also been cited above.

#### Summary

The literature explored in this chapter acknowledges the differences in the theories of Piaget, who considered audience awareness to result from the casting off of the egocentrism of the young child and subsequent development of social thought, and Vygotsky, who argued that the social thought comes first, is internalized, and undergoes a "linguistic metamorphosis" (Flavell, 1968, p. 21). This area of disagreement, though, is less important than the notion that they acknowledge the place of interaction in the development of skills.

Piaget's notion of egocentrism and subsequent decentering is important to the development of theories of audience awareness, social cognition, and writing ability. The role-playing, turn-taking, and referential facets of social cognition have developed from this viewpoint. Assessment of writing development credits the student's understanding of the necessity of identifying and meeting audience requirements with successful communication.

Already there is substantial evidence that young school age children are capable of written dialogue and benefit from the interaction provided. There is, however, a need to know more about the relationship of the external variables identified--to each other, as well as to the internal characteristics of dialogue journal writing. This study attempts to answer some of these questions.

## CHAPTER 3

### METHODOLOGY

#### Introduction

This chapter will detail the background of the study, the measures used, and how they were administered. Source material for the dependent variables reference, response complexity, and detail consisted of thirty dialogue journal sample entries from each of twenty-two third grade students. The independent variables are measures of the individual student ratings in audience awareness, social cognition, and writing ability.

#### School Background

Pupils involved in the research were students in an elementary school located in a large, suburban school district in Virginia. The building opened in 1966, with children coming from a wide range of socioeconomic, racial and ethnic groups. A total of 419 pupils were enrolled during the year the study was done. Identifiable ethnic groups were as follows:

Group	Percent of Student
Body	
American Indian/Alaskan	.2
Asian/Pacific Islander	9.5
Hispanic	4.3



Black (Not Hispanic)	18.6
White (Not Hispanic)	67.3
Incomplete data	.1
TOTAL	100.0

Students are enrolled from kindergarten through sixth grade. A child care center is located in the school for before and after school to accommodate the needs of the many working parents. The faculty included a principal, 32 full-time teachers, seven part-time or itinerant teachers and 12 instructional aides. Forty of the pupils were enrolled in special education programs for the autistic and for self-contained learning disabilities classes. At the time of this study less than forty percent of the sixth-graders had spent five or more years in the school. This mobility reflected, in general, a change in socio-economic status or temporary residence of foreign born students.

Parents were, for the most part, involved in the progress of their children. They attended parent-teacher conferences in November and at other times when they or the teacher so requested. Parent attendance at school functions reflected their interest in what was going on at the school.

#### Research Participants

During the year of the study forty seven third graders were divided into two classes. The group that kept the dialogue journals began the school year with twenty four

Table 1 Student Profiles

No.	Age*	Gender	ESL	Minority	Reading*
1	8.4	M	no	no	2.6
2	7.10	F	no	no	6.0
3	8.0	F	yes	yes	2.8
4 (Lauren)	8.3	F	no	no	3.4
5	8.2	M	no	yes	3.8
6 (Thomas)	8.10	M	no	yes	3.2
7	8.3	M	no	yes	2.0
8	7.9	F	yes	yes	2.5
9	8.2	F	yes	yes	2.5
10 (Chau)	8.2	M	yes	yes	2.5
11	8.5	F	no	yes	5.2
12	8.0	F	yes	yes	6.0
13	7.10	F	no	yes	2.5
14+	9.4	F	yes	yes	2.2
15	8.2	F	no	yes	3.5
16	8.5	M	no	yes	4.1
17	8.4	F	no	yes	2.2
18 (Mary)	8.4	F	no	no	4.0
19	7.11	F	no	no	3.3
20	7.11	M	no	no	2.3
21 (John)	7.9	M	no	no	5.1
22	7.10	F	no	no	6.0

+omitted from study

\*at beginning of school year

students. During the year two students moved beyond the school boundary. At the start of the school year their Gates MacGinitie reading scores ranged from grade equivalent 2 years, 2 months (2.2) to six years (6.0). Eight of the students were reading at below-grade level. Thirteen pupils belonged to minority groups and six spoke a language other than English at home. Their English, however, was adequate for classroom use.

At the beginning of the school year the students ranged in age from seven years nine months to nine years four months. There were nine boys and thirteen girls. Of the minority group seven were black, five had come from southeast Asia, and one student was a native of India. Table 1 contains student profiles. The researcher was the classroom teacher.

#### Dialogue Journal Routine

During the third week of school the dialogue journal project was introduced. The students were made familiar with the purpose and routine for the journal writing. They were told that the journals were to be kept in notebooks, with each student's name written on the outside. When the pupils came into the room each morning they were to find their journals on a desk at the door. After they had settled at their desks they were to write in their journals, identifying the date at the top. The students were told

that the topic for each day could be chosen as they wished. It could be a continuation from the day before or a new subject could be introduced. When a few children claimed that they had nothing to write about it was suggested that they might write about one thing they had done from the time they left the classroom the day before to the time they came back the next day. After a few days claims of no subject for the entry were no longer made.

It was explained that the teacher would read each entry after school each day and write back to them. The students were told to do their best to be neat and to spell correctly, but no grade would be given for this writing. It was preferred that they use words they felt were right, rather than to substitute another word they could spell correctly. It was to be their journal, and they had full control over the entries.

Because of absence and other interferences there was not an entry for each day of the school year for each student. For this reason the decision was made to use ten consecutive entries from each time period in the analysis of each pupil's dialogue journal, even though the dates were not always the same for each pupil.

#### Teacher Goals

At the onset of the investigation there was no specific protocol for teacher responses. The basic objective was to

remain neutral. However, the teacher did want to encourage dialogue, to model sentence structure, punctuation and spelling, and to provide an opportunity for students to share interests and concerns.

#### Study Framework

Figure 2 illustrates the framework of the study. Thirty dependent measures of reference, response complexity and detail were analyzed for each student - ten from the beginning, ten from the middle, and ten from the end of the school year. The decision to select these particular strands of journal content was made with the assistance and input of Dr. Gloria McDonell, a committee member.

Three dependent measures were used to evaluate the students in the components of reciprocal communication discussed. They are:

##### Reference

Reference is concerned with the subject matter of the student's journal discussion. These categories and the rating given are: (1) self; (2) self and other(s); (3) other(s); (4) journal recipient (teacher) and journal writer (student).

##### Response Complexity

Response complexity refers to the student pattern of answers to the questions and comments of the teacher. Experience has shown that dialogue journals contain a

variety of feedback. The categories are: (1) no response to teacher; (2) yes/no response; (3) elaborated response to teacher's comment/question before beginning a different topic; (4) fully developed response to teacher's entry which comprises the total new journal entry. (See appendix B for examples).

### Detail

Detail involves growth in the ability of the student to recognize incomplete information and to supply the reader with the facts needed for full understanding of what is written. This section is categorized as: (1) partial information - reader required to fill in gaps; (2) partial buildup of information - fewer gaps; (3) descriptive phrases with less inference required--structural coherency.

Set up for use, this is the scoring table for the three variables:

#### REFERENCE

1	2	3	4
self	self/others	others	you/us

#### RESPONSE COMPLEXITY

1	2	3	4
none	yes/no	elaborated	extended

#### DETAIL

1	2	3
many gaps	fewer gaps	coherency

The thirty samples for each student - ten from the beginning, ten from the middle and ten from the end of the school year, were scored by three raters, with interrater reliability of .98 for reference, .99 for response complexity, and .99 for detail. Since the reliabilities were all above .85 only one set of ratings was used in computation. The independent measures used to evaluate student achievement in the areas of audience awareness, social cognition and writing ability follow.

#### Audience Awareness

An adaptation of the Audience Awareness Categories in Writing by Braig (1984) was used for this evaluation. Braig's categories have five levels but for this sample it was difficult to differentiate the 4th and 5th categories (creative-affective and conceptual-reflective). In fact, Braig's data do not support the notion that a category 5 response was higher than a category 4 response. Therefore, the 4th and 5th levels were combined. The categories used were:

1. Literal Level

Writer provides basically readable text.

2. Minimal Communicative Level

Writer provides minimally comprehensible message to audience.

### 3. Elaborated Communicative Level

Writer provides elaborated and clarified message to audience.

### 4. Creative-Affective Level

Writer appeals to senses and/or emotions of the audience.

Three raters were asked to assign an audience awareness level for ten samples of the dialogue journal entries from the beginning, ten samples from the middle, and ten samples from the end of the school year. An overall rating for each student in each time group was also given.

Interrater reliability was determined. Cronbach's Alpha ranged from = .62 for the first time period, = .79 for the second time period, and = .83 for the third time period. Audience awareness for each child was computed by averaging the ratings of all three coders.

It is an interesting fact that the ratings indicate increased internal consistency across time. This could be the result of one of two possibilities: (1) audience awareness itself became more unidimensional (2) the raters became more consistent in concentrations on certain key features as they scored rather than responding to all possibilities. This could reflect either efficiency or expediency.



### Social Cognition

A study conducted by Miller, Kessel & Flavell (1970) was replicated as the independent measure of social cognition. This study traced the growth of the recursive, or self-embedded, nature of thinking. For this "Thinking About People Thinking About People Thinking About..." activity eighteen line drawings were prepared on white poster cards, approximately ten by twelve inches. Each drawing was an example of four basic types of items - contiguity, action (talking), one-loop recursion, and two loop recursion. The two-loop recursion involved a different type of operation from the one-loop. A sample of each of the four operations appears in Figure 3, and Appendix C contains the identification of the eighteen drawings.

In preparation for the testing three different orders of presentation were developed, each using all 18 cards. Cards numbered one and two were placed first in each order, but the remaining 16 cards were arranged in the three randomly determined orders. Students were assigned randomly to one of the three forms. Each student was tested individually. Students responded to the question, "What is the boy thinking?" and the answer was recorded by the tester. The testing was also taped. Each student was given a score of 0 through 4, depending on which item group the majority of the correct answers fell.



CONTIGUITY  
(Item no. 3)



ACTION  
(Item no. 9)



ONE-LOOP RECURSION  
(Item no. 14)



TWO-LOOP RECURSION  
(Item no. 15)

Figure 3. Examples of items from the four groups

From "Thinking about People Thinking about People Thinking about...: A Study of Social-Cognitive Development" by P. Miller, F. Kessel, & J. Flavell, 1970, *Child Development*, 41, p. 616. Copyright 1970 by the Society for Research in Child Development, Inc. Adapted by permission.

### Writing Ability

Writing ability was measured using A Model for the Evaluation of Student Writing developed by McCaig and his associates in the Grosse Point, Michigan School District. This model contains four levels of competence for Grade 1 and seven levels for Grades 2 through 10. In discussing evaluation criteria the handbook states:

"If there is one basic skill in the model, it is that the graphic symbols placed on paper must be a completed message which can be fully understood by a reader who does not know and cannot talk to the student writer" (p. 2).

A sample of student descriptive writing, not found in the dialogue journal, was used to evaluate each pupil's writing. The criteria for the seven levels in Grade 3 are:

Level 1...Pre-writing. Not an understandable message.

Level 2...Not competent. An understandable message but seriously deficient in written language abilities.

Level 3...Marginally competent. Not competent in one or more grade level abilities.

Level 4...Competent. Competent for the grade.

Level 5...Highly competent. Demonstrates higher order abilities.

Level 6...Superior. Contains creative/critical thinking or flair for language.

Level 7...Superior. Exhibits sustained excellence of expression.

### Hypothesis

The following hypotheses, stated in the null form, and tested at the .05 level, were made for the research questions:

Hypothesis 1--There are no significant correlations among elements of dialogue journal writing, detail, response complexity, and detail.

Hypothesis 2--There are no significant correlations between the elements of dialogue journal writing, reference, response complexity, and detail, and the external variables of audience awareness, social cognition, and writing ability.

Hypothesis 3--There is no significant linear trend across the three time periods for any of the three identified elements of dialogue journal writing--reference, response complexity, and detail.

Hypothesis 4-- Gender, ESL and minority status do not change the results obtained in looking at the effect of time across the dependent measures--reference, response complexity, and detail.

### Statistical Analyses

Scores of the dependent and independent measures were initially assessed to determine inferential observations

i.e., outliers, in the data sets. For each time period, boxplots of the dependent variables--detail, response complexity, and reference--- and the independent variables-- audience awareness, social cognition, and writing ability -- by gender and over all subjects were provided by SAS (1985). One outlier was identified for reference for the third time period for females. That datapoint was excluded from the analysis. The student involved was an ESL student who had the habit of addressing her teacher by name in every sentence uttered orally. She carried this over to the dialogue journal entries. Thus the majority of her sentences began with "Mrs....". This made her reference score abnormally high, even though she was not correspondingly high in any other rating or performance.

Pairwise Spearman rho and Pearson correlations were run between the scores of the dependent and the independent measures for each of the three time periods. However, the assessment of the independent variables social cognition and writing ability were made only during the late time period.

A regression model was completed to explain the relationship between the dependent measures of reference, response complexity, and detail and the independent measures of audience awareness, social cognition, and writing ability.

To determine if there was a change over time, a repeated measures analysis of variance was completed--a first order interaction test over time by the three demographic variables (i.e., gender, ESL, and minority status). Additional repeated measures were completed between the time periods.

Repeated measures analyses of variance for between subjects effects were conducted to ascertain differences in dependent measure means by demographic variables. The Student-Newman-Keuls multiple comparison procedure was completed to identify where differences lay for those demographic variables which demonstrated significant differences at specific time periods.

#### Summary

The study generated testable hypotheses regarding children's reciprocal journal writing and the aspects of audience awareness, social cognition, and writing ability. It further:

1. Compared dialogue journal responses in two week blocks from the beginning, middle, and end of the school year for three aspects of reciprocal communication--response complexity, reference, and detail.

2. Examined the correlation of the total scores across these key aspects of reciprocal communication with measures of audience awareness, social cognition, and writing

ability. These measures were obtained through use of an adaptation of Braig's Audience Awareness Categories, Miller, Kessel & Flavell's "Thinking About People Thinking About People Thinking About...", and A Model for the Evaluation of Student Writing developed by McCaig and associates.

3. Ran stepwise regression analyses to determine whether each dependent variable could be explained by any or all of the three independent measures.

4. Completed repeated measures analyses of variance (ANOVA) over time, separately for gender, English as a second language (ESL), and minority.

5. Where significance was identified, Student-Newman-Keuls multiple comparison procedure was completed to identify where the differences lay.

## CHAPTER 4

### RESULTS OF THE ANALYSIS

#### Introduction

In this chapter the research questions will be addressed and discussed in the order in which they are presented in Chapter 1.

The questions are:

1. Are there separate, unique elements within dialogue journal writing or is dialogue journal writing essentially an inseparable whole?

2. Is there a relationship between measures of reference, response complexity, and detail, and the independent measures of audience awareness, social cognition, and writing ability?

3. Is there an increase over time in skill in the use of each of the three identified elements of dialogue journal writing?

4. What is the effect of gender, ESL and minority status over time for each of the dependent measures?

Under each question, statistical results and relevant observations about the data will be included.

#### Question 1

Are there separate, unique elements within dialogue journal writing or is dialogue journal writing essentially



an inseparable whole?

In order to address the first question, pairwise Spearman and Pearson correlations were completed between the dependent measures--reference, response complexity, and detail. Because data for each dependent variable were not distributed normally, Spearman Rho correlation coefficients are reported. Although the correlations over all subjects and by gender raised the question of linearity, scatterplots showed that the data over all males and females were indeed linear; however, scores of males grouped high and low on the plots, and scores of females filled in the center portion. The Spearman results are:

Spearman Rho Correlation Coefficients

	Late Reference	Late Response Complexity	Late Detail
Late Reference	X	.15	.41
Late Response Complexity		X	.29

Since none of these values is significantly different from zero it is concluded that the dependent variables reference, response complexity, and detail are relatively separate elements.

Question 2

Is there a relationship between measures of reference, response complexity, and detail, and the independent

Table 2

Spearman Correlations for TOTAL GroupTime 1

	Detail	Res.Com.	Ref.	Aud.Aw.	Soc.Cog.	Wr.Abil.
Detail	X	-.10	.56**	.66**	.01	.25
Res.Com.		X	.04	.27	.19	.08
Reference			X	.58**	-.06	.25
Aud. Aw.				X	-.25	.14
Soc. Cog.					X	.17

Time 2

	Detail	Res.Com.	Ref.	Aud.Aw.	Soc.Cog.	Wr.Abil.
Detail	X	.15	.49*	.69**	-.36	.64**
Res.Com.		X	-.33	-.17	.23	-.06
Reference			X	.68**	-.41*	.20
Aud. Aw.				X	-.64**	.34
Soc. Cog.					X	.17

Time 3

	Detail	Res.Com.	Ref.	Aud.Aw.	Soc.Cog.	Wr. Abil.
Detail	X	.29	.42*	.79**	.35	.73**
Res.Com.		X	.15	.07	.19	.18
Reference			X	.33	.06	.18
Aud. Aw.				X	-.03	.65**
Soc. Cog.					X	.17

\* p &lt; .05.

\*\* p &lt; .01.

measures of audience awareness, social cognition, and writing ability?

To address research question 2, pairwise Spearman rho correlations between the dependent measures detail, response complexity, and reference and the independent measures audience awareness, social cognition, and writing ability are reported. Data collected in the last time period were used for the dependent measures and for audience awareness; during the last time period one assessment of social cognition and writing ability was obtained.

After the correlations were addressed, stepwise regression analysis was completed in order to determine whether each dependent variable could be explained by any or all of the three independent measures--audience awareness, social cognition, or writing ability.

#### Correlations

Results indicate that for subjects overall there were high correlations between late detail and both audience awareness ( $r = .79$ ) and writing ability ( $r = .73$ ). In addition, a moderately high correlation was identified between late audience awareness and writing ability ( $r = .65$ ). Response complexity and reference were not found to correlate highly or moderately with any independent variable. (See Table 2 for the correlation matrix).

Table 3

Spearman Correlations for GENDER


---

	<u>Males</u>		
	Aud. Aw.	Soc. Cog.	Writing
Detail	.58**	.58**	.52
Resp. Com.	-.35	.57**	.22
Reference	.05	-.46	-.68**
N = 9			

---

	<u>Females</u>		
	Aud. Aw.	Soc. Cog.	Writing
Detail	.55*	.20	.51*
Resp. Com.	-.35	.57*	.22
Reference	.05	-.46	-.68**
N = 12			

\*  $p < .05$ .\*\*  $p < .01$ .

Table 4

Spearman Correlations for ESL Status


---

	<u>Non-ESL</u>		
	Aud. Aw.	Soc. Cog.	Writing
Detail	.80**	.33	.72**
Resp. Com.	.17	-.01	.35
Reference	.28	-.17	.14

N = 16

---

	<u>ESL</u>		
	Aud. Aw.	Soc. Cog.	Writing
Detail	.97**	.57	.76
Resp. Com.	-.70	.22	-.41
Reference	.90*	.67	.67

N = 5

\*  $p < .05$ .\*\*  $p < .01$ .

### Demographic Correlations

Although the question of correlational differences by gender, ESL and minority status was not asked in the original research question, the results were interesting and are included here.

Correlations by gender. For females as a group, late detail correlated moderately with late audience awareness ( $\underline{r} = .55$ ) and with writing ability ( $\underline{r} = .51$ ). Late audience awareness correlated moderately with writing ability ( $\underline{r} = .51$ ). (See Table 3 for the gender correlation matrix).

Scores of males appear to correlate more highly. For males, late detail correlated moderately with late audience awareness ( $\underline{r} = .58$ ), social cognition ( $\underline{r} = .58$ ), and writing ability ( $\underline{r} = .52$ ). There were also moderate correlations between late response complexity and social cognition ( $\underline{r} = .57$ ) and a negative high moderate correlation between late reference and writing ability ( $\underline{r} = -.68$ ). In addition, there was a low moderate correlation between social cognition and writing ability ( $\underline{r} = .45$ ).

Correlations by ESL status. For non-ESL students, there were high correlations between late detail and both late audience awareness ( $\underline{r} = .80$ ) and writing ability ( $\underline{r} = .72$ ). There was a moderate correlation ( $\underline{r} = .65$ ) between late audience awareness and writing ability. For ESL students, late detail showed a very high correlation with

Table 5

Spearman Correlations for Minority Status


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	<u>Non-minority</u>		
	Aud. Aw.	Soc. Cog.	Writing
Detail	.77**	.43	.86**
Resp. Com.	.58*	.06	.67**
Reference	.34	.04	.23

N = 12

---

	<u>Minority</u>		
	Aud. Aw.	Soc. Cog.	Writing
Detail	.84**	.37	.54
Resp. Com.	-.40	.34	-.33
Reference	.47	.11	.31

N = 9

\*  $p < .05$ .\*\*  $p < .01$ .

Table 6

Stepwise Regression AnalysisForward Selection Procedure for Dependent Variable DETAIL


---

Step 2 Variable SOCIAL COGNITION entered

R-square = 0.7657 C(p) = 4.5671

	df	Sum of Squares	Mean Square	F	Prob > F
Regression	2	380.21	190.11	29.41	p = .0001
Error	18	116.36	6.47		
Total	20	496.57			

Variable	Param. Est.	Standard Error	Type II Sum of Sq.	F	Prob > F
INTERCEP	-3.62	3.24	8.07	1.25	NS
SOC COG	1.76	0.58	58.77	9.09	p < .01
AUD AWAR	0.65	0.10	286.01	44.24	p = .0001

Regression Equation  $Y = -3.62 + .65 \text{ AUDIENCE AWARENESS}$



audience awareness ( $\underline{r} = .97$ ), a high correlation with writing ability ( $\underline{r} = .76$ ), and a moderate correlation with social cognition ( $\underline{r} = .57$ ). There was a high negative correlation ( $\underline{r} = -.70$ ) between late response complexity and audience awareness. There was a very high correlation between late reference and audience awareness ( $\underline{r} = .90$ ), and moderate correlations between late reference and social cognition ( $\underline{r} = .67$ ) and late reference and writing ability ( $\underline{r} = .67$ ). (See Table 4 for the ESL status correlation matrix.)

Correlations by minority status. Looking at the results for non-minority students (see Table 5), there were high correlations between late detail and writing ability ( $\underline{r} = .86$ ) and late detail and audience awareness ( $\underline{r} = .77$ ). There was a moderate correlation between late response complexity and audience awareness ( $\underline{r} = .58$ ) and late response complexity and writing ability ( $\underline{r} = .67$ ).

Minority students demonstrated a high correlation between late detail and audience awareness ( $\underline{r} = .84$ ). A moderate correlation was also identified between late detail and writing ability ( $\underline{r} = .54$ ).

#### Stepwise Regression Analyses

Results of stepwise regression analyses indicated that detail in journal writing is explained by both audience awareness and social cognition. (See Table 6). In fact,

76.57% of the variance in detail is explained by those two independent measures. Neither response complexity nor reference is explained by any of the three independent measures; there is no significant relationship between either response complexity or reference and audience awareness, social cognition, or writing ability.

### Question 3

Is there an increase over time in skill in the use of each of the three identified elements of dialogue journal writing--reference, response complexity, and detail?

Repeated Measures Analyses of Variance (ANOVA) were completed for each of the three dependent measures to determine a time effect. Results indicated that while there was no significant time effect for detail, significant time effects were identified for response complexity ( $p = .01$ ) and reference ( $p = .04$ ) (See Tables 7, 8, and 9). For both response complexity and reference there were significant increases between early and late scores and between middle and late scores. (See Tables 10 and 11). Between early and middle scores, means decreased, though not significantly. There were no significant increases for detail for any time period. (See Table 12.) Table 13 delineates means and standard deviations for detail, response complexity, and reference over time.

Table 7

Repeated Measures Planned ContrastsTime v. First Order Interaction for DETAIL

Statistic	Value	F	Num df	Den df	Pr > F
<u>For the hypothesis of no TIME effect</u>					
Wilks' Lambda	0.96	0.35	2	16	NS
Pillai's Trace	0.04	0.35	2	16	NS
Hotelling-Lawley	0.04	0.35	2	16	NS
Roy's Greatest Root	0.04	0.35	2	16	NS
<u>For the hypothesis of no TIME * GENDER effect</u>					
Wilks' Lambda	0.84	1.55	2	16	NS
Pillai's Trace	0.16	1.55	2	16	NS
Hotelling-Lawley	0.19	1.55	2	16	NS
Roy's Greatest Root	0.19	1.55	2	16	NS
<u>For the hypothesis of no TIME * ESL effect</u>					
Wilk's Lambda	0.96	0.32	2	16	NS
Pillai's Trace	0.04	0.32	2	16	NS
Hotelling-Lawley	0.04	0.32	2	16	NS
Roy's Greatest Root	0.04	0.32	2	16	NS
<u>For the hypothesis of no TIME * MINORITY effect</u>					
Wilks' Lambda	0.84	1.53	2	16	NS
Pillai's Trace	0.16	1.53	2	16	NS
Hotelling-Lawley	0.19	1.53	2	16	NS
Roy's Greatest Root	0.19	1.53	2	16	NS

Table 8

Repeated Measures Planned ContrastsTime v First Order Interaction for RESPONSE COMPLEXITY

Statistic	Value	F	Num df	Den df	Pr > F
For the hypothesis of no TIME effect					
Wilks' Lambda	0.57	5.97	2	16	p < .01.
Pillai's Trace	0.43	5.97	2	16	p < .01.
Hotelling-Lawley	0.75	5.97	2	16	p < .01.
Roy's Greatest Root	0.75	5.97	2	16	p < .01.
For the hypothesis of no TIME * GENDER effect					
Wilks' Lambda	0.85	1.44	2	16	NS
Pillai's Trace	0.15	1.44	2	16	NS
Hotelling-Lawley	0.18	1.44	2	16	NS
Roy's Greatest Root	0.18	1.44	2	16	NS
For the hypothesis of no TIME * ESL Effect					
Wilks' Lambda	0.99	0.03	2	16	NS
Pillai's Trace	0.01	0.03	2	16	NS
Hotelling-Lawley	0.01	0.03	2	16	NS
Roy's Greatest Root	0.01	0.03	2	16	NS
For the hypothesis of no TIME * MINORITY effect					
Wilks' Lambda	0.91	0.77	2	16	NS
Pillai's Trace	0.09	0.77	2	16	NS
Hotelling-Lawley	0.10	0.77	2	16	NS
Roy's Greatest Root	0.10	0.77	2	16	NS

Table 9

Repeated Measures Planned ContrastsTime v First Order Interaction for Reference

Statistic	Value	F	Num df	Den df	Pr > F
For the hypothesis of no TIME effect					
Wilks' Lambda	0.67	4.03	2	16	p < .05
Pillai's Trace	0.34	4.03	2	16	p < .05
Hotelling-Lawley	0.50	4.03	2	16	p < .05
Roy's Greatest Root	0.50	4.03	2	16	p < .05
For the hypothesis of no TIME * GENDER effect					
Wilkes' Lambda	0.97	0.25	2	16	NS
Pillai's Trace	0.03	0.25	2	16	NS
Hotelling-Lawley	0.03	0.25	2	16	NS
Roy's Greatest Root	0.03	0.25	2	16	NS
For the hypothesis of no TIME * ESL effect					
Wilkes' Lambda	0.91	0.83	2	16	NS
Pillai's Trace	0.09	0.83	2	16	NS
Hotelling-Lawley	0.10	0.83	2	16	NS
Roy's Greatest Root	0.10	0.83	2	16	NS
For the hypothesis of no TIME * MINORITY effect					
Wilkes' Lambda	0.98	0.20	2	16	NS
Pillai's Trace	0.02	0.20	2	16	NS
Hotelling-Lawley	0.03	0.20	2	16	NS
Roy's Greatest Root	0.03	0.20	2	16	NS

Table 10

Repeated Measures Analysis of VarianceContrast Variables for RESPONSE COMPLEXITY

## TIME 1 and TIME 2

Source	df	Type III SS	Mean Square	F Value	Pr > F
MEAN	1	13.53	13.53	0.60	NS
GENDER	1	13.85	13.85	0.61	NS
ESL	1	1.41	1.41	0.06	NS
MINORITY	1	10.17	10.17	0.45	NS
Error	17	385.67	22.69		

## TIME 1 and TIME 3

Source	DF	Type III SS	Mean Square	F Value	Pr > F
MEAN	1	461.57	461.57	9.33	$p < .01$
GENDER	1	75.53	75.53	1.53	NS
ESL	1	1.45	1.45	0.03	NS
MINORITY	1	33.49	33.49	0.68	NS
Error	17	840.98	49.47		

## TIME 2 and TIME 3

Source	df	Type II SS	Mean Square	F Value	Pr > F
MEAN	1	633.18	633.18	12.41	$p < .01$
GENDER	1	154.06	154.06	3.02	NS
ESL	1	0.01	0.01	0.00	NS
MINORITY	1	80.42	80.42	1.58	NS
Error	17	867.47	51.03		

Table 11

Repeated Measures Analysis of VarianceContrast Variables for REFERENCE

## TIME 1 and TIME 2

Source	df	Type II	SS	Mean Square	F Value	Pr > F
MEAN	1	0.84		0.84	0.07	NS
GENDER	1	0.01		0.01	0.00	NS
ESL	1	3.57		3.57	0.29	NS
MINORITY	1	2.62		2.62	0.22	NS
Error	17	205.51		12.09		

## TIME 1 and TIME 3

Source	DF	Type II	SS	Mean Square	F Value	Pr > F
MEAN	1	92.83		92.83	6.37	p < .05
GENDER	1	5.35		5.35	0.37	NS
ESL	1	24.71		24.71	1.70	NS
MINORITY	1	0.15		0.15	0.01	NS
Error	17	247.64		14.57		

## TIME 2 and TIME 3

Source	df	Type III	SS	Mean Square	F Value	Pr > F
MEAN	1	76.03		76.03	6.76	p < .05
GENDER	1	4.96		4.96	0.44	NS
ESL	1	9.50		9.50	0.85	NS
MINORITY	1	4.03		4.03	0.36	NS
Error	17	191.13		11.24		

Table 12

Repeated Measures Analysis of VarianceContrast Variables for DETAIL

## TIME 1 and TIME 2

Source	df	Type III SS	Mean Square	F Value	Pr > F
MEAN	1	2.69	2.69	0.15	NS
GENDER	1	0.97	0.97	0.06	NS
ESL	1	11.18	11.18	0.64	NS
MINORITY	1	46.26	46.26	2.63	NS
Error	17	299.21	17.60		

## TIME 1 and TIME 3

Source	df	Type III SS	Mean Square	F Value	Pr > F
MEAN	1	8.34	8.34	0.39	NS
GENDER	1	69.30	69.30	3.20	NS
ESL	1	4.19	4.19	0.19	NS
MINORITY	1	32.21	32.21	1.49	NS
Error	17	367.91	21.64		

## TIME 2 and TIME 3

Source	df	Type III SS	Mean Square	F Value	Pr > F
MEAN	1	20.49	20.49	0.73	NS
GENDER	1	53.86	53.86	1.92	NS
ESL	1	1.69	1.69	0.06	NS
MINORITY	1	1.27	1.27	0.05	NS
Error	17	476.20	28.01		



Table 13

Overall Means and Standard Deviations


---

Variable	Mean	SD
Early detail	19.24	3.25
Middle detail	19.57	3.38
Late detail	20.86	4.98
Early Response Complexity	17.81	6.97
Middle Response Complexity	16.57	6.73
Late Response Complexity	23.81	5.75
Early reference	17.00	3.46
Middle reference	16.90	3.66
Late reference	18.90	2.98

---

N = 21

Table 14

Means for the Demographic Variable Gender

<u>Males</u>		
<u>Variable</u>	<u>Mean</u>	<u>SD</u>
Early detail	17.89	1.83
Middle detail	17.78	3.31
Late detail	17.11	3.85
Early response complexity	17.89	7.47
Middle response complexity	17.33	6.63
Late response complexity	21.89	6.33
Early reference	15.00	3.20
Middle reference	14.89	3.69
Late reference	17.11	3.22
<u>Females</u>		
<u>Variable</u>	<u>Mean</u>	<u>SD</u>
Early detail	20.25	3.77
Middle detail	20.92	2.87
Late detail	23.67	3.77
Early response complexity	17.75	6.92
Middle response complexity	16.00	7.03
Late response complexity	25.25	5.08
Early reference	18.50	2.94
Middle reference	18.42	2.94
Late reference	20.25	2.01
Males N = 9	Females N = 12	

Table 15

Means for the Demographic Variable ESL

<u>Non-ESL</u>			
<u>Variable</u>	<u>Mean</u>	<u>SD</u>	
Early detail	19.25	2.90	
Middle detail	19.56	3.72	
Late detail	20.50	5.32	
Early response complexity	16.25	6.38	
Middle response complexity	14.75	5.47	
Late response complexity	22.19	5.29	
Early reference	17.19	3.80	
Middle reference	16.94	3.73	
Late reference	18.44	2.94	
<u>ESL</u>			
<u>Variable</u>	<u>Mean</u>	<u>SD</u>	
Early detail	19.20	4.60	
Middle detail	19.60	2.30	
Late detail	22.00	4.00	
Early response complexity	22.80	7.05	
Middle response complexity	22.40	7.63	
Late response complexity	29.00	4.06	
Early reference	16.40	2.30	
Middle reference	16.80	3.83	
Late reference	20.40	2.88	
Non-ESL	N = 16	ESL	N = 5

Table 16

Means for the Demographic Variable Minority Status

<u>Non-minority</u>			
<u>Variable</u>		<u>Mean</u>	<u>SD</u>
Early detail total		20.78	2.73
Middle detail total		19.56	3.97
Late detail total		20.56	6.48
Early response complexity		16.33	5.63
Middle response complexity		14.22	3.99
Late response complexity		23.33	5.74
Early reference total		18.00	3.77
Middle reference total		18.11	3.69
Late reference total		19.22	2.39
<u>Minority</u>			
<u>Variable</u>		<u>Mean</u>	<u>SD</u>
Early reference total		18.08	3.23
Middle reference total		19.59	3.06
Late reference total		21.08	3.80
Early response complexity		18.92	7.89
Middle response complexity		18.33	7.92
Late response complexity		24.17	6.00
Early reference total		16.25	3.17
Middle reference total		16.00	3.52
Late reference total		18.67	3.45
Non-minority	N = 9	Minority	N = 12

## Question 4

What is the effect of gender, ESL and minority status over time for each of the dependent measures?

Repeated Measures Analyses of Variance (ANOVA) were completed to determine the interaction of gender, ESL, and minority with time for each of the three dependent measures. Rather than determining main effects of each of the three demographic variables, the repeated measure ANOVA focuses upon first order interactions of each variable with time. While an identified interaction would indicate whether or not a demographic variable was affected by the overall effect of time, it would not indicate if there were a significant difference within the variable itself. For this reason repeated measures analyses of variance tests of hypotheses for between-subjects effects were run.

To determine whether or not a significant difference within demographic groups occurred during a specific time period, Student-Newman-Keuls multiple comparison procedures were completed for demographic variables identified as significant by the repeated measures between subjects analyses.

Results for each dependent measure will be addressed individually. Tables 14, 15, and 16 contain means and standard deviations for the demographic variables--gender, ESL, and minority status.

Table 17

Repeated Measures Analysis of Variance (ANOVA)Between-Subjects Effects

N = 21

Detail

Source	df	Type III SS	Mean Sq.	F Value	Pr > F
Gender	1	271.41	271.41	24.68	p = .0001
ESL	1	0.25	0.25	0.02	NS
Minority	1	35.94	35.94	3.27	NS
Error	17	186.96	11.00		

---

Response Complexity

Source	df	Type III SS	Mean Sq.	F Value	Pr > F
Gender	1	12.82	12.82	0.19	NS
ESL	1	479.63	479.63	7.07	p = .02
Minority	1	1.99	1.99	0.03	NS
Error	17	1153.55	67.86		

---

Reference

Source	df	Type III SS	Mean Sq.	F Value	Pr > F
Gender	1	207.25	207.25	18.69	p = .0005
ESL	1	3.70	3.70	0.33	NS
Minority	1	78.56	78.56	7.09	p = .02
Error	17	188.49	11.09		

Table 18

Student-Newman-Keuls Multiple Comparison ProcedureDETAIL

	<u>Means</u>		<u>SD</u>	
<b>Gender</b>	<b>Males</b>	<b>Females</b>	<b>Males</b>	<b>Females</b>
	N = 9	N = 12	N = 9	N = 12
Time 1	17.89	20.25	1.83	3.77
Time 2	17.78	20.92*	3.31	2.87
Time 3	17.11	23.67*	3.85	3.77
<b>ESL</b>	<b>Non-ESL</b>	<b>ESL</b>	<b>Non-ESL</b>	<b>ESL</b>
	N = 16	N = 5	N = 16	N = 5
Time 1	19.25	19.20	2.91	4.60
Time 2	19.56	19.60	3.72	2.30
Time 3	20.50	22.00	5.32	4.00
<b>Minority</b>	<b>Non-minority</b>	<b>Minority</b>	<b>Non-minority</b>	<b>Minority</b>
	N = 9	N = 12	N = 9	N = 12
Time 1	20.78*	18.08	2.73	3.23
Time 2	19.56	19.58	3.97	3.06
Time 3	20.56	21.08	6.48	3.80

\*p = &lt; .05.

### Detail

For detail, no significant first order interactions were identified between time and gender, ESL, or minority (see Table 7). Significant between-subject effects were found, however, for gender ( $p = .0001$ ). (See Table 17). The Student-Newman-Keuls multiple comparison procedures explain the differences in the demographic variable detail for each time period (see Table 18). They indicated that, for gender, females scored significantly higher than males during the second and third time periods ( $p < .05$ ). The mean scores for the second time period were 20.92 for females and 17.78 for males. For the third time period, the mean score for females was 23.67 and the mean score for males was 17.11. Non-minority students scored significantly higher than minority students for the first time period, with means of 20.78 and 18.08, respectively. In addition, repeated measure contrasts between time periods (i.e., time one vs. time two; time two vs. time three; and time one vs. time three) for detail by time, gender, ESL and minority status were not significant (see Table 7).

### Response Complexity

For response complexity no significant first order interactions were identified between time and gender, ESL, or minority (see Table 8). Significant between-subjects effects were found, however, for ESL ( $p = .02$ ), but not for



Table 19

Student-Newman-Keuls Multiple Comparison ProcedureRESPONSE COMPLEXITY

<u>Gender</u>	<u>Means</u>		<u>SD</u>	
	Males	Females	Males	Females
	N = 9	N = 12	N = 9	N = 12
Time 1	17.89	17.75	7.47	6.92
Time 2	17.33	16.00	6.63	7.03
Time 3	21.89	25.25	6.33	5.08

---

<u>ESL</u>				
	Non-ESL	ESL	Non-ESL	ESL
	N = 16	N = 5	N = 16	N = 5
Time 1	16.25	22.80	6.38	7.05
Time 2	14.75	22.40*	5.47	7.63
Time 3	22.19	29.00*	5.29	4.06

---

<u>Minority</u>				
	Non-minority	Minority	Non-minority	Minority
	N = 9	N = 12	N = 9	N = 12
Time 1	16.33	18.92	5.63	7.89
Time 2	14.22	18.33	3.99	7.92
Time 3	23.33	24.17	5.74	6.00

\*p &lt; .05.

gender or minority (see Table 17). The Student-Newman-Keuls multiple comparison procedure (see Table 19) indicated that ESL students scored higher than non-ESL students on response complexity ( $p < .05$ ) during the middle and late time periods. For the second time period, the mean ESL score was 22.40; the mean non-ESL score was 14.75. The mean score for ESL students for the third time period was 29.00, and the mean score for non-ESL students was 22.19. In addition, contrasts between time periods by time, gender, ESL and minority status were significant only for time and only during periods one and three and two and three. No significance was identified for the three demographic variables (See Table 10). It should be noted that there were only five ESL students, all of whom were also classified as minorities.

#### Reference

For reference, no significant first order interactions were identified between time and gender, ESL, or minority (see Table 9). However, significant between-subject effects were found for gender ( $p = .0005$ ), and for minority ( $p = .0164$ ), but not for ESL (see Table 17). The Student-Newman-Keuls multiple comparison procedure indicated that females scored higher than males on reference ( $p < .05$ ) for all three time periods. The mean score for females for the first time period was 18.50 and 15.00 for males. During the

Table 20

Student-Newman-Keuls Multiple Comparison ProcedureREFERENCE

	<u>Means</u>		<u>SD</u>	
	Males	Females	Males	Females
<u>Gender</u>				
	N = 9	N = 12	N = 9	N = 12
Time 1	15.00	18.50*	3.20	2.93
Time 2	14.89	18.42*	3.69	2.94
Time 3	17.11	20.25*	3.22	2.01
<u>ESL</u>				
	Non-ESL	ESL	Non-ESL	ESL
	N = 16	N = 5	N = 16	N = 5
Time 1	17.19	16.40	3.80	2.30
Time 2	16.94	16.80	3.73	3.83
Time 3	18.44	20.40	2.94	2.88
<u>Minority</u>				
	Non-minority	Minority	Non-minority	Minority
	N = 9	N = 12	N = 9	N = 12
Time 1	18.00	16.25	3.77	3.17
Time 2	18.11	16.00	3.69	3.52
Time 3	19.22	18.67	2.39	3.45

\*p = .05.

second time period females scored 18.42 and males scored 14.89. Mean scores for females for the third time period was 20.25 and the mean score for males was 17.11. (See Table 20).

While significant between-subject effects were identified for minority status (see Table 17), results of the subsequent Student-Newman-Keuls showed only a higher, though not significantly higher, score for non-minority students.

In addition, contrasts between time periods by time, gender, ESL and minority status were significant only for time and only during periods one and three and two and three. Significance was not identified for the three demographic variables (see Table 9).

#### Summary

Results of the Pearson Correlations indicate that the internal measures of the dialogue journals are indeed unique elements. Further, for the total group, detail is highly correlated with audience awareness and writing ability, and has a low moderate correlation with social cognition. For the total group, neither response complexity nor reference shows a significant relationship with audience awareness, social cognition, or writing ability.

Results of stepwise regression analysis indicate that only detail is explained by both social cognition and

audience awareness.

Repeated measures analysis of variance indicated that there were significant time effects for response complexity and reference, but not for detail. In addition, no significant first order interactions between time and gender, ESL or minority status were identified for any of the demographic variables--detail, response complexity, or reference.

Between-subjects analyses examined overall differences between students classified on demographic variables. For detail there was a significant between-subjects effect for gender. For response complexity, there was a significant between-subjects effect for ESL, and for reference there was a significant between-subjects effect for gender.

## CHAPTER 5

### DISCUSSION, IMPLICATIONS, CONCLUSION

#### Introduction

This final chapter begins with a brief summary of the analyses results. It presents discussion and exploration of the issues presented and profiles of three of the student dialogue journal writers. Excerpts are included to illustrate conclusions reached in this and previous studies. Suggestions for design of future research and implications for further research conclude the dissertation.

#### Summary of Findings

Detail was the only dependent variable that correlated significantly with any of the independent variables. ESL students correlated on five independent variables while non-ESL correlated on only two. While minority students only showed a high correlation between late detail and audience awareness, there was a moderate correlation for late reference and audience awareness, in addition to four low moderate correlations. Regression results appear to confirm that late detail is explained by audience awareness and social cognition.

Another important issue was change over time in elements of journal writing. The dependent variables response complexity and reference showed a significant

increase over time. Detail increased, but not significantly. For none of the three dependent measures is there a significant first-order interaction of time with the three demographic variables. However, for each of the three dependent measures, there is a between-subject effect for one or more of the demographic categories; there are differences in gender, ESL, and/or minority. These differences are consistent over time--they do not interact with time.

### Three Student Profiles

The samples used in these student profiles were chosen as representative of the demographic sub-groups. Lauren is a non-ESL, non-minority girl; Chau is an ESL minority boy; and Thomas, a minority boy.

The entries are copied exactly as the students wrote them. No spelling has been corrected and no punctuation added or deleted. Words that are difficult to understand are spelled correctly to the right of the entry. "S" indicates student entry, and "T", those of the teacher.

#### Lauren

Lauren was eight years, one month at the start of the school year. She tested at grade level for reading. Her profile records examples of all three internal measures of journal writing. Lauren began to respond to the teacher's comments on the fourth entry, but was not consistent in

answering until the beginning of February. Her writing was formal and a chronology at first.

S - Friday, August 31, 1984

Last night I had dinner

Then after that I went

outside and I breackdanced

with my friends a wile.

T - Is it hard to breakdance?

S - NO. But sometimes it is.

The dialogue continued:

S - Tuesday, September 4, 1984

Saturday, Sunday and

Monday I speended the

hole weekend at the beach

with my hole family

even with grandmother

and grandfather.

T - What beach did you go to? Were there a lot of cars coming home?

S - I went to Virginia Beach.

T - I never was there! Is it nice?

S - Yes it is very nice. and pretty

For the next month the entries were routine--short recitals of Lauren's activities but with no responses to the written comments of her teacher. Then there were two



consecutive entries that were different. The first was the initial reference to an event that had not taken place yet, and the next told about a dream.

S - Friday October 5, 1984

This weekend I am going to spend the night over my ants house. She is like my mom. Mom was in college with her. I like her a lot.

T - Where does she live, Lauren?

[No response]

S - Tuesday October 9, 1984

Last night I had a dream that I went to fredricksburg and all my friends your glad to see me. One of my were really surprised. I just wish that I still lived there. I miss them a whole lot. I wish that I still lived in my house. But one of my friends I didn't get to

see. Her name is Elezabeth.

T - Do you ever get to see Elizabeth?  
Do you write to her? That might be fun!  
I know that it's hard to  
move, Lauren. I have moved a lot  
and I always missed my friends.  
But you can keep your old friends,  
even if you don't see them as  
often as you would like. You  
will make more friends, too.

The next entry did not have a response for the teacher,  
but there was an abrupt change of topic.

S - Tonight I am going to  
the Thomas Jefferson  
library. Maybe we will  
be abell to go out                   able  
to eat after we go  
to the library.

T - I like to go to the Thomas  
Jefferson Library. I hope that you  
write about what books you get!

There was no response to the teacher's entry, but the  
next student entry gave a change of topic and an unusually  
intricate description. Lauren's writing incorporated  
invented spelling and she used question marks over words she

was not sure were spelled correctly.

S - Thursday October 11, 1984

Tommrow after school

I am going to my

ant's beach house.

There is a hot tub

and there is a bedroom

on top of the kitchen.

On the beach there are

these humunges shells at the

humongous

beach. There is a fireplace

beside the fireplace is a big

coby I always go in and

cubby

lay down it. There is

to gronup rooms. One has

merray in the day you can

mirror

see but when it is night it

is a merray. The kids

room has a bunk bed and

a chair that tern in to a

bed. My room has to

beds and a chair that can

turn in to a bed, too. There

is a glass talbe near

the fireplace. There is a

pot of plants on the  
table. There is a paking  
place it is made out  
of wood. Almost the whole thing  
is made out of wood.

When you get in the hot  
tub it feels good. I like  
that a lot.

T - I liked reading your story a  
lot, Lauren! That sounds like a  
wonderful place to visit - I can  
tell that you are happy there!  
Where is the beach house?

Lauren did not respond to the teacher's compliment on  
her description, or to a question about where the beach  
house is. However, she continued to write for the next two  
entries about what she wanted to do at the beach house, and,  
after she returned, about the good time she had. Clearly she  
had control of the topic.

By January Lauren had begun answering the teacher's  
comments and questions again, usually with one word, but  
more and more with complete sentences.

S - Wednesday January 30, 1985

Last night I went out  
to dinner with my mom

and went shopping and  
 went to Baskin Robin's  
 We had a lot of fun.  
 When we went home  
 the house was a  
 wreck. My mom wasn't  
 so happy.

T - I love Baskin Robins ice cream!  
 It sounds like a really fun  
 time. At least you didn't  
 help to make the house a wreck!

S - Ya that's right.

Although there was much indirect indication that Lauren was aware of the reciprocal nature of the journal writing, the first direct evidence in an entry came in March.

S - Monday March 25, 1985  
 I will tell you why I was  
 late. My sister had to  
 get a check up. And I  
 had to go and fix my  
 glasses. Now I have a  
 lot of work to do.

T - You were busy! I'm sure you will  
 finish the work. Are you glad that  
 your glasses are fixed?

S - Yes I am  
 very happy.

Again, as the class was practicing for the school production of the musical Oliver, Lauren addressed the teacher directly. She incorporated her answers to the teacher's several questions next to the question itself.

S - Tuesday April 16, 1985

On Sunday I forgot to tell  
 you something. I went to see  
 the play of Oliver. It was  
 good. They had some grown-  
 ups in it. Our waitress was in waitress  
 it. She was the milk lady.

T - Was it a dinner theater? S - yes

Wasn't it a good play? S - yes

Did you see it someplace close

to your house? S - Well sartve. sort of

The following two entries demonstrate that Lauren's style of writing had become more natural, and her responses, while not involved, confirmed that she had entered into the spirit of the dialogue.

S - Wednesday May 1, 1985

My brother is very sick.

He hasn't been in school

since Monday. That's why

I keep asking if I can  
go to his classroom. I have  
to give her his homework.

T - I'm sorry! Can you do anything  
to make him feel better--like  
read a story to him?

S - It's hard. I try too but it doesn't help.

Friday May 3, 1985

My brother is still sick.

He is not here today. He has  
not been in school for  
a week.

T - Is he getting a little bit better?  
I hope he is well by Monday.

S - He is in school today.

Monday, May 6, 1985

Yesterday I went shopping  
with my mom. We had dinner  
at George Town and shopped  
there too.

T - I like to shop there. Where did you eat?

S - I don't know the name of it. I forgot. But it is fancy.

Another example of the developing sense of written  
discourse is shown in the following entry, concerning the

visit of Lauren's brother to their aunt (at the beach house) and Lauren's response to the teacher's comments:

S - Wednesday May 29, 1985

Today my brother is finally home from seven days. He wishes he was still there. I said don't you want to stay home with your real family. He said wanted to be with anty Kay. And My dad is leaving today.

T - Things are busy at your house!

I guess your brother likes being company at your aunt's house.

How long will your dad be away?

S - 'Till Friday. I wont be missing him that much. Cause he left yesterday.

Lauren used her dialogue journal writing as an instrument for improving her spelling. Her use of invented spelling and question marks over words she was not sure of has been noted. Lauren also made her own corrections by noting the words her teacher had modeled. On September 26th Lauren spelled ballet "baloa", on December 18th it was "balat", on January 29th "balet" and on May 30th "ballet". "Elezabeth" on October 9th became "Elizabeth" on February 11th as a result of the teacher spelling the word correctly



in response, without comment about the misspelling. On May 23rd "poisnivy" was the topic of the entries for several days, and on June 3rd it was spelled "poison ivy".

Lauren's profile is representative of the other non-minority, non-ESL girls in the class. She demonstrated appreciable growth in detail and reference. The complexity of her responses grew over the school year, but not to a significant degree.

### Chau

Chau was eight years, two months at the beginning of the school year. He was an ESL student who had come to the United States two years before. He was faithful in answering any comments made by his teacher, although his style was quite formal at first. As the school year progressed, he demonstrated that he was becoming adept in the role of dialoguer.

S - Friday september 14, 1984

yesterday I went  
to the cub scout  
and we play chase  
with Anthony, Brad,  
Jonathan, Ray, Jee young..

T - Are you going to be a Cub Scout now?

S - I'm going to  
be one.

Here, Chau responded to his teacher's question, then he continued with a new subtopic:

S - Monday, September 17, 1984

On saterdy my friend

diged two dip hol

dug

deep holes

be side his house.

T - What did he dig the holes for?

S - he dig the holes

for the water

that goes in

the house.

S - September 19, 1984

yesterday I stayed

home becaucse

I was sick

T - We missed you!

S - did you

While Chau answered questions, he never let topic control elude him. He also brought to print his delightful good nature and ability to carry over to another day the fact that he had absorbed a message the teacher had implied--a good example of his audience awareness.

S - September 25, 1984

When I was doing

my home work

I was watching Tv.

T - Could you do them both together?

S - yes I can do  
them both together.

S - September 26, 1984  
- yesterday I did  
not watch tv  
and do my home work.

T - That is good!

S - Thank you.

In the above excerpts it is interesting to note that the teacher's question "Could you do them both together?" really had two levels. First, in the literal sense she asked if he could manage the homework and the TV together. Chau immediately answered that first level question. His teacher was also implying whether he could do a good job with the homework if the TV was on. Chau showed that he understood second level meaning the next day when he announced that he had done his homework without the TV on. Chau demonstrated his role-playing skills here.

Chau changed the subject to one that he would come back to again several times--going to the dentist.

S - September 27, 1984  
yesterday I went  
to dintist and I

got another  
silver tooth  
now I got  
two silver teeth.

T - Lucky Chau! Do you remember to brush?  
some time I  
do some time I  
don't brush my teeth.  
Again, on October 4th:

S - yesterday I went  
to the dentist  
and I didn't  
get a silver teeth.

T - Maybe your teeth are all better now.

S - I don't think  
so may be there  
not better.

Homework was a recurring subject for Chau. He took it  
very seriously.

S - October 2, 1984  
I did my  
homework over  
about three times.

T - You are very careful, Chau! Were you  
satisfied the third time?

S - I was Satisfied  
When I did over  
the third time.

T - Good--I'm glad you were!

S - October 3, 1984  
thank you

S - October 10, 1984  
yesterday I  
went home and  
eat then I  
went to rake  
the leaf and  
then I went  
to get some  
nut them I  
did my home work  
but I need lot  
of help.

T - Pretty soon you will be able to do  
it with very little help.

S - may be or maybe  
not.

The response for the October 22nd entry contained the first reference to Chau's particular audience--he addressed his teacher by name.

October 22, 1984

S - On saterdy I  
 went to but my buy  
 cub scout suot suit  
 and then I went  
 to sleep over my  
 friend house.

T - Do you like your Cub Scout uniform?

S - yes I do Mrs. ....

Homework and the dentist were topics that appeared often in Chau's dialogue journal entries. By January Chau was writing longer entries about some new activities:

S - January 7, 1984  
 Friday night  
 My sister my ants  
 my grandma and I  
 wewre watching tv  
 then the lights  
 went off and I  
 stand up and took a  
 lighter and a candle  
 and lit it.

T - How long were the lights off?

S - I don't no but it went of off  
 three times.

S - January 10, 1985

yesterday I

did my math

at 5:02.

T - What time did you finish? How long  
was it all together?

S - I finish at 5:56

Chau used his journal to explain things to his teacher.  
He found writing easier than discussing problems face-to-  
face. When he did not have one homework assignment ready to  
turn in, he wrote:

S - January 16, 1985

Monday on the bus

dawn said that

we were no have-

ing spelling home-

work.

T - Oh! She shouldn't have said that, because  
we did.

S - you are right

S - January 30, 1985

yesterday I went

to the den meeting

and I had to

make a place mat

because we are  
going to the blue  
and Gold dinner  
and I had to  
write the names  
that were coming.

T - Who is going? When is the Blue  
and Gold dinner?

S - My dad and my sister  
and my friend.

It starts at  
February 21, 1985

By February 7th, Chau was reporting more than just  
events--more feelings and comments about events were  
beginning to appear:

S - February 7, 1985  
yesterday I washed  
the dishes and  
brook one but didn't broke  
get in trouble.

T - I'm glad about that!

S - February 8, 1985  
This morning when  
I went to the  
bus stop I



didn't have a hat  
and my face was  
very cold my body  
to.

T - That's too bad! It's a very cold day.

At the end of May Chau had some news--which turned into  
an extended dialogue that lasted for almost two weeks:

S - well I'm going to  
New York. This Saturday  
with My Dad, Mom,  
aunt, uncle, sister and  
I. I don't know what  
it would be like.

T - That will be fun! I grew up  
and went to school in New York,  
but just outside the city. There  
are lots of people and cars  
there, and some very tall buildings.  
How do you feel about going?

S - I don't know. But  
I think I'll have  
fun. So I'll go  
to see if I like it.

T - That's good. I hope that  
you have a good time and

that you write to me about it.

S - May 27th

When I was at  
New York I saw  
my dad's brother!

He brought us  
to a resturaunt.  
after that we went  
to buy things.

T - Did you like New York City?

Tell me what you saw.

S - I saw people saleing things out  
side. They were saleing watch,  
shoe and other things.

selling

They also had fire  
crackers I boucht  
four boxes.

bought

T - What are you going to do with  
four boxes of firecrackers? Be careful!

S - The firecrackers

I didn't have to  
light them

I had to throw them

Dialogue continued about the firecrackers for several  
more days, then Chau announced a new topic:

S - Well I'm going  
to write about  
something else.  
My sister's and I  
were playing  
at the school. We  
played basketball.

T - Do you live close to school?

S - Yes didn't you know  
that. I walk to  
school now.  
It is fun but the  
only thing is I  
don't get to see  
my friends.

That day the teacher was unable to write in Chau's  
journal, and he was not happy about it:

S - June 7  
You didnt write to  
me And I don't  
know what to  
write to you.  
because you  
didn't write. to me.  
that is fair.

T - I'm sorry - I was so busy!

Chau made significant growth in response complexity ratings over the year. From the beginning he answered his teacher's comments, but his personality came through more and more as the year progressed. In the June 7th entry Chau complains that he had no message from his teacher. This is a marked contrast from the beginning of the year, when he answered in formal, impersonal language. Clearly he had become comfortable with the dialogue, and felt free to voice his protest. Chau also showed evidence of using the teacher's spelling of words he had not spelled correctly on his own.

#### Thomas

Thomas was a minority student. He was eight years, ten months at the beginning of the school year, and tested at beginning third grade level in reading. He was a quiet student, a "man of few words", but he entered into the dialogue willingly, and appeared to enjoy the opportunity for exchange. His response pattern in the beginning was not always accurate, in that he answered, but not always the question asked:

September 12, 1984

S - I palyed cach outside in the park                      catch  
 I palyed with my friend Tung  
 We plyed cach all day long

Soon I had to go inside

T - Do you like to play catch, Thomas?

S - Yes I do like to play catch  
outside.

S - September 13. 1984

Yesterday I palyed a big game of  
football friend.

My friend passed the ball to my  
and we win.

T - What was the score? What is  
your friend's name?

S - The score was 75 to 14

S - September 14, 1984

Yesterday I want to the cub scout.

And I saw Chau, Brad, Jonathan,  
Ray Ray, and Jee young Lee.

I felt happy.

T - Are you going to be a Cub Scout?

How often do they meet?

S - We meet at the school.

The next entries show that Thomas had a sense of the  
needs of his audience. When asked a question by his teacher  
the first time, he could not answer it, but later he  
appeared to remember the question and supplied the answer:

S - Yesterday I want to my went

football.

It was fun palying over ther.

playing

It begin at 630 End at 800

6:30

8:00

T - What is the name of your team? I  
hope that you win all of your games.

S - I do not no my teams name.

The dialogue continued:

S - Sep 20 1984

Yesterday I want to football practice.

It was fun.

We start at 6 15 End 8 00

T - What position do you play, Thomas?  
It sounds like you  
are really excited. Does your team  
have a name?

S - I do not no my team name.

Then, two months later, Thomas wrote:

S - November 13, 1984

I know my teams name.

My teams name is the

Panthers. We win Two game.

And lost two game.

T - I hope that the Panthers win  
all the rest of their games.

S - me to

Thomas had difficulty remembering to bring things to school, and he usually wrote about it in his journal:

S - September 27, 1984

Yesterday I forgot my homework.

At school I had a bad day. bad

T - That is too bad, Thomas. I hope that today is better!

S - Me to

S - Oct 2, 1984

Today I all most left my federal paper home.

I all most left my lunch box on the bus Stop. I had a bad time.

T - But it turned to a good time because you did remember, Thomas!

S - yse it did yes

S - October 17, 1984

Today I left my Lunch money at home. So I can't eat Lunch today. And I left my homework at home

T - I can lend you lunch money Thomas--but I can't lend you your homework!

S - I no thre that

S - Nov 28, 1984

Yesterday I got all of my  
Homework Done. And I am  
vary vary vary Happy we do  
not have Homework

T - I'm so glad you got it all done, too,  
Thomas!

S - me to

Thomas was enthusiastic about football and Cub Scouts.  
At Thanksgiving time he initiated a new topic. Also, in  
contrast to earlier responses which were short and  
usually echoes of what the teacher had written, Thomas  
began writing longer responses:

S - Nov 18, 1984

In two more days

I am going to North Carelina

T - Lucky you! I hope you have a  
good trip.

S - OK I will have a good  
trip

S - Nov 26, 1984

it was vary fun in  
Northcarelina. And  
my dad even buy me a  
toy dart gun. With



toy darts.

T - I'm glad you had a good time in North Carolina. Who did you visit there?

S - I went to North Carolina to visit my Gandmother and Gandfater

Early December brought the first question Thomas directed to his teacher:

S - Dec 10, 1984

Yesterday I saw the skins game did you see it It was a good game. The score was 30 to 28. The Skins had 30 points and the Cowboys had 28 points

T - I certainly did see it! It was so exciting. I hope that the Redskins go to the Super Bowl!

S - me to I hope the skins go to the super bowl

Then, in March, a different kind of journal entry, in that a more serious side of Thomas is presented, and his feelings are shown:

S - March 20, 1985

Today is a bad day for me

T - Why, Thomas? What happened?

S - March 20 is

all way a bad day for me

S - March 21, 1985

I know march 20 is a

bad day for me becaanes

because

my friend sister ran away

T - Did she come back? Your friend

must be very worried!

S - I don't know

Thomas wrote his most involved entry and response the next day, on a different topic:

S - March 22, 1985

Yesterday I went to Robby

but I couden't stay lony

because I had to go to

pack meeting and Ba and I

wan a cake

won

T - I think it's wonderful that

you both won a cake. How did

you win it?

S - You have to but

buy

a ticket then the man

has to call it out and

[the number]

see if you have

the right number

The following account shows a detail in writing that Thomas had not included before:

S - April 18, 1985

Yesterday I went over  
to Donny house. And we  
Break Dance and when  
I got Back I was locked out.  
So I went to play baseball  
and when it was my turn I  
was going too 3 base to home  
and I tripped over Anthony and  
fell on cement and hurt it  
my lip.

tripped  
cement  
lip

T - That's too bad! You had quite a  
day. Did you score? I hope so,  
because you certainly have a  
bruise!

S - Yes it did

At the end of the school year Thomas had made progress  
in his journal writing, but he continued to omit words in  
sentences when he was most eager to express himself:

S - May 10, 1985

Yesterday I a flashlight and  
I bought it for show and tell  
and on the side it said trail

flashlight  
bought  
side

light and I put balltaer in battery  
it.

Thomas came to third grade with skills that were not as advanced as those of the average student his age. However, several areas of growth are demonstrated in his journal.

Thomas controlled the topic and answered a high percentage of the teacher remarks directed to him. He was not afraid to use "real words" (flashlight, battery) even though he might well have never used them in written form before. He knew that there would be no penalty for his attempts, and therefore could be authentic in his choice of vocabulary. In his profile Thomas is typical of the other minority students in this group. He started with lower scores than the non-minority students, but nevertheless did exhibit gain over the school year.

#### Discussion

The students demonstrated growth, although not always significant growth, in the three dependent measures of reference, response complexity, and detail.

There were some examples of egocentric speech but the majority of the entries fell within Piaget's adapted information speech category. Each student was able to begin at his/her own level, and progress from there. The children were able to show that they could take the role of their own

audience, as demonstrated by Thomas when he remembered that he had been asked about his team's name, and provided it when he could.

Just as Braig's first graders succeeded at the task of audience awareness, so did these children. One additional example of success in this area came from Bill, whose October 2nd entry lacked an important fact and was confusing to the teacher. This led her to assume what was not the case. Bill sensed this and set the record straight:

S - October 2, 1984

I could not wiat	wait
till Sunday becace	because
Craig and Robby	
team. On Craig and	
Robby's frist game	first
the team did	
not show up.	

T - I wonder why! Do you think they had the wrong schedule?

S - October 3, 1984

If you think that Craig and Robby's team did not show. You must of been

wong it was the  
 other team did  
 not show up

wrong

T - Oh! I did have the wrong idea.

I'm glad you explained it to me.

Bill's dialogue is an illustration of heuristic function (Halliday, 1977)--to find out. Bill realized the teacher's misunderstanding and corrected it. In terms of social cognition, such awareness is made possible by recursive thought--the early statement is separate from self; the later statement is an expression of Bill's own experience and feeling.

Flavell's work (1968) on perspective taking has relevance here. Bill had to take the teacher's perspective when he read the response to know that his teacher had the wrong idea. Chau took the teacher's perspective to come to the conclusion that he had moved, and lived closer to school. Examples used here show that what Vygotsky has written was demonstrated by some in this group. At the start, writing was more abstract and isolated for them than speech was. The fact that some students frequently omitted words can be explained by Vygotsky's observation that when speech is internalized it is abbreviated in the mind. Writing entails putting words back that have been condensed. Other students did not appear to have this problem.

The findings of Staton, Shuy, and Kreeft (1982) are confirmed in this study. For many of the students the dialogue journal activity did serve as a "bridge" from oral conversation to a basic writing style. The interactive, reciprocal nature of the efforts, as well as topic ownership are demonstrated here. Varied functions of dialogue journal writing are also presented. Students responded to inquiries, reported events and facts, explained, complained, and expressed feelings and emotions. Mary did several of these things, and even took control of her dialogue partner's response format:

S - Thursday, March 7, 1985

I want to move my  
 Desk becuse Antony  
 is fooling arund so is John  
 and Philip Joan's ok Joan wants  
 to move to. I want to  
 move enywere.

T - I didn't know that there was a  
 problem. We'll see if we can  
 make things better. Are you trying  
 very hard to take care of your work?

S - friday, March 8, 1985,

I hope that Joan and I  
 Move Soon I can't stand

it. Will I Don't want you  
 to for get. The anwsere  
 wright yes\_\_\_ or no\_\_\_ write  
 can we move some ware and  
 sitting nest to each other. next

The following excerpt from Mary's journal is not only an example of topic control, but also an example of expanded response, and an unusual request:

S - Today is Monday, April 1, 1985

I have my ears parsed pierced  
 I get them out  
 in two weeks Do you  
 have ear rangs I can yase rings  
 use

T - I don't have pierced ears, Mary,  
 so my earrings wouldn't be any  
 good. Did it hurt when you had it done?

S - to Day is Thesday, April  
 2, 1985 yes it DID hurt  
 I'll show you how  
 they DID it. OK.  
 See they take you  
 to amat you lay a mat  
 on it, They take  
 oukaha and put it on the alcohol



your ears and take

some a nedel and puncha

needle

punch a

and purh it in!

push

#### Implications for Practice

The students involved in this study had no prior experience with journal writing. If students had the advantage of continuous exposure to this interaction from kindergarten through sixth grade, and longer, there would be an opportunity to chart their course and document the development over a longer period.

With the continued popularity of dialogue journal writing in schools it could be possible to investigate the connection of gains made in dialogue journal writing to other forms of writing--expository and persuasive writing, for example.

The consistently higher scores of girls on the multiple comparison procedures suggest that further research is indicated to investigate the individual differences between boys and girls in dialoguing. In this study, however, boys made gains in overall means for response complexity and reference, but not for detail.

ESL students had initially higher scores in only response complexity, but ended with significantly higher scores than non-ESL students in all three dependent

variables. This agrees with the conclusions reached by Staton (1988) and Kreeft (1983), that this interaction is a valuable tool in the education of students who are learning English.

This can also be connected to the work of Staton and associates (1982) and Shuy (1988) that journal writing, with its familiar audience and relaxed expectations, is an appropriate activity for beginning writers. Surely this gives added confidence to those students who are beginning a new language, with unfamiliar syntax and spelling.

A brief overview of development in the dependent variables and particular traits observed can guide teacher observations:

Detail. Students controlled the topic, even after answering questions on a different subject. The pupils also displayed a growing sense of freedom to express their thoughts and feelings.

Response complexity. Students responded to questions and comments of the teacher. They moved from a formal to more personal expression in both topic and choice of vocabulary.

Reference. Students displayed an awareness of the reciprocal nature of the discourse.

Within all three of the dependent measures the pupils expressed themselves in a manner that displayed a sense of

Table 21

TARGETS FOR OBSERVING STUDENT DIALOGUE JOURNALS

Do students increasingly:

1. Assume and maintain topic control?
2. Provide information the teacher needs to understand the entry?
3. Directly and/or indirectly refer to their teacher as audience?
4. Provide more expanded entries with fewer gaps in information?
5. Use a more conversational writing style?
6. Use more variety in sentence structure ?
7. Use teacher entries as a reference for correct spelling?
8. Respond to teacher questions and observations?
9. Include their involvement with others in their topics?
10. Use their dialogue journals for a variety of functions?

freedom to use meaningful vocabulary, without concern for the need to have error-free spelling. They also demonstrated that they understood how to use their teacher's spelling as a model when the words appeared again in the text.

The suggestions found in Table 21 are offered for informal assessment of student journals. It is important to repeat that there may be long periods where little or no progress is made. Not all students grew in all themes, and there is no reason to expect that growth in all areas will occur during any isolated time period. However, this list supplies lenses to see things that might be of interest.

The demonstrated success of dialogue journal writing should encourage teachers to relax the practice of assigning writing topics too frequently. Journal writing prepares students for topic selection and assists them to be comfortable with these decisions as well as other technical aspects of writing.

The journal writing experience encourages more "connectedness" between pupils and teachers. This is important for all ages, but particularly so with young children. It should be noted that several of the children in this study shared information that would not have been known if the normal conversational channels had been relied on. One child shared a serious psychological problem, and

help was made available. Another student, unhappy because he missed many Cub Scout meetings because he had no transportation, was able to find a dependable ride. Several misunderstandings and interpersonal difficulties were resolved.

#### Implications for Theory and Research

As presented in Chapter 1, Figures 1 and 2 were designed to illustrate a possible explanation of the relationship between the internal variables--detail, response complexity, and reference--and the internal variables--audience awareness, social cognition, and writing ability. There was at that time little relevant guidance on this subject, but Figure 2 depicts the original anticipation of the outcome. As a result of the study there is a new concept of the relationships. Figure 4 illustrates the post-study adjustment of the original picture. The highest correlations are between detail and audience awareness, detail and social cognition, and detail and writing ability.

There are a few more points to be made in this regard. As Vygotsky has pointed out, writing is a developmental process. These students represented several stages of this development. In variables for which significant growth was not seen during the nine month span, it is possible that there would be significant growth when observed over a longer period. Similarly, some correlations not significant

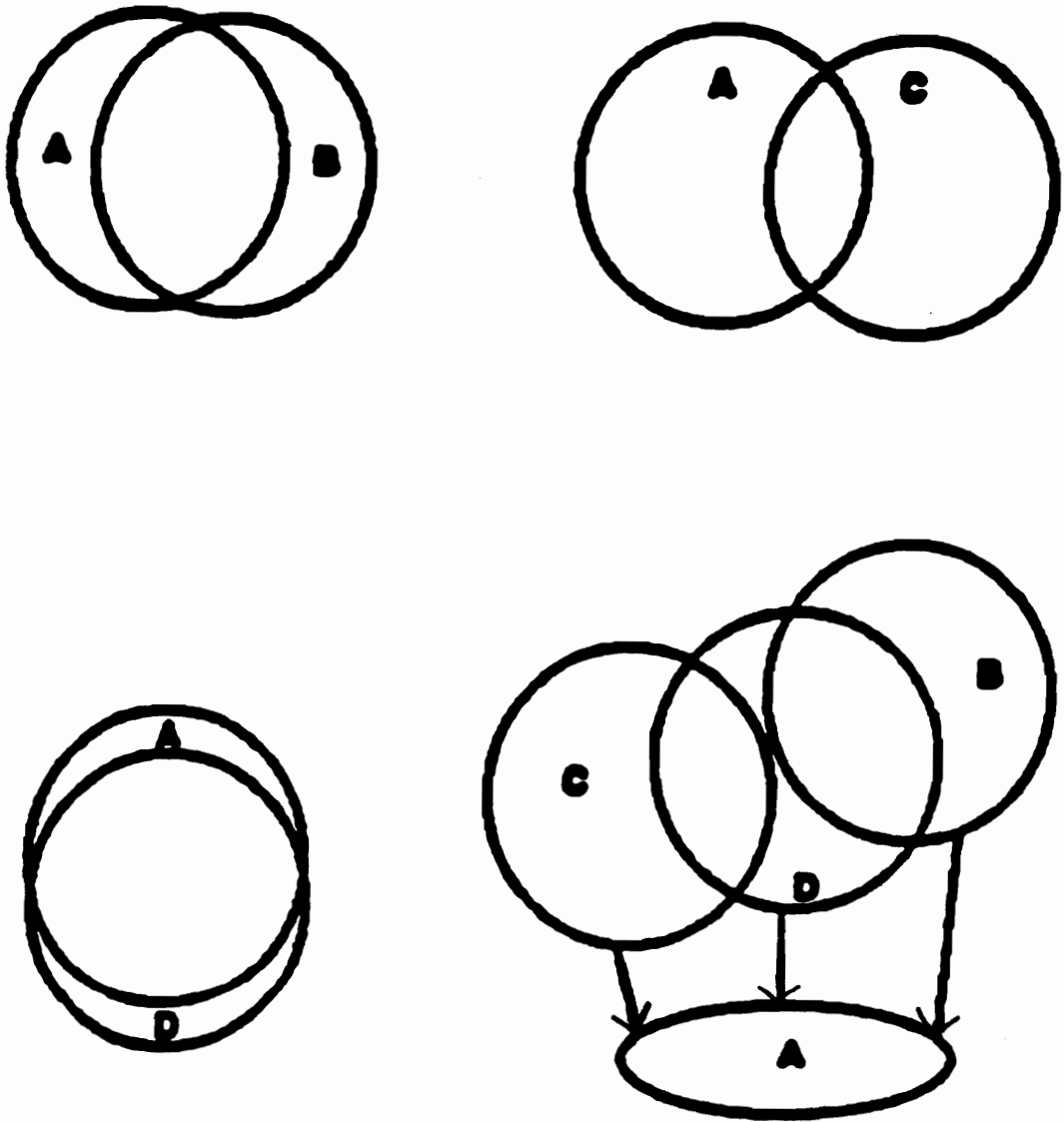


Figure 4. End of study position for variable DETAIL  
See Table 3 for Spearman rho correlations

A = DETAIL  
B = AUDIENCE AWARENESS

C = SOCIAL COGNITION  
D = WRITING ABILITY

at a given time may be at other times. (See Table 2 for correlations during the three time periods for audience awareness and reference, and detail and writing ability.)

As for social cognition, this includes what the students thought, and then later said, about others. Social cognition can be present in thought without manifesting itself in speech. Recursive thought can also be present in thought and speech without appearing in a student's writing. Another study might investigate the relationships between social cognition, oral speech, informal writing, and formal writing.

It is also noted that the audience awareness scores were obtained by using the journals themselves. It should not be surprising that the audience awareness and writing scores would be highly correlated, but that was not a given.

While the focus was on the students during this study it is also possible to look at the teacher as she responded to her students, and to question patterns in her responses to her students. Did the student journals affect her? Was her feedback to students as neutral as she originally intended? Did she ask more open or closed questions to some students than to others? Did she treat the journal entries of boys differently from those of girls? Why did she comment on some student statements and skip others? Why did she address some students by name more often than others?

These interesting questions offer possibilities for future investigation.

#### Conclusion

The children in this study changed over time. They grew in their ability to assume responsibility for their writing. They demonstrated awareness of their teacher as audience, displayed social cognition skills, and for the most part became responsible dialoguers. The students improved over time in expression of detail, response complexity and reference, significantly so for response complexity and reference between the first and third and second and third time periods.

Knowing this helps the understanding of dialogue journal writing and its elements. Although this study involved a small number of children for only a short time, results indicate the usefulness of the rating scales and also provide tools for guiding teacher observation.

On page viii of his forward to Dialogue Journal Communication: Classroom, Linguistic, Social and Cognitive Views (1988), Bruner writes:

From the point of view of linguistic pragmatics, the approach [dialogue journal writing] makes eminently good sense. Above all, it is a recognition of, and a salute to, the intrinsically human nature of the learning situation. The time has come to give up once



and for all the regressive idea that learning takes place most effectively within the rarefied atmosphere of the monk's cell, that it is a solitary pursuit performed within the shadows of an abstract god. Much of learning is contextual and performed best when it can occur within human dialogue.

## LITERATURE CITED

- Anderson-Smith, K. (1986, December). Dialogue journals in marketing education. Dialogue, p. 5.
- Bernstein, B. (1972). A critique of the concept "compensatory education". In C. Cazden, D. Hymes & V. John (Eds.), Function of language in the classroom. NY: Teachers College.
- Bloom, L., Rocissano, L., & Hood, L. (1976). Adult-child discourse: Developmental interaction between information processing and linguistic knowledge. Cognitive Psychology, 8, 521-552.
- Braig, D. (1984). Six authors in search of an audience: Dialogue journal writing of second graders. Dissertation Abstracts International, 45/05A p. 1295. University Microfilms International No. 8417269.
- Britton, J. (1978). The composing processes and the functions of writing. In C. Cooper & L. Odell (Eds.), Research on composing: Points of departure. Champaign, IL: National Council of Teachers of English.
- Britton, J. (1985). Research currents: Second thoughts on learning. Language Arts, 62, 72-77.
- Britton, J., Burgess, T., Martin, N., McLeod, A. & Rosen, H. (1975). The development of writing abilities (11-18). London: McMillan.
- Bruner, J. (1966). Toward a theory of instruction. Cambridge, MA: Harvard University Press.
- Bruner, J. (1988). Forward. In Staton, J., Shuy, R., Peyton, J., & Reed, L. Dialogue journal communication: Classroom, linguistic, social and cognitive views. Norwood, N.J: Ablex.
- Calkins, L. (1986). The art of teaching writing. NH: Heinemann.
- Cazden, C. (1972). Child language and education. NY: Holt, Rinehart and Winston.
- Cazden, C. (1979). Peekaboo as an instructional model: Discourse development at home and at school. Papers and Reports on Child Language Development. No. 17. Palo Alto, CA: Stanford University, Department of Linguistics.
- Clay, M. (1975). What did I write? London: Heinemann.

- Cochran-Smith, M. (1983). Reading stories to children: a review critique. In B.A. Hutson (Ed.), Advances in reading/language research, 2. Greenwich CT: JAI.
- Elsasser, N. & John-Steiner, V. (1977). An interactionist approach to advancing literacy. Harvard Educational Review, 47, 355-369.
- Elkind, D. (1970). children and adolescents. NY: Oxford University.
- Farley, J. (1986). An analysis of written dialogue of educable mentally retarded writers. Education and training of the educably mentally retarded. 21, 181-191.
- Farley, J. (1987, April). Gifted Children and interactive writing. Dialogue, p. 8.
- Ervin-Tripp, S. & Mitchell-Kernan, C. (1977). Introduction to child discourse. NY: Academic.
- Feffer, M. (1959). The cognitive implications of role-taking behavior. Journal of Personality, 27, 152-168.
- Flavell, J. (1975). The development of role-taking and communication skills in children (reprint ed.). NY: Robert E. Krieger.
- Garvey, C. (1974). Some properties of social play. Merrill-Palmer Quarterly, 20, 163-180.
- Glucksburg, S., & Krauss, R. (1967). What do people say after they have learned how to talk? Studies of the development of referential communication. Merrill-Palmer Quarterly, 13, 309-316.
- Glucksberg, S., Krauss, R., & Higgins, E. (1975). The development of referential communication skills. In F. Horowitz (Ed.), Review of child development research (Vol. 4). Chicago: University of Chicago.
- Graves, D. (1981). Patterns of control of the writing process. In R. D. Walshe (Ed.), Donald Graves in Australia. Exeter: Heinemann.
- Graves, D. (1983). Writing: teachers and children at work. Exeter, NH: Heinemann.
- Gutstein, S. (1987, April). Assessing communicative competence in the dialogue journals of ESL students. Dialogue, p. 15.

- Harste, J., Burke, C., & Woodward, V. (1981). Children, their language and world: Initial encounters with print. Bloomington: Indiana University.
- Halliday, M. (1977). Learning how to mean. NY: Elsevier North-Holland.
- Hunt, K. (1965). Grammatical structures written at three grade levels (Research Report No. 3). Urbana, IL: National Council of Teachers of English.
- Hipple, M. (1985). Journal writing in kindergarten. Language Arts, 62, 255-261.
- Keenan, E. (1974). Conversational competence in children. Journal of Child Language, 1, 163-183.
- Kreeft, J. (1984). Dialogue writing-bridge from talk to essay writing. Language Arts, 61, 141-150.
- Kreeft, J., Shuy, R., Staton, J., Reed, L., & Morroy, R. (1984). Dialogue writing: Analysis of student-teacher interactive writing in the learning of English as a second language. Final Report to the National Institute of Education, NIE-G-83-0030. Washington, DC: Center for Applied Linguistics.
- Kroll, B. (1978). Cognitive awareness and the problem of audience awareness. Research in the Teaching of English, 12, 269-281.
- Kroll, B. (1980). Developmental perspectives and the teaching of composition. College English, 41, 741-752.
- Kurdek, L. (1979). Generality of decentering in first through fourth grade children. The Journal of Genetic Psychology, 134, 89-97.
- Light, P. (1979). The development of social sensitivity. Cambridge: Cambridge University.
- Loban, W. (1976). Language development: Kindergarten through grade twelve. Urbana, IL: National Council of Teachers of English.
- Long, R., & Bulgarella, L. (1985). Social interaction and the writing process. Language Arts. 62, 166-172.
- Looft, W. (1972). Egocentrism and social interaction across the life span. Psychological Bulletin, 78 (2), 73-80.

- Lowenstein, S. (1987). A brief history of journal keeping. In T. Fulwiler (Ed.), The Journal Book (pp. 87-97). Portsmouth, NH: Boynton/Cook.
- Maguire, M. (1989). An analysis of dialogue journal writing. Conseil scolaire de l'ile de Montreal: Montreal, Canada.
- McCaig, R. (1984). A model for the evaluation of student writing. MI: The Grosse Pointe Board of Education.
- McDonnell, G., & Osburn, B. (1978, May). The development of written discourse of primary age children. Paper presented at conference of the International Reading Association, Houston, TX.
- Mead, G. (1934). Mind, self, and society. Chicago: University of Chicago.
- Miller, P., Kessel, F., & Flavell, J. (1970). Thinking about people thinking about people thinking about...: A study of social cognitive development. Child Development. 41, 613-623.
- Moffett, J. (1983). Teaching the universe of discourse. Boston: Houghton Mifflin.
- Moffett, J., & Wagner, B. (1983). Student-centered language arts and reading, K-13: A handbook for teachers. Boston: Houghton Mifflin.
- Piaget, J. (1950). The psychology of intelligence. London: Routledge & Keegan Paul.
- Piaget, J. (1955). The language and thought of the child. NY: World.
- Piaget, J. (1962). Comments on Vygotsky's critical remarks concerning the language and thought of the child and judgment and reasoning in the child. MA: MIT Press.
- Piaget J., & Inhelder, B. (1969). The psychology of the child. London: Routledge & Keegan Paul.
- Reed, L. (1988). Dialogue journals make my whole year flow: The teacher's perspective. In Staton, J., Shuy, R., Peyton, J., & Reed, L. Dialogue journal communication: Classroom, linguistic, social and cognitive views (pp.56-72). Norwood, N.J.: Ablex.
- Rose, B. (1989, September). Dialogue Journals in Mathematics Courses. Dialogue, p. 6.

- Rosen, C. & Rosen, H. (1973). The language of primary school children. Harmondsworth, England: Penguin.
- SAS Users Guide: Statistics Version 5. (1985). Cary, NC: SAS Institute.
- Selman, R., & Byrne, D. (1974). A structural-developmental analysis of levels of role-taking in middle childhood. Child Development, 45, 803-806.
- Shantz, C. (1975). The development of social cognition. In E. Heatherington, (Ed.), Review of child development research: Vol. 5 (pp. 257-323).
- Shuy, R. (1988). The oral language basis for dialogue journals. In Staton, J., Shuy, R., Peyton, J., & Reed, L. Dialogue journal communication: Classroom, linguistic, social and cognitive views (pp. 73-87). Norwood, NJ: Ablex.
- Staff. (1989, April). New Publications. Dialogue journal writing with first graders. Dialogue, p. 22.
- Staton, J. (1984). Thinking together: The role of language interaction in children's reasoning. In C. Thaiss & C. Suhor (Eds.), Speaking and writing, K-12. Champaign, IL: National Council of Teachers of English.
- Staton, J. (1985). Using dialogue journals for developing thinking, reading and writing with hearing-impaired students. Volta Review, 87, 127-154.
- Staton, J. (1987). The power of responding in dialogue journals. In T. Fulwiler (Ed.), The journal book. (pp.47-63). Portsmouth, NH: Boynton/Cook.
- Staton, J. (1987, April). New research on dialogue journals. Dialogue, pp. 1-3.
- Staton, J., Shuy, R., Kreeft, J., & Reed, L. (1982). The analysis of dialogue journal writing as a communicative event. National Institute of Education. NIE-G-80-0122. Washington, DC: Center for Applied Linguistics. (ERIC Document Reproduction Services Nos. ED 214 196; ED 214 197).
- Staton, J., Shuy, R., Peyton, J., & Reed, L. (1988). Dialogue journal communication: Classroom, linguistic, social and cognitive views. Norwood, NJ: Ablex.

Tierney, R., & Pearson, P. (1983). Toward a composing model of reading. Language Arts, 60, 568-580.

Vygotsky, L. (1978). M. Cole, V. John-Steiner, S. Scribner & R. Loubberman (Eds.), Mind in society: the development of higher psychological processes. Cambridge MA: Harvard University Press.

Vygotsky, L. (1986). Thought and language. Cambridge: MIT Press.

APPENDIX A

Thinking about people thinking about people...

Item Group and No.

Description

Contiguity:

- 1.....The boy is thinking of the girl.
- 2.....The boy is thinking of himself.
- 3.....The boy is thinking of the girl and the  
father.
- 4.....The boy is thinking of himself and the  
girl.
- 5.....The boy is thinking of the girl, the  
father, and the mother.
- 6.....The boy is thinking of himself, the  
girl, and the father.

Action:

- 7.....The boy is thinking that the girl is  
talking to the father.
- 8.....The boy is thinking that he is talking  
to the girl.
- 9.....The boy is thinking that the girl is  
talking to him.

One-loop recursion

- 10.....The boy is thinking that the girl is  
thinking of the father.



## APPENDIX A - Page 2

- 11.....The boy is thinking that he is thinking  
of the girl.
- 12.....The boy is thinking that the girl is  
thinking of him.
- 13.....The boy is thinking that the girl is  
thinking of herself.
- 14.....The boy is thinking that he is thinking  
of himself.

## Two-loop recursion:

- 15.....The boy is thinking that the girl is  
thinking of the father thinking of the  
mother.
- 16.....The boy is thinking that he is thinking  
of the girl thinking of herself.
- 17.....The boy is thinking that the girl is  
thinking of the father thinking of the  
mother.
- 18.....The boy is thinking that he is thinking  
of himself thinking of himself.

From Miller, Kessel & Flavell, Child Development, 1970, 41,  
613-623.

## Appendix B

### Britton's divisions of audience

---

1. Self--child or adolescent to self
2. Teacher
  - 2.1 Child or adolescent to trusted adult
  - 2.2 Pupil to teacher, general (Teacher-learner dialogue)
  - 2.3 Pupil to teacher--particular relationship
3. Wider audience (known)
  - 3.1 Expert to known layman
  - 3.2 Child or adolescent to peer group
  - 3.3 Group member to working group (known audience which may include teacher)
4. Unknown audience--writer to his/her readers (or his/her public)
5. Additional categories
  - 5.1 Virtual named audience
  - 5.2 No discernable audience

From Britton, J., Burgess, T., Martin, N., McLeod, A., & Rosen, H., & Rosen, H. (1975). The Development of Writing. London: McMillan.

APPENDIX C

Examples of Ratings Given for Dependent Variables

REFERENCE

1	2	3	4
self	self/others	others	you/us

1 - self

S - Thursday, June 6, 1885

Today I feel better. I think  
I won't be going to the clinic today.  
Today I got some new things.

2 - self/others

S - March 6, 1985

I was doing my homework when  
I herd a BOOM! I went to see  
what It was and it was the certain curtain  
my sister was playing with the  
certain and knocked It  
down it fel with a  
B O O M !

3 - others

S - Tuesday October 30, 1984

Today my mom started  
a new office and a new work, too.  
She use to work there before.

## APPENDIX C - Page 2

She is glad she is there  
again.

4 - you/us

S - Monday, May 20, 1985

Yesterday I had  
a dream that you  
fell in a well

It was trouble. I  
couldn't sleep anymore.

terrible

I hated that dream

it was to grose.

I didn't want to

tell my mom.

## RESPONSE COMPLEXITY

1	2	3	4
none	yes/no	elaborated	expanded

1 - none

S - November 13, 1984

When I did  
my home work  
I need a lots  
of help.

T - Who helps you?

## APPENDIX C - Page 3

S - [no response]

2 - yes/no

S - November 3, 1984

Today I am going to the

store to get some

close for my cadigpath kid. clothes Cabbage Patch

I like it a lot.

T - Who are you going with, Mary?

Did you just get your Cabbage Patch Kid?

S - no

3 - elaborated

S - March 22. 1985

I played out side and my mom

thought I was lost

T - She must have been very worried.

Did she almost call the police?

S - YES! How did you ges? guess

4 - expanded

S - Monday, Dec. 17, 1984

I went to look at gunie pigs. guinea

It was fun. We saw one that we

might get. It was pretty. It is a

female. We have a male.

T - That will be nice! When will you decide?

## APPENDIX C - Page 4

S - Tuesday, Dec. 18, 1984

We went back and put it on hold.

I was glad. It is an abbyssinnin.

Abyssinian

It is brown and white. She is  
cute.

T - You must be very excited! When will  
you get her?

S - Wednesday, Dec. 19, 1984

I do not know when. I

am VERY excited! She does not  
bite.

## DETAIL

1

2

3

many gaps

fewer gaps

coherency

1 - many gaps

S - October 4, 1984

When I got home

mom said let's go

to the Fall's? O.k

I said. My brother

I wanto go to

the pond with

## APPENDIX C - Page 5

so he went with  
his friend.

2 - fewer gaps

S - October 23, 1984

On Saturday

I had a soccer

we won three to nothing.

On Sunday we rack the leves.

rake

leaves

3 - coherency

S - January 7, 1985

On Friday we

got the video. On

Saturday We joind

joined

Errol,s video clud.

club

I got Breakin and

Grease 2 and Where

the red fein grows.

fern

They were good.

VITA

Date of Birth	December 2, 1927
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Education	
1991 - Doctor of Education	Virginia Polytechnic Institute & State Univ.
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