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The Relationship Between Teacher Conceptions about Writing Instruction and Student Perceptions and Performance in Writing

by

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ABSTRACT

THE RELATIONSHIP BETWEEN TEACHER CONCEPTIONS ABOUT WRITING INSTRUCTION AND STUDENT PERCEPTIONS AND PERFORMANCE IN WRITING

by

Kathleen L. Fear

This study examines relationships among third, fourth, and fifth grade teachers' conceptions and students' perceptions and performance in writing. Teachers (n=28) completed structured questionnaires on their conceptions about writing instruction. After analyzing the data from the questionnaire, 10 teachers holding two different perspectives were identified for more in- depth analysis. Teachers with an externally-focused perspective expressed high agreement with the conception that the teacher's role is to inform students about form. Teachers with an internally-focused perspective expressed high agreement with the conception that the student informs the teacher about the function of a written piece. Results indicated that significant differences exist between the two groups of teachers in their conceptions of student informancy status, goals and evaluation during writing instruction; and

significant positive relationships exist between these conceptions and classroom practice. Students of teachers holding disparate conceptions were compared and incoming differences were removed.

Compared to teachers with externally-focused conceptions, teachers with internally-focused conceptions had students who perceived writing to be an internally-drive activity that must be completed to communicate with different audiences in different contexts. In addition, the internally-focused teachers' students surpassed the externally-focused teachers' students when the content and mechanics of written composition were examined.

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CHAPTER I

INTRODUCTION AND PURPOSE

This is a study of conceptions that drive teacher decisions about writing and the relationship of those conceptions to students' perceptions and writing performance. It is distinct from studies of teacher decision making because the focus is on teacher conceptions that drive decisions, rather than teacher decisions that drive behaviors (Shulman & Elstein, 1975; Shavelson & Stern 1981). Because recent research emphasizes teacher thinking within subject matter domains (Shulman, 1986; McDermaid, Ball & Anderson, 1987; Wilson & Wineburg, 1987 and Ball, 1988), and the relationship between teacher thinking and student thinking (Winne & Marx, 1982; Doyle, 1983; and Rohrkemper, 1984), the relationship between teacher thinking about writing as a subject matter domain and students' thinking and performance in writing is studied.

Background

Within a large body of research on teacher thinking, research on teacher theories cut across content areas, rather than focusing on specific conceptions about pedagogy and content within subject matter domains, (Clark & Yinger, 1979; Posner, 1981; and Shavelson

& Stern, 1981). Recently, researchers are beginning to question the absence of a specific focus on subject matter. For example, Shulman (1986) points out that a "major limitation" of research on teacher thinking is the absence of focus on subject matter content that influences teacher thinking. In his review of various research paradigms, Shulman (1986) emphasizes the importance of this problem by labeling this "blind spot" the "missing paradigm." Shulman suggests that subject matter content might be integrated into the study of teachers' cognitive processes by examining teacher conceptions about specific content.

Researchers within a variety of subject matter domains are beginning to define conceptions held by teachers who have knowledge about both pedagogy and content, e.g., Duffy & Roehler (1988) in reading; Peterson, Fennema, Carpenter & Loef (1987) and Ball (1988) in math; and Wilson & Wineburg (1987) in social studies. The study proposed here reflects a similar concern, but the focus is on studying teacher conceptions in the area of writing instruction.

Teacher Conceptions about Writing

Teacher conceptions about writing instruction have not been described in the literature. However, researchers such as Bereiter and Scardamalia (1987) are beginning to describe models that suggest differences in teacher conceptions about writing instruction. These differences can also be inferred from an

examination of the research on teacher practices during writing instruction. They suggest teacher conceptions about: student informancy status, goals and evaluation.

Student Informancy Status

Differences in teachers' conceptions about students' informancy status can be inferred from the research on teachers' writing practices. Graves (1983) defines informancy status as a condition in which students assume a role that allows and encourages them to bring their own "territories of knowledge" into the classroom. This notion is supported and operationalized in data collected by Tierney, Leys and Rogers (1984:207) who studied writing in two different schools. Teachers from one school were described as perceiving their students as capable of informing others as authors and interpreters, rather than consumers of content manufactured by teachers, as reported in another school. Teacher differences found in this research are consistent with findings reported by Raphael, Englert and Anderson (1987), who examined differences in the content of teacher dialogue. For example, Teacher B suggested and defined appropriate topics for students and missed opportunities to develop student thinking of themselves as young writers who possess ". . . the knowledge and information to be successful informants." On the other hand, Teacher A, similar to a teacher described by Fear, Anderson, Englert & Raphael (1987), discussed student generated purposes and audiences. Deford (1984) reports similar differences in teacher

practices in classrooms that were organized around teacher assigned versus student initiated writing.

In summary, consistent patterns of teacher practices reported across research finding suggest that one critical difference in teacher thinking may be teachers' conceptions of their students as informants. Teacher conceptions could be described as ranging from the conception of the teacher as the informer of writing topics and information to the conception of the student as the informer of topics and purposes for chosen audiences.

Goals of Writing Instruction

A second difference in teacher conceptions is based in goals of writing instruction. Differences in teacher conceptions about goals can also be inferred from an examination of the research on teacher practices. For example, Tierney, et al. (1984) found that teachers in one school placed more emphasis on neatness, grammar and punctuation while teachers in another school emphasized the meaningfulness of written pieces.

These findings are consistent with interview data reported by Raphael, et al. (1987). After a year of involvement in a process writing project, Teacher B describes writing as a formulaic task in which students need help with proper mechanics such as punctuation, spelling, grammar and penmanship while Teacher A, involved in the same project, described writing as "a communication process" that depends upon the writers' abilities to reflect upon their own thinking. Deford (1984) and Scardamalia

& Bereiter (1986) concur with these findings when they suggest that teachers' goals range from writing to produce correct form, clarity and organization to writing that fosters development of reflective planning about the function of written pieces.

In summary, consistent differences reported by researchers indicate that a second critical difference among teachers may be teachers' thinking about the goals of writing instruction. Teacher conceptions about the goals of instruction could be described as ranging from the conception that writing goals should emphasize mechanics and decontextualized forms external to student thinking to the conception that writing goals should emphasize student communication of the meaning and the function of the text that is internal to the student's thinking.

Evaluation During Writing Instruction

Finally, differences in teacher conceptions related to evaluation can be inferred from an examination of the research on teacher practices during writing instruction. Tierney, et al. (1984) found marked differences between teachers in two schools. In one school, teachers evaluated and mediated student compositions and interpretations while teachers within another school encouraged "self-initiation," self-monitoring and self-evaluation. Again these findings are consistent with research on the content of teacher dialogue reported by Raphael, et al. (1987). Researchers found that Teacher B not only evaluated the appropriateness of topics but she also warned the students about

judges who would evaluate their writing. Teacher A on the other hand, developed self-reflection about the thinking process that underlies topic generation and selection. Similarly, Deford (1984) found differences in classrooms that she described as organized for mastery learning versus literature-based classrooms. In the mastery learning classroom, teacher feedback emphasized mechanics while in the literature-based classroom feedback conferences focused on student interpretation of the message within the text.

In sum, differences in teacher practices concerning what is evaluated and who evaluates texts suggest differences in teacher conceptions. These conceptions could be described as ranging from the conception of evaluation as externally focused on formal criteria that is predetermined by the teacher to the conception of evaluation as internally focused on the students' reflections about the purpose, the audience and the meaning of the text.

Summary

There are marked similarities across research findings suggesting that teachers hold internally or externally focused conceptions about student informancy status, goals and evaluation. Bereiter & Scardemalia (1986:795) reinforce this difference, cautioning teachers about conducting writing instruction that does not allow the writer to develop the ability to . . . harmonize personal and externally defined objectives." Personal objectives can be defined as students' intentional plans, i.e., students are

stake holders because they determine communication purposes for audiences that they know about. Externally defined objectives can be defined as imposed plans, or teacher determined purposes and/or audiences. These purposes include teaching the student to reproduce traditional structures, rules and norms previously agreed upon and handed down by communities of writers that are decontextualized from the writer's current situation.

In light of the research on teacher practices, these comments may suggest that teachers who hold conceptions that are internally focused on students are more able to balance internal and external objectives. They view the student as an informant so that formal rules and procedures are evaluated by the student in light of purposes, audiences, and contexts. Students then must self-evaluate their written pieces in terms of how successful they are in communicating to an audience. In contrast, teachers who hold conceptions that are externally focused on forms see themselves as informants and evaluators who tell students rules and formal criteria that can be decontextualized from the writing process without regard for purpose or audience.

Therefore, teacher conceptions about their students, goals and evaluation are described as being externally or internally focused. These differences may be linked to differences in students. That is, internal or external teacher conceptions may be related to internal and external control of students' thinking processes. In the next section, current research will

be cited that documents the relationship between teacher thinking and student thinking.

Linking Teacher Conceptions to Student Conceptions

Consistent findings are reported when researchers examine the relationship between teacher thinking and student thinking (Deci, Schwartz, Sheinman & Ryan, 1981; Cusick, 1983; Peterson et al., 1986; and Anderson, Stevens, Prawat & Nickerson, 1988). For example, in an early study, Kounin & Gump (1961) found that teachers' beliefs and behaviors not only influenced activities in the classroom but also their students' self-perceptions and perceptions about school. These findings are consistent with research conducted by Rohrkemper (1984) who studied teachers' beliefs about socialization. Teachers' socialization styles were found to be related to students' social cognition and classroom behavior.

Similarly, Fear, Anderson, Raphael & Englert (1987) found evidence that students' perceptions of control of the writing process were positively related to teachers' belief systems and instructional practice. It was determined that teachers who believed that students should be placed in the role of an informant had students who reported internal strategies for selection of topics. However, this study included only a small number of student and classrooms and only limited aspects of students' metacognitive knowledge, such as topic selection, were examined. The larger set of subprocesses within the writing

process was not addressed. Therefore, it is not known if these students were in metacognitive control of internal strategies for subprocesses such as planning organizing, drafting, editing and revising their texts. Furthermore, we do not know if students who are more metacognitive can produce texts that are of higher quality than students who are less metacognitive. Research examining these issues could provide valuable information about student metacognitive control and performance in relation to teacher conceptions that underlie observed differences.

Student Perceptions

The research on student metacognitive control describes characteristics of student perceptions that parallel differences in teachers' internal and external conceptions about writing. This is important because internal and external perceptions of control are beginning to be identified as critical outcomes of instruction within specific subject matter domains. For example, internal control of thinking is examined by researchers who study metacognitive knowledge of the reading process. Metacognitive knowledge is defined as both awareness and control of cognition (Flavell, 1978 and Brown, 1978), while control of cognition is the executive control of processes such as planning, monitoring, checking and revising (Brown, 1978). In reading research, numerous studies confirm the relationship between metacognitive control and improvements in reading performance consistently across grades and ability groups (Brown, Armbruster & Baker, 1984,

for a past review; and Paris, Wasik & Westhuizen, 1988, for a more current review).

Similarly, students' perception of control is beginning to be examined by research in writing instruction. For example, recent researchers of student metacognitive knowledge about the writing process (Englert, Raphael, Fear & Anderson, 1988) found that students with metacognitive deficits were dependent upon external cues to make decisions about writing. These students were more externally reliant on the teacher to tell them what to do, and how and when to carry out different tasks during writing instruction. In contrast, students with metacognitive control can be defined as dependent upon internal cues when they make decisions about strategies for planning, organizing and drafting for an audience chosen by the student. The Englert, et al. (1988) study, cited above, documents differences in student thinking. These differences could be related to teacher conceptions.

Summary

Differences in teachers' internally and externally focused conceptions about student informancy status, goals and evaluation may result in different instructional practices. Presumably, if the content and the quality of instruction in writing affects students' perceptions, then the content and quality of students' perceptions and performance will differ depending on teacher's conceptions.

Statement of the Problem

This study will examine the effect of different teacher conceptions about writing instruction on student perceptions of the writing process and on the quality of students' written products.

Research Questions

1. Are there differences in teacher conceptions about writing?
2. Are there relationships between teacher conceptions about writing and student perceptions of the writing process?
3. Are there relationships between teacher conceptions about writing and the quality of students' written products?

Significance of the Problem

Efforts of policy makers and researchers to improve writing instruction in elementary classrooms are seen in state and local funds, reform movements and implementation studies. These efforts have had considerable impact on the writing curriculum within elementary classrooms (Florio-Ruane, 1987). However, variation among the way that teachers interpret and enact the same curriculum has been documented by the research on teaching and learning (Schwille, Porter, Floden, Freeman, Knapp, Kuhs & Schmidt, 1983). At the same time, variation in how students interpret the actions of the same teacher has been described (Nespor, 1987). Therefore, it is important to analyze how teachers interpret and enact writing curriculum and how students interpret

writing instruction in order to improve instructional effectiveness in writing.

The writing research reported here is significant because it describes how teachers conceptualize and enact writing curriculum and how this affects student perceptions control of the writing process and student performance in content and mechanics in writing.

Definition of Terms

This dissertation uses several terms in its discussion. The major terms are defined below.

Writing process: a recursive cognitive system of operations that includes subprocess such as planning, organizing, drafting, revising, and editing; that is carried out with the intention of producing written drafts.

Student perceptions about writing: student awareness of how to make decisions about what to write about, why something needs to be written, and how to go about writing a text.

Internal perceptions of the writing process: is the writers' ability to make decisions based on the authors' purpose, audience, and the function that a written product performs.

External perceptions of the writing process: is the writers' reliance on the teacher or surface features to make decisions about what to include in the written text.

Externally-focused teacher conceptions: teacher conceptions which places emphasis on the teacher informing the student of forms and the teacher evaluating written products according to how well it adheres to rules and conventions.

Internally-focused teacher conceptions: teacher conceptions which place emphasis on the student identifying purposes and audiences, and on the student evaluating written pieces according to how well the piece communicates a message.

Writing forms: language conventions and structures that can be decontextualized.

Writing functions: contextualized purposes for writing.

Pedagogical knowledge: knowledge about "how and why" content should be taught.

Content knowledge: knowledge about "what" should be taught within a specific subject matter domain.

Pedagogical content knowledge: the interaction between knowledge of content and knowledge about pedagogy within a specific subject matter domain. Pedagogical content knowledge is operationalized as teachers conceptions about subject matter and pedagogy.

Teacher conceptions: thoughts that organize ideas and drive the decision making process.

Limitations

There are three limitations to the study: the generalization of findings, measuring cognitive skills with either interviews or paper and pencil tests, and possible bias due to one data collector.

Limitation 1: Generalizability of Findings

The sample of teachers were drawn from a group of teachers whose agreement with propositional statements about writing instruction indicated well formulated conceptions of writing instruction and its impact on students. Teachers having mixed or less well formulated conceptions as determined by their responses to propositional statements were not studied. Therefore, a sizable portion of the teaching population is not represented and generalizability of the findings is limited.

Limitation 2: Measuring Cognitive Processes

The validity of research on cognitive processes has been questioned by research methodologists (Yinger, 1986). On one hand, asking questions and stimulating responses about cognitive processes in interviews may change the process that is being measured. On the other, measuring cognitive process with paper and pencil tests reduces the complexity of mental processes. Therefore, measures used to assess processes such as student perceptions may be subject to questions of validity.

Limitation 3: Bias in the Data Collection

Possible bias may exist in the observational and interview data because one researcher collected all data. Although exact dialogue was recorded, researchers suggest that researchers who transcribe dialogue may produce biased transcripts through the inadvertent elimination of subtleties such as hesitations, utterances and changes in voice intonations (Green, 1988).

At the time of the data collection, the data collector had background knowledge of some of the teachers. Such knowledge could lead to some judgements about group membership and thereby introduce bias in data collection.

Limitation 4: Time on Task

Teacher self-report data were used to determine if equal amounts of time were devoted to writing instruction across the 10 classrooms analyzed to substantiate questionnaire findings.

Although each of the 10 teachers reported that his/her students wrote every day with only a few changes in their schedules, the amount of writing time was not verified through observation of each writing lesson from the beginning of the year to December. Therefore, differences in student outcomes may be due to factors such as time on task.

Summary of Chapter I

This study investigates teachers' conceptions about writing instruction and how their conceptions relate to differences in student perceptions of the writing process and students' writing ability. It is expected that teachers with internally-focused conceptions will have students who have perceptions of the writing process and higher quality written products.

This dissertation will have implications for future studies in the acquisition and instruction of writing processes and in understanding how teacher conceptions about writing drive instructional practices. These implications are important for several groups of people. First, it will help teachers understand how their thinking impacts student learning and performance in writing. Second, it will help researchers understand and interpret the effects and outcomes of instructional interventions in writing. Third, it will help teacher educators assess students' incoming conceptions about writing. Fourth, it will help educational reformers implement programs to improve instructional effectiveness.

CHAPTER II

REVIEW OF THE LITERATURE RELATED TO TEACHER THINKING AND STUDENT PERCEPTIONS AND PERFORMANCE IN WRITING

This study examines the relationship between teacher conceptions about writing instruction and students' perceptions and performance in writing. As such, it calls on research from the following fields: the literature on teacher thinking, the literature describing the relationship between teacher thinking and student thinking, the literature on student metacognitive control as an outcome of instruction, and the literature on writing instruction.

The underlying plan of this literature review focuses on teacher thinking and student thinking in general at the beginning of each section, and then moves to a focus on teacher and student thinking in one subject matter domain, writing instruction. Because the questions in this study address writing as a subject matter domain, more in-depth attention is given within each of the four sections to studies that establish baseline information in the area of writing and therefore supports the need for this study.

Section 1 reviews and traces research on teacher thinking in general that support the need for studying teacher conceptions about subject matter, such as writing.

Section 2 describes teacher conceptions about writing instruction that are suggested by the research on teacher practices during writing instruction. Section 3 surveys research that links teacher thinking with student thinking, focusing on recent work in writing instruction. Finally, Section 4 examines student thinking that parallels differences in teacher conceptions described in Section 2 by reviewing research on student perceptions and performance.

Section 1: Research on Teacher Thinking
Teacher Thinking Across Content Areas

In section one, past research on teacher thinking is reviewed and contrasted with current research on teacher thinking. Earlier worked reviewed by Clark & Yinger, 1979; Posner, 1981; and Shavelson & Stern, 1981 focused on portraying the complexity of the teachers' planning, decision making and judgements during the preactive and interactive phases of teaching across subject matter in general. This research emphasized the importance of understanding teacher thinking and planning as a means for making sense of classroom behaviors. It lead to the view of the teacher as a professional who carries out skilled <u>performances</u> in classrooms. Similarly, Clark & Peterson (1986:257) define teacher

actions that result from complex thought processes before and during instruction. Two superordinate categories, teacher action and teacher thought, are used to categorize subordinate variables in this model of the teacher as a skilled professional. One category, teacher thought, contains subcategories such as 1) teacher planning, 2) decision making and 3) teacher theories.

In contrast to the Clark and Peterson model and earlier work, current researchers are beginning to change the focus of research on teacher thinking in two ways. First, researchers describe a different relationship between planning, decision making and teacher theories; and second, researchers are beginning to define teacher thinking in terms of teacher conceptions about subject matter.

First, instead of seeing the three categories, planning, decision making and teacher theories, as parallel, researchers describe teacher theories as those thoughts that drive decision making and planning (Shulman, 1987 and Yinger, 1986). Specifically, teachers hold theories; these theories drive decisions, and these discrete decisions drive behavior. Reconceptualizing the relationship between teacher theories and teacher decision making has changed the focus of the research on teacher thinking that is related to a second significant change.

The second change in the research on teacher thinking has to do with a change in focus from general theories that cover a variety of topics, to a focus on specific theories that explain

differences in teacher conceptions about subject matter. For example, Clark & Peterson review articles categorizes under teacher theories that describe broad pedagogical principles such as teachers perspectives of their roles (Munby, 1983), pedagogical principles (Conners, 1978), practical knowledge (Elbaz, 1981), classroom control (Olson, 1981) and influence and principles of practice (Clark & Peterson, 1986). In essence, these studies attempted to capture teacher theories that cut across content areas, rather than questioning whether differences exist in teacher theories about different content areas.

In contrast, current researchers question the absence of focus on teacher conceptions within specific subject matter. For example, Shulman (1986) concludes in his analyzes of paradigms and research programs in the study of teaching, that there is clearly a "missing program". He describes the field as

> ". . . falling short in the elucidation of teachers' cognitive understanding of subject matter content and the relationships between such understanding and the instruction teachers provide for students. (Shulman, 1984).

Changes in the work of reading researchers, who address this short fall, are examples of current changes from the study of teacher thinking in general to the study of teacher conceptions about subject matter. Duffy (1977) and Duffy & Anderson (1984) began to explore teachers' conceptions of reading as an integrated whole rather than perceiving reading as a sequence of isolated skills. In this work teachers' conceptions about using basal

readers and other approaches were analyzed in order to understand differences in teacher practice related to conceptions about reading content. More current research attempts to identify teacher practice related to teacher conceptions about content and pedagogy. For example, Duffy & Roehler (1987) examine teachers representations of content and responsive elaborations to students' restructuring of reading content. This research can be classified as representing a set of research that examines teachers' "pedagogical content knowledge".

Teacher Thinking Within Content Areas: Pedagogical Content Knowledge

A different category of teacher thinking is represented in work that examines "pedagogical content knowledge" because teacher thought in classrooms interacts and is transformed by students' learning and achievement. Shulman defines teachers' "pedagogical content knowledge" as including:

> The ways of representing and formulating the subject that make it comprehensible to others . . . alternative explanations of the same concepts or principles. . . Pedagogical powerful and yet adaptive variations. . . (understanding) conceptions and preconceptions that students of different ages and background bring with them to the learning of those most frequently taught topics. (Shulman, 1986 p. 9)

Shulman (1986) argues that subject matter content knowledge might be integrated into the study of teachers' thinking by examining the interaction between knowledge of subject matter content and knowledge of pedagogy. An important distinction is

suggested by this work. Rather than defining teacher thinking in terms of teacher decision making or "a deliberate choice to implement a specific action" (Clark & Peterson 1986: 274); instead, teacher thinking is defined in terms of teachers' conceptions of "alternative theories of interpretation and criticism" about subject matter. The focus in this analysis is on describing patterns of thought that drive decisions. The teacher is described as needing flexible and multifaceted comprehension and metacomprehension of content so that decisions making is flexible rather than rigid. Rather than routinizing decision making, decisions grow out of a conception of reality that are subject matter and situationally bound. Teacher thinking can then be characterized as taking control of understanding multiple forms of content for student representation. Therefore, teacher conceptions about content are inseparably bound to conceptions about students, so that the analytic focus is on interaction between knowledge of pedagogy and knowledge of content.

Other researchers and scholars compliment and extend Shulman's analysis by comparing teacher thinking to other design professions. For example, Yinger (1986) describes teacher thinking as characterized by "flexible adaptation and improvisation" similar to the artful skills of other design professions like architecture and engineering. He describes designers of physical structures as taking knowledge of content, such as principles of architecture and principles of art, together

in "reflective conversations" with knowledge of situations. Similarly, designers of content structures use knowledge of subject matter in "reflective conversation" with other forms of knowledge, such as knowledge of how to represent content within a given context or situation. Pedagogical content knowledge is further refined in this analysis. The teacher as well as the architect or the engineer moves back and forth from decontextualized knowledge of content to contextualized knowledge of content and pedagogy that involves teacher conceptions about the content, the student, the time and the setting.

Teacher Conceptions

Researchers who study specific subject matter domains are beginning to operationalize "pedagogical content knowledge" in classrooms by defining conceptions that teachers hold about specific subject matter content. For example, Peterson, Fennama, Carpenter & Loef (1987) describe teacher pedagogical knowledge in Math as cognitively-based vs. less cognitively-based. Differences in teachers' instruction of addition and subtraction were studied.

Teachers who were described as cognitively-based believed that 1) children construct rather than receive knowledge, 2) skills should be taught in relations to rather than in isolation from problem solving, 3) instruction should be organized to facilitate children's construction rather than teachers' presentation of knowledge.

Differences found above in teachers conceptually-based vs. rule-based instruction are similar to differences found in an analysis of three teachers studied by Ball (1988). Teachers' knowledge of mathematics, their assumptions about teaching and learning, and their assumptions about the context of the classroom were identified as different across teachers (Ball, 1988). One teacher is described as seeing her role as showing students procedures, assigning and monitoring practice and remediating difficulties. While another teacher holds different assumptions about why, as well as how children learn math. The latter teacher sees her role as facilitating student learning. She assumes that students must be actively involved in constructing their own understanding. So that her goal is to involve students in a mathematical community.

Similarly, Wilson & Wineberg (1987), in a cross case analysis, found differences in four teachers in ways that they know and believe different ideas about the disciplines that represent the social sciences or Social Studies. Teachers' knowledge of subject matter and their awareness of different ways of knowing content are described as critical differences in teacher conceptions that affected goals of instruction and classroom practice.

In these studies differences in teachers' "pedagogical content knowledge", operationalized as differences in teachers' conceptions of subject matter interacting with pedagogy, were reported as having a very important impact on students, classrooms

and assignments. Although research in Math and Social Studies describes critical differences in teacher conceptions, differences in teacher conceptions about writing instruction have not been explored.

Summary of Section 1

Earlier research efforts attempted to describe elements of teacher thinking in general that cut across content areas. In contrast, current research differs from past research on teacher thinking in two ways. First, the focus is on studying teachers' overarching theories that drive discrete decision making within subject matter domains rather than focusing on decisions that drive general teaching behaviors. Second, it examines in depth teacher thinking within subject matter domains and how knowledge of content interacts with knowledge of pedagogy, referred to as teacher "pedagogical content knowledge".

Researchers in math, social studies, and reading are beginning to emphasize the importance of identifying differences in teacher "pedagogical content knowledge", that is operationalized as teacher conceptions about subject matter interacting with pedagogy. However, differences in teacher conceptions about writing are not been described in the literature. The study presented here attempts to describe differences in teachers' "pedagogical content knowledge" about writing, operationalized as teacher conceptions about subject matter interacting with pedagogy

in writing. Teacher conceptions will be specified by reviewing research on teacher practices in writing instruction. This research suggests, but does not delineate such teacher conceptions about writing.

Section 2: Teacher Conceptions about Writing

In this section differences in teacher conceptions about writing are inferred from current research in order to describe pedagogical content knowledge about writing. Bereiter & Scardamalia's (1987) analysis of high literacy and low literacy traditions and current descriptions of classroom practice can be used to trace recurrent patterns that are indicative of different teacher conceptions about writing. For example, Bereiter and Scardamalia (1987) contrast three idealized elementary school teachers in an effort to distinguish high literacy from low literacy traditions. Teacher A is described as representing an "exercise model," Teacher B a "knowledge-base model" and Teacher C an "intentional learning model". These models contain elements that are parallel to elements found in the research on classroom practice that support the hypothesis that teachers hold three different conceptions about writing instruction. They are teacher conceptions about student informancy status, goals and evaluation.

Student Informancy Status

First, differences in teachers' conceptions about student informancy status can be inferred from the models described by Scardamalia and Bereiter, and from research on teacher practices during writing instruction. Graves (1983) defines informancy status as a condition in which students assume a role that allows and encourages them to bring their own "territories of knowledge" into the classroom. This is more than student suggestions or selection of topics; instead students bring knowledge to the writing situation. In the work of Donald Graves (1983), Murray (1979, 1985) and Calkins (1986) students assume informancy status when they own topics and are committed to communicating knowledge to an audience that they envision.

Bereiter and Scardamalia's three imaginary elementary teachers can be described as holding different conceptions of their students as informants. Teacher A, who represents the "exercise model", gives students assignments and explains what reading selections mean for "the benefit of those who have not understood." In this model the student does not hold informancy status. Instead, teacher A holds informancy status because she grades students work on the basis of the student' ability to reproduce content that has been interpreted by the teacher.

Teacher B, who represents the "knowledge-base model" conducts activities for activating student's prior knowledge and she/he asks students questions in order to relate new knowledge to old.

In this model teacher B holds more informancy status than students because she/he chooses the relevant knowledge. Students are seen as having background knowledge, however, they are not expected to relate old knowledge to new on their own initiative, nor are they encouraged to ask questions that might bring different kinds of knowledge to bear. Although teacher B's students hold more informancy status than teacher A's students, they hold less than teacher C's students.

Teacher C, who represents the "intentional model", asks students themselves to recognize what is new and what is old information. Bereiter & Scardamalia describe the difference in writing as:

> Teacher C models the process of asking questions of the text or of oneself, and coaches the student in carrying out the modeled process. . . . Teacher C makes use of external prompts, modeling, and peer cooperation to enable students to carry on their own Socratic dialogues,. . .

In this analysis students knowledge is not only activated as with Teacher B, but self-activated and then reconsidered and self-evaluated in relation to what they are trying to write.

In summary, Teacher A assumes informancy status by holding student accountable for reproducing information that comes externally from the text. Whereas Teacher B tries to minimize students' difficulty in comprehending and composing. In contrast, Teacher C assigns tasks that provide occasions for teaching problem solving strategies. Difficulties are treated as interesting phenomena for investigation, with the result that

students assume informancy status in providing knowledge about the problem that they plan to solve. Although Teacher A, B, and C are described as representing imaginary models, writing researchers are beginning to document parallel differences in teacher practice that verify informancy status differences in classrooms.

For example, differences in teachers' conceptions about student informancy status can be inferred from research describing teachers' writing instruction conducted in two different schools by Tierney, Leys and Rogers (1984). Teachers in one school, the Prairie School, could be described as assuming informancy status themselves while teachers in another school, the Atkinson Academy, encouraged students to assume informancy status.

Teachers in the Prairie school were described as having different norms of interpretation than those of the teacher in the Atkinson Academy. Prairie school teachers judged the "rightness" or "wrongness" of answers to questions that teachers ask about texts. Students were asked to write biographies of characters from texts using a list of ideas interpreted by the teacher. In contrast, the Atkinson teacher facilitate the question asking that students engage in "so that those who (had) something substantial to say (got) a chance." Students interpreted text and compared character development in their own written pieces to an author's work from the text they are reading. Students were asked to analyze ". . . how it is they as authors have let their readers

come to know their characters." The Atkinson teachers assume that students are informants that know and interpret information and that they have knowledge of the process used to communicate information.

In addition to difference in norms if interpretation, Prairie teachers controlled topics and interactions. They are described as ". . . not encourag(ing) an immediate sense of authorship;" instead students were expected to use information from texts in order to make writing tasks easier. In contrast, Atkinson teachers encouraged students to choose their own topics and to use their own previously written pieces. They not only encouraged students to inform their classmates of ". . . things that they care about, things that are important. . .", but they also urged students to think of themselves as writers and readers. Students informed each other about how they as writers compose. Atkinson teachers were reported as attempting to interface the students experience with published authors, their peers' work and their own writing. Teachers from this school could be described as perceiving their students as capable of informing others as authors and interpreters rather than consumers of content. Tierney et al. (1984) in this microethnographic analyses found differences in teachers that parallel differences found in research that examines transcripts of teacher dialogue (Raphael, Englert and Anderson, 1987).

Raphael, et al. (1987) examined differences in the content of classroom dialogue of two teachers who both participated in the same year-long intervention in writing, Cognitive Strategies in Writing (Englert, Raphael, Anderson, Anthony, Fear & Gregg, 1987). Teacher B, similar to the Prairie school teachers, limited students thinking about topic selection. She suggested that certain topics were "appropriate" and inappropriate. For example, when a fifth grade student suggest that an interesting topic for a compare contrast might be boys and girls Teacher B states: ". . . since we are growing and developing, we do not want to call attention to this topic right now." Teacher B suggests topics that boys and girls might write about and therefore communicates that the teacher needs to inform students of topics. Teacher B is described as missing opportunities to develop student thinking of themselves as young writers who possess ". . . the knowledge and information to be successful informants." In contrast Teacher A, similar to the Atkinson teachers expected students to generate topics for which they could identify and locate information that would meet a writing purpose. Teacher A's dialogue is reported as reflecting an emphasis on the thinking process that underlies topic generation and selection. She places different demands on students by prompting students to monitor the purposes authors have in writing texts. Implicit in Teacher A's dialogue is the assumption that students can inform others in the classroom about purposes and topics of written pieces. In addition to differences

in teacher dialogue, parallel differences were found by Deford (1984)when she examined task assignments.

Deford's (1984) findings reinforce informancy status differences suggested in the research conducted by Raphael, et al. (1987) and Tierney, et al. (1984) when she reports differences in teacher practices in classrooms that were organized around teacher assigned vs. student initiated writing tasks. In "traditional" and "mastery learning" classrooms Deford found that teachers suggested or assigned topics. Guidelines were provided by the teacher and controlled vocabulary was provided so that the reading material emphasized in the reading program was ". . . the most influential factor in determining the form as well as the content of the children's writing.

In contrast, the "literature based" classroom students were able to choose their own topics so that the children used texts to "improvise" using contextual and instructional information. The amount of improvising was described as related to the number of options the writers felt they had. Students wrote a greater variety of topics representing more literary forms, and they used elements from a number of books to improvise rather than "parroting" whole texts. Students in the literature based classroom were expected to inform others by choosing topics and they were given opportunities to share information on repeated instances. In addition, these students were responsible to each

other to generate new ideas and to "exhibit a sense of voice and ownership in their writing."

In summary, consistent findings across the literature suggest that one critical difference in teacher thinking may be teachers' conceptions of their students as informants. Teachers conceptions could be described as ranging from the conception of the teacher as the informer of writing topics and information to the conception of the student as the informer of topics, the writing process, information, and purposes for a chosen audience. Specifically, according to this conception, students are intentional learners who are not only capable of generating and conveying information, but are also internally driven to inform. Given these differences, one critical difference in teacher thinking about writing may be that teachers may hold different conceptions about their students' informancy status in the classroom.

Goals of Writing Instruction

A second difference in teacher conceptions is based in the goals of writing instruction. Differences in teacher conceptions about goals can also be inferred from models described by Bereiter and Scardamalia and from an examination of the research on teacher practices.

Bereiter and Scardamalia's three imaginary elementary teachers can be described as holding different conceptions of the goals of

writing instruction. Teacher A, who represents the "exercise model", and Teacher B, who represents the "knowledge-base model" emphasize the importance of choosing reading and writing assignments that become harder from grade 2 through grade 8. These models presume general improvement through sustained activities so that goals of writing instruction include teaching simple to more complex competencies and motivating through extrinsic incentives ranging from selection of interesting or challenging activities to ". . . devices as decorating worksheets". Teacher C, who represents the "intentional model" emphasizes the importance of an "intrinsic sequentiality". That is, the sequentiality within the curriculum arises from the goal of having students take over "the goal-setting, context-creating, motivational, strategic, analytical and inferential actions" that are typically carried out by the teacher. Motivational techniques are not applied to learning situations; instead, interests and intentions are part of a person's competence and therefore one of the goals of instruction. Motivation, interest and intentions are not just mediators of instruction but they <u>are</u> "part of a person's competence" so that internal control of intentions forms a <u>major goal</u> of instruction. In concert with these models, differences in classroom practices also supports the hypothesis that teachers' hold different conceptions about the goals of writing instruction.

Tierney, et al. (1984) found that teachers in Prairie school, similar to Bereiter and Scardamalia's description of Teachers A and B, emphasized student familiarity of content, clarity and neatness during writing instruction. Prairie teachers are reported as emphasizing the "products of writing (neatness, grammar, punctuation)". In contrast, teachers in the Atkinson school, similar to Teacher C described above, emphasized student control of the meaningfulness and purpose of written pieces as goals of writing instruction. Atkinson teachers talked about the writer and world-of-text collaborations in terms of the importance of students purposes: They are writing things that are meaningful to them, things they care about, things that are important to them."

These teachers talked about comparing writing to thinking aloud about how things fit, how texts are meaningful to students, and they asked students questions such as: ". . . where do you see them (texts) going?" Interview data reported by Raphael, et al. (1987) are consistent with differences found in both Bereiter and Scardamalia's work and Tierney, et al.'s work.

Raphael, et al. (1987) found that Teacher B, who completed a year of involvement in a process writing project, described writing as a formulaic task in which students need help with proper mechanics, spelling, and penmanship. In Teacher B's interview, concerns about skills such as grammar, punctuation, use of encyclopedias, and proof reading are reported as dominating her

comments. Researchers further report that what is missing from her lessons and interview is " . . . a focus on the functions or purposes of writing, a focus on the importance of communication . . ."

In contrast, Teacher A who was involved in the same year long writing project, described writing as a "communication process" that depends upon the writers ability to reflect upon their own thinking. Teacher A in both her classroom dialogue and in her interview emphasized the importance of encouraging students' internal control of their own thinking: " You have your topic, you know who's reading it, and why you're writing it (compare/ contrast paper)." Differences in teacher conceptions about goals that concur with these findings are reported by Deford (1984).

In a study that explored the classroom context, Deford (1984) examines how specific values and beliefs about written language are constructed and communicated by teachers and children within a classroom environment. She found that teachers within "mastery learning" classrooms gave feedback in classrooms that emphasized mechanics while teachers in "literature based" classrooms emphasized setting "personal goals" and the "message" within written texts. Bereiter and Scardamalia (1986) in a review of writing research also suggest that teacher goals range from writing to produce correct from, clarity and organization, to writing that fosters the development of reflective planning about the function of written pieces.

In summary, consistent differences reported in the literature indicate that a second critical difference among teachers may be teachers' thinking about goals of writing instruction. Teachers' conceptions about the goals of instruction could be described as ranging from the conception that writing goals are made up of a sequence of tasks that emphasize mechanics and decontextualized forms external to student thinking; to the conception that writing goals should emphasize the gradual increase of intentional control of writing on the part of the student. Specifically, the goal is the gradual increase of control over the communication of meaning and the function of the text that is internal to the student's thinking about the writing context, purpose and audience.

Evaluation During Writing Instruction

Finally, differences in teacher conceptions related to evaluation can be inferred from an the models described by Bereiter & Scardamalia and from the research on teacher practices during writing instruction.

Implicit in Bereiter & Scardamalia's description of three imaginary elementary teachers are different conceptions of evaluation during writing instruction. Teacher A grades writing assignments on the basis of content and language, while workbooks questions and oral recitations are conducted and evaluated by the teacher with little student preparation. In contrast, Teacher B and Teacher C conference with students about topics, interests,

experiences and intentions to help the student focus their ideas in order to "produce a richer second draft." In addition, Teacher C is described as emphasizing "self-regulatory procedures" in which students are involved in checking, planning, monitoring, testing, revising and evaluating. The contrast between teacher evaluation and student self-evaluation is also apparent in studies of classroom practice.

For example, Tierney, et al. (1984) found marked differences between teachers in two schools. In the Prairie school, teachers evaluated student compositions and interpretations: "In the Prairie classrooms the writing was finished, corrected by the teacher, and sent home."

Interactions were described as having an act sequence in which the teacher asks a question, children raise their hands and when chosen answer, and then the teacher evaluates the response. If student responses were deemed appropriate the teacher asked for more information, if response was evaluated as inappropriate the teacher asked for another response. In this analysis the teacher is reported as "the participant who knows the appropriate questions and is the judge of the 'rightness' or 'wrongness' of the answers."

In contrast, the act sequence in the Atkinson school was guided by a different set of norms. The students were allowed to evaluate the questions and they could choose to deem questions and answers as irrelevant or redundant. Students in this school

also had control over their writing folders. Students decided when a piece should be abandoned and they listed problems they had had, new things they had learned and who they had conferenced with about their own writing. The emphasis on teacher vs. student evaluation is again consistent with findings reporting the content of teacher dialogue (Raphael, et al., 1987).

Researchers found that one teacher not only evaluated the appropriateness of topics, but she also warned the students that others who would be evaluating and judging their work. Similar to the "mastery learning" model described by Deford (1984) a predominate emphasis on student accountability for accurate spelling, mastery levels for writing and word lists was reported. Written as well as oral feed back emphasized evaluation of mechanics.

In contrast, Raphael, et al. 1987 describe another teacher who developed self-reflection about the thinking process that underlies topic generation and selection. Criteria for topic selection was controlled by the student rather than the teacher. Implicit within this description is the notion that students not only evaluate the appropriateness of a topic, but also students evaluate their own thinking about the appropriateness of topics. This is also consistent with Deford's (1984) description of classrooms where students were involved in decisions about work. Teachers were described as "stressing independence" by listening to student's reflections about questions and problems.

Conferences about writing that grew out of the context focused on the students' self-exploration of "their own potential in style, voice and form in writing."

In sum, consistent differences reported in the literature on writing indicate that a third critical difference among teachers may be teachers' conceptions about evaluation. These conceptions could be described as ranging from the conception of evaluation as externally focused, i.e., decontextualized formal criteria are evaluated by the teacher, to the conception of evaluation as internally focused, i.e., awareness of contextualized purposes and the meaning of texts are evaluated by the student.

Summary of Section 2

There are marked similarities across the literature on writing that suggests that teachers hold externally and internally focused conceptions about writing instruction. Teachers who hold conceptions that are externally focused see themselves as informants and evaluators who tell students rules, interpretation, and formal criteria that can be decontextualized from the writing process without regard for purpose or audience. In contrast, teachers who hold internal conceptions view the student as an informant so that formal rules and procedures are evaluated by the student in light of purposes, audience and the context of the writing situation. According to this conception the student must

self-evaluate their written pieces in terms of how successful they are in communicating a message.

Specifically, teacher models and research findings suggest that teacher conceptions about their students, goals and evaluation could be described as externally or internally focused. These differences may be related to differences in students because an internal or external instructional focus may be related to internal or external control of student thinking processes. This argument is supported in the next two sections. First, by reviewing research that documents the relationship between teacher thinking and student thinking. And second, by reviewing research that describes internal and external control of student thinking that bears a striking resemblance to internal and external conceptions of writing instruction held by teachers.

Section 3: Linking Teacher Conceptions to Student Perceptions

Consistent findings are reported when researchers examine the relationship between teacher thinking and student thinking. In past research this relationship was established in general across subject matter, while recent research documents the relationship between teacher thinking and student thinking within specific subject matter domains.

Links Across Subject Matter Content

Early reviews of the literature focused on describing the relationship between student thinking and teacher's instructional behavior, while only a few early studies began to explore the relationship between teacher and student thinking. For example, early work by Kounin & Gump (1961) found that teachers' beliefs and behaviors not only influenced activities in the classroom, but also their student's self-perceptions and perceptions about school in general. Early studies were few in number; however, the quantity of research on teacher and student thinking across subject matter in general began to increase in 1980's.

For example, Deci, Schwartz, Sheinman & Ryan (1981) documented the relationship between students' beliefs about themselves as related to teachers' beliefs about the importance of student autonomy. Marshall & Weinstein (1984, 1986) found that students' beliefs about themselves as task performers were related to the task environment created by teachers. However, additional evidence that documents the relationship between students' thinking about the purposes of instruction and their teachers' motives is documented by Anderson (1981) as cited and interpreted by Wittrock (1986). The Anderson study suggests that first graders typically believe that the "most important part of their classwork" is to get it done, to get to the bottom of the page, or to get to the end of the book. According to Wittrock (1986: 299) "These perceptions by first graders raise fundamental questions

about kindergarten and primary school teaching," because the teachers' focus on the mechanics of instruction parallels the students' focus on the mechanics of the classroom as early as first grade. This relationship was not only noticed in early grades, but also at the high school level as well.

Cusick (1983) found similar parallels between teacher and student thinking about the purposes of schooling when he studied high school students in three American schools. According to Cusick's findings, the instructional and curricular side of two urban schools was subordinate to maintaining attendance and discipline. Evidence cited in three case studies suggest that students' attitudes toward the purposes of schooling reflected teacher attitudes.

Another study that examined teacher and student thinking, that also cut across subject matter, examined teacher beliefs about socialization. Rohrkemper (1984) specified teachers' socialization styles as either primarily inductive or primarily reliant on behavior modification techniques to manage classrooms. Inductive teachers approached students socialization with a concern for extensive communication and provision of rationales for behavior demands. The intent of these demands was to promote student insight into the logic underlying behavior and its consequences. In contrast, behavior modification-style teachers relied primarily on reward-based contingency programs. Behavior modification teachers focused primarily on external tangible consequences of

behavior rather than focusing on insight concerning causes of behavior. The findings of this study suggest that teachers' socialization styles related to students' social cognition and interpersonal classroom behavior. According to Rohrkemper (1984): ". . . students appeared to have internalized the underlying principle of their teacher's believed strategies. . . "

In this work congruent ratings of students' role play responses were consistently associated with teacher socialization styles and teacher modeling effects were reported to be strong for all students. The strong modeling effect, combined with the patterns of effects associated with teacher socialization style on students' thinking that were evidenced in interview data, underscore the powerful role that teacher thinking plays in student thinking about socialization.

The social nature of classrooms was also studied by Anderson, Stevens, Prawat & Nickerson (1988) when they described the nature of classroom task environments and their relations to students' task-related beliefs. Tasks are described as reflecting the teachers' expectations and goals for students' activity, academic assignments and conduct. The nature of the classroom task environment, as a reflection of teachers thinking about goals and expectations, are described as related to students' task-related thinking in three areas. These three areas include: 1) beliefs about self-competence in academic domains, 2) beliefs about control over success, and failure, and 3) beliefs about the

instrinsic value of performing school tasks in an independent manner. Although this work as well as early work successfully linked teacher thinking to student thinking across subject matter, only recently studies have begun to document the relationship between teacher thinking and student thinking within specific subject matter domains.

Links Within Subject Matter Domains

In a current study of mathematics, Peterson et al. (1987) examined the relationship between teachers' pedagogical content beliefs and student learning. Teachers' beliefs about addition and subtraction were related with students problem solving abilities in addition and subtraction. Teachers who had cognitively-based beliefs about teaching mathematics were described as believing that 1) children construct rather than receive math knowledge, 2) math skills should be taught in relation to rather than in isolation from problem solving, 3) instruction should be sequenced to build on children's development of math ideas rather than the structure of mathematics as a discipline, and 4) instruction should be organized to facilitate children's construction rather than the teacher's presentation of math knowledge. These beliefs lead the more cognitively-based teachers to emphasize word problems as a basis for introducing addition and subtraction as well as throughout the year, while less emphasis was placed on students' learning number facts and

computational skills. Differences in teachers' pedagogical content beliefs were found to be related to student understanding of addition and subtraction and to their achievement in both word problem-solving and computation. In addition to relating teacher thinking to student thinking in mathematics, researchers are beginning to find similar relationships in writing instruction.

Fear, Anderson, Raphael & Englert (1987) found evidence that students' perception of the writing process was related to teachers' belief systems and instructional practices. Teachers' beliefs about writing were characterized as reflecting a structural or a post-structural perspective. Teachers with a structural perspective believe that writing instruction is a process of informing students of formal rules and procedures that can be decontextualized from the writing process without regard for purpose, audience or social context. The teacher within this perspective view their role as informants and evaluators of students' ideas and compositions. Teachers with post-structural perspectives view their role as instrumental in establishing a writing context so that formal rules and procedures help the writer to solve problems with communication to an audience. The teacher within this perspective view the student's role as that of an informant and self-evaluator of writing strategies as well as written pieces. In this case-analysis of two teachers, it was determined that the teacher who believed that students should be placed in the role of informant had students who reported internal

strategies for selecting topics. That is, students perceived writing as an internally driven activity that includes choosing topics to communicate with different audiences in different contexts, rather an externally driven activity that must be completed as a school task for the teacher. However, these results need to be further investigated since only two classrooms and a small number of students were included and only limited aspects of student perceptions were examined. Specifically, topic selection is only one of a larger set of subprocesses within the writing process that need to be studied. As a result, we do not know if students were internally driven throughout the writing process, i.e., were students in control of purpose setting, organizing, drafting, editing, revising and evaluating texts. Furthermore, we do not know if students who hold internal perceptions about the writing process can produce texts that are of higher quality than students who are less metacognitive. Research examining these issues could provide valuable information about student perception and performance in relation to teacher conceptions that underlie observed differences.

Summary of Section 3

Consistent findings are reported when researchers examine the relationship between teacher thinking and student thinking across subject matter and within certain subject matter domains. Early work established the effect of teacher thinking on students'

general perceptions about school. Later work addressed more specific issues such as student autonomy, purposes of instruction, socialization & social cognition and task related beliefs. Current research is just beginning to examine the relationship between teacher thinking and student thinking within subject matter domains. In math and in writing differences in teacher beliefs are related to student learning. However, more research is need that describes the links between teacher conceptions about subject matter content and student subject matter conceptions. Linking teacher and student conceptions is particularly important in writing, because teachers' internal and external conceptions about writing may be related to differences in students' internal and external control of thinking processes. In the next section, current research will be cited that documents differences found in students' internal and external control of thinking that are described as important instructional outcomes.

Section 4: Student Outcomes

The research on student metacognitive knowledge describes characteristics of student thinking that parallel differences in teacher internal and external conceptions about writing. This is important because this parallelism may be indicative of an important relationship. It is particularly important because internal and external control is beginning to be identified as a critical outcome of instruction within specific subject matter

domains. In section 4 metacognitive awareness and control are defined in order to discriminate between external and internal perceptions of the writing process. Then instructional studies that document the importance of examining student internal and external perceptions is reviewed.

Defining Student Control

Internal and external perceptions can be described by examining the work of researchers who study metacognitive knowledge of the reading process. Students who hold internal perceptions can be described as having metacognitive knowledge. Metacognitive Knowledge is defined as both metacognitive awareness and metacognitive control of cognition (Flavell, 1978 and Brown, 1978), while control of cognition is referred to as executive control of processes such as planning, monitoring, checking and revising (Brown, 1978 and Baker & Brown, 1984). Pearson, Dole, Duffy, Roehler (1989) describes the close link between awareness and control when they describe instruction that is influenced by research on metacognition and metacognitive awareness (Baker & Brown, 1984; Flavell, 1981; Garner, 1987; Garner & Kraus, 1981). This research suggests that expert readers are consciously aware of cognition. As a result of this awareness, the reader controls cognitive processes by using metacognitive strategies, such as self-questioning, monitoring, and adapting. A growing body of research defines and documents metacognitive strategies as critical components of reading instruction.

For example, reading research emphasizes the importance of instruction that helps students to be consciously aware of how and why they employ strategies. One line of reasoning suggests that instruction that heightens awareness, empowers readers to control cognitive processes when they are needed. For example, in a post hoc analysis of a large scale study by Duffy, Roehler, Sivan, Rackliffe, Book, Meloth, Vavrus, Wesselman, Putnam & Bassiri (1987), Meloth (1987) reports that students' metacognitive awareness of lesson content is a mediating variable between instruction and student application of instruction that resulted in student achievement. Therefore, metacognitive awareness and metacognitive control of comprehension, work together when strategies are employed to improve reading performance. Several training studies documents the importance of building students' metacognitive control and awareness during reading instruction.

Metacognitive Knowledge as an Important Instructional Outcome

In reading research, numerous studies confirm the relationship between metacognitive control and improvements in reading performance. For example, Duffy, et al. (1987) describe the importance of explicit instruction on students' metacognitive awareness. In this research when teachers were explicit, students demonstrated significantly greater amounts of metacognitive awareness of lesson content. Duffy & Roehler, et al. (1988) further established that teachers' explanation of reasoning

associated with using reading strategies, resulted in low group students who possess metacognitive awareness of lesson content and high achievement on a variety of measures. In this research and in metacognitive training conducted by Paris, Cross & Lipson (1984), Informed Strategies for Learning, elementary students improved their ability to apply strategies to their reading. Similarly, Garner & Reis, 1981; Garner, Wagoner & Smith, 1983; Garner, McReady & Wagner, 1987) also found a consistent positive relation between using the look-back strategy and reading comprehension.

The relationship between instruction of metacognitive strategies and improved comprehension were also demonstrated by Raphael, Winograd & Pearson, 1980; Raphael & McKinney, 1983; Raphael & Wonacutt, 1985; and Raphael & Pearson, 1982. This work has consistently demonstrated a positive relationship between students' ability to learn to adapt questions answering strategies and students' ability to comprehend. Good readers were better able to adapt appropriate strategies than poor readers when they were given a choice between: 1) answering a question by going right to the part of the text that the question comes from, 2) searching around the text to find an answer that fit the question or 3) relying on their own prior knowledge. In this research and in results reported by Pearson & Johnson (1978) better readers appeared to have better control of strategies for answering questions.

In addition to these studies metacognitive control is related to improvement in reading performance consistently across grades and ability groups (Brown, Armbruster & Baker 1984, for a past review; and Paris, Wasik & Westhuizen, 1988; Pearson, Dole, Duffy & Roehler, 1989; and Pressley, (1989) for more current reviews). For example, Day (1980); Day (1986) and Rinehart, Stahl & Erickson (1986) studied summarization strategies used by middle school and junior high students. The results of these studies report significant effects of strategy instruction on student ability to mediate texts. Control of summarization strategies is a parallel thread that is described by Miller (1985). In this research comprehension strategies were taught through self-instruction. Findings indicate that self-instruction training lead to significant error detection and therefore increased comprehension monitoring.

In addition to this work, comprehension monitoring abilities have also been identified as important instruction outcomes. Dewitz, Carr & Patberg (1987) report improvement in inferential comprehension when students were taught improved awareness through self-monitoring. Short & Ryan (1984) report that training in metacognitive awareness of story grammar improved comprehension awareness and reading in poor readers. Similarly, comprehension monitoring abilities have been taught to students of various age levels through the use of questioning strategies. For example, students were taught to monitor understanding by generating

questions based on story structure (Singer, Donlan, 1982). Bransford, Singer, Shelton & Owing (1980) successfully taught students to use questions to activate prior knowledge. Risko & Feldman (1986) used reciprocal questioning techniques to help elementary school students increase their monitoring skills, and Capelli, Markman& Gorlin (1981) taught students to ask questions after each sentence to check understanding.

Other methods for monitoring comprehension have been examined as well. For example, learning to generate a paraphrase after each sentence increased students' monitoring abilities (Doctorow, Wittrock & Marks, 1978), while Babbs (1983) taught students to use cue cards to monitor comprehension. Palinscar & Brown (1984) used reciprocal teaching techniques to teach students to summarize, question, clarify and predict as monitoring techniques. These studies document the importance of metacognitive control of strategy use as an instructional outcome in reading research.

Similarly, students' internal and external perceptions are beginning to be examined in writing instruction. For example, recent researchers of student metacognitive knowledge about the writing process (Englert, Raphael, Fear & Anderson, 1988) found that students with metacognitive deficits were dependent upon external cues to make decisions about writing. These students were more externally reliant on the teacher to tell them what to do, and how and when to carry out different tasks during writing instruction. In contrast, students with internal perceptions can

be defined as dependent upon internal cues when they make decisions about strategies for planning, organizing and drafting for an audience chosen by the student. The Englert, et al. 1988 study, cited above, documents differences in student thinking that are related to internal and external perceptions of the writing process.

Summary of Section 4

Metacognitive awareness and control are documented as critical outcomes of instruction by researcher in reading. Instruction that focused on metacognitive strategies such as self-questioning, self-monitoring and adapting are reported as improving reading achievement and performance in students of difference ages and ability levels. Improving reading performance defined as improving comprehension and comprehension monitoring have resulted when readers are more aware of their own knowledge of text content and text features, such as story grammars and text structures. Also in writing, student monitoring of internal and external cues are cited as a critical difference in perception of the writing process. In both reading and writing, self-questioning and self-monitoring are characteristic of internally driven student perceptions that may be related to teachers internally focused conceptions about writing instruction.

Summary of Chapter II

This chapter reviewed four areas of research that support the need for this study of teacher conceptions about writing and student perceptions and performance in writing. These include the following: 1) research on teacher thinking, particularly teacher thinking within subject matter domains, 2) research on teacher thinking about writing as one example of teacher thinking within a specific domain, 3) research linking teacher thinking to student thinking, and 4) research on student perceptions and performance.

First, research is cited that supports the existence of differences in teacher conceptions across and within subject matter domains. The need for identifying teacher conceptions in writing is argued since teacher conceptions have been found to result in different instructional practices in subjects such as math and social studies.

In an effort to describe teacher conceptions about writing, consistent patterns across research are examined that document differences in teacher instructional practice. Consistent findings suggest that these differences in practice may be indicative of differences in teacher conceptions about writing, i.e., teachers hold internally or externally-focused conceptions of their students informancy status, goals and evaluation. It is argued that teachers' conceptual differences may result in differences in student thinking as an instructional outcome since research documents the link between teacher and student thinking.

This is particularly important for writing instruction because differences in students' internal and external perceptions of the writing process parallel differences in teachers' internal and external conceptions suggested by the research in writing. For example, teachers who hold internal conceptions about writing view the student as an informant who self-regulates their thinking, while students with metacognitive control have been found to rely on internal cues when they make decisions about strategies for planning, organizing and drafting.

On the other hand, teachers who hold external conceptions about writing evaluate student topic selection as well as the content and the form of written products, while students with metacognitive deficits were dependent upon external cues to make decisions such as asking the teacher to tell them what to do. Although these parallels exist they need to be systematically examined together in an instructional context.

More succinctly stated, teacher conceptions about writing are related to instructional differences. If the quality of instruction in writing affects students' perceptions, then the content and quality of students' perceptions and performance will differ depending on teacher's conception.

CHAPTER III

DESIGN AND PROCEDURES

This study is designed to better understand whether differences in teachers' conceptions about writing instruction are related to differences in students' perception and performance in writing. This chapter presents the methodology used. First, the procedures used to obtain the quantitative and qualitative data on teachers and classrooms are described. Second, procedures used to measure student perceptions of the writing process and writing performance are described. Third, the data analysis procedures used to answer each of the research questions are discussed.

Procedures to Obtain the Teacher and Classroom Sample

This section deals with issues regarding selection of specific teachers and their classrooms. First, differences between teacher conceptions that determined the selection of teachers and classrooms will be specified. Second, measures that substantiate differences in teacher conceptions will be described.

Selection of Teachers and Classrooms

The sample for this study can be described as a "purposive or judgemental" sample (Babbie, 1983), since teachers were chosen because they had particularly focused conceptions about teaching writing. Ten teachers and their classrooms were selected because they held specific conceptions about teaching writing that are suggested by current writing literature. Research findings and hypothetical models suggest that teacher conceptions about their students, goals and evaluation could be described as externally or internally focused. Therefore, the sample of teachers and their classrooms can be described as "purposeful or judgemental" because they were selected with the specific purpose of studying teachers with internally-focused and externally-focused conceptions about teaching writing.

To begin the selection process, a list of 31 third, fourth and fifth grade teachers, recommended by the district writing consultant, was obtained. All 39 teachers had participated in a year long inservice program on process writing. An additional eight teachers were added to this list because they had worked in another year long process writing intervention study (Cognitive Strategies in Writing, Englert, et al. 1988). All 39 teachers in both the district writing program and the writing intervention study worked with consultants in their classrooms and they attended inservice sessions after school. Materials such as writing folders and binders for publication of student work were

provided for the teachers. In addition, teachers selected by the district writing consultant and teachers who participated in the writing intervention study were recommended because, by virtue of having participated in the training sessions, they had knowledge about and experience with teaching writing. A structured questionnaire on conceptions about teaching writing was hand delivered to each of the 39 teachers and picked up after approximately two weeks. Twenty-seven of the 39 teachers completed the structured questionnaire. Then, 10 of these remaining 27 teachers were selected, based on their responses to propositional statements on the questionnaire. Five of the 10 teachers agreed with statements representing one conception of writing instruction, while the other five teachers agreed with statements representing a different conception of writing instruction. These two groups of five teachers each represented the highest levels of agreement on the two different conceptions of writing represented on the questionnaire.

After the selection process was complete, these two groups of five teachers were matched. No extreme cases were eliminated. The two groups were matched for years of training in teaching process writing, total years of teaching experience, age, grade level taught, language arts series used, city and district where schools were located, and percentage of students receiving ADC. The only recorded difference in the two groups was that only one male teacher was selected.

The students in the classrooms of the two groups of five teachers form the pool of students studied. All students completed pre and post performance in writing measures.

Measuring Teacher Conceptions

To measure differences in teachers' conceptions about writing instruction, a teachers' questionnaire, a teacher interview and a classroom observational guide were developed.

Teacher questionnaire. A 36 item questionnaire was designed to assess differences in the focus of teachers thinking about writing on three separate subscales. Each subscale contained six internally-focused and six externally-focused propositional statements to which teachers responded on a five-point Likert scale by indicating "strongly agree," "agree," "undecided," "disagree," or "strongly disagree." The format of the questionnaire was modeled after a questionnaire designed and used by Peterson, et al. (1987) to measure teachers pedagogical content beliefs about mathematics. The content of the questionnaire was taken from research on writing instruction.

The three subscales represented three teacher conceptions identified from a review of the research on teacher practices during writing instruction as summarized in Chapter 2. These conceptions about student informancy status, goals and evaluation were represented as propositional statements developed from interview data reported and analyzed during a pilot study (Fear,

et al. 1987). Teacher statements that reflected differences in teacher thinking suggested by the current literature in writing were used to develop the three subscales. Statements made by teachers were rewritten as propositional statements with as little change as possible in the teacher's original dialogue. (The teacher questionnaire is provided in Appendix A.) Examples of sample items on the teacher questionnaire are followed by illustrated examples of differences between teachers who held disparate conceptions examined in pilot study data. These examples are included to further explain and substantiate differences in teacher conceptions by describing differences in teacher practices that parallel differences in internal and external conceptions for each of the three subscales.

Subscale one: Student informancy status. The first subscale reflects teacher thinking about the student as an informant in the classroom. A high score on this subscale indicates that the teacher thinks that children use background knowledge to generate and construct knowledge, while a low score indicates that the teacher thinks that children receive knowledge.

More specifically, a high score indicates agreement with statements indicating agreement with the conception that writing instruction should involve students in thinking about internally-focused sources of information. Using internally-focused sources of information includes allowing students to choose and evaluate ideas, topics and information.

According to this conception, the student is expected to relate old knowledge to new on their own initiative and they are encouraged to bring different kinds of knowledge to bear. Teachers think about setting up tasks so that students recognize what is new and what is old information by self-activating and reconsidering background knowledge. The student is thought of as an information resource, so that even when the teacher describes the situation or the audience the student is entrusted with the task of choosing appropriate information. This conception is consistent with Bereiter & Scardamalia's description of the "high literacy tradition" or the "intentional" teaching model in which Teacher C is described as "coaching" students to provide knowledge about problems that the student plans to solve. The student assumes informancy status, defining the problem and engaging in their own Socratic dialogue by asking questions of themselves, of the text and of the audience.

A low score on this subscale indicates agreement with the items on this scale that were statements indicating agreement with the conception that writing instruction should involve students in thinking about externally-focused objectives. Externally-focused objectives include reproducing information in the form of text content, as well as reproducing decontextualized forms, rules and procedures described by the teacher. This conception is consistent with Bereiter and Scardamalia's description of the "low literacy tradition" in which the teacher is described as giving students assignments that she/he grades on the basis of the

student's ability to reproduce content interpreted by the teacher. The teacher assumes informancy status, defining information and minimizing complexity so that students master and produce information. Example of items on subscale 1: Internally-focused conception: Sometimes when students get started writing, they might write three or four different things. Externally-focused conception: Children learn best by attending to the teacher's explanation.

In pilot study data (Fear, 1989), two teachers who held disparate conceptions were observed during three writing lessons at the end of the school year. The following examples from their classroom practice illustrate how disparate conceptions drove the essence of the same writing tasks. For example, both teachers used prewriting activities to stimulate children's background knowledge; however, different conceptions of student informancy status were found to parallel differences in practice.

The externally-focused (Teacher E) agreed with the view that the teacher holds informancy status and that her role is to inform students of decontextualized rules and principles about language conventions. Teacher E began prewriting exercises by playing an adjective and noun game and providing a stimulus (breaking an egg). She spent 35 minutes of a 45-minute writing period helping students to think of descriptive words. Teacher E also reviewed indenting, capital letters, and punctuation just before students began to compose descriptive paragraphs about a horse which was a topic chosen by the teacher. The innercity children in her class

generated strong visual images such as "a horse with pink, yellow, and blue hair and the thing you hold to ride it with is gold." In this lesson, it appears that Teacher E attempts to reduce the complexity of the writing task so that students will know how to begin to write descriptive pieces for an audience of classmates. After an interim lesson from the basal on letter writing, students exchanged these descriptive pieces and attempted to draw each other's individual original descriptions.

The internally-focused teacher, on the other hand, agreed with the view that students hold informancy status and they write for contextualized purposes. During prewriting, Teacher I spent five minutes of a 45-minute period directly addressing the complexity of the writing task.

> Before we start writing though, we're going to talk about it. Some people have trouble thinking about things to write about. Remember you don't have to write about any of these things, but I just want for people who don't have an idea. What do you think?

Teacher I stepped back while students informed each other of ideas in a concatenation of thought. Rather than original ideas, students discussed related topics such as "sand dunes down south," "going to Texas," and trips to the "sand dunes over by Lake Michigan." As such, students initially held informancy status in stimulating each other's contextualized territories of knowledge.

Subscale two: Goals of writing instruction. The second subscale reflects conceptions about the goals of writing instruction as they affect the sequencing and choice of tasks for

instruction. A high score on this subscale indicates that the teacher thinks writing goals depend on students' purposes and the social context both in school and out; a low score indicates that the teacher thinks writing goals should emphasize mastery of a simple to complex sequence of skills.

More specifically, a high score indicates agreement with statements indicating agreement with the conception that writing should involve students in thinking about internally-focused objectives. Internally-focused objectives include choosing and analyzing contextualized purposes as well as audiences to communicate with. This is consistent with Bereiter and Scardamalia's description of the "high literacy tradition" or the "intentional" teaching model in which Teacher C emphasizes the importance of "intrinsic sequentiality". That is, Teacher C assigns tasks and provides occasions for students to investigate a phenomenon so that sequentiality within the curriculum arises from the goal of having students take over the "goal setting, context creating, motivation, strategic, analytical and inferential actions." Motivation is not applied by the teacher, but is one of the goals of instruction and therefore is part of the competence that is developed. Internal control of motivation and ones intentions is a major goal of writing instruction.

A low score on this subscale indicates agreement with statements indicating agreement with the conception that writing instruction should involve students in thinking about externally-focused objectives. Externally-focused objectives include

teaching simple to complex decontextualized skills and motivating through extrinsic incentives ranging from selection of interesting or challenging activities to decorating worksheets. This conception is consistent with Bereiter and Scardamalia's description of the "exercise model" and the "knowledge-base" model that emphasizes teacher pre-prescribed goals and intentions. For example, decontextualized goals might include clarity, neatness, grammar, spelling, punctuation and mechanics in general. Example of items on subscale two: Internally-focused conceptions: My writing goals depend on the situation, the lesson and the mood of the student. Externally-focused conceptions: It is important to break down a sequence of mechanical skills when planning instruction.

Pilot study data (Fear, 1989) provide examples from classroom practice that illustrates how disparate conceptions drove the essence of the same writing tasks. For example, both teachers discussed personal meaningfulness, emphasized sentence structure and mechanics, and encouraged students to share pieces with their classmates; however, different conceptions about the goals of writing instruction were found to parallel differences practiced.

The externally-focused teacher agreed with the view that the purpose of writing instruction is to teach language conventions and correct form so that the teacher should emphasize mastery of a simple to complex sequence of skills. Classroom observational data indicated that Teacher E emphasized structural features first and then she discussed personal meaning the day after students

wrote letters. Teacher E read a lengthy article written by Stevie Wonder: "I feel that writing and reading letters is a most personal and intense form of communication. . . ." The sequencing of this message after students' letters were written and the following statement suggest that personal meaningfulness was used to motivate students to review their letters for correct form:

> We didn't talk much yesterday about <u>when</u> you write a letter. I wanted to show you how to do it first. It's almost a mathematical and scientific way to do it. Everything lines up beautifully for a friendly letter. Today I want to tell you why we write letters.

Teacher E then directed students to a lesson at the end of the language basal. She drew a square on the board with lines indicating the position of the five parts of the letter, indentation, capital letters, and punctuation. The lesson was closed by having students read aloud the letters that they have written rather than sending the letters to the intended audiences.

The internally-focused teacher, on the other hand, agreed with statements on the conceptions' questionnaire indicating that her goals are dependent upon the situation and the contexts that students live within. Children's awareness of contextualized purposes provide the basis for instruction. For example, in Teacher I's classroom, several events signaled the blending of teacher purposes and student purposes as central to teachers' goals. During Teacher I's first writing lesson, students immediately took from their desks and classroom bookshelves previously written pieces and class books published earlier in the

year for reference purposes. Without requesting teacher permission, one student took out his book on "The Dog Who Lived on Food Stamps" to continue writing an additional chapter, and several students moved to work together on writing stories about similar topics such as summer skateboarding school and approaching birthday plans. By the end of the period, most of the class worked with partners, and one student offered his paper to be used on the overhead for anticipated next day editing purposes. Teacher I transitioned to the next lesson by directing students to a lesson on editorial marks in the middle of their language basal. She explained that it "makes more sense" to cover editorial marks at the end of the year because students understand editing by the and of the third grade.

Subscale three: Evaluation. The third subscale reflects conceptions about writing evaluation. A high score on the subscale reflects thinking that the student plays a major role in describing and using evaluation criteria for writing and that the teacher's role is to turn student's attention back on to written products in an effort to jointly understand problems about audience communication. A low score on this subscale reflects the thinking that evaluation should be organized to facilitate teachers' presentation of criteria i.e., the teacher lays out a predetermined list of criteria used to evaluate written products.

More specifically, a high score indicates agreement with statements indicating agreement that writing instruction should

involve students in thinking about internally-focused evaluation. Internally-focused evaluation includes student involvement in self-evaluation during all the phases of the writing process. This is consistent with Bereiter and Scardamalia's description of Teacher C who emphasized "self-regulatory procedures" in which students are involved in checking, planning, monitoring, testing, and revising.

A low score on this subscale indicates agreement that writing instruction should involve students in thinking about externally-focused evaluation. Externally-focused evaluation emphasizes teacher evaluation of decontextualized criteria such as the use of descriptive words, rather than the effect that descriptive words might have on the reader, given the purpose of the written piece. This conception is consistent with Bereiter and Scardamalia's description of Teacher A who grades workbooks and writing assignment on the basis of preset criteria. Example item on subscale three: Internally-focused conception: When a student gets writer's block, I ask them where they want to go with their ideas. Externally-focused conceptions: Students should be encouraged to use descriptive words in their written pieces.

Pilot study data (Fear, 1989) provide examples from classroom practice that illustrate how disparate conceptions drove the essence of the same writing tasks. For example, both teachers discussed revision and editing for mechanics; however, disparate conceptions about evaluation during writing instruction were found to parallel differences in practice.

Teacher E agreed with the view that the teacher should evaluate student knowledge according to preconceived criteria that can be decontextualized. Classroom observations data included many examples of the teacher's evaluative comments. As students began to compose, Teacher E walked around the classroom and made public comments about he absences of indentations, punctuation, and capital letters. She stated that she would choose only the best student compositions to include in the class book. Teacher E evaluated students' letters for correct form, and she accepted or rejected students' ideas without explaining her reasoning. In addition, in an alphabetical adjective/name game designed similar to a spelling bee, Teacher E nodded in acceptance when students contributed some examples such as "astonishing apple" and "blue ball." She checks one students' unusual response "lime lamb" by stating, "If you explain yourself out of it, you might have it." When the student begins to say, "The color is lime . . . " Teacher E moves on by responding, "Lamb is a thing, and your lamb is colored lime. I have to accept it." No references to the communicative function of descriptive words or correct forms were made throughout the three observations. Teacher E consistently made final pronouncements on the value of students' ideas.

In contrast, Teacher I, who agreed with the view that students need to self-evaluate the meaning of their paper as it will be understood by an audience, immersed students in tasks that necessitated student reflection about their classmates' responses. Teacher I directed students to read a student's work on an

overhead projection, and her voice became a part of the conversation about revision. For example, when students debated whether adding a section on friends would improve or distract from a student paper on school, Teacher I discourages any final pronouncements: "Tony thinks that you could add more about friends and Melissa doesn't. Brandy can do what she wants to do." Teacher I does not reduce complexity for the writer, and students continue the debate by explaining their reasoning, such as, "If you put too much about something else, it won't be about school."

Reliability

Graduate students who had studied writing research scored the questionnaire items in order to validate differences in conceptions measured on the questionnaire. Propositional statements on one of the three subscales was scored by three graduate students. A total of 90% agreement between the number of responses scored as internally focused and externally focused by the graduate students and the number of responses designated as internal and external by the researcher. (See Appendix A for the classification of propositional statements.)

Teacher scores on the questionnaire were calculated by adding across each propositional statement for each subscale. Each internally-focused propositional statement was represented by a positive number (1 to 5) and each externally-focused statement was represented by a negative number (-1 to -5). Subscale scores were calculated by adding across the negative and positive numbers

assigned to each statement. A total score for the entire questionnaire was calculated by summing across the three subscales.

After this procedure was completed, reliability of the questionnaire and the variation among teachers' scores on the teacher questionnaire were analyzed. To examine the reliability of the questionnaire, the internal consistency of 27 teachers' scores was computed using Cronbach's alpha. Reliability was calculated at .78 which is a correlation indicating that any combinations of internally-focused or externally-focused answers were found to relate to each other 78 out of 100 times.

Classroom Observations

Classroom observations were developed to further analyze teachers' conceptions about writing instruction and to substantiate questionnaire findings. Five observations per classroom were recorded in narrative form with specific attention given to teacher statements or dialogue pertaining to student informancy status, goals and evaluation. (See Appendix B for observational guidelines.)

Each of the five observations were rated on a five point scale that ranges from an internal focus to an external focus according to the following criteria. First, observations were rated as internally focused when reference is made to student control over topics, idea generation, drafting information and informing a reader. Classroom observations were rated as externally focused

when reference is made to teacher control of topics, idea generation, and delivery of content such as teacher delivery of rules about form rather than teacher interactions about communication of a message to a reader.

Second, classroom observations were rated as internally focused when emphasis was placed on student decision-making about purposes and sense-making for the communication of ideas to an audience. Observations were be rated as more externally focused when emphasis was placed on teacher explanation of mechanics, grammar, and decontextualized words. However, reference to skills and forms were rated as externally focused only when they are discussed and sequenced to facilitate the teachers presentation, rather than helping students to see the purpose of mechanics in facilitating communication to a reader.

Finally, classroom observations were rated as internally focused when emphasis was placed on self-reflection and conferencing that directs the student to evaluate the meaningfulness of their own texts. Observations were rated as externally focused when emphasis is placed on teacher evaluation of topic appropriateness content, mechanics, grammar and written forms (See Appendix C for observational rating scheme).

Field notes were evaluated by two graduate students who have studied and conducted writing research. Raters were blind to each teacher's identity and each teacher's scores on the questionnaire and the interview. When scores were not close in agreement, the scorers discussed their reasoning and reached consensus. If

scores did not reach consensus, a third scorer read the transcripts and scored the responses in agreement with one of the two original scorers. Interrater reliability of the ratings was calculated before scorers tried to reach consensus. Reliability was determined by dividing the number of agreements by the total number of agreements plus disagreements. The interrater reliability was .86.

Teacher Interview

A teacher interview was developed to further evaluate teachers' conceptions about writing instruction and to substantiate questionnaire findings. The one hour interview focused on teachers' conceptions about (1) student informancy status, (2) goals of writing instruction and (3) evaluation of written pieces. The teacher interview questions parallel the three subscales on the teacher questionnaire. The questions for the interview were selected from an interview developed for the Cognitive Strategies in Writing Project (Englert, et al. 1987). The teacher interview is provided in Appendix D.

Each interview was rated on a five point scale that ranges from an internal focus to an external focus according to the criteria described in the preceding section for the classroom observation (See Appendix C for the complete rating scale). Responses to the interview were independently evaluated by two graduate students who have studied writing research. Scorers were blind to teacher scores on the questionnaire. When scores were

not close in agreement, the scorers discussed their reasoning and reached consensus. If scorers did not reach consensus, a third scorer read the transcripts and scored the responses in agreement with one of the two original scorers. Interrater reliability of the ratings was calculated before scorers try to reach consensus. Reliability was determined by dividing the number of agreements by the total number of agreements plus disagreements. The interrater reliability was .92.

In summary, each of the ten teachers will be placed on a continuum using the scores from the teacher questionnaire. One end of the continuum reflects internally-focused conceptions, while the opposite end of the continuum reflects externally-focused conceptions. Then, interview data and observational data were used as a multi-method approach to substantiate the questionnaire findings.

Measuring Student Perceptions and Performance

Two student variables, perception of the unit process and performance, were measured. First, in order to measure internal and external perceptions of the writing process, a student questionnaire was developed. Second, to measure student performance in writing a composition measure was developed.

Measuring Student Perception of the Writing Process

Metacognitive knowledge has been defined as awareness and control of cognitive processes in general across subject matter (e.g., Brown, 1978; Flavell, 1978). Control of cognitive processes is the ability to understand what, why and how certain mental processes are carried out. In writing, internal perceptions are defined as the presence of metacognitive control or as the ability of the student writer to rely on internal cues when deciding what they need to think about during planning, organizing and drafting (i.e., students use their knowledge of their chosen audiences to make decisions about how and why they plan, draft and edit their texts). External perceptions are defined as lack of metacognitive control or as the student's reliance on external cues for deciding what to do during planning, organizing and drafting (i.e., students ask the teacher to make decisions). The two student measures were designed to measure such student internal and external perceptions.

Student questionnaire. The student questionnaire provides information about how students make decisions about planning, organizing and drafting texts. Questions were organized so that students completed multiple choice questions about "how" and "why" they plan, organize and draft after they were asked to engage in these processes. The ordering of items as well as the questions and responses developed for the questionnaire resulted from an

analysis of student responses during a 1-2 hour open-ended interview reported in a previous study (Cognitive Strategies in Writing, CSIW, Englert, Raphael, Fear & Anderson, 1988). Questions used by CSIW interviewers and responses made by students were selected because they identified students who were highest and lowest in metacognitive knowledge. The multiple choice format was used in order to measure student control of specific processes such as planning, drafting and finishing. These specific processes were assessed in "how" and "why" questions about students' internal, external and neutral perceptions of the writing process.

Internal perceptions: A response receiving a score of +1 reflects use of internal cues when making decisions about writing. For example, the student chooses an answer which describes writing as an activity that involves making decisions about composing meaning and communicating with different audiences (i.e., I know I'm done writing when I answered all the questions a reader might have).

External perceptions: A response receiving a score of -1 reflects use of external cues when making decisions about writing. For example, the student chooses an answer which describes writing as an externally driven activity that involves making decisions about formal school task requirements designated by the teacher (i.e., My teacher tells me when I'm finished writing).

Neutral perceptions: A response receiving a score of 0 reflects neither internal nor external perceptions because a vague

or ambiguous answer was chosen (i.e., I'm done writing when it's time to be done).

The questionnaire was scored by a writing researcher who was not involved in the project and was not informed of the three response types. The expert was asked to classify responses and designate a categories. The expert labeled and explained the internal, external and neutral categories with 100% accuracy and listed responses under the categories with 92% accuracy when compared to researchers grouping.

Means, standard deviations and the reliability of students' scores on the questionnaire were calculated. To examine the reliability of the questionnaire, the internal consistency of 210 students' scores was computed using Cronbach's alpha. The reliability coefficient was calculated at .60. (The student questionnaire is provided in Appendix E).

In summary, a questionnaire was analyzed to determine whether student held internal or external perceptions of the writing process.

Measuring Student Written Performance

In addition to analyzing metacognitive control a pre and post composition measures were administered to analyze the quality of students' written products. For the pre and post composition measures, students were asked to explain to someone how to do something that the student knows something about. The directions stated that students should write a paper for someone who does not

know anything about their subject (e.g. friend, relative or younger schoolmate). This composition were administered as a pre and post measure.

Quality of both compositions were assessed using an analytic measure described by Diederich (1974). Diederich's system allows scores to range from 0 to 30 based on an analysis of four content variables and four mechanics variables. Each of the four content variables and each of the four mechanics variables receives a rating of high, middle or low that is converted into a numerical score according to criteria specified by the system. Scores on each of the four variables were totaled to form one score for content and one score for mechanics.

Content variables include: 1) ideas, 2) organization, 3) wording and 4) flavor. The idea rating measures what Temple (1982) refers to a "transactional voice". That is, the writer uses language that conveys a main idea with persuasive arguments, examples and points so that the reader gets a clear picture of the main idea or impression that the author is trying to make.

Organization, the second variable in the content category, has to do with a papers sense of movement. The organization rating measures if the paper is logically organized, is balanced and has and underlying plan that starts at one point and moves to another. This variable measures if the writer cues the reader to the underlying plan so that the reader is never in doubt of where the paper is going, i.e., even when the ending has a surprise twist the reader is ready for it.

Wording, the third variable in the content category, has to do with the writers use of words that evoke a response in the reader. This is similar to what Temple (1982) refers to as "poetic voice" in that the writer is imaginative in using phrases, rather than using tired old phrases and "hackneyed expressions" to get ideas across. Either uncommon words or familiar words used in an uncommon setting are indicators that the writer shows an interest in his/her topic as well as using his/her imagination to interest the reader in the paper.

Flavor is the last variable in the content category which measures what Temple (1982) refers to as "expressive voice". The writer's use of language that is close to the self and reveals the nature of the person is measured in this subcategory. The writer's ability to exhibit a close relationship to the reader through self-revelation, opinion, emotion or feelings of like and dislike is captured in this measure.

The second category, labeled mechanics, measures four variables. The first variable in the mechanics category, usage and sentence structure, measure the writer's ability to use standard or informal written English with a varied sentence pattern.

The second variable, punctuation, measures the writer's ability to use rules about capitalization, comas, abbreviation, contractions, numbers, run-on sentences, periods.

The third variable, spelling, measures the writer's ability to spell correctly given that a dictionary might not be available or sensible given the stage of the writing. The absence of

misspellings is not necessarily given a high score if no difficult words are used. Some misspellings are accepted if insufficient time is given to use dictionary. The last variable in the mechanics category, handwriting and neatness, measures the writer's care for legibility and appearance.

The validity and the reliability of Deiderich's system, reported in a 92 page technical report, was established in 1961 by the Educational Testing Services in Research Bulletin 61-15. This system was published in 1974 and is used currently by researchers who assess effects of reading and writing instruction on the quality of student composition (Head & Buss, 1987; and Stevens, Madden, Slavin & Farnish, 1987). Diederich is also cited by current researchers who study alternative means of assessing and assessment reformulation in reading and writing (Pearson & Valencia, 1989).

Diedrich's measure was applied to student compositions by six teams of scorers who were blind to students' identity. Scorers were also blind to when the composition was written, pre or post test. Three teams of scorers, who participated in 5 training sessions, independently read each student's written composition. Each team discussed their independent ratings and then assigned a consensus score on each variable in the content category. An additional three teams of scorers who also participated in 5 training sessions independently read each student's written composition, discussed their rating and assigned a consensus score on each of the variables in the mechanics category. Then

25% of the data was randomly selected and scored by an independent rater who was the primary investigator in this research. When ratings were not in close agreement, the scorers met to discuss their reasons for assigning a specific score and reached consensus. If scorers could not reach consensus, a third scorer reconciled differences. Reliability was calculated by dividing the number of agreements by the total number of agreements and disagreements (Englert, et al. 1988). Reliability was calculated at .86.

Procedures

During the last month of the 1987-1988 school year, 27 teachers completed the teacher's conceptions about writing questionnaire. Then, based on responses to the questionnaire, each teacher was ranked along a continuum which ranged from externally-directed and mechanically focused on decontextualized form to internally-directed and strategically focused on contextualized function. Ten teachers, five each from the opposite ends of the continuum, were selected.

During the fall of the 1988-89 school year, five observations of writing lessons were conducted in each of the ten classrooms. Two observations were conducted during the first three writing lessons of the school year. Then, one lesson per month were recorded for the next three months until December. The first two observations were recorded in field notes and the last three

observations were recorded in field notes, audiotaped and transcribed.

The writing questionnaire and composition measures were administered to students during the first week of the school year as a pretest and again during the first week of December as a posttest. December was chosen as a mid year evaluation before students left for Christmas vacation. Teacher interviews were administered and taped the following April and May, and were subsequently transcribed. April and May were chosen primarily due to time availability and because one year had passed since the administration of the teacher questionnaire. Therefore, each of the three measures of teacher conceptions were administered at 6 month intervals; the teacher questionnaire was administered at the end of the 1987-88 school year, observations were recorded from September to December of the 1988-89 school year, and interviews were conducted at the end of the 1988-89 school year. This is important in order to examine consistency of teacher conceptions over the school year.

	School Year One	School Year Two		
	April 1988	September 1988	December 1988	April 1989
Teacher	Questionnaire	Observation	Observation	Interview
Student		(PRE) Questionnaire Writing sample	(POST) Questionnaire Writing sample	

Analysis of Research Questions

This section is organized into three subsections corresponding to the three research questions: (1) an analysis of differences in teacher conceptions about writing, (2) an analysis of the relationship between teacher conceptions and student perceptions of the writing process, and (3) an analysis of the relationship between teacher conceptions and the quality of student products.

Variation among Teachers' Conceptions about Writing Instruction

Question 1

To examine differences in teacher conceptions about writing instruction, teachers' scores on the conceptions questionnaire were ranked along a continuum ranging from an internal focus to an external focus. The means and standard deviations of the ten teachers were computed for the questionnaire. Then, classroom observations and the interview data were rated and three steps were taken to compare groups.

First, in order to substantiate the findings of the questionnaire and therefore substantiate the rank ordering of teacher scores, two correlations were computed. Teacher scores on the questionnaire and the interview were correlated, and teacher scores on the questionnaire and the classroom observations were correlated.

Second, teacher interview data and observational date were read to verify consistency across the three data sources.

Third, a Mann-Whitney test was be computed to determine if the two groups of five teachers differed significantly in their scores on the conceptions questionnaire. These three steps were used to substantiate differences in teacher conceptions about writing through a multi-method approach.

Teacher Conceptions and Student Perceptions of the Writing Process

Question 2

To explore the relationship between teachers' conceptions about writing instruction and student perceptions of the writing process, two analyses were run. First, in order to determine the relationship between teacher conceptions and student perceptions, correlations between teachers' scores on the conceptions questionnaire and the student ratings on the posttest perceptions' questionnaire were computed. Second, a multiple analysis of covariance was computed to determine if the two group of classrooms differed significantly in internal and external perceptions in the middle of the year. Post-test scores on the student perceptions questionnaire were compared and pretest questionnaire collected at the beginning of the year were used as a covariate to remove incoming differences as a source of variation.

Teacher's Conceptions and the Quality of Student Products

Question 3

To explore the relationship between teachers' conceptions about writing and the quality of student performance, two analyses were run. First, in order to determine the relationship between teacher conceptions and student performance, correlations between teachers' scores on the conceptions questionnaire and the student ratings on the content and the mechanics subsection of the posttest analytic composition measure were computed. Second, a multiple analysis of covariance was computed to determine if the two group of classrooms differed significantly in the middle of the school year on the quality of their written products. Post-test scores on the analytic measure were compared and the composition collected at the beginning of the year (pretest) was used as a covariate to remove incoming differences as on source of variation.

Summary of Chapter III

This chapter presents the research design, (i.e., sample selection, data collection, instrumentation and data analysis procedures), used to examine the relationship between teacher conception about writing and student perceptions and performance in writing. In the first section, methods for choosing a purposive sample of teachers who held different conceptions about

teaching writing are described. To begin the process, a questionnaire was administered in order to identify internally and externally focused teacher conceptions. Then, measures that were used to substantiate questionnaire findings about student informancy status, goals and evaluation were administered. Specifically, the interview and classroom observation data were described as a multi-method approach used to substantiate questionnaire findings.

In the second section of Chapter III, measures of student perceptions and writing performance were explained. A questionnaire was described as a measure that determine students internal or external perceptions of the writing process. In this measure student thinking about how and why they plan, draft, organize and finish written pieces was assessed.

Then, student performance measures which include a pre and post composition measure, and the Diedrich system which was used to analyze both content and mechanics, were described. The Diedrich system is an analytic measure that separates the structural or formal from the functional qualities of a text by including an analysis of both content variables and mechanics variables.

The final section outlines analysis procedures for each of the three research questions. First, analysis procedures for examining differences in teacher conceptions on the conceptions questionnaire and substantiation of these differences through teacher interview and classroom observational data are discussed.

Second, analysis procedures for examining the relationship between differences in teacher conceptions and student perceptions is discussed. The final section describes the analysis procedures for examining the relationship between teacher scores on the conceptions questionnaire and students' scores on the performance measures.

CHAPTER IV

RESULTS

Introduction

The purpose of this study was to examine teachers' internally and externally-focused conceptions about writing instruction. The general research question that guided the formulation of the specific research questions and procedures used to answer these research questions was the following:

> What differences in teachers' conceptions about student informancy status, goals and evaluation are related to differences in students' perceptions of the writing process and students performance in writing.

To answer the research questions, data were collected on teacher conceptions in order to examine variation among teachers conceptions about writing instruction and to identify five teachers with internally-focused and five teachers with externally-focused conceptions about teaching writing. These data were obtained through a questionnaire, an interview, and observations. Data were also collected on student perceptions of the writing process and writing performance at two time points during the school year to assess changes. Both the writing performance measure and the student perceptions questionnaire were

administered at the beginning of the year prior to writing instruction and again in the middle of the school year, approximately three weeks before students left for Christmas break.

This chapter presents the major findings of the study. The findings are organized into three sections corresponding to each of the research questions posed in Chapter One. The first section describes the results of the first research question regarding differences in teacher conceptions. The second section examines the differences in students' perceptions related to teacher differences. The third section examines differences in writing performance related to teacher differences.

Question 1: Analysis of Differences in Teacher Conceptions

In this section, the results of the analyses examining differences in teacher conceptions are presented. The specific research question is:

> Are there differences in teachers' conceptions about student informancy status, goals and evaluation in writing?

To investigate the above question, two analyses are reported. The first analyses reports variation among all 27 teachers' conceptions about writing instruction as measured on the teacher questionnaire. Analysis of the interview data and the observation data that substantiate the questionnaire findings are reported. The second analyses compares two groups of five teachers who

scored on the opposite ends of the continuum measured by the questionnaire. This analysis was used to determine if significant differences existed between the two groups in their average scores on each of the three conceptions that make up the total score on the conceptions questionnaire.

Table 4.1 presents the distribution of teachers scores on the three conceptions and Table 4.2 presents means and standard deviations of teachers' scores on the three conceptions as measured by the conceptions questionnaire. A higher score on the conception indicated greater agreement with an internally-focused conception. The maximum score on each of the conceptions on the questionnaire was +25, and a minimum scores was -25.

As can be seen from Tables 4.1 and 4.2, significant variation existed among teachers in their scores on the three conceptions about writing. Teachers differed in the degree to which their conceptions corresponded to and internally-focused and externally-focused perspective. All three conceptions showed significant variation with neither a "ceiling affect" nor a "floor effect" in teachers' scores. Teachers' scores on the three conceptions were positively correlated.

Table 4.3 presents the intercorrelations among teachers' scores ranging from .48 to .87. Consistent with the moderate to high intercorrelations found between conceptions, Table 4.3 indicates that teachers who scored high on a given conception also tended to score high on the other two conceptions. In contrast,

Table 4.1

Distribution of Scores on the Three Conceptions and the Total Score by Individual Teacher (N=27)

Teacher#	1.Informancy	2.Goals	3.Evaluation	4.Total
280	+6	+12	+10	+28
290	+11	+7	+6	+24
270	+11	+3	+5	+19
180	+4	+8	+5	+17
210	+6	+8	+2	+16
110	+7	+3	+5	+15
130	+1	+13	+1	+15
250	+3	+1	+8	+12
240	+3	+3	+5	+11
220	+2	+1	+5	+8
120	+2	+1	+4	+7
360	+4	+1	+1	+6
230	+5	+5	-4	+6
350	+1	0	+3	+4
140	+4	0	0	+4
300	+3	+3	-2	+4
170	+3	+1	-1	+3
320	-2	+3	+1	+2
310	+4	+2	-5	+1
160	-2	-2	+3	-1
330	-4	+2	0	-2
100	+5	-6	-2	-3
260	-6	+4	-8	-10
190	-6	-3	-2	-11
200	-10	-1	-4	-15
340	-13	-8	-6	-27
150	-8	-4	-17	-29

Table 4.2

Means and Standard Deviations of Teachers' Scores on Conceptions as Measured by the Writing Conceptions Questionnaire

	All Teachers Conceptions (N = 27)		
1.	Student as informant	Mean	1.26
		SD	5.91
2.	Goals of writing instruction	Mean	2.11
		SD	4.80
3.	Evaluation in writing instruction	Mean	.48
		SD	5.61
4.	Total across all three conceptions	Mean	6.67
		SD	14.21

Table 4.3

Correlations Between Teachers' Scores on Subscale and the Global Constructs on the Writing Conceptions Questionnaire (N=27)

	Conceptions	1	2	3	4
1.	Student as informant	.80	.53	.63.	87
2.	Goal of writing instruction	---	.53	.48	.64
3.	Evaluation during writing instruction	---	---	.71	.80
4.	Total score on all three conceptions	.87	.64	.80	.76

teachers who scored low on a conception tended to score low on the other two conceptions.

Because teachers' scores on the three conceptions were highly intercorrelated teachers' conceptions about writing instruction might be considered as one global construct or three related constructs on which teachers are arrayed. For purposes of further analyses, teachers were ranked from high to low. Five teachers were selected who scored consistently high on all three conceptions as measured by the questionnaire (internally-focused) and five teachers who scored consistently low on all three conceptions (externally-focused) were selected and differences were examined in their approaches to writing instruction.

Further examination of the differences between teachers whose conceptions were more internally-focused and more externally-focused was conducted to substantiate questionnaire findings. Correlations were calculated relating the questionnaire with the interview data and observational data. As shown in Table 4.4, the Spearman Rho nonparametric test indicated a relationship between measures and therefore substantiate the results found on the conceptions questionnaire. Moderate to high correlation between the questionnaire and the interview for Student as Informant, Goals, Evaluation and the Total Score and between the questionnaire and the observation ratings were found to be statistically significant.

Table 4.4

Correlation Between Teachers' Scores on Conceptions Questionnaire and Teachers' Scores on the Conceptions Interview and Observation Ratings

Scores on Conception Questionnaire	Interview Rating	Observation Rating
1. Student as Informant	.79*	.78*
2. Goals	.65*	.70*
3. Evaluation	.85*	.76*
4. Total Score	.71*	.69*

*p < .05 one-tailed

Second, in order to determine if the differences found were statistically significant, four Mann-Whitney tests were performed on the teacher questionnaire responses. The Mann-Whitney test, a non-parametric equivalent of a t-test, was chosen in order to compare the five internally-focused teachers with the five externally-focused teachers on the three conceptions about writing and the total score on the conceptions questionnaire. Significant differences were found between the groups on each of the three conceptions and the total score. The Mann-Whitney test revealed significant differences between internally-focused and externally-focused teachers for conception 1, Student informancy status (W=15, p< .004), for conception 2, Goals of Writing instruction (W=16, p< .008), for conception 3, Evaluation (W=15,

p< .004) and for the Total Score (W=15, p< .005). Table 4.5 gives the mean ranks and the standard deviations in z scores for teacher questionnaire results.

The results indicate that significant variation existed between the 27 teachers on the conceptions questionnaire and that statistically significant differences exist between the two groups of teachers' scores measuring internally-focused and externally-focused conceptions about their students informancy status, goals and evaluation on the writing questionnaire. The significant differences found are supported by correlations generated between the questionnaire and observational & interview data.

Question 2: Analysis of the Relationship Between Teacher Conceptions and Student Perceptions of the Writing Process

The relationship between teachers' conceptions about writing instruction and student perceptions of the writing process is explored in two ways. First, correlations were computed between teachers' scores on the conceptions questionnaire and students' scores on the perceptions questionnaire. Second, the students of the internally-focused teachers are compared with the students of the externally-focused teachers on the perceptions questionnaire.

Table 4.5

Mann Whitney Comparing Group 1 (Internally-focused Teachers' Scores) with Group 2 (Externally-focused Teachers' Scores) on the Conceptions Questionnaire

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Total Score on Conceptions Questionnaire

Group 1(Int)	Group 2(Ext)
Mean Rank=8	Mean Rank=3

W= 15.0
z-score= 2.611
p= .005 (one tailed)

Mann Whitney Comparing Internally-focused Teachers' Scores with Externally-focused Teachers' Scores on the Conceptions Questionnaire. Subscale 1-Student Informancy Status

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Student as Informant Scores

Group 1 (Int)	Group 2 (Ext)
Mean Rank=8	Mean Rank=3

W= 15.0
z-score= 2.635
p= .004 (one tailed)

Mann Whitney Comparing Internally-focused Teachers' Scores with Externally-focused Teachers' Scores on the Conceptions Questionnaire. Subscale 2- Goals

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Goals of Writing Instruction

Group 1 (Int)	Group 2 (Ext)
Mean Rank=7.80	Mean Rank=3.20

W= 16.0
z-score= 2.410
p= .008 (one tailed)

Table 4.5, continued

Mann Whitney Comparing Internally-focused Teachers' Scores with Externally-focused Teachers' Scores on the Conceptions Questionnaire, Subscale 3- Evaluation

Evaluation During Writing Instruction

Group 1 (Int)	Group 2 (Ext)
Mean Rank=8	Mean Rank=3

W= 15.0
z-score= 2.619
p= .004 (one tailed)

Correlations Between Teacher Scores and Student Scores

In this section, the results of the analyses examining the relationship between teacher conceptions and student perceptions is presented. The specific research question is:

> Is there a relationship between teachers' conceptions about student informancy status, goals and evaluation in writing and students' perceptions of the writing process?

Correlations computed using the Spearman Rho nonparametric test reported in Table 4.6 indicate that teacher' scores on the conceptions questionnaire are positively related to their students' scores on the perception questionnaire. When the three separate teachers conceptions scores were then correlated with internal and external scores on the perceptions questionnaire results indicated that students having internal perception ratings were positively related to teachers' internal conceptions' scores

Table 4.6

Correlation Between Teachers' Scores on Conceptions Questionnaire and Students' Scores on the Perceptions Questionnaire

	Teachers' Scores on Conception Questionnaire	Students' Internal Control	Students' External Control
1.	Student as Informant	.43	-.81*
2.	Goals	.00	-.63*
3.	Evaluation	.19	-.80*

*p < .05 one-tailed

on all three conceptions about student informancy status, goals and evaluation. However, these correlations were not statistically significant. External control ratings were negatively related to teachers' external conceptions' scores on all three conceptions about informancy status, goals and evaluation. The moderate to high negative correlations for external perceptions were found to be statistically significant for each of the three conceptions.

In this section, the results of the analyses examining differences in perceptions of students whose teachers held internal conceptions and the students whose teachers held external conceptions is presented. The research question is:

> Are there significant differences between students in the group of internally focused teachers' classrooms and the group of externally focused teachers' classrooms in the internal and external perceptions after three and a half months of classroom instruction (August to December)?

Students' perceptions of the writing process were evaluated in an overall MANCOVA with two variables entered simultaneously, internal control and external control. The results revealed significant main effect for teacher conceptions, $F(1,218) = 4.283$ $p<.015$, after incoming differences were removed using the pretest as a covariate. The student questionnaire was administered as a pretest before writing instruction began in order to account for incoming differences in internal or external perceptions at the beginning of the school year. When the separate univariate F-ratios were examined, the results showed that one of the two variables (i.e., external perceptions) made a significant contribution to the overall multivariate analysis. The results of the univariate analysis are shown in Table 4.7.

Table 4.7

Results for MANCOVA on Student Perceptions of the Writing Process

Source of Variation	Hypoth MS	Error MS	F	*Sig of F
Covariate			2.063	.000
Internal Perceptions (pre)	146.228	4.157	35.179	.000
External Perceptions (pre)	37.546	2.074	18.102	.000
Main Effect for Teacher Conceptions			4.283	.015
Univariates				
Internal Perceptions (post)	5.882	4.157	1.415	.236
External Perceptions (post)	17.760	2.074	8.563	.004

* Wilks F test reported.

External perceptions. Univariate results revealed that student groups differed most in external perceptions. An examination of the adjusted mean scores indicate that the students in the externally-focused teachers' classrooms were higher in external perceptions after incoming differences were removed. An examination of the unadjusted and adjusted group means reported in Table 4.8 and unadjusted classroom means in Table 4.9 reveal that the mean scores of the internally-focused teachers' students

Table 4.8

Adjusted and Unadjusted Means Scores for Group 1 (Classrooms of Externally-focused Teachers) and Group 2 (Classrooms of the Internally-focused Teachers) for Students' Perceptions of the Writing Process

Adjusted Means Scores:

Variable	Group 1 (Int) Adj. M	Group 2 (Ext) Adj. M
Student Internal Perceptions	4.70	4.37
Student External Perceptions	1.38	1.96

Unadjusted Means Scores:

Variable		Group 1 (Int) M	SD	Group 2 (Ext) M	SD
Student Control:					
Internal	pre	3.67	(1.96)	4.34	(2.25)
	post	4.48	(2.49)	4.58	(2.19)
External	pre	2.77	(1.79)	2.13	(1.68)
	post	1.49	(1.54)	1.84	(1.56)

Table 4.9

Unadjusted Means Scores and Gain Scores by Classroom on the Perception Questionnaire

Variable	Group 1 (Int) Classrooms 1-5					Group 2 (Ext) Classrooms 6-10				
	Classroom									
	1	2	3	4	5	6	7	8	9	10
Internal										
pre	2.71	4.33	4.67	2.43	4.38	6.43	4.25	4.28	2.86	3.83
post	3.04	5.56	5.87	3.78	5.25	5.96	4.41	5.28	3.41	3.79
gain	.33	1.22	1.20	1.35	.71	-.47	.17	1.00	.54	-.04
External										
pre	3.25	2.44	2.13	3.61	2.13	.91	1.96	1.96	2.95	2.88
post	1.92	1.38	.67	1.96	1.21	1.13	1.46	1.48	2.90	2.33
gain	-1.33	-1.06	-1.47	-1.65	-.92	.21	-.50	.50	-.05	-.54

decreased from the beginning of the year to the middle of the year on the external perceptions rating, while the unadjusted means scores for external-focused teachers' students increased or remained the same.

Internal perceptions. Univariate results revealed that student groups differed least on internal perceptions and this difference was not statistically significant. An examination of the adjusted means scores indicate that students in the internally-focused teachers' classrooms were higher than the students in the externally-focused teachers' classrooms when incoming differences were removed. An examination of the

unadjusted mean scores indicate the internally-focused classrooms started out lower and gained in internal perceptions. In contrast, the students in the externally-focused teachers' classroom scores started out higher and generally remained same or decreased slightly. Although the students' in the internally focused classroom gained, the stable internal scores of the students in the externally-focused classroom were high enough so that no significant difference between students scores for internal perceptions was found.

Summary of Findings for Student Perceptions

In the first analyses, results indicate that significant negative correlations exist between teacher scores on the conceptions questionnaire and student external perceptions scores on the perceptions questionnaire. That is, the teachers who scored high on the conceptions questionnaire, indicating that they held internally focused conceptions, had students who scored low in the external perceptions on the perceptions questionnaire. In contrast, the teachers who scored low on the conceptions questionnaire, indicating that they held externally focused conceptions, had students who scored high in the external perceptions on the perceptions. No significant correlations were found between teachers conceptions and students' internal perceptions.

In the second analyses, significant main effects found in the MANCOVA analyses are attributable to significant differences in external perceptions favoring the students of the internally-focused teacher. When incoming differences were removed using a pretest as a covariate, students of the externally-focused teachers had higher scores on external perceptions than the students of the internally-focused teacher. The differences were primarily due to consistent decreases in external perceptions of mean scores of all five internally-focused teachers' students.

When internal control was examined, different results were found. Although the internally-focused teachers' students' scores increased for internal perceptions, no significant differences were found in internal perceptions between the two groups. Examination of the mean scores reveal that the externally-focused teachers' students' maintained approximately the same mean scores for internal perceptions from the beginning of the year to the middle of the school year.

Question 3: Analysis of the Relationship Between Teacher Conceptions and Student Writing Performance

The relationship between teachers' conceptions about writing instruction and student performance in writing was explored in two ways. First, correlations were computed between teachers' scores on the conceptions questionnaire and student performance on a written composition measure. Second, the students of the

internally-focused teachers are compared with the students of the externally-focused teachers on the written composition measure.

Correlations Between Teacher Scores and Student Scores

In this section, the results of the analyses examining the relationship between teacher conceptions and student performance is presented. The specific research question is:

> Is there a relationship between teachers' conceptions about student informancy status, goals and evaluation in writing and students' writing performance in content and mechanics?

Correlations computed using the Spearman Rho nonparametric test indicate that teachers' scores on the conceptions questionnaire are positively related to their students' performance on the content and mechanics scales. That is, high scores on the conceptions questionnaire, indicating an internal focus, related to high scores on both the content and mechanics ratings.

The three teacher conceptions about student informancy status, goals and evaluation that were correlated with student performance on the content and mechanics are reported in Table 4.10. When teachers' scores on the conceptions questionnaire were rank ordered and correlated using the Spearman Rho, moderate to high correlation between teachers' conceptions about student informancy status, goals and evaluation and student performance on content measures were statistically significant. When mechanics was

Table 4.10

Correlation Between Teachers' Scores on Conceptions Questionnaire and Students' Scores on the Performance in Content and Mechanics

	Teachers' Scores on Conception Questionnaire	Students' Content Rating	Students' Mechanics Ratings
1.	Student as Informant	.72*	.52*
2.	Goals	.54*	.36
3.	Evaluation	.62*	.54*

*p < .05 one-tailed

assessed, significant correlations were also found between teachers' conceptions about student informancy status and evaluation and students' performance in mechanics. However, the low correlation between teachers' conceptions about goals and student performance in mechanics was not significant. The low correlation can be attributed to the combination of both low scores on the goals' subscale and decreased variability among teachers' scores and the low scores on the mechanics' subscales and decreased variability among students' scores.

Comparison of Student Performance of the Externally-Focused and Internally-Focused Teachers

In this section, the results of the analyses examining differences between the writing performance of students whose

teachers held internally-focused conceptions and teachers who held externally-focused conceptions is presented. The research question is:

> Are there significant differences between students in the group of internally-focused teachers and the group of externally-focused teachers in performance on content and mechanics?

Student performance in writing was evaluated in two overall MANCOVA's (i.e., content and mechanics) with four variables entered simultaneously for each MANCOVA. The four content variables were ideas, organization, wording, and flavor and four mechanics variables mechanics were usage, punctuation, spelling and handwriting.

Student performance on content. In the first analysis the content in student compositions was assessed. The results revealed significant main effects for content favoring the students of the internally focused teacher, $F(1,174)=3.835$, $p<.005$ when incoming differences were removed using the pretest as a covariate. When the separate univariate F-ratios were examined, the results showed that all four of the variables (i.e., ideas, organization, wording and flavor) made significant contribution to the overall multivariate analysis. The results of the univariate analysis are shown in Table 4.11.

Ideas, organization, wording and flavor. Univariate results revealed that student groups differed significantly on all four

Table 4.11

Results for MANCOVA on Student Performance-Content

Source of Variation	Hypoth MS	Error MS	F	*Sig of F
Covariate			2.063	.009
Ideas (pre)	26.093	6.054	4.310	.002
Organiz.(pre)	35.126	7.003	5.016	.001
Wording (pre)	34.766	6.225	5.585	.000
Flavor (pre)	36.851	6.335	5.817	.000
Main Effect for Teacher Conceptions			3.835	.005
Univariates				
Ideas (post)	72.081	6.054	11.906	.001
Organiz.(post)	61.885	7.003	8.837	.003
Wording (post)	77.875	6.225	12.511	.001
Flavor (post)	93.557	6.335	14.767	.000

* Wilks F test reported.

content rating variables: ideas, organization, wording and flavor. An examination of the adjusted mean scores reported in Table 4.12 indicates that the students in the internally-focused teachers' classrooms were rated higher for idea, organization, wording and flavor in their written composition than students in the externally-focused teachers' classrooms when incoming differences were removed. An examination of the unadjusted means scores for the groups reported in Table 4.12 and unadjusted means scores for classrooms reported in Table 4.13 indicate that students in the internally-focused teachers' classrooms consistently made larger gains than the students in the externally-focused teachers' classrooms.

Table 4.12

Adjusted and Unadjusted Means Scores for Group 1 (Classrooms of Externally-focused Teachers) and Group 2 (Classrooms of the Internally-focused Teachers) for Student Performance-Content

Adjusted Means Scores:

Variable	Group 1 (Int) Adj. M	Group 2 (Ext) Adj. M
Ideas	7.92	6.58
Organization	7.71	6.47
Wording	7.11	5.72
Flavor	7.94	6.42

Unadjusted Means Scores:

Variable		Group 1 (Int) M	Group 1 (Int) SD	Group 2 (Ext) M	Group 2 (Ext) SD
Ideas	pre	5.10	(2.61)	6.28	(3.00)
	post	7.75	(2.51)	6.75	(2.59)
Organ.	pre	5.07	(2.88)	6.03	(3.20)
	post	7.54	(2.73)	6.64	(2.79)
Wording	pre	4.98	(2.57)	5.63	(2.80)
	post	6.96	(2.58)	5.87	(2.65)
Flavor	pre	5.15	(2.78)	6.60	(3.03)
	post	7.78	(2.42)	6.58	(2.83)

Table 4.13

Unadjusted Means Scores and Gain Scores by Classroom on the Performance Measure of Content

Variable	Group 1 (Int) Classrooms 1-5					Group 2 (Ext) Classrooms 6-10				
	Classroom									
	1	2	3	4	5	6	7	8	9	10
Ideas										
pre	3.30	5.29	6.26	4.36	5.65	7.48	5.20	6.75	5.05	6.19
post	8.47	8.59	8.77	6.54	7.33	6.96	6.23	8.09	6.23	6.67
gain	5.17	3.30	2.51	2.18	1.68	- .52	1.03	1.34	1.18	.48
Organization										
pre	3.30	5.18	6.27	4.45	5.55	8.04	4.90	6.20	4.86	5.52
post	8.53	8.35	8.62	6.27	7.17	7.22	5.41	7.91	6.64	5.90
gain	5.23	3.17	2.35	1.82	1.62	-.82	.51	1.71	1.78	.38
Wording										
pre	3.35	5.41	6.40	4.09	5.25	7.39	5.00	5.80	4.57	4.95
post	7.87	7.76	5.77	5.63	5.92	6.35	5.41	6.64	6.68	5.50
gain	4.52	2.35	-.63	1.54	.67	-1.04	.41	.84	2.11	.55
Flavoring										
pre	4.00	5.18	6.67	4.00	5.60	7.82	6.10	7.00	5.62	6.10
post	8.40	8.81	8.61	6.64	7.41	6.70	6.59	8.00	5.64	6.86
gain	4.40	3.63	1.94	2.64	1.81	-1.12	.49	1.00	.02	.76

Student performance on mechanics. Student performance in writing was evaluated in an overall MANCOVA for mechanics with four variables entered simultaneously. The results revealed no significant main effects, $F(4,173)=1.242$, $p<.295$ when incoming differences were removed using a pretest as a covariate. When separate univariate F-ratios were examined, the results showed

that one of the variables (i.e., usage) made a significant contribution to the overall multivariate analysis. The results of the univariate analysis are shown in Table 4.14.

Table 4.14

Results for MANCOVA on Student Performance-Mechanics

Source of Variation	Hypoth MS	Error MS	F	*Sig of F
Covariate			3.547	.000
Usage (pre)	4.339	1.597	2.717	.031
Punct.(pre)	10.711	1.889	5.669	.000
Spelling (pre)	6.067	1.302	4.659	.001
Handwr.(pre)	5.540	1.058	5.242	.001
Main Effect: for Teacher Conceptions		1.242	.295	
Univariates				
Usage (post)	7.433	1.597	4.654	.032
Punct.(post)	4.519	1.889	2.392	.124
Spelling(post)	1.454	1.302	1.117	.292
Handwr.(post)	.771	1.058	.729	.394

* Wilks F test reported.

Usage. Univariate results revealed that student groups differed most in usage of formal English, correct sentence structure with standard English language patterns. An examination of the adjusted mean scores reported in Table 4.15 indicates that the students in the internally-focused teachers' classrooms scored higher on the usage rating after incoming differences were removed. An examination of the unadjusted means scores for the

two groups reported in Table 4.15 and unadjusted scores for classrooms within each group reported in Table 4.16 indicates that the students in the externally-focused teachers' classroom started out the year slightly higher and remained approximately the same

Table 4.15

Adjusted and Unadjusted Means Scores for Group 1 (Classrooms of Externally-focused Teachers) and Group 2 (Classrooms of the Internally-focused Teachers) for Student Performance-Mechanics

Adjusted Means Scores:

Variable	Group 1 (Int) Adj. M	Group 2 (Ext) Adj. M
Usage	3.76	3.34
Punctuation	3.12	2.78
Spelling	.90	3.72
Handwriting	4.07	3.94

Unadjusted Means Scores:

Variable		Group 1 (Int) M	SD	Group 2 (Ext) M	SD
Usage	pre	3.00	(1.44)	3.28	(1.29)
	post	3.75	(1.21)	3.35	(1.35)
Punct.	pre	2.37	(1.39)	2.88	(1.35)
	post	3.02	(1.48)	2.87	(1.41)
Spelling	pre	3.53	(1.29)	3.48	(1.33)
	post	3.87	(1.11)	3.75	(1.25)
Handwr.	pre	3.84	(1.14)	4.26	(.97)
	post	4.00	(1.06)	4.01	(1.09)

Table 4.16

Unadjusted Means Scores and Gain Scores by Classroom on the Performance Measure of Mechanics

Variable	Group 1 (Int) Classrooms 1-5					Group 2 (Ext) Classrooms 6-10				
	Classroom									
	1	2	3	4	5	6	7	8	9	10
Usage										
pre	2.65	3.23	3.33	2.90	2.90	3.52	3.35	3.30	3.05	3.14
post	3.87	4.24	4.46	2.68	3.63	3.56	2.82	3.27	3.86	3.33
gain	.78	1.01	1.13	-.22	.73	.04	-.53	-.03	.81	.19
Punctuation										
pre	2.10	2.82	2.87	1.95	2.35	3.30	2.95	2.90	2.62	2.38
post	3.07	3.76	4.08	1.77	2.88	2.96	2.58	2.81	3.14	2.76
gain	.97	.94	1.21	-.18	.53	-.34	-.37	-.09	.52	.38
Spelling										
pre	2.95	3.88	4.00	3.32	3.55	3.73	3.75	3.60	3.29	3.14
post	4.53	4.05	4.07	2.86	3.83	3.87	3.88	3.59	3.90	3.62
gain	1.58	.17	.07	-.46	.28	.14	.13	-.01	.61	.28
Handwriting										
pre	3.65	4.05	3.93	3.59	4.15	4.65	4.05	4.10	3.95	4.10
post	4.20	4.65	3.93	3.31	3.67	4.26	3.56	3.90	4.18	4.14
gain	.55	.60	0	-.28	-.48	-.39	-.49	-.20	.23	.04

on the usage rating. In contrast, the internally-focused teachers' classroom started out slightly lower and made greater gains.

Punctuation, spelling and handwriting. Univariate results revealed that student groups did not differ significantly in punctuation, spelling or handwriting. An examination of the

adjusted and unadjusted means scores reported in Table 4.15 indicates that students in the internally-focused teachers' classrooms scored higher on all three ratings. However the differences were not significant.

Summary of Findings for the Relationship Between Teacher Conceptions and Student Writing Performance

In the first analyses, results indicate that significant positive correlations exist between teachers' scores on the conceptions questionnaire and students' performances in writing when the content of student writing was examined. That is, the teachers who scored high on the conceptions questionnaire, indicating that they held internally-focused conceptions, had students who scored high in writing performance when the content of their written compositions was analyzed.

When mechanics was assessed, significant correlations were also found when two of the three teachers' conceptions were evaluated (i.e., conceptions about students' informancy status and evaluation). The low positive correlation between teachers' conceptions about goals and students' performance in mechanics was not significant. In the second analyses students' performances in producing content in written composition was evaluated in an overall MANCOVA with four content variables: ideas, organization, wording and flavor. When incoming differences were removed using the pretest as a covariate, significant content differences were found. Students of the internally-focused

teachers' scored significantly higher on all four of the univariates variables measured.

Students' performance in producing correct mechanics was also evaluated in an overall MANCOVA with four mechanics variables: usage, punctuation, spelling and handwriting. When incoming differences were removed using a pretest as a covariate, significant differences were found when usage was assessed, however differences between the groups on punctuation, spelling and handwriting were not significant.

Summary of Chapter IV

Chapter IV presents analyses and results indicating that significant differences were found between internally-focused and externally-focused teachers' conceptions about writing instruction. Interview and observational data supported the differences found in teachers' conceptions about student informancy status, goals and evaluation on the conceptions questionnaire.

The differences found in teacher conceptions were also found to be related to differences in student perceptions and writing performance. When internally-focused teachers' classrooms were compared with the externally-focused teachers' classrooms, differences were noted in external perceptions. Specifically, decreases in external perceptions scores were noted for the internally focused teachers' students when beginning of the year

scores were compared with middle of the year scores. The externally-focused teachers' students maintained internal perceptions scores so that no significant differences were noted for internal perceptions' ratings.

When student performance was assessed, the internally-focused teachers' students outperformed the externally-focused teachers students when content scores examining ideas, organization, wording and flavor were analyzed. In addition to content, internally-focused teachers' students outperformed the externally-focused teachers' students when mechanics scores examining usage was analyzed. Nonsignificant differences between the two groups were found were found when mechanics scores examining punctuation, spelling and handwriting were analyzed.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to examine teachers' internally and externally focused conceptions about writing instruction. The general research question addressed in this dissertation was the following:

> What differences in teachers' conceptions about student informancy status, goals and evaluation are related to differences in students' perceptions of the writing process and student performance in writing?

The research questions that form the basis of this study were formulated in response to a major limitation of the research on teacher thinking: an absence of subject matter focus. Consequently, this study examines teachers' conceptions about writing as one example of research on teacher thinking within a specific subject matter domain.

As such, one research question addresses teachers' conceptions about writing, and two questions address the relationship between these conceptions and student learning. Specifically, the first question examines differences in teacher conceptions about student informancy status, goals and objectives. The second questions examines the relationship between these

teacher conceptions and student perceptions of the writing process. The third question examines the relationship between teacher conception and student performance in writing.

This chapter is organized into three major sections. The first section is a discussion of the three research questions. The second section describes two major implications: first, how this study exposes a need to clarify a model of teacher thinking about literacy instruction; and, second, implications for teachers, researchers, teacher educators and educational reformers. Finally, the third section is a discussion of future directions and the need for additional research.

Section 1: Discussion of Findings

Research Question 1

The first research question was:

> Are there differences in teachers conceptions about student informancy status, goals and evaluation in writing?

Teachers who were trained in process writing and had participated in at least one year of classroom instruction in process writing were asked to respond to a questionnaire about writing instruction that was divided into three subscales. The three subscales, developed from a review of the literature on writing instruction, measured teachers' internally and externally-focused conceptions about student informancy status, goals and evaluation. Five teachers whose responses were in

highest agreement with internally-focused statements and five teachers whose responses were highest in agreement with externally-focused statements were chosen for more in-depth analysis. Interviews and observation of teacher practice were collected and consistent finding across the data substantiate the findings on the questionnaire. The questionnaire, observations and interview data were collected at six month intervals, from spring of the year preceding the collection of student data to the spring of the year following the collection of student data.

Findings of research question 1. The results from the statistical analyses support the existence of differences in teacher conceptions about writing. Teachers who held conceptions that were internally-focused agreed with statements on the questionnaire, made statements during the interview and acted in the classroom consistent with the notion that formal rules and procedures are evaluated by the student in light of purposes, audience and contextualized writing situations. Consistent findings indicate that teachers who held conceptions that were externally-focused differed from teachers who held conceptions that were internally focused across all three conceptions. That is, teachers who held externally-focused conceptions agreed with statements on the questionnaire, made statements during the interview and acted in the classroom consistent with the notion that they see themselves as informants and evaluator who inform

students of rules, interpretations and formal criteria that can be decontextualized.

Conclusions and implications regarding research question 1.

The two groups of teachers identified from a larger pool of teachers who had training in the process approach to teaching writing can be described as holding disparate views of writing instruction. The teachers with an internal focus view the students as important agent in contextualizing instruction because they have knowledge and experiences and therefore inform the teacher about the function or purpose of a written piece. This view is in sharp contrast to the view that the teacher decontextualizes instruction so that rules and standards concerning form are delivered to students without regard for contextualized audiences or purposes.

One major implication of the findings concerns the important role that teacher conceptions play in interpreting the training that they receive. That is, even though groups were balanced in terms of the content and amount of training in process writing, teachers held opposing views of writing instruction. Since teachers' conceptions were found to be highly correlated to conceptions inferred from observing classroom practice, the results suggest that determining teacher incoming conceptions about student informancy status, goals and evaluation might be necessary for understanding differences in teachers'

interpretations of training and, ultimately how that training will be applied to classroom practice.

Summary of research question 1. In sum, significant differences were found between two groups of teachers holding different conceptions about writing instruction. Internally-focused teachers held different conceptions than externally-focused teachers when each of the three conceptions were measured separately and when a total internal and external score were compared. Teachers were found to consistently hold either internal or external conceptions about student informancy status, goals and evaluation during writing instruction. These findings support differences described in the literature on instructional practice in writing (Tierney, 1984; Raphael, Englert & Anderson, 1987; and Deford, 1984). Findings of this research also support differences in teachers models of literacy instruction suggested by Bereiter & Scardamalia (1987).

Research Question 2

The second research question concerned the relationship between teacher conceptions and student perceptions:

> Is there a relationship between teachers' internally-focused and externally-focused conceptions and student perceptions of the writing process?

This research question examined (a) the relationship between teacher conceptions and student perceptions and, (b) differences

between students who were instructed by internally-focused and externally-focused teachers.

Students were asked to respond to multiple choice questions about "how" and "why" they plan, organize and draft after they were asked to engage in these processes on a student questionnaire. Student responses were coded as either internal, external or non-directional for the beginning of the year responses and middle of year responses. An internal score indicated that students use internal cues (e.g., background knowledge, success criteria) to help them to monitor and regulate the writing process, while an external score indicated that students use external cues (e.g., ask the teacher, length of the paper, presence of mechanical features) so that they rely on the teacher to tell them what to do, when to do it and whether they have satisfactory accomplished a writing task.

Findings for research question 2. Significant differences in external perceptions were found when students who were taught by internally-focused teachers were compared with students who were taught by externally-focused teachers. Externally-focused teachers' students scored significantly higher in external perceptions than internally-focused teachers' students. In addition, high internally-focused scores on the teacher questionnaire were found to be related to low external scores on the student questionnaire, and high externally-focused scores on

the teacher questionnaire were found to be related to high external scores on the student questionnaire. No significant difference between the groups of students on internal perceptions and no significant correlations between teachers' conceptions and student internal perceptions was found.

An examination of internal perceptions mean scores reveals that the internally-focused teachers' students started out slightly lower and exceeded the mean scores for the externally-focused teachers scores students. Inversely, an examination of external perceptions means scores reveals that the internally-focused teachers' students started out slightly higher and decreased to a lower external mean score than the externally-focused teachers' students.

An examination of the means scores revealed that the externally-focused teachers's students maintained about the same level of internal perceptions from the pre to the post test and the post test mean scores were almost equal to the post test mean scores for the internally-focused teachers' students. External-focused teachers' students also maintained about the same level of external perceptions, however these scores were significantly higher than the internally-focused teachers' students when incoming differences were removed.

Conclusions and implications. Student perceptions were found to be related to differences in teachers' conceptions about

writing. Internally-focused teachers who viewed students as important agents in contextualizing instruction tended to have students who held more internal perceptions than externally-focused teachers who view instruction as a decontexualized process. After about four months of writing instruction, the internally-focused teachers' students decreased in reliance on the teacher and on external cues to make decisions and increased in thinking about planning, drafting, editing and finishing as an internally driven activity that must be completed to communicate with different audiences in different contexts. Externally-focused students maintained the same level of reliance on the teacher and on external cues to make decisions, as well as the same level of internal perceptions.

One major implication of these findings concerns the important relationship between teacher conceptions and student perceptions. Even though both groups of students were taught by teachers who had training in process writing and claimed to use process writing in their classrooms, students of the internally-focused teachers' decreased in their reliance on external cues and increased in reliance on internal cues and therefore moved toward thinking about writing as communication rather than task completion.

Although external perceptions of the students of the externally-focused teachers related to their teachers' externally-focused conceptions, internal perceptions were not

related. This finding and the stable internal means score suggests that students maintained internal perceptions and, therefore, internal perceptions may be less influenced by teacher conceptions. However, it is important to note that the relationship between teachers' internal and external focus and students' external perceptions is correlational. Therefore, the changes in student external perceptions toward the direction of their teachers' conceptions only suggests that teachers influenced students rather than vice versa.

Summary of research question 2. In sum, significant differences were found between the two groups of students who were taught by teachers holding different conceptions of the writing process. Students of the internally-focused teachers decreased in external perceptions and increased in internal perceptions and therefore were less reliant on the teacher and external cues to make decisions about writing. Students of the externally-focused teachers maintained about the same level of external and internal perceptions. Internal perception scores were not significantly related to teacher conceptions, while external perceptions scores were significantly related to teacher conceptions. This implies that student internal perceptions may be less influenced by teacher conceptions about students' informancy status, goals and evaluation than external perceptions.

Research Question 3

The third research question concerned the relationship between teacher conceptions and student performance on written compositions:

> Is there a relationship between teachers' internally-focused and externally-focused conceptions and student performance in producing content and mechanics in writing?

This research question examined (a) the relationship between teacher conceptions and student performance in content and mechanics and, (b) the differences between students who were instructed by internally-focused teachers and students who were instructed by externally-focused teachers.

Students were asked to explain to someone how to do something that they knew about in order to assess their ability to compose. Students wrote one composition at the beginning of the year prior to being instructed in writing and one in the middle of the school year. Both composition measures were scored for content and mechanics by trained scorers who were blind to the students' identities.

Findings for research question 3. Student performance in writing was found to be positively related to differences in teachers' conceptions about student informancy status, goals and evaluation in writing when content was assessed and when teachers' conceptions about student informancy status and evaluation in writing when mechanics were assessed. The only positive

relationship that was not statistically significant was the relationship between teachers' conceptions about goals and students performance in mechanics, possibly due to less differentiated ratings on both teacher and student measures.

Significant differences were found between the two groups when student performance on the content measure was assessed. The internally-focused teachers' students outperformed the externally-focused teachers' students when content scores examining ideas, organization, wording and flavor were analyzed. That is, compositions written by the internally-focused teachers' students were of higher quality on the: (a) idea rating or transactional voice, indicating that the pieces that they wrote were more transactional and had more persuasive arguments that were supported with examples and evidence, (b) organization rating, indicating the pieces that they wrote were more logically organized and had a better sense of movement, (c) wording rating or poetic voice, indicating that the pieces that they wrote had a higher quality of wording that were more likely to evoke a response in the reader and (d) flavor rating or expressive voice, indicating that the pieces that they wrote were more expressive and close to the self, revealing the nature of the person.

When mechanics were assessed, significant differences were found between the two groups when student performance on the usage rating were compared. Internally-focused teachers' students compositions were rated higher when the quality of the sentence

structure and formal English was assessed. Nonsignificant differences between the two groups were found when mechanics scores examining punctuation, spelling and handwriting were analyzed.

Conclusions and implications regarding research question 3. Student performance was found to be related to differences in teachers' conceptions about writing. Internally-focused teachers view students as important agents who have their own "territories of information", their own communication purposes and therefore they play an important role in contextualizing writing functions during instruction. This view was found to be related to student performance, i.e., the higher the agreement with this view the higher the quality of the content of student written composition.

On the other hand, externally-focused teachers view the teachers' role as an informant so that the teacher decontextualizes rules and standards concerning form that are delivered to the student without regard for contextualized audience or purposes. This view was found to be related to lower performance scores, i.e., the higher the agreement with this view the lower the quality of the content in students written composition.

Furthermore, teachers who held an internally-focused conceptions had students who outperformed the students of the externally-focused teachers in mechanics when usage was assessed.

Even though externally-focused teachers delivered information about correct sentence structure and correct formal English, the student in the internally-focused teachers classrooms started out lower and made greater gains when usage was assessed. The externally-focused teachers also emphasized mechanics such as punctuation, spelling and handwriting. Even though classroom observations substantiate the emphasis that these teachers placed on mechanics, students in the externally-focused teachers' students performed no better than the internally-focused in mechanics. In fact, internally-focused teachers' classroom means scores were higher on punctuation, spelling and handwriting when incoming differences were removed.

Additional research is needed to document differences at the end of the school year. In this study data were collected from September to December so that the students in the internally-focused teachers' classrooms may have had less instruction in mechanics. Comments made by the internally-focused teachers on the interview and during classroom observations suggest that these teachers rearrange the order of lessons in their language text books so that mechanics are stressed in the second half of the school year. Significant differences in mechanics may be apparent at the end of the year rather than the middle of the year.

One implication of these findings concerns the important relationship between teacher conceptions and student performance. Even though externally-focused teachers emphasized mechanics and

form, their students' compositions were similar in quality to the students of internally-focused teachers when mechanics was assessed during the middle of the school year. On the other hand, internally-focused teachers who emphasized the function over form had students who produced content of higher quality than students of the externally-focused teachers.

Summary of research question 3. Significant differences were found between the two groups of students who were taught by teachers holding different conceptions of the writing process. Student of the internally-focused teachers made significantly greater gains when the contents of their written compositions were rated for he quality of ideas, organization, wording and flavor, and when mechanics or the quality of formal English and sentence structure was rated. Even though externally-focused teachers emphasized mechanics no significant differences were found in punctuation, spelling and handwriting between the two groups. This implies that instruction that is driven by internally-focused teacher conceptions is related to and may have a positive influence on students' ability to produce ideas, organization, wording, flavor and usage, while instruction that is driven by externally-focused teacher conceptions may have little positive influence on student performance on content or mechanics. However, it is important to note that relationship between teacher conceptions and student performance is

correlational. Therefore, the change in student scores from the beginning of the school year only suggest that teacher influence students rather than vice versa. Further research is needed to determine if the relationship is causal.

Section 2: Implications of the Findings of This Dissertation

Two sets of implications are suggested by this study. The first relates to implications for clarifying a model of teacher thinking about literacy instruction, and the second related to implications for teachers, educational reformers, researchers, teacher educators.

Implications for Clarifying a Model of Teacher Thinking

This research supports the findings of other research that begin to clarify a model of teacher thinking about literacy instruction. An analysis of differences in thought about literacy described by scholars who study classroom practices during writing instruction, literary theorist, and scholars who propose historical accounts of literacy, reveals some consistent patterns. For example, the findings described in this study support differences described in the literature on instructional practice in writing (Tierney, 1984; Raphael, Englert & Anderson, 1987; and Deford, 1984). Differences in teachers' conceptions about informancy status, goals and evaluation means on questionnaire

parallel differences found in the nature of classroom dialogue, interaction patterns and the nature of tasks that are reported in this descriptive research. Similarly, the findings of this study support differences in the models of literacy instruction proposed by Bereiter & Scardamalia (1987). That is, differences in the "exercise model", "knowledge-base model" and the "intentional model" described by Bereiter and Scardamalia (1987) are congruent with differences in teachers' internally and externally-focused conceptions documented by this research.

In addition to these current accounts, historical research reported by current theorist suggest that form-driven versus function-driven analyses of literary thought have a long history. For example, Eagleton cites Jacobson (1956) in a historical account that reports dominant themes in literary analysis as early as 1915. Eagleton describes how Jacobson provides major links between Russian formalist groups in 1915 and modern-day structuralism. The pattern of thinking that is described in this early work is traced to a current analyses by Eagleton (1983) and later Cherryholmes (1988) who provide major links between modern-day structural and post-structural thought as it operates within educational settings.

Specifically, Jacobson (1956) describes differences in literary analyses using poetry as an example. Early formalist groups are reported as analyzing poems as structures that are ". . . a set of signs that must be studied in their own right,

not as a reflections of external reality." He refers to the process of decontextualizing literary work by stressing:

> ". . . the arbitrary relation between the sign and the referent, word and thing, that helps to detach the text from its surrounding and make it an autonomous object."

Jacobson contrasts this structural view with a functional view of poetry in which the focus of the analysis in on communication in terms of who is speaking, for what purpose, in what situation rather the words or signs. Similarly, Eagleton and Cherryholmes refer to structural and post-structural thought. Structural thought is described as reductionist in that literary pieces are reduced to a set of forms and rules that govern the use of forms. Meaning corresponds to reality and therefore meaning has been constructed in the past.

Post-structural thought, on the other hand, views meaning as reconstructed and deconstructed so that literary work is received and meaning is made by individuals within a time and setting. Readers are seen as constructing meanings from texts and also reconstructing their own preconceived conceptions as they read. This is similar to what Bruce (1986) refers to as a social-interactionsists model of literacy. This model describes reader awareness of different levels of implied authors and readers, so that the reader is self-consciously aware that meanings associated with literary pieces are constructed at different times and settings by different authors.

Differences in structural and post-structural thought parallel differences found in teachers' internally and externally-focused conceptions. Teachers' externally-focused conceptions are congruent with structural perspective. In this study, externally-focused teachers held the view that their goals for writing instruction were focused on forms such as mechanics and rules for producing correct form. Similar to the formalist and structuralist perspectives, teacher thought their role was to reduce complexity and deliver form to students. In contrast, teachers' internally-focused conceptions are congruent with functionalist and post-structural perspectives, in that internally-focused teachers held the view that their goals for writing instruction were focused on communication purpose determined by students given a specific time and setting.

Consistent differences across this work suggests that there may be important differences in teacher conceptions that are important for explicating a model of teacher thought process that effect instruction and student performance in writing. In the past, models of teacher thinking have described teacher planning, decision making and theory building as parallel and reciprocal processes. However, these consistent findings suggest that differences in teachers' conceptions about goal setting and evaluation that is focused on form and/or function play an important role in driving subsequent planning, decision making, and instruction in contrasting ways. Consequently, a model of

teacher thinking about literacy instruction needs to include a conceptual framework specifying teachers' conceptions about student status, goals and evaluation.

Implications for Teachers, Researchers, Teacher Educators and Educational Reformers

This research has important implications for teachers, researchers, teacher educators and educational reformers. By explicating differences in teacher conceptions this study may help teachers to become more consciously aware of their own thinking. Greater awareness may help teachers assess their own conceptions so that they are better able to monitor their own thinking about students' status, intentionality, purpose-setting and self-evaluation. Monitoring conceptions may help teachers to control their own thinking about instructional practice and therefore understand how they influence student perceptions and performance.

This study also has implications for researchers. First, in helping them to understand how teachers interpret and respond to instructional implementations and applications of research findings, and second, in helping them interpret the effects and outcomes of instructional interventions in writing. That is, understanding differences in teacher interpretations and enactments of implementation techniques may help to explain why instructional programs have differential impacts on students. In addition, this study also implies that it is important for researchers to assess rather than assume that congruence exists

between teachers' incoming conceptions and the conceptual frameworks that undergird effective implementation. As such, this study has implications for future implementation studies, in that the assessment of teacher thinking and/or building in self-assessment of incoming conceptions may be as important as the implementation itself.

Finally, this study has important implications for teacher educators and educational reformers. Educational innovations and improved teaching methods may be filtered through existing conceptions and therefore reinforce existing instructional practices. This implies that in addition to training pre-service and in-service teachers to carry out instructional methods, they also need to be educated to develop an ongoing awareness of their own conceptions about students, goals, and evaluation. Therefore, developing habits of thought focused on these three conceptions may help teachers to become more effective at monitoring and questioning their own literacy instruction.

Section 4: Where Do We Go from Here?

This dissertation only begins to unravel the complexity of teacher thinking about writing instruction. It suggests that teacher thinking about students, goals, and evaluation are three dimensions that are critical but not exhaustive features of teacher thinking about writing instruction. As such, this study focuses on limited aspects of internally-focused conceptions about

writing instruction as a model of more effective instruction. Specifically, we know that internally-focused teachers view their students, goals, and evaluation very differently than externally-focused teachers. However, this work does not report examples from classroom practice that explains how these differences effect instructional practice and students' learning. Additional research is needed to delineate how differences in teacher conceptions about their students, goals, and evaluation impact teacher practice and student learning.

Additional studies would also add much to our understanding of teacher thinking about writing if attention is given to the following limitations of this study. First, conceptions of teachers in extreme groups were studied. Additional research that examines the relationship between teachers' possessing less extreme conceptions and their students' perceptions and performance would contribute to our understanding of a large population of teachers. Specifically, understanding how internally-focused and externally-focused conceptions are balanced and confronted within teachers who agreed less strongly and/or have conflicting internal and external conceptions about writing instruction would provide useful information for staff developers and teacher educators.

Second, when the data examining student perceptions were analyzed, internal perception scores and external perception scores were calculated separately. It is not clear whether

internal perceptions and external perceptions are discrete or continuous variables. That is, can a student hold internal perceptions and external perceptions at the same time, and, if so, do they influence writing performance? We do not know if an increase in internal perceptions diminishes external perceptions. Research that clarifies how student perceptions are related to student control of the writing process would add to current knowledge about effective writing instruction.

Third, further research that controls for and/or documents time-on-task as a variable would help to explain the relationship between teacher conceptions and time spent on writing instruction. Since teacher self-report data were used, it is not known whether internally-focused teachers devoted the same amount of time to writing instruction as the externally-focused teacher. This problem is confounded by the fact that the internally-focused teachers emphasized contextualized tasks; therefore, students could have spent more time composing outside of writing periods designated by the teacher. This is one example of the difficulties of measuring cognitive processes on paper and pencil tests.

Summary of Chapter V

Finding of this research suggest that significant differences were found between two groups of teachers holding different conceptions about writing instruction. Internally-focused

teachers held different conceptions than externally-focused teachers when each of three conceptions was measured separately and when a total internal and external score was compared. Teachers were found to consistently hold either internal or external conceptions about student informancy status, goals and evaluation during writing instruction.

Significant differences were also found between the two groups of students who were taught by teachers holding different conceptions of the writing instruction. Students of the internally-focused teachers decreased in external perceptions and therefore were less reliant on the teacher and external cues to make decisions about writing. While external perceptions scores were significantly related to teacher conceptions, internal perceptions were not related to teacher conceptions. This implies once students gain a sense of internal reliance they may continue to understand that decisions need to be made based on their own reasoning about audiences and purposes. Finally, significant differences were found in performance between the two groups of students who were taught by teachers holding different conceptions of the writing process. Student of the internally-focused teachers wrote higher quality compositions when content was rated for ideas, organization, wording and flavor as well as when mechanics was rated for usage of formal English and sentence structure. No significant differences were found in punctuation, spelling and handwriting between the two groups. This implies

that instruction that is driven by internally-focused teacher conceptions may have a positive influence on students' ability to produce content, while the mechanical quality of students' work is no different than the mechanical quality of the work produced by students who were taught by teachers who stressed form over function.

The differences in teacher conceptions documented by this research support and extend past and current research findings. Consistent differences that are described across the research suggest that differences in teachers' internally and externally-focused conceptions may play an important role in driving instruction, and therefore these differences have implications for developing a model of teacher thinking about literacy instruction. As such, examining differences in the way that teachers think has important implications for teachers in how they monitor their thinking, for researchers in how they conceptualize and interpret findings of implementation studies, and for teacher educators and reformers in the way that they go about educating rather than training teachers to construct and reconstruct their own conceptions about literacy instruction. Suggestions for future directions include examining teachers' less extreme conceptions of practices, studying the relationship between internal and external student perceptions, and documenting time on task as it is related to teacher conceptions about writing instruction.

APPENDICES

APPENDIX A

TEACHER CONCEPTIONS QUESTIONNAIRE

Teacher Conceptions Questionnaire

The conceptions questionnaire is designed to assess teachers' conceptions about writing instruction. The questionnaire consists of 36 items designed to assess teachers' conceptions on three subscales. Items preceded by a "+" represent internally-focused propositions, while items preceded by a "-" represent externally-focused propositions.

I. Student as informant.

+(Children have background knowledge and they construct their own knowledge.)

-(Children receive knowledge and need to be given information.)

+12. Children learn how to write best by figuring out for themselves the ways to find answers to writing problems.

+25. Children can figure out ways to write papers without formal instruction.

+26. Experience forms the basis for a good writer.

+39. Sometimes when students get started they might write three of four different things.

+42. Good writers have lots of questions about where to get information.

+43. Most children can figure out a way to solve many writing problems without adult help.

-2. It is important that students know how to follow directions to be good writers.

-4. Children learn best by attending to the teacher's explanation.

-10. Good writers think systematically and usually have good mechanical skills.

-13. When children have problems writing its usually because they have language problems or problems with reasoning or apoor grasp of the english language.

-17. It is important for a child to be a good listener in order to learn how to write.

-23. When students get stuck while writing I usually try to give them ideas so that they might get their thinking startedagain.

II. The goals of writing instruction.

+(Children's awareness of forms and contextualized functions together should provide the basis for instruction.)

-(Decontextualized forms and language conventions should provide the basis for instruction.)

+8. My writing goals depend on the situations, the lesson and the mood of the students.

+9. Students can use ideas from cartoons and t.v. programs as ideas for writing.

+11. When selecting the next topic to be taught, a significant consideration is what children already know.

+14. I write the same kinds of papers that my students do.

+28. Students write in my classroom in order to teach other students.

+33. My overall goals for teaching writing change depending on the subject that I am teaching.

-5. Time should be spent learning the love and value of writing before children spend much time composing.

-19. It is important to break down a sequence of mechanical skills when planning for instruction.

-22. When selecting the types of writing lessons to be taught one must consider the logical organization of skills.

-29. I assess students understanding by giving them writing assignments.

-36. When selecting the next topic to be taught, one must consider the logical organization of mechanical skills.

-44. No matter what subject that students are writing in they should be taught to use proper spelling and punctuation because people judge their writing.

III . Evaluation within writing instruction.

+ (Writing instruction should be taught in relation to understanding the role of self-critcism and self-evaluation of meaning as communicated to an audience)

- (Teachers should evaluate knowledge according to preconceived criteria that does not consider the audience and purpose of the writer.)

+15. Students should pretend that they are a friend or a neighbor when they go back over their work.

+ 20. When students are confused by their own writing I ask them to tell me what the problem is.

+24. Good writers have lots of questions.

+31. When a student gets writers block, I ask them where they want to go with their ideas.

+38. Teachers should encourage children who are having difficulty solving a writing problem to continue to try to find solutions.

+48. Teachers should allow children to figure out their own ways to solve writing problems.

-7. When students are finished writing a draft, they should then go back and check for spelling and grammatical errors.

-16. Students should be encouraged to use descriptive words in their written pieces.

-18. I seldom have students working with their peers because they have trouble giving each other specific feedback.

-34. Teachers should evaluate student writing to be sure that the lessons goals have been accomplished.

-45. **Good writers remember to use the set of criteria that I lay out in class beforehand.**

-46. **Good writers ask questions like: Do you think this paper is ready to be handed in?**

APPENDIX B

GUIDELINES FOR OBSERVATION

Guidelines for Observations

GENERAL PROCEDURES:

Written notes on complete writing lessons should be taken in addition to audio-recorded lesson content. In general, the observer should write down the teacher's dialogue in addition to keeping a running log of the teacher's activity and how the student's are responding. Time should be noted regularly every 3-5 minutes.

The overall tone or ethos in the room should be noted (e.g., orderly, disorderly, relaxed but businesslike or disciplined vs. confusing, student self-regulated vs. teacher dominated.)

HYPOTHESIS OF THE STUDY

The major hypothesis of the study is that what teachers think, say and do with students during writing instruction affects student thinking in terms of student performance, internal vs. external perceptions about writing.

More specifically, teacher differences in ways of thinking about form and function will affect the way that they think about the role of the student and the teacher, their writing goals, topic selection and evaluation. Therefore, the tasks that they assign and the dialogue that they use in the classroom may reflect these differences in conceptions. The next section will describe how you might see difference in teacher conceptions operating in the classroom.

1. Role of the student as informant. Students are informants that use forms such as text structures, punctuation, grammar etc. for a purpose that they own. The student is responsible for teaching or informing his/her chosen audience. Therefore, the teacher's role is to communicate this role to the student through dialogue. The teacher informs the student of conventional forms and reasons for using forms that will help the student to solve problems and facilitate communication of the student's ideas to a "real world" audience.

Topic selection then becomes the responsibility of the student. The teacher's role is to provide instruction that models thinking about how to arrive at a topic rather than suggesting topics or assigning topics. I am interested in how teachers set up and introduce a writing lesson as well as how they follow through during the writing lesson or lessons in facilitating students purposes during editing and revision. How are tasks and problems negotiated?

2. Goals of the writing program I am interested in describing what goals are explained to students and how goals are communicated to students (e.g. explicit or implicit). Are goals adjusted to combine the purposes that students bring and the knowledge of forms that teachers bring, given the specific social context of the classroom?...or...Are the goals stable and decontextualized.

   Does the teacher communicate to the student that forms or language conventions are used to fulfill real functions rather than contrived or routine school tasks that have no real audience communication or purpose besides the teacher assessment of decontextualized skills.

   The teacher mediates this process by questioning student's purposes, helping them to define goals and problems. How does the teacher incorporate her agenda and the students agenda intersubjectively.

3. Evaluation

   Teachers response to students and self-criticism. How does the teacher respond to students written pieces? Who responds to whom? How and when does the response take place? (e.g. oral response with the student vs. written response without the student present). Does the teacher tell the student how she would change the piece, or does she ask the student to think about how the intended audience might react? Does the teacher help the student to think about the audience if the audience is distant?

   Does the student communicate at the beginning of the lesson what will be evaluated or how evaluation will take place? Does the teacher communicate at the beginning of the lesson that writing is to be evaluated by the teacher so that writing assignments

are for assessment vs. learning. Is writing used by the teachers to evaluate if students know appropriate forms vs. if the student has voice and ownership of their pieces. Does the teacher care if the piece says something to an audience rather than fulfilling a duty for the teacher?

What does the teacher evaluate (e.g. text structure, descriptive words, mechanics, voice, reader sensitivity, considerateness of text, student self-evaluation of their text)?

Is the evaluation task set up so that more than one person responds to a written piece? Does the teacher evaluate if the student knows "why" forms are important?

SPECIFIC GUIDELINES: Be sure to note:

1. Instructional times: keep a running record of the amount of time spent on explanation of form and function, as well as response, selection of topics, and evaluation.

2. Individual work and conference times: try to capture teachers individual dialogue with students and kinds of comments that students make to each other.

3. Types of dialogue: Does the teacher "ask" or "tell"? How often does the teacher respond to students? What is the pattern of asking and telling?

4. Keep a running record of non-verbal interactions. How does the teacher position herself in relation to her students (e.g., does she sit next to students, stand over students)? Are there signs of the teacher's attitude toward pupils and their roles...pupil movement around the room? (e.g., Can students get up and ask questions of each other? Can students sit under tables or choose places to write?)

THINGS TO LOOK FOR:

Organize your notes according to the natural flow of conversation and events. Here are some specific things to look for:

1. Does the teachers dialogue move back and forth from ideas about form to ideas about function?

2. Are there causal links in here talk with students?

3. What are the purposes set for writing, (e.g., for a school-tasks or for real world tasks)? Does the teacher talk about her own real purposes and then engage students in thoughts of their own purposes? Does the teacher critique her own work?

4. Does the teacher model how she thinks about forms and functions given her own real world experiences?

5. Does the dialogue transfer control of ideas and purposes? Does the teacher listen to the students purposes and ask questions that focus on that purpose?

6. Does the teacher give examples of "why" things are done and "how" decisions are made about the tasks and other classroom concerns?

7. Does the teacher talk about how she figured out what audience she would be talking to and why?

8. Are expectations communicated that the written piece should be completed in one class session? Does she explain why certain time limits or guidelines are given? Are students allowed to choose times to finish?

9. Where do written products go?

10. Is the criteria for evaluation made explicit? If so when? When does the teacher respond to a written piece?

11. Does the teacher set requirement unrelated to purpose and audience (e.g., write 5 lines)?

12. Do students respond to each others writing? When and how often?

13. Does the teacher have students plan, organize, draft, revise and edit? Is she concerned with evaluating the process or just getting an answer?

14. Are clarity and coherence and considerateness of the text ever mentioned?

15. Are students asked to evaluate other contextual variables that might effect how the written piece will be received (e.g., Where will your reader be sitting when he/she read this)?

16. What instructional strategies does the teacher use? Does the teacher gives procedures to follow or does she give problems to solve?

17. Does the teacher communicate that students can solve problems and that they know valuable information or that they can find valuable sources of information? Do expectations vary by student?

APPENDIX C

RATING SCALE FOR THE TEACHER INTERVIEW AND OBSERVATIONAL DATA

Rating Scale for the Teacher Interview and Observational Data

Subscale One: Student as Informant

(Contextualized View vs. Decontextextualized View)

Teacher wants to hear from students . . . versus. . . teacher wants only to tell students things they don't know.

The first subscale reflects teacher thinking about the student as an informant in the classroom. A high score on this subcale indicates that the teacher thinks that children use background knowledge to generate and construct knowledge. This is a contextualized view of writing instruction because the teacher sees the student as knowing a great deal of information that she can use to 1) learn from and about students and 2) connect the information that she wants students to learn form her.

A low score reflects the thinking that children receive knowledge. The teacher needs to inform the student of topics, information, rules and procedures for writing a paper. This is a decontextualized view because the teacher doesn't see the students incoming knowledge and experience as important for instruction. Instead, she needs to inform students. For example, during planning the teacher gives students topics or during editing the teacher by tells students to indent, use capitals or write incomplet sentences. She thinks more about the deficits in students thinking rather than the assets. For example, when this teacher talks about the importance of writing complete sentences, you get the sense that you use correct form because you are a better writer if you use correct form rather than you communicate to a reader your message more effectively if you use correct form. The teacher might talk about readers or audience but she thinks about the student as producers of correct form rather than givers of information.

Several examples of teacher statements about students ability to inform about content or process. Students choose topics and get ideas for writing from their experiences or peers. Teacher asks the students to think of ideas. She generates ideas with students. She invites students to give each other ideas by writing them on an overhead, the chalkboard or involving students in oral discussion or groups discussions. Teacher might assign an

audience during planning, but students choose what they know about to tell this audience while brainstorming or drafting. The emphasis is on giving ideas that you have in your head rather than the teacher selection of information. The students spend most of the writing time informing others about topics and ideas that they know about. The teacher asks students what they think about.

The teacher views students as able to inform her and each other about content, process and attitudes. For example, students are seen as having knowledge about topics and planning as well as about drafting and editing so that the teacher believes that peer editing has value. Although the teacher may feel there are some problems with peers working together, she can see the value of having students work together. This is beyond one or two "high" students who act as teachers aids. The teacher thinks that students learn more about the writing process from working together.

5 In addition, the teacher might express the conception that students can inform each other of content so that she might metnion publishing students work. Again this isn't publishing for publishings sake, the teacher talks about readers and writers so that you get the sense that she hopes publishing is a means of sharing thought. The teacher may talk about the improtance of using correct form, such as punctuation, complete sentences and spelling, but form and sense making are seen as related to each other so that they are connected during instruction.

4 A few examples of teacher statements about student as knowing and important sources of infomation. The teacher rated 4 has the same conceptions about her students as the teacher above in rating 5, but there are fewer examples and the pattern of her thinking is less clear.

3 The teacher and the student both mention some ideas, but it's hard to tell who chooses topics and who has iformation to share about content or process.

2 The teacher rated 2 has the same conceptions about her students as the teacher below in rating 1, but there are fewer examples and the pattern of her thinking is less clear.

1 Several examples of statements that indicate that the teacher needs to tell students topics and information to write about as well as information about the correct form of the paper. The topic may be a secondary concern to the teacher because teacher is stresses how to set up the paper and physical features rather than being concerned about paper contents. Teacher spends most of the time telling students what to write and what to do rather thinking about what ideas they want to express. She doesn't talk

about the student as having ideas that they can share, she talks more about the importance of making sure that students can write information in a way that she needs to inform them about.

Subscale 2: Goals of Writing Instruction

The second subscale reflects teacher thinking about the goals of writing instruction. A high score indicates that the teacher thinks writing goals are dependent on the students' purposes and social contexts both in and out of school. She focuses on the importance of students intentions during writing instruction. She doesn't see the need to impose motivation because if students see writing as purposeful then she does need to be the primary source of motivation.

A low score indicates that the teacher thinks writing goals should emphasize the intentions that she holds for students, such as her intent that students should master correct forms that can be removed from students purposes. She expresses the need to motivate students through instruction or in other words she sees motivation as part of the instruction that she needs to provide rather than motivation as coming from students or the writers' intentions.

5 Several examples of students purposes and goals. Teacher emphasizes students need to think about purpose, audience and intentional control of writing. Statements indicate that the students' goal is to communicate meaning to a reader or an audience of classmates or an audience in the students' social context. The teacher encourages students to think about planning and organizing for a reader and mentions publication as one way to help students set goals for writing. Teachers talk and assignments emphasize the importance of instilling the notion that student are author so that she doesn't need to do all external motivating. Her goal is to get students to desire to write and see purpose. They need to own the purpose for communicating ideas and own the purpose for using correct mechanics. When this this teacher talks about mechanics you get the sense that students need to understand the reasons for using correct form. She not only states that her goal is that students will desire or appreciate writing. She also talks about the students need to learn to choose purposes or audiences and topics. In this talk learning mechanics is seen by students as important to achieve a communication purpose.

4 The teacher rated 4 has the same conceptions about her goals as the teacher above in rating 5, but there are fewer examples and the pattern of her thinking is less clear.

3 Teacher mixes equally comments about contextualized purposes and content and decontextualized form. It's hard to tell what she emphasizes because both are talked about and are equally emphasized.

2 The teacher rated 2 has the same conceptions about her students as the teacher below in rating 1, but there are fewer examples and the pattern of her thinking is less clear.

1 Several examples of teacher emphasis on her purpose or intentions which are often express as her goal is that student will master correct mechanics and decontextualized forms. The teacher might state that her goal is to have students desire to write, but she does not teach students to set goals or purposes. Instead, she believes that if students learn correct form they will be better writers so then they will desire to write. The teacher doesn't address students incoming intentions or desire to communicate, she sets purposes by defining what better writers do. Therefore, the teacher stresses the importance of indenting, capital letters, punctuation, margins on the sides of the paper as means to becoming a better writer. She imposes upon students her desire to have them become better writers that produce correct form, rather than using students intentions to help them learn to use form to achieve the goals that they have set.

Subscale 3: Evaluation

The third subscale reflects the teacher's thinking about evaluation. A high score on this subscale reflects the thinking that students play a role in thinking about and evaluating their own topics, ideas and written pieces. The teachers' role is to turn student's attention back on to written pieces in an effort to jointly understand problems about audience and communication. A low score on this subscale reflects the thinking that teachers role is to evaluate topics and written products using decontextualized criteria such as emphasizing the use of mechanics, descriptive words, or formatting the paper.

5 Several instances where the teacher encourages the students to think about their reader. The teacher helps students to reflect on what they want to accomplish and how they will effectively communicate to a reader. Teacher talks about being organized or interesting for a reader so that they can understand or learn from your written pieces. The teacher talks and sets of tasks with the assumption that audiences will read your writing so student needs to check to make sure the writing makes sense. Evaluative comments do not dominate teacher talk.

4 A few instances of 5 above, again a less clear pattern.

3 Mixed teacher evaluates and student evaluates.

2 A few instances of 1 below, again a less clear pattern.

1 Several instances that teacher evaluates students comments and writing. The teacher implies or directly states that she will be looking for correct form (e.g., capital letters, indenting and surface features.) If teacher talks about an audience she imples or states that others will judge your writing rather than learn from it. Teacher talks and sets up tasks with the notion that she will assess students writing. Evaluative comments seem to dominate the teacher's talk.

APPENDIX D

TEACHER INTERVIEW

Teacher Interview

The interview will follow a structured format. The interviewer will ask questions as written below and then the teacher's answers will be followed with probes when necessary. All teachers' responses to the interview will be audiotaped and later transcribed. Interview questions and procedures include the following (adapted from CSIW interview, Englert et al., 1988).

TEACHER INTERVIEW

(General information to see what surfaces first.)

1. In the first section of this interview I would like to deal with general ideas and perceptions about writing in your own class. The first thing I want to know is, when do students write?

2. Could you give me an example of what a typical writing activity looks like during reading, language, social studies or science? Do you formally teach writing during the day? When? (Goals, Conception II)

3. What are the goals of your writing program? In June when you look back over the year, what are the things in general that you would want your students to leave your room with as a result of your writing program?

4. Now I'd like to move away from general goals to specific things that you think your kids should learn by the end of the year. What are specific things that you want your students to leave your room with as a result of your writing program?

5. Are there any skills that you would hope that your students would walk away with?

6. How do you begin a lesson or a unit that would include writing a paper?

7. Where do your students get their specific topics?

8. What do your students write reports about? In contrast to creative writing, what are some kinds of informational topics that your students have written about?

9. Where do students get information for there reports? What kinds of things might you do?

(Evaluation, Conception III)

10. When your students are writing their papers do you see them making changes in their paper as they're writing? What kinds of revisions do they make?

11. If you had to identify the major problem that you think your students have in writing reports, what would you say that problem is?

12. Do you evaluate your students reports? How?

13. zhat do you do to motivate kids for different kinds of writing assignments?

(Informancy, Conception I)

14. How would you characterize a good writer What makes somebody a good writer? What do you think children need to learn to be a good writer?

15. How would you characterize a poor writer? What makes somebody a poor writer?

16. Children often ask questions in class as they work on their papers. What sorts of questions do children ask when they are writing? What kinds of questions are good or poor?

17. Have you noticed any kinds of students that are more dependent or more independent than other students?

18. Do you have any techniques that you use to help promote children's independence in writing?

(Specific application questions-these could cover any or all of the conceptions.)

21. Now I'm going to describe two students for you to describe what kind of help you might give that student. Sam is a student who has a lot of trouble just selecting a topic, coming up with ideas and getting ideas organized. What would you do to help him with these problems? Let's say that Sam is about to turn a paper in to you. What are some things that you might say to him when he is finished before he hands his paper in?

22. Let's say that Rosa is another student. Rosa can come up with ideas, she's written an explanation. What are some things you might say to her? (show a series of written pieces)

23. Do you think it would be helpful to have her work with a peer?

24. What do you think the role of the teacher should be in teaching writing ? What do you think the teacher's responsibility should be?

25. What do you think the role of the learner should be in the writing lesson? What do you think the student's responsibility should be?

Note to the Interviewer: Throughout the interview, if you think the teacher has already answered a question then say, "The next question is:. . . I think that you already answered that question. Do you think that you answered it? Is there anything else that you want to add?"

APPENDIX E

STUDENT PERCEPTIONS QUESTIONNAIRE

Student Perceptions Questionnaire

Name_____ Date_____

Teacher's name_____

WHAT I THINK ABOUT

We would like to know what you think about when you write a paper or a report. This is not a test. There are no right or wrong answers. Since everyone writes differently from one another, each of you may put something different down. When you try to think of answers to some of these questions try to remember back to times when you have written a paper or a report in your classroom.

1. Sometimes teachers ask students to write reports because they want

   a) you to get ready to write when your older.
   b) to check and see how much you know about a topic.
   c) to help you and your classmates learn more.

2. Imagine that you have been asked to write a paper about a topic that you know something about. To get ideas for your paper you could

   a) indent and begin to write.
   b) think about what you have done or what you know about.
   c) get an idea off the board or from the teacher.

3. If you were to write a paper or a report that describes how cats and dogs are alike and different, what are some kinds of information you would include? Write your ideas on the lines below.

a)
b)
c)
d)
e)
f)

4. To organize your ideas for your paper about cats and dogs you should

   a) decide what ideas go together.
   b) write only ideas that are true.
   c) ask the teacher what ideas go together.

5. Sometimes you write a paper about how two things are alike and different. The most important reason that you would write a paper like this would be to

   a) finish an assignment that your teacher gave you.
   b) show your teacher that you know about something.
   c) help your reader to decide between two things.

6. Let's pretend that you were writing a report about dogs and cats. Imagine that as you were reading in the library you came across the sentence, "Dogs and cats need vitamins and meat everyday." Imagine that you thought of the list of ideas listed below. Circle the idea from below that this sentence would go with.

   What dogs and cats look like
   *Colors of dogs and cats
   Where dogs and cats live
   What dogs and cats eat
   How to care for your dog and cat

7. When you are writing a report if you try to group ideas together like these, the most important thing to try to do is

   a) write ideas that sounds right.
   b) make sure you have complete sentences.
   c) think of ideas that make sense together.

8. It is important to organize ideas in a paper because

   a) it will look better.
   b) your teacher will like your paper.
   c) your reader will understand it more easily.

9. If you were writing a report about the steps you need to follow to feed your dog, you might think of ideas like: "You need to call him in from playing when its time to eat"...or..."Make sure his feet aren't muddy when he comes inside." Look at the ideas below and number the ideas 1,2,3,4, in the order that you would put them in your paper.

   -----Find a safe place for your pet's bowl and get the dog food.
   -----Clean his food and water bowls when he is done eating.
   -----Fill his bowl with fresh food.
   -----When his food is ready call him inside.

10. Imagine that you are writing this paper in class. If you were trying to explain how you think about ordering ideas like the ideas above you would say

    a) I think about whichideas should follow each other.
    b) I check with the teacher to see what should come next.
    c) I write what comes into my head that sounds right.

11. If you were explaining to a friend why it is important to put ideas in this order, you might say that

    a) you'll get a better grade if you put them in order.
    b) papers that are organized are good papers.
    c) readers understand more when papers are organized.

12. You know your paper is finished when

    a) you have written down every idea that you can think of.
    b) you get to the bottom of the page and the page is full.
    c) you have given your reader something to think about.

13. If a friend reads your paper before you turned it in, the most important thing that he/she should do is make sure that

    a) your paper has capital letters and periods.
    b) your paper is organized and makes sense.
    c) your paper has a title.

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