CHANGES IN TEACHERS' BELIEFS, UNDERSTANDINGS, AND PRACTICES CONCERNING READING COMPREHENSION THROUGH THE USE OF PRACTICAL ARGUMENTS:
A FOLLOW-UP STUDY

by
Alora Valdez

Copyright © Alora Valdez

A Dissertation Submitted to the Faculty of the DEPARTMENT OF TEACHING AND TEACHER EDUCATION In Partial Fulfillment of the Requirements for the Degree of DOCTOR IN PHILOSOPHY WITH A MAJOR IN ELEMENTARY EDUCATION In the Graduate College THE UNIVERSITY OF ARIZONA 1992
As members of the Final Examination Committee, we certify that we have read the dissertation prepared by Alora Valdez entitled "Changes in Teachers' Beliefs, Understandings, and Practices Concerning Reading Comprehension Through the Use of Practical Arguments: A Follow-Up Study" and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy.

Dr. Virginia Richardson  
Date 8/19/92

Dr. Walter Doyle  
Date 8/19/92

Dr. Patricia Anderson  
Date 8/23/92

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

Dr. Virginia Richardson  
Dissertation Director  8/19/92
STATEMENT BY AUTHOR

This dissertation has been submitted in partial fulfillment of requirements for an advanced degree at the University of Arizona and is deposited in the University Library to be made available to borrowers under the rules of the Library.

Brief quotations from this dissertation are allowable without special permission, provided that accurate acknowledgement of the source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the copyright holder.

Signed  Alora Valdez
ACKNOWLEDGEMENTS

This dissertation is dedicated to my husband Don, who made all of this possible: my daughter Jennifer, who has always supported me; my grandson Damian Cory, who brings sunshine into my life each and every time he smiles; and my mother, who always pushed me to do my best. I also want to extend my gratitude to Virginia Richardson for touching my life in such a profound way. And a special thanks to Walter Doyle, Patricia Anders, Kathy Carter, Luis Moll, and Paul Robinson, who all shared a great deal of themselves and their wisdom with me.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF FIGURES</td>
<td>11</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>12</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>13</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>1. STATEMENT OF PROBLEM</td>
<td>15</td>
</tr>
<tr>
<td>Introduction</td>
<td>15</td>
</tr>
<tr>
<td>The Present Study</td>
<td>16</td>
</tr>
<tr>
<td>Focus</td>
<td>16</td>
</tr>
<tr>
<td>Significance</td>
<td>17</td>
</tr>
<tr>
<td>Background</td>
<td>17</td>
</tr>
<tr>
<td>Terms</td>
<td>19</td>
</tr>
<tr>
<td>Practical Argument</td>
<td>19</td>
</tr>
<tr>
<td>Teachers' Beliefs</td>
<td>20</td>
</tr>
<tr>
<td>Teachers' Understandings</td>
<td>21</td>
</tr>
<tr>
<td>Reflection</td>
<td>22</td>
</tr>
<tr>
<td>Assumptions</td>
<td>23</td>
</tr>
<tr>
<td>Limitations</td>
<td>24</td>
</tr>
<tr>
<td>Organization of the Chapters</td>
<td>25</td>
</tr>
<tr>
<td>2. REVIEW OF THE LITERATURE</td>
<td>28</td>
</tr>
<tr>
<td>Introduction</td>
<td>28</td>
</tr>
<tr>
<td>Teacher Change Literature</td>
<td>29</td>
</tr>
<tr>
<td>Staff Development Literature</td>
<td>32</td>
</tr>
<tr>
<td>Practical Argument Literature</td>
<td>33</td>
</tr>
</tbody>
</table>
Reflection Literature ............................................ 37
Constructivist Literature ........................................ 44
The Role of Dialogue in Teacher Change Literature ................. 46
   Overview .................................................. 46
   Teachers' Professional Knowledge Studies ...................... 49
   Teacher Enhancement Studies .................................. 50
   Enhancing Teachers' Professional Knowledge Studies ........... 52
   Teacher Change: A Vygotskian Perspective ..................... 54
Teacher Cognition Literature ..................................... 56
Teacher Beliefs Literature ....................................... 61
Summary ........................................................... 65

3. METHODOLOGY .................................................... 66
   Introduction .................................................. 66
   Research Approach ........................................... 70
   Sample .......................................................... 71
   Context ......................................................... 73
   Data Collection ................................................. 73
      Belief Interviews .......................................... 73
      Practical Arguments ....................................... 74
      Observations and Field Notes ............................... 75
      Videotaped Lesson ......................................... 77
      Informal Interviews ....................................... 77
   Data Analysis ................................................. 78
      Analysis of the Data ....................................... 79
      Practical Arguments ....................................... 80
Nature of conversation ........................................ 80
Topics of reflection and
    Initiators of the Topics .................................. 82
Type of change made ............................................ 83
Belief Interviews ............................................... 83
Observations and Field Notes ................................ 86
Triangulation .................................................... 86
Analysis of the Research Questions ............................ 87
Summary ........................................................... 88
4. PARTICIPANTS AND CONTEXT .................................. 89
Introduction ....................................................... 89
Alec ................................................................. 89
Alec's School ..................................................... 89
Alec's Principal .................................................. 91
Alec's Class ....................................................... 91
Alec's Classroom ................................................ 92
A Typical Day ..................................................... 92
The Teacher ....................................................... 95
Kristi ................................................................. 97
Kristi's School ................................................... 97
Kristi's Principal ................................................ 98
Kristi's Class ..................................................... 99
Kristi's Classroom ............................................... 99
Kristi's Teammate ............................................... 100
A Typical Day ..................................................... 103
LIST OF FIGURES

1. Time-line for Data Collection—Kristi ......................... 67
2. Time-line for Data Collection—Alec ............................ 68
3. Layout of Alec's Classroom .................................... 92
4. Set up for Silent Reading in Kristi's Classroom ............... 100
5. An Example of the Way Kristi's Students
   Get Together for Literature Groups
   and the Books They are Reading .............................. 101
6. Kristi's Beliefs and Practices ................................ 120
7. Alec's Beliefs and Practices .................................. 139
8. Kinds of Talk in Teacher's Practical ......................... 155
9. Various Kinds of Change Discussed in
   Teachers' Practical Arguments ............................... 160
10. Who Owns the Agenda in the Teachers' 
    Practical Arguments ........................................ 164
LIST OF TABLES

1. Changes in Kristi's Primary Topics ..................... 127-128
2. Changes in Alec's Primary Topics ......................... 146-147
3. Occurrences of Who Introduced
   Primary Topics of Conversation
   in Kristi's Practical Arguments ......................... 157
4. Occurrences of Who Introduced
   Primary Topics of Conversation
   in Alec's Practical Arguments .......................... 158
5. Primary Topics of Conversation
   in the Practical Arguments .............................. 162
ABSTRACT

This study was designed to examine changes in two teachers' beliefs, understandings, and practices concerning reading comprehension since the beginning of a staff development process over five years ago. It will also explore the role of dialogue in teacher change. The theoretical framework used to guide the staff development process was Fenstermacher's (1986) notion of practical arguments. Fenstermacher suggests that research can be introduced to teachers by assisting them in examining their own empirical and value premises as they relate to those taken from the most-recent research.

The two teachers were amongst twenty-four intermediate grade teachers who participated in a year long school-wide staff development process designed as a constructivist activity in which the teachers' beliefs and theories were explored in relation to the current research on reading comprehension (Richardson & Valdez, 1991). They also participated in belief interviews, observations, and individual practical argument sessions at the beginning, at the end, and three years following the staff development process. The practical arguments sessions consisted of a teacher and two staff developers viewing a videotape of the teacher's practices in reading comprehension, discussing what they saw, and exploring alternative theories and practices.

The content of the teachers' belief interviews, observations, and practical arguments was analyzed according to the teachers' beliefs, understandings, and practices concerning how to teach reading and the purpose of reading. In addition, the practical arguments were analyzed according to the nature of the conversation, the topics of reflection, initiators of the topics, and the changes the teachers were making in their practices.
The content and discourse analyses revealed that both teachers had changed and were continuing to change their beliefs, understandings, and practices concerning reading comprehension in the direction of recent research. The discourse analyses determined the staff developers' and teacher's dialogue had also changed. The findings suggest the teachers had developed a framework for examining their beliefs, understandings, and practices in relation to recent research through reflective conversations with themselves and others which enabled them to keep on changing their practices long after the formal staff development was over.
CHAPTER I

STATEMENT OF PROBLEM

Just there, where people imagine the world to be stable, just there its reality slips away instant by instant. Think of the shadow of the tree, which the traveler reaches at last, after miles of walking in the blazing sun. He desires only to rest in its shade, which to him seems permanent and immobile (for its motion can not be perceived by the senses). But no sooner has he fallen asleep than the shadow moves on and passes over him, and he wakes to find himself in the heat of the sun. (Nasir al-Din Tusi [thirteenth-century poet] quoted in Benny, 1975, p. 90).

CHAPTER I

STATEMENT OF PROBLEM

Introduction

Throughout the nation and around the world, educators are busy reflecting on what learning, teaching, and schooling are all about. As a result, they are making some major changes in their teaching practices (Loucks-Horsley and Stiegelbauber, 1991). Richert (1991) suggests that change happens. In the realm of teaching and learning, change can be reassuring, but it can also be troublesome. Maybe it is troublesome because it means teachers and teacher educators have to come to deal with change - a lot of change. Things are not fixed in teaching. Circumstances change, students change, content changes, teachers change (p. 113).

Typical frustrations with change are evident in the discussions that occur in meetings, conferences, workshops, and staff lounges (Loucks-Horsley & Stiegelbauer, 1991). Many reforms have been set in motion in order to affect change in the educational system and yet they have not always been successful (Hamilton, 1989).

One explanation for a lack of teacher change implies that
administrators know what is best for teachers since teachers have not been trained in scientific thought (Jackson, 1968; Lortie, 1975). Another explanation suggests that teachers do not willingly change their practices due to organizational and personal reasons (Hargreaves, 1984; March & Simon, 1958; Smylie, 1988). Some studies indicate that teachers are motivated by student performance and engagement (Mitchell, Ortiz, & Mitchell, 1987; Stern & Keisler, 1977). While other studies explain that teachers' commitment, engagement, and willingness to change or learn is affected by features of the school organization (Little, 1987; Rosenholtz, Bassler, & Hoover-Dempsey, 1986) and others describe how teachers' beliefs, knowledge, attitudes, and perceptions inhibit or promote changes in teachers' practices (Doyle & Ponder, 1977; Guskey, 1988; Richardson, 1990; Tobin, 1987; Waugh & Punch, 1987). Researchers have gone as far as to inquire about the nature of change in terms of the probability that teachers will adopt it (Cohen, 1987, 1988; Cuban, 1984, 1986, 1988).

The Present Study

Focus

This qualitative case study is designed to examine how two teachers are thinking about reading comprehension more than two years after completion of a staff development process that focused on teachers' cognitions. It will investigate the following questions:

1. What are the teachers' current beliefs and understandings concerning reading comprehension?
2. What are the teachers currently working on in terms of their reading comprehension practices?

3. Have the teachers' beliefs, understandings, and practices changed since the beginning of the staff development portion of the Richardson and Anders (1990) study over five years ago?

4. Are the teachers' current beliefs consistent with their current practices?

5. What is the role of dialogue in teacher change?

Significance

The findings from this study will contribute to the fields of research and staff development in terms of:

1. Contributing to our understandings of teacher change, teachers' beliefs, teachers' understandings, teachers' practices, and the practical argument process.

2. Improving upon current conceptions of the staff development process.

3. Using dialogue to promote and detect teacher change.

Background

The present study is just one component of a follow-up study to the Richardson and Anders (1990) study—a three-year study designed to investigate a U.S. Department of Education grant announcement of why teachers do not use the current research on reading. The original and follow-up study was funded by the Office of Educational Research and
Improvement (OERI), Department of Education.

During the second year of the three-year research project, individual and group staff development sessions were conducted with fourth, fifth, and sixth grade teachers. The theoretical framework used to guide the staff development process was Fenstermacher's (1986) notion of practical arguments change. Both individual and group staff development processes incorporated constructivist learning (Cobb, 1986, 1987; Driver, 1988; Duckworth, 1987; Fosnot, 1989; Glassersfeld, 1987, 1990; Lester & Onore, 1990) and reflective practices (Dewey, 1933; MacKinnon, 1987a; Munby & Russell, 1989; Schon, 1983; Van Manen, 1977; Zeichner & Liston, 1989) to encourage teachers to eventually take control of their own learning.

It was the goal of the individual staff development process to create an environment in which teachers would be encouraged to explore the explanations of their practices in relation to empirical premises and practices abstracted from the latest research concerning reading comprehension. Explanations for a particular practice are defined as a set of statements of beliefs about teaching and learning that may be placed within the analytic framework of a practical argument. It was believed that when a teacher discloses an empirical premise, it could be explored in terms of alternative empirical premises as drawn from the other teachers or from the latest research on reading comprehension. The teacher could modify, change, and/or adopt new premises, and thus consider changing classroom practices during this process.

Richardson (1991a) indicated that at the completion of the staff
development process, teachers were beginning to try some of the practices as discussed in the staff development. But some of the changes made in their practices were altered if they violated the teacher's beliefs about teaching and learning, created a management problem, or did not appear to meet needs created by the standardized testing system. The filtering of a research-based practice through a teacher's experience and personality also seemed to dramatically change the original practice. An additional factor affecting change was the school culture which appeared to determine the type and level of involvement in the staff development process (Richardson, 1989). Richardson and Anders (1990) concluded that the teachers' considerations were broader and more contextualized than any of the theories from the reading research because they were embedded in the teachers' beliefs and cognitions. Richardson (1990) recommended that research provide teachers with content on which to reflect in relation to their own present beliefs and theories (Richardson, 1989).

**Terms**

**Practical Argument**

This study borrows Fenstermacher's (1979, 1986) definition of a practical argument—a series of reasons, regarded as premises, connected to an action. The notion of practical argument stemmed from Aristotle's concepts of practical and theoretical rationality. Aristotle suggested that a practical argument is made up of a set of premises that ends in an action or leads to an intention to act. Today, Green (1986) argues
that the reason for teaching is "to change the truth value of the premises of the practical argument in the mind of the child" (p. 252). Fenstermacher (1979), advancing this notion, contends that research about teaching is most beneficial when it is used to change or modify the premises in the minds of teacher and thus their actions.

Fenstermacher suggests that research can be introduced to teachers by assisting them in examining their own empirical and value premises as they relate to those taken from the most-recent research (Richardson, 1991a). Fenstermacher and Richardson (In Press) maintain that practical arguments can assist teachers in understanding the reasoning behind their actions, reflecting on and evaluating their thinking in relation to their actions, changing their practices in directions supported by educational research, and taking control of their justifications and responsibility for their actions.

Teachers' Beliefs

Educational research has borrowed definitions of beliefs from anthropology, philosophy, psychology, and sociology. For instance, Eisenhart, Shrum, Harding, and Cuthbert (1987) borrowed Goodeneough (1971) and others' definition of belief—a shared statement of relationship among things accepted as true. Klein and Smith (1987), expanding on Rokeach's (1968) definition of beliefs, explained beliefs as simple propositions, conscious or unconscious, that can be inferred from what a person says or does. Taking a philosophical perspective, Green (1971) defined beliefs as statements that are clustered in groups
with other beliefs and accepted as true.

This study will use the definition of belief as taken from educational philosophy—a proposition or statement of relationship among things accepted as true (Fenstermacher, 1979, 1986; Green, 1971). This definition has been extended by cognitive anthropologists who maintain that a value is placed on the proposition. In Goodenough's (1971) analysis, for instance, to accept as true is to value it in some way for "logical and empirical grounds . . . social and emotional reasons" (p. 25).

Teachers' Understandings

Di Bello and Orlich (1987) and Au (1990) note the differences between spontaneous concepts and scientific concepts (see Panofsky, John-Steiner, & Blackwell, 1990) as taken from Vygotsky's notion of theory development. They maintain that spontaneous concepts, also known as everyday concepts, are the ontological categories which form the basis for an individual's own intuitive theories of the world. Spontaneous concepts develop differently than scientific concepts. Everyday concepts are acquired informally as products of an individual's life experiences; whereas scientific concepts are systems of relations between objects, as defined in formal theories. Scientific concepts are formulated through formal schooling in a process of cultural transmission. Au (1990) says that when "there is a dialectic interaction between spontaneous and scientific concepts . . . true concepts" (p. 272) or deeper understandings emerge.
Valdez (1992) contends that true concepts or deeper understandings play a meaningful part in practical arguments. By analyzing the dialogue in the Richardson and Anders (1990) study, Richardson and Valdez (1991) concluded that practical arguments may have an interaction between teachers' more practical teaching experiences and the more formal theories as derived from research. Toward the end of a one-year staff development process, teachers began to articulate deeper understandings about alternate theories and beliefs concerning the teaching of reading comprehension. This could be seen when the teachers introduced the use of literature to teach reading comprehension which only the staff developers had introduced to that point (Richardson and Valdez, 1991).

Reflection

The varied definitions and processes involved in reflection and reflection-in-action are derived from the theoretical frameworks of such philosophers and curriculum theorists as Dewey (1933) and Schon (1983, 1987). Dewey (1933) explained reflection as "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends . . ." (p. 9). Dewey perceived reflection-in-action as a reflective conversation with the materials of the situation. Each person carries out his own evolving role . . . 'listens' to the surprises ['backtalk'] that result from earlier moves, and responds through on-line production of new moves that give new meanings and directions to the development of the artifact (p. 31).
Clift, Veal, Johnson, and Holland's definition of reflection is utilized for this study. They narrow the definition of reflection to the "mental processes that operate interactively, as a educator recognizes a problematic situation related to professional practice and works to understand and deal with the situation" (p. 54). Clift et al. suggest that even though the mental processes involved in reflection cannot be observed directly, it can be inferred through talk and nonverbal actions.

Assumptions

Teachers' theories/beliefs and their actions are assumed to be interrelated. Lately, a great deal of the literature has focused on the reciprocal relationship between the domain of thought and the domain of action (see Clark & Peterson, 1986). For example, Richardson and Anders (1990) examined teachers' implicit beliefs and theories as they related to their premises and practices. Russell and Munby (1991) contend that productive reframing demands seeking a consistency between theory and practice and the theories and beliefs that guide practice. Valdez (1992) suggests that practical arguments be used to assist teachers in finding deeper understandings concerning the beliefs and theories that guide their actions.

Clark and Peterson (1986) present a model that demonstrates a reciprocal relationship between the domain of thought and the domain of action. They maintain "teachers' actions are in large part caused by teachers' thought processes, which in turn affects teachers' actions"
Clark and Peterson contend that the process of teaching will only be entirely understood when these two domains are studied in relation to one another. Vygotsky contributed to psychological theory by proposing that the mind and behavior be reconceptualized so they can be studied in an integrated way (Minick, 1986; Au, 1990). "From a Vygotskian prospective, it is argued that teaching behavior cannot be understood apart from the thought processes of the teacher" (Au, 1990, p. 271).

Limitations

There are methodological issues related to research concerning teachers’ beliefs and teachers’ knowledge.

1. It is difficult to uncover teachers’ beliefs and teachers’ knowledge. Teachers usually hold beliefs and knowledge unconsciously, they do not have the language to describe them, or they may be reluctant to reveal them. The beliefs and/or knowledge could also be too contextualized to be uncovered easily (Leinhart, 1990).

2. The nature of the methods used to elicit beliefs and thoughts are time-consuming. Take, for instance, the individual practical arguments conducted with each of the 16 teachers involved in the Richardson and Anders (1990) study. This procedure included conducting interviews and making observations to determine the focus for videotaping each teacher’s reading practices, videotaping, conducting the practical argument session between the researchers and the individual teacher as they shared the teacher’s practices as seen on the
videotape, transcribing the audio-tapes of the practical arguments, and then analyzing the transcriptions.

3. Certain methodologies encourage researchers to place value judgments on the teachers' beliefs and/or knowledge. Zeichner and Liston (1985) examined the three levels of reflection in supervisory conferences between student teachers and their supervising teachers using Van Manen's (1977) three levels of reflection—technical, practical, and critical. Later Zeichner (1989) suggested reflection should not be judged by a hierarchical framework. This would mean that one type of reflection is devalued at the worth of another.

4. The findings can easily become prescriptive if certain beliefs or self-reflective thoughts are seen as better than others in the findings. These prescriptive practices can then become easily imposed upon teachers in pre- and in-service teacher education programs.

5. Methods that rely on an analysis of the teachers' descriptive language do not have to follow any standard set of procedures. The structure is defined by the data, and the findings are highly inferential (Kagan, 1990).

Organization of the Chapters

This study is organized in somewhat the same way the researcher's own reflections became organized during the two-year study. It was only by moving back and forth many times from the related literature to the collection of the data for this study to the data from the Richardson
and Anders (1990) study when more focused questions and answers began to emerge. A brief description of the chapters follow.

Chapter II

This chapter will include the various literature that is applicable to this study. The review included topics on teacher change, staff development, practical arguments, reflection, constructivism, teachers' beliefs, and teachers' understandings.

Chapter III

This chapter will present a justification for using the traditions and methodologies from qualitative research, more specifically from cognitive anthropology, to understand and describe teacher change. The chapter includes a description of the sample and techniques used for data collection and data analysis.

Chapter IV

This chapter will introduce the teachers in the context of their classrooms and schools. The goal of this chapter, as it is in cognitive anthropology, is to describe the participants in their own terms.

Chapter V

In this chapter, the analysis of the data and findings about the teachers' earlier and current beliefs, understandings, and practices concerning reading comprehension will be revealed and discussed.
Chapter VI

This chapter will address the conclusions made from the findings concerning the two teachers' beliefs, understandings, and practices of reading comprehension. It will also close with the implications of this study to teacher education and future research.
CHAPTER II
REVIEW OF THE LITERATURE

Then said the teacher, Speak to us of Teaching
And he said
No man can reveal to you aught but that which already
lies half asleep in the dawning of your knowledge.
The teacher who walks in the shadow of the temple,
among his followers, gives not of his wisdom but
rather of his faith and his lovingness.
If he is indeed wise he does not bid you enter his
house of his wisdom, but rather leads you to the
threshold of your own.
The astronomer may speak to you of his understanding
of space, but he cannot give you his wisdom.
The musician may sing to you of the rhythm which is
in all space, but he cannot give you the ear which
arrests the rhythm nor the voice that echoes it.
And he who is versed in the science of numbers can
tell of the regions of weight and measure, but he
cannot conduct you thither.
For the wisdom of one man lends not its wings to
another man.
And even each one of you stands alone in God's
knowledge, so must each one of you be alone in his
knowledge of God and his understanding of the earth.
(Gibran, 1977, pp. 56-57)

Introduction

One would presume that a specific understanding of the change
process is within arm's length because of the abundance of literature
concerning educational change. Instead, the more one looks at the
literature, the more one realizes how overwhelming the topic is.
Therefore, this chapter will provide a comprehensive examination of the
following literatures that relate to educational change. The teacher
change literature will be addressed to examine why teachers have
difficulties making long-term changes in their practices. The staff
development literature will be explored to understand how staff development has been the means used to assist teachers in making changes in their practices. The practical argument literature and role of dialogue in teacher change will be examined to examine a formal dialogical staff development process and the way it operates in the promoting change. It will also explore the literature concerning reflection and constructivist learning to better understand the role they played in the practical argument sessions.

Teacher Change Literature

Many reforms have been set in motion in order to affect change in the educational system and yet they have not always been successful (Hamilton, 1989). School districts have spent a great deal of money each year trying to change teachers' educational practices with little success (Moore & Hyde, 1981; Rutherford, 1989). Those involved with teacher change (Duffy & Roehler, 1986, 1987) have shown that getting teachers to make any long-term changes in their practices is a difficult enterprise. Berman and McLaughlin (1975, 1978) contend that although numerous innovations are employed for the short run, they are not adopted for the long run. Hall and Loucks (1977) maintain that even though the innovations may be inviting, feelings of insecurity tend to increase before the change becomes permanent.

The teacher change literature can be used to try and answer questions concerning why innovations are not implemented as their developers had envisioned. McLaughlin (1987) argues that it is the
teachers who are blamed for resisting change when the various innovations fail to be adopted. Lortie (1975) explains that teachers are not as rational and analytic as other professionals, while Jackson (1968) maintains that teachers do not use educational research because their thinking is too simplistic and intuitive. Lortie and Jackson provide one level of explanation for this resistance to change in which educational scholars and administrators are said to know what is best for teachers since the teachers have not been trained in scientific thought.

There are other explanations as to why teachers do not implement new programs that do not place the blame on the teachers. Some studies use both organizational and individual reasons to explain the factors that influence the implementation of change. Smylie (1988) suggests that personal teaching efficacy, teachers' certainty about practice, high concentration of low-achieving students in the classroom, and the interactions teachers have with their colleagues regarding instruction contribute to the changes made in teaching behaviors in the classroom. March and Simon (1958) contend that an individual teacher's beliefs, attitudes, goals, knowledge, and the cues from the organizational environment influence the implementation of research in the classroom. Hargreaves (1984) discussed a way of aiding the change process— to work with the individual teacher's consciousness that redefines his/her working conditions.

Other studies attribute the lack of implementation to the theoretical relationship between organizational and personal attributes
and factors like incentive systems. Studies that have come up with implications like this have suggested that teachers are motivated by student performance and engagement instead of salary incentives and other external rewards (Stern & Keisler, 1977). Mitchell, Ortiz, & Mitchell (1987) suggest that it is the incentives which are deeply embedded in the school and classroom cultural values and/or associated with student achievement and cooperation that motivate teachers.

Connecting the teachers' commitment, engagement, and willingness to change to the features of the school organization is another condition often examined. Little (1987) determined that school norms of collegiality and experimentation propels a faculty toward improvement. Rosenholtz, Bassler, & Hoover-Dempsey (1986) concentrated on how teacher collegiality, instructional coordination, and the other school organizational features found in the school effectiveness literature affect teachers' willingness to learn. Hatton (1987) felt that changing teachers' cultural responses can only come about through structural change.

Other studies explain how teachers' beliefs, knowledge, attitudes, and perceptions inhibit or promote the implementation of new practices. Doyle and Ponder (1977) contend that teachers lean more toward the concrete and practical; therefore, they are more or less willing to change on the basis of three ethics—practicality, situational, and cost. Waugh and Punch (1987) maintain that the majority of the variance in their sample of teachers' willingness to change within the system can be explained by Doyle and Ponder's notion of ethics in addition to
beliefs about how the system should look. Tobin (1987) indicated that it is the teachers' beliefs concerning how students learn and just what it is they ought to learn that has the greatest influence on what they do in the classroom and whether or not they change.

**Staff Development Literature**

Staff development programs are designed to provide the training needed to generate a change in practices or reinforce practices already seen as desirable (Hamilton, 1989). Some researchers (Clark & Clark, 1983; Fenstermacher & Berliner, 1985) contend that staff development is a productive means to encourage growth, understandings, change, and/or alter professional beliefs and practices (Griffin, 1983a, 1983b). Fenstermacher and Berliner (1985) claim that staff development determines the organizational dynamics that allow the fullest realization of staff skill and talent in pursuit of the larger goals of education. This is because it advances teachers' knowledge, skills, and understanding in a way that leads to a change in their classroom behaviors and thinking.

Staff development has been defined as "any systematic attempt to alter the professional practices, beliefs, and understandings of school persons towards an articulated end" (Griffin, 1983b, p. 2). It is those means by which school employees' job-related knowledge, skills, and attitudes are improved (Sparks & Loucks-Horsley, 1990). Staff development has been recognized as a significant and powerful means of keeping teachers abreast of the rapid changes in schooling
(Fenstermacher & Berliner, 1985). Fullan (1982) argues that staff development is also a better way to promote on-the-job growth. Teachers have been required to attend staff development programs because the school wants them to become aware of new federal, state, or district mandates; improve their skills and behaviors; or be better teachers. Teachers have attended staff development programs on their own to acquire specific, concrete, and practical ideas which allow them to improve the operation of their classrooms (Guskey, 1986).

Practical Argument Literature

Practical arguments is a specific type of staff development process that Fenstermacher (1979, 1986) explored as he was trying to understand such notions as using research in practice, being engaged in reflective practice, and grounding concepts in a credible theory of education. The notion of practical arguments originated in Aristotle's work and suggests that a practical argument is a set of premises that lead to an action. Recently, Green (1976) argued that the reason for teaching is "to change the truth value of the premises of the practical argument in the mind of the child" (p. 252). Fenstermacher (1979, 1986) furthered this notion by suggesting that the value of research is to change or modify the premises in the minds of teachers and, thus, their actions.

Fenstermacher goes on to say that research can be introduced to teachers by assisting them to examine their own empirical and value premises as they relate to those taken from the most-recent research
(Richardson, 1991a). Premises are similar to beliefs which Green (1971) defines as propositions that are true (Richardson & Fenstermacher, 1988). Beliefs may or may not be consciously held at the time of the action, and therefore, an "other" helps the teacher frame his/her practical argument through articulation.

Fenstermacher and Richardson (In Press) examined Aristotle's concept of practical rationality—the process of thought that ends in an action or an intention to act. They contend that the meaning of practical argument is somewhat different from practical rationality as can be seen in the following excerpt:

... all of us, nearly all of the time, may be said to employ practical reasoning; that is, we reason about our actions in relation to what we want to accomplish and what we believe to be the case about who, what, and where we are. If called upon to explain our action, we might set out our reasons in such a way that the inquirer learns from us what we were trying to accomplish, why we chose to act the way we did, and how the action we took fit the goal we sought to accomplish. We refer to this explanation as a practical argument, in the sense that it lays out a series of reasons that can be viewed as premises, and connects them to a conclusion, in this case a particular action (p. 3).

Fenstermacher and Richardson (In Press) suggest that practical arguments are valuable to education because they assist teachers in their understanding of the practical reasoning that lie beneath their actions, aid teachers in reflecting on and evaluating their thinking in relation to their actions, encourage and sustain teacher change in directions supported by sound educational research, and allow teachers to become empowered by taking control of their justifications and
responsibility of their actions. Richardson and Anders (1990) indicated that when practical arguments were used as a staff development process, teachers were encouraged to identify and clarify their premises, consider alternate premises and practices, possibly modify or change their beliefs, and ultimately change their practices concerning reading comprehension. Fenstermacher & Richardson (In Press) suggest that since developing practical arguments is quite an involved process and teachers do not think in practical arguments, an "other" with a considerable range of expertise about practical arguments, classroom instruction, and the material being taught needs to assist in the elicitation and reconstruction process. The staff developer/teacher relationship needs to be built on mutual respect and regard (Fenstermacher & Richardson, In Press; Morgan; 1991; Richardson & Fenstermacher, 1992; Vasquez-Levy, 1991).

Vasquez-Levy (1991) contends that when teachers examine their beliefs, they enhance their practical reasoning. She maintains that when teachers' beliefs are made explicit through a dialogue with an "other," a process is started by which they question and possibly change their beliefs. She goes further by illustrating how the process of practical arguments:

... encourages teachers to question their approaches to teaching, theories of content, and theories of student learning; examine educational research as a basis for thinking about and informing their beliefs and actions; experiment with their teaching to gather empirical evidence; and are enabled to change what they do in their practice to assist students in acquiring a strong sense of knowledge (p. 20).
Using a Vygotskian framework and discourse analysis, Valdez (1992) revealed how speech, theory development, and internalization play an important and influential part in practical arguments. In analyzing the data from the staff development process implemented by Richardson and Anders (1990), Valdez maintains that in practical arguments

1. Discussions begin by being externally and socially regulated. The "others" assist teachers in making their tacit premises and practices explicit. Then the "other" introduce alternative premises and practices as taken from current research. Thus, once a person's beliefs and actions become explicit, they become accessible to the kind of discourse process that encourages and provides for the reorganization and refinement of premises and practices.

2. Teachers' practical teaching experiences as seen in their present premises and practices are discussed in relation to the more formal premises and practices. Teachers begin to possess deeper understandings about the formal theories in relationship to their practical knowledge and beliefs.

3. The "others" assist the teachers throughout the staff development session thus making the staff development session a social process. The interpersonal process can be seen transforming into an intrapersonal process when teachers start discussing changes they want to make or have already made in their premises or practices.

Richardson and Valdez (1991) examined changes in the staff developers' and teachers' dialogue between the first and second practical argument sessions in the Richardson and Anders study (1990).
They conceptually framed their discourse analyses in Schon's (1983) notion of reflection-in-action, Dewey's (1933) and Van Manen's (1977) notion of reflection, and Aristotle via Fenstermacher's (1979, 1986) notion of practical arguments. Richardson and Valdez suggested that even though these conceptual frameworks varied considerably, there were some common threads that held them together. All the methods were dependent on the teacher's own articulated premises which in turn affected his/her thinking and classroom practice. The methods suggested that thoughtful teachers who reflected upon their practices were more effective than less thoughtful teachers who approached practice in a technical manner. This kind of reflection required that attention be given to both existing premises or beliefs for practice and alternative ways of thinking about the practice. The content of the reflection process consisted mainly of a teacher's classroom experience or action.

Reflection Literature

A lot of those involved with promoting change in teachers' beliefs and theories are pushing for teachers to become empowered in the change process by taking control of their own learning. Two promising methods—constructivism and reflective thinking encourage this type of learning. These two methods are presently being examined and utilized for teacher change. Reflection has become a widely used term in the teacher education and teacher change literature. The current model of teaching as a technical process is being challenged (Wildman & Nile, 1987). Teachers need more autonomy and power for the good of the profession.
(Apple & Teitelbaum, 1986) and to make sense of their lives in the classroom (Kliebard, 1973). Noting that teachers need to be more autonomous and deliberate in their classrooms, the Holmes Group (1986) suggests that teachers are finding teaching too intellectually limited when most decisions are being made for them; and the limits of theory are producing too specific answers about how to teach effectively. Wildman and Niles (1987) contend that the history of technological approaches to teaching (Apple, 1972; Kliebard, 1973), "close-up analyses of teachers behaviors" (Jackson, 1968; Lampert, 1985), and other conceptual descriptions of the complexity of teaching yield a compelling case for increased emphasis on the teacher as a reflective and responsible teacher. For these reasons, teacher education programs are producing a very different kind of teacher, one who is more reflective and more in control of their professional lives.

Reflection can be traced to Dewey's (1909, 1933) notion of reflective teaching and Schon's (1983, 1987) concept of reflection-in-action. Dewey's (1904, 1933) notion cautioned against placing too much emphasis on the mechanical portion of teaching in the preparation of teachers (Zeichner, 1981-82). Dewey also maintained that it was the responsibility of educational programs to produce students of teaching who are thoughtful about educational theory and principles rather than proficient in only routines, examples, and tradition, mere technicians, and copiers (Valli, 1990). Schon's work concerning the epistemology and the professional knowledge inherent in the epistemology of practice has attracted the attention of teacher educators (Munby & Russell, 1989).
Schon maintains that our basic assumptions about what counts as knowledge is deeply rooted in theory. He attempts to reconstruct the epistemology of practice by removing it from its inferior status in relation to theory. He challenges what he sees as the domain of epistemology of practice.

Schon (1983) defines "technical rationality" as the view of professional knowledge that has most powerfully shaped both our thinking about the professions and the institutional relations of research, education, and practice. He suggests that according to the model of "technical rationality", professional activity consists of instrumental problem solving made rigorous by the application of scientific theory and technique. Schon contends it is not right to reduce the work of practitioners to mere problem solving. Professionals do something he calls problem setting in which they name the things they will attend to and frame the context in which they will attend to them. For Schon, reflection-in-action is what happens when professionals are presented with new puzzles.

Many researchers and teacher educators have theoretically based their work in Dewey and Schon's notions of reflection. Zeichner and Liston (1987) advanced the notions of "reflective teaching, greater teacher autonomy, and increasing democratic participation in systems of educational governance" (p. 23). Zeichner and Liston's work is theoretically framed in Dewey's (1933) concept of reflective action and Van Manen's three levels of reflection. Zeichner and Liston define reflective action as the act of actively, persistently, and carefully
considering any belief or knowledge in relation to the "grounds that support it and the consequences to which it leads" (p. 24). Van Manen's (1977) three levels of reflection are technical rationality, practical action, and critical reflection. Technical rationality is the first level in which the educational knowledge is efficiently and effectively applied for the purposes of attaining ends which are accepted as given. At the second level, practical action involves explicating and clarifying any assumptions and predispositions that undergird practical affairs and assessing the educational consequences towards which an action leads. The third level, critical reflection, involves the incorporation of moral and ethical criteria into discourse concerning practical action.

Munby and Russell (1989) also ground their work in Schon's notion of reflection-in-action. Russell and Munby (1991) contend that the essence of reflection-in-action is "hearing" or "seeing" differently, a process that Schon calls "reframing." They argue that it appears productive reframing requires seeking consistency between theory and practice and the theories and beliefs that guide practice. The act of teaching itself becomes the medium for reflection-in-action. Reflecting-in-action involves inherent knowledge and is based upon past experiences of the practitioner interacting with a particular situation (Richardson, 1990). Munby and Russell (1989) maintain reflection-in-action is being able to see a puzzle differently. They assert that the phenomenon of reflection-in-action occurs when teachers begin to find the answers to professional puzzles in the "form of strategic reasoning
and from the data of the classroom" (Munby and Russell, 1989, p. 78) instead of in books, workshops, or classes. The shift is prompted by the actions themselves and by the act of seeing those events differently. Munby and Russell insist the "learning that comes from this kind of a shift is a significant part of what a beginning professional learns."

Also basing his work in Schon's notions of reflection-in-action, MacKinnon (1987a) developed a way to detect reflection-in-action among preservice teachers enrolled in science methods classes. He contends that "when preservice teachers are guided through the cycle of reflection consisting of problem setting, reframing, and resolution, they become reflective in the analysis of their teaching" (p. 28). MacKinnon emphasizes "the non-logical processes that manifest in recognition of patterns and making meaning of sense" (p. 8).

Ross (1989) defines reflection as a way of thinking about educational concerns that entails the ability to make rational decisions and accept responsibility for those decisions. She uses reflection to frame a teacher education program in which teacher effectiveness research is introduced to college students (Goodman, 1984; Zeichner & Liston, 1987). Ross' work is based on Schon's notion of a practitioner's appreciation system. The teachers' appreciation system influences the types of dilemmas that will be recognized, the way the dilemmas will be framed and reframed, and the judgments that will be made about the desirability of solutions. Ross (1989) maintains that reflective thinking includes: recognizing an educational dilemma;
responding to a dilemma by recognizing both the similarities to other situations and the unique qualities of the particular situation; framing and reframing the dilemma; experimenting with the dilemma to discover the consequences and the implications of various solutions; examining the intended and unintended consequences of an implemented solution; and evaluating the solution by determining whether the consequences are desirable or not.

Clift, Veal, Johnson, and Holland (1990) make a differentiation between the terms "reflection" and "action research." They narrow the definition of reflection to the "mental processes that operate interactively, as an educator recognizes a problematic situation related to professional practice and works to understand and deal with the situation" (p. 54). Clift et al. suggest that even though the mental processes involved in reflection cannot be observed directly, it can be inferred through talk and nonverbal actions. Action research is viewed as a deliberate attempt to systematically collect data in order to gain insight into professional practice. The term "action research" is used when the goal is to change practice. It is a "way of thinking that implies the use of reflection and inquiry as a way of understanding the conditions that support or inhibit change, the nature of the change (or intervention), the process of change, and the results of the attempt to change" (p. 54-55).

Valli (1990) details three approaches to reflective teacher education that emphasize the moral foundations of teaching—deliberative, relational, and critical. In the deliberative approach to
teacher education, "reflective teachers consistently monitor the rightness of their conduct in relation to students and develop curricula with a conception of the most worthy end" (p. 41). The relational approach to teacher education is based in the "natural relation of mothering, subjective experience, and the uniqueness of human encounters" (Valli, 1990, p. 43) encouraging teachers to become caregivers. The critical approach to teacher education is derived primarily from Marxist philosophy. In this approach, teachers are prepared to be critical pedagogues, who are morally obliged to reflect on and change their own practices in relation to the understanding that schooling is a social institution that perpetuates a society based on unjust class, race, and gender relations (Valli, 1990).

Wildman and Niles (1987) came up with three necessary conditions that teachers should have for the realization of systematic reflection: 1) support from the administration; 2) time appropriated away from the site; 3) a supportive environment that includes other teachers and administrators. Wildman and Niles (1987) maintain that teachers are eager to reflect extensively, to test their own personal ideas and conceptions about teaching, and to have the locus of control. In settings where teachers are in control of their own reflective processes, their content of deliberation is primarily student-centered. Wildman and Niles argue that unnecessary tensions may arise if teachers are forced to consider ideas, techniques, or research findings that are fundamentally at odds with, or irrelevant to, their own conceptions of teaching.
Calderhead's (1988a) work is framed in Dewey's notion of reflection. Dewey (1933) defines reflection as an "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (p. 9). Calderhead argues that action based on reflection is viewed as intelligent action as opposed to impulsive action. Therefore he contends that for the different "models of reflective teaching to have some constructive impact on teacher education, they will have to be grounded in an empirically defensible interpretation of teaching and teachers' professional learning" (p. 7). Calderhead maintains that the content or substance of reflection should be informed by educational research on teaching and that the knowledge which most directly informs practices seems to be held in the form of belief systems, implicit theories, schemes, images, rules of practice, and scripts.

Constructivist Literature

The concept of constructivist learning has become popular in education because it suggests that one's previous beliefs and knowledge are important in the construction and use of new knowledge. The definitions of constructivism suggest that learning is not acquiring knowledge or truth. Instead, it is the interpretations of interactions with the environment that confront already existing constructions or present dilemmas to the individual who holds expectations about what should occur (Glasersfeld, 1987). von Glasersfeld (1987, 1990) contends
that constructivism is a theory of learning in which truth is viable and knowledge is an individual's viable explanation of her/his experience. Therefore, it is subjectively defined by the individual as s/he makes meaning of the objects in her/his environment by constructing explanations of these objects and solving problems to verify these explanations.

Constructivist teaching and learning differs from a positivist notion of teaching and learning. Traditional teaching is the transfer of facts and theories, whereas constructivist teaching is the recognition of students' constructions. The educator presents dilemmas or alters the environment in order to engage students in the construction of their own explanations or interpretations and the process of reflection upon how they know and resolve (Cobb, 1986, 1987; Driver, 1988; von Glasersfeld, 1987). Teachers and students negotiate collectively about what they know, how they know, what they need to know, and how they can know what they need to know (Cobb, 1986, 1987; Driver, 1988; Lester & Onore, 1990). Teachers and students become researchers, posing problems, designing experiments, hypothesizing, observing, and reaching viable conclusions about the objects in their environments (Cobb, 1986, 1987; Driver, 1988; Duckworth, 1987; Fosnot, 1989).

Cohen (1988) suggests that social organizations, expectations, and roles inhibit the risk-taking, ambiguity, and inquiry required for "adventurous" constructivist teaching and learning and, therefore, changing practice to reflect current constructivist notions are
unlikely. He suggests that in order for adventurous, constructivist teaching to be enacted, teachers must possess a deep understanding of the materials and the modes of discourse used, understand students' reasoning processes, know how to do thoughtful and tactful probing, be able to share authority and responsibility for learning, and face teaching as inquiry.

Tobin (1990a, 1990b) examined how designing and implementing new mathematical and science curriculum affects teacher change in the classrooms. The conceptual framework of his study is based upon Johnson (1987) and von Glasersfeld's (1987) notion of radical constructivism. Tobin's (1990) advanced concept of constructivist learning involves observing, reflecting on observations, collaborating with peers, negotiating meaning, and arriving at a consensus. Tobin maintains that teachers have frequently reconstructed what they know about learning into images of classroom experiences throughout their existence. Therefore, what they learn is implicit—an interpretation of experience, rather than explicit—a negotiated, shared meaning established through social interaction. He contends that since most teachers' knowledge is intuitive and is represented metaphorically, teachers will change the metaphors they use to explain their practices when they change their practices and vice-a-versa.

The Role Of Dialogue in Teacher Change Literature

Overview

Dialogue is currently being used by researchers to explore or
promote a change in teachers' beliefs and/or teachers' knowledge.

Richardson and Anders (1990) conducted individual and group staff development processes in the form of practical arguments to explore teachers' beliefs concerning the current research on reading (Richardson, 1991a). Richardson and Valdez (1991) analyzed the dialogue—the nature of conversation, interactive conversation, quality of reflection, and content of reflection—in the teachers' individual practical arguments from the Richardson and Anders (1990) study to determine if any changes had occurred in their beliefs concerning reading comprehension. Vasquez-Levy (1991) maintains that when teachers' beliefs are made explicit through a dialogue with an "other," a process is started by which the teachers question and possibly change their beliefs. Valdez (1992) suggests that once a person's beliefs and actions become explicit, they become accessible to the kind of dialogue that encourages and provides for the reorganization and refinement of their premises and practices.

Other investigators use metaphors to explore teachers' beliefs. They base their studies on the assumption that teachers' beliefs stem from their own language. Munby (1982, 1984, 1986) contends that language serves a significant function for teachers as they try to describe their perceptions and experiences (Kagan, 1990). Elbaz (1983) suggests that the thought processes teachers employ are made of images constructed from their own experiences. Therefore, the figurative language they utilize is central to their own understanding of students and classrooms (Kagan, 1990). Connelley and Clandinin (1985, 1986,
came up with the notion of narratives and biographies to explore teachers' personal practical knowledge of the curriculum while, Elbaz (1991) uses the concepts of story and voice to examine teachers' knowledge concerning the curriculum.

The theoretical framework that guides their research is Kaoff and Johnson's (1980) concept of image. Image was developed as an alternative account in which human experience and understanding, rather than objective truth, plays a central role. It is our images and deep metaphorical structures, as well as our concepts and propositions, that constitute our practical knowledge (Clandinin, 1985). Narrative unities are used as a growth and change process when novices' experience, in their rhythmic knowledge of teaching, is reconstructed (Clandinin, 1989; Connelley & Clandinin, 1985, 1986, 1988).

Other researchers examine pre- and in-service teachers' reflective practices by focusing on the language surrounding these practices. Zeichner & Liston (1985, 1987), Zeichner, Liston, Mahlios, Gomez, M. (1988), and Zeichner (1989) investigated the reflective language used in student teacher supervisory conferences by coding the supervising teacher's and the student teacher's reflections according to thought units. Zeichner's work is theoretically based in Van Manen's (1977) three levels of self-reflection--technical rationality, practical action, and critical reflection. In a later study, Zeichner (1989) argues that quality reflection should not be placed on a hierarchy but should be comprised of all three of Van Manen's levels.
Teachers' Professional Knowledge Studies

The Teachers' Professional Knowledge Studies (Munby, 1986, 1987; Russell & Johnston, 1988; Russell & Munby, 1991) employ teachers' language to find out more about teachers' professional knowledge and how it changes with experience. Their studies concentrate on how the interaction between teachers and their experiences give rise to knowing how to teach. Their work is theoretically based on Schon's philosophy (1983, 1987) because they feel his epistemology of practice offers a fresh level of discourse for understanding the place, rigor, and significance of knowing-in-action and reflection-in-action (Russell, Munby, Spafford, & Johnston, 1988). The researchers suggest that reframing involves "seeing" or "hearing" differently, so the process of perception becomes a unifying process in which the observation is interpretive and is reflected through language, especially metaphors. Teachers use discourse as they frame the puzzles they encounter in their practice. The shifts in their imagery suggest changes in their perspectives (Munby, 1986).

In Russell and Munby's (1991) latest study, data collection involved interviewing each participating teacher immediately following a period of classroom observation. These observations were spaced at monthly intervals. The fifteen participants included teachers in a preservice teacher education program, teachers in their first and second year of teaching, and a number of teachers with several years of experience. In analyzing the data for evidence of reframing, they were particularly attentive to the language the teachers used when talking
about their work.

Russell and Munby used cases to follow two experienced teachers, Diane and Roger, as they confronted the puzzles of their practice. Diane's practice presented her with three puzzles concerning: a) finding a comfortable balance of activity between managing independent reading and establishing classroom routines, b) teacher intervention, and c) parental involvement. Roger's puzzles were related to: a) inquiry-based learning, b) the contrast between inquiry and traditional learning, and c) the nature of students' understanding. Both Diane's and Roger's puzzles arose out of their need to find balances between theory and practice and their beliefs and actions. It was their teaching experiences that allowed them to reframe their practices. A change could be witnessed in their descriptive language as they worked through their puzzles. The shifts in imagery these teachers used when interpreting classroom events suggested that a change in their perspectives had materialized (Munby, 1986).

Teacher Enhancement Studies

The teacher enhancement studies have provided some explanations for the use of metaphors to make sense of teachers' roles, how belief sets are associated with specific roles and metaphors, and how new metaphors can be constructed to help teachers reconceptualize their teaching roles and change instructional practices (see Tobin & Espinet, 1989; Tobin & Gallagher, 1987; Tobin & Jakubowski, 1990). For example, Tobin and Ulerick's (1989) study of Marsha demonstrates significant
changes in classroom practice are possible if teachers are assisted with envisioning their teaching roles in terms of new metaphors. Interviews were conducted with Marsha, four other male science teachers who teach in the same school, the principal, and students from two of Marsha's science classes. Observations were also made of Marsha teaching the two science classes.

When their study began, Marsha had been teaching two high school science classes for one semester and was presently experiencing severe management problems. She was introduced to the constructivist (von Glasersfeld, 1987) way of teaching and learning. After six to eight weeks, it was evident that Marsha valued constructivism as a set of beliefs about knowledge and believed she should incorporate these beliefs into her practices. The researchers discovered that even though Marsha was able to discuss her beliefs concerning constructivism, she was not able to incorporate them into her practices.

The question for their study then became—Why can't Marsha teach the way she wants? The research team helped Marsha examine her beliefs in relation to the three teaching roles she had identified for herself—facilitator, manager, and assessor. The metaphors that assisted Marsha in understanding her role as a teacher included saintly facilitator, comedian, and miser. Through the use of metaphors, Marsha soon became aware that there were some major discrepancies between her beliefs about her role as a teacher and her classroom practices. When Marsha realized she had problems, she decided to make some changes with the assistance of the research team. For instance, Marsha decided to reconceptualize
her role to that of a social director. After Marsha had some success in changing part of her role as a teacher, she went on to envision herself as a researcher and mentor. This gave her the cognitive tools by which to reconceptualize her roles, identify changes she wanted to make, and change without the assistance of others. Reconceptualizing her roles through the use of metaphors allowed Marsha to become an empowered professional with a broad vision of learning and teaching.

**Enhancing Teachers' Professional Knowledge Studies**

The studies concerning enhancing teachers' professional knowledge (see, MacKinnon, 1985; MacKinnon & Erickson, 1988; Munby, 1982; Russell, 1988; Russell & Munby, 1991; Tobin, 1989, 1990a, 1990b, 1991) examined the language that surrounds clinical supervision conferences to explore preservice teachers' reflective thinking about their science lessons. These studies have enhanced teachers' professional growth in the practice of teaching through the use of reflective practices. The theoretical framework for these studies was based on Schon's (1983, 1987) concept of reflection-in-action. Reflective thinking lends itself to the act of helping teachers become users of research.

MacKinnon (1985, 1987b) analyzed a set of clinical supervision transcripts in which preservice teachers were thinking about their early presentations of science lessons. Since the five preservice teachers involved in the study would rely on an act of reflection when confronted with a problematic teaching event, MacKinnon's theoretical framework for analysis was based on Schon's (1983, 1987) concepts of reflection-in-
action, problem setting, and reframing. MacKinnon defines problem setting as the process by which the teacher identifies the problematic classroom event, reframing as the process of seeing the event in a different light, as well as new possibilities for action in the situation, and an act of reflection as the process of examining a problematic event from various perspectives to make sense of the experience. MacKinnon’s (1985, 1987b) work indicated that acts of reflection occurred in three stages: a) initial problem framing, b) reframing, and c) the resolve.

The next set of studies (Erickson & MacKinnon, 1991; Grimmett, MacKinnon, Erickson, and Riecken, 1990; MacKinnon & Erickson, 1988) was theoretically based on the notion of "seeing," which can be traced to Wittgenstein’s philosophical writings on ordinary language analysis and elaborated by Goodman (1978, 1984), Kuhn (1970), and Schon (1983). Models and strategies described by Schon (1987) were found to be helpful in bringing about conceptual change. These included the "role of modeling" in learning a new interpretive frame, analysis of the structure of modeling in terms of two complementary processes: "telling" and "showing;" and "reflective conversations".

A collaborative research team comprised of the researchers, experienced classroom teachers, and novice teachers was formed to develop a systematic approach for teaching science using a constructivist approach. In supervisory conferences, the team discussed the various teaching moves used by the experienced teachers to explore the thinking of a small group of students working on a laboratory
exercise. Cases were framed around problems such as introducing novice teachers to thinking about and acting on classroom situations that were different from those exemplified in their past experiences in the classroom (Erickson & MacKinnon, 1991). Data for this project were gathered through supervisory conferences. The language was analyzed to examine the nature of a constructivist approach to science teaching and how to communicate that approach to a novice teacher. Some findings evolved out of this project: one indicated the importance of the supervisor being able to articulate and demonstrate a coherent perspective of teaching practice; while the other demonstrated the importance of creating a trusting climate in which reflection could be nurtured.

**Teacher Change: A Vygotskian Perspective**

Valdez (1992) examined how learning as a social process mediated by language and culture was related to a staff development process in which teachers were encouraged to explore their own premises and actions concerning reading comprehension as they relate to those taken from the most recent research. More specifically, she investigated the role of speech, theory development, and internalization (Vygotsky, 1978) in the practical argument sessions by examining data as taken from the individual staff development sessions of the Richardson and Anders (1990) study.

Valdez (1992) suggests that Vygotsky's concepts of the role of speech, theory development, and internalization play important roles in
practical arguments. She maintains practical arguments promote the kind
of discussions that begin by being externally and socially regulated.
The 'other' assists teachers in making their tacit premises and
practices explicit. When teachers vocalize their own understandings and
actions, the 'other' has the opportunity to introduce alternative
premises and practices as taken from the recent research and to
encourage teachers to discuss them in relation to their own. Thus, once
a person's beliefs and actions become explicit, they also become open to
the kind of discourse process which encourages and provides for the
reorganization and refinement of beliefs and practices.

Valdez (1992) indicates practical arguments promote an interaction
between teachers' more practical teaching experiences, as found in their
present premises and practices, and the more formal premises and
practices as taken from recent research. With this interaction, evolves
new understandings. She also maintains practical argument sessions
provide a structure in which the teachers are encouraged to change their
premises and/or practices. The interpersonal process is transformed
into an intrapersonal process when teachers consider changing their
premises or practices. It is important to note here that teachers are
constantly changing so internalization could not be thought of as a
stagnate entity, just a transferring of the social to the psychological.
Gallimore and Tharp (1990) emphasized that learning is a lifetime
endeavor and depending on the task, a person's learning is constantly
moving from a state of being assisted by others to being assisted by
self to being internalized and over again.
Teacher Cognition Literature

The research on teacher knowledge, teacher thinking, teachers' thought processes, teacher planning and decision-making, and teachers' theories blossomed in the mid-1970's. Clark and Peterson (1986) maintain that it is the goal of those involved with research on teacher thinking to increase their comprehension of how and why the process of teaching looks and works the way it does. The teacher-thinking research provides a framework for teacher educators and researchers to decide what kinds of information, advise, and support are valuable in the classroom (Clark & Lampert, 1986).

The teacher-planning research focuses on what teachers think about while they are planning for classroom instruction. Clark and Peterson (1986) suggest that cognitive activities include many types of planning which create a transformation of curriculum to instruction through many modifications and changes. Those involved with teacher-planning research indicate that teachers do not attend to objectives or individual students. Rather, they focus on what curriculum content needs to be covered and through which activities that will be accomplished.

The research on teacher interactive thoughts includes studies on the content of teachers' decisions, alternative courses of action, antecedents of teachers' decisions, and effective teacher decision-making strategies (Clark & Peterson, 1986). Research on interactive decision-making focuses more on what techniques teachers used to solve the daily problems of classroom life (Anders, 1991). These types of
studies indicate that experienced teachers possess better developed knowledge structures or "schemata" for deciphering relevant information pertaining to classroom learning and teaching.

Shulman (1986b, 1987) maintains that teachers draw upon a base of knowledge when they are making decisions about how to promote understanding or comprehension amongst their students about the content that they teach. Shulman's knowledge base is framed by a conceptualization of subject matter for teaching in which teachers hold an understanding about how to teach the subject; how learners learn the subject (what are subject-specific difficulties in learning, what are the developmental capabilities of students for acquiring particular concepts, what are common misconceptions); how curricular materials are organized in the subject area; and how particular topics are best included in the curriculum.

Researchers examine personal practical knowledge to uncover the nature of teacher's practical knowledge (Elbaz, 1981, 1991), images (Calderhead, 1988a, 1988b, 1989), knowledge-in-action (Schon, 1983, 1987), and practical arguments (Fenstermacher, 1986, 1987; Fenstermacher & Richardson, In Press) and to explore how such knowledge develops in individual teachers. This kind of knowledge is different from formal theoretical knowledge in that it interacts with the particular context and classroom situation in which the knowledge is transformed into action.

Richardson (1990) maintains that experience and the teacher as a person appear to be the most important elements in the development of
practical knowledge. Clandinin and Connelley (1986) perceive teaching experience as vital to practical knowledge. They indicate that "practical knowledge is gained through experience with the cyclic nature of schooling and classroom life" (p. 380). The practitioner interacts with a particular situation and, therefore, brings forth knowledge in action acquired from experience in similar circumstances (Schon, 1983). Leinhart (1988) suggests that teachers teach their mathematical lessons in ways which are related to their past experiences (e.g., how the lesson was presented in the same grade when they were students, how the content was represented in preservice education, and how the books represented the content).

There are aspects other than experience that are involved in the development of teachers' practical knowledge such as who the teacher is. This includes a teacher's perceptions and beliefs about him or herself as a learner and a teacher. Hollingsworth (1989) contends that prior beliefs about teaching and learning strongly affect teachers' patterns of intellectual change. Richardson-Koehler and Fenstermacher (1988) indicate that teachers' beliefs about how children learn to read, as well as their classroom practices, were strongly tied to their views of themselves as readers and how they learned to read.

The research on teachers' thinking focuses on teachers' theories and beliefs in which they suggest that teachers possess another kind of knowledge—propositional—that is exemplified by theories and beliefs. This category contains studies concerning teachers' beliefs about students' and teachers' tacit beliefs about teaching and learning (Clark
& Peterson, 1986). Investigators have invested a great deal of time and energy in using the teachers' own language to depict their implicit theories in ways that are aligned with their beliefs, and in discovering ways in which a teacher can be assisted in explicitly representing their own frame of reference.

Lately educational psychologists who are interested in cognition examine both teachers' knowledge and teachers' beliefs. Kagan (1990) uses teachers' beliefs and teachers' knowledge synonymously as she describes and evaluates the methodologies researchers have utilized over the years to uncover these notions. Nisbett and Ross (1977) maintain that part of teachers' knowledge is arranged in schematic cognitive structures, while the other part is represented as beliefs and theories which are "reasonably explicit propositions about the characteristics of objects or object classes" (p. 28). Kay (1987) maintains that teachers are not conscious of how their personal theories, which are made up of beliefs, are used routinely to help them understand their teaching.

The social sciences have been interested in the differences between scientific and personal theory for quite a while. Scientific theory has always offered explicit, reliable answers to questions or problems, whereas a personal theory has offered a common sense understanding which people implicitly or explicitly use to explain how people and things function in ordinary life (D'Andrade, 1987). Linde (1987) distinguishes between personal theory and scientific theory when he defines an explanatory system as a system of beliefs derived historically from some scientific system which has become incorporated
into our language and our culture in a way that anyone can discuss as if they were an expert. Connelley and Clandinin (1986) and Lakoff (1987) contend that personal theories are experiential, embodied, reconstructed and based on childhood events.

Clark and Peterson (1986) declare that teachers' personally held system of beliefs, values, and principles guide and make sense of their cognitive and other behaviors. Hamilton (1989) suggests that teachers' theories are related to scientific theory. Teachers have found ways to teach that have combined their own beliefs, values, and everyday experiences with the more formal information they have accumulated in their teaching training.

Personal theories are more difficult to change (McCloskey, 1983) than scientific theories for many reasons. It is not as complicated to find out what is wrong with scientific theory as it is with a personal theory (Lakoff, 1987). Teachers cannot absorb new information unless the new information matches or resembles their beliefs and theories (Richardson, In Press b). Until an 'other' intervenes, the teachers' personal theories may be tacit. Therefore, role of the other is to assist the teacher in making his/her theory explicit (Valdez, 1992).

Vygotsky (1989) examined the notion of theory development. He suggests that there is a dynamic relationship between spontaneous and scientific concepts in the course of development.

One might say that the development of the child’s spontaneous concepts proceeds upward, and the development of his scientific concepts downward, to a more elementary and concrete level. This is a consequence of the different ways in which the two
concepts emerge. The inception of a spontaneous concept can usually be traced to a face-to-face meeting with a concrete situation, while a scientific concept involves from the first a "mediated" attitude towards its object. . . . scientific concepts grow downward through the spontaneous concepts; spontaneous concepts grow upward through the scientific concepts (pp. 193-194)

Au (1990) maintains that the dialectic interaction between spontaneous and scientific concepts results in teachers' "true concepts" (p. 272) or deeper understandings.

**Teacher Beliefs Literature**

Psychology, sociology, philosophy, and anthropology are disciplines that contribute to the literature on beliefs. Psychologist Stich (1983) dispels beliefs as non-existent whereas Kelly (1955) contends that beliefs are personal constructs. Philosophers argue that beliefs are ambiguous. For instance, Quine (1978) contemplates that beliefs are not constant and insists there is little evidence to prove they exist.

On the other hand, sociologists and anthropologists maintain that beliefs are social constructions (Berger & Luckman, 1966) and are produced through the process of social interaction with other people, as well as with socially conceptualized ideas about the way the world works. Words, concepts, and institutions are all affected by this kind of interaction. Social construction suggests that individual members of society formulate their beliefs by filtering their own concepts through their interaction with other members of society (Berger & Luckman,
Sociologists have also been known to interpret reality as a social construction (Garfinkel, 1955). Their viewpoint is rooted in a political examination of society, focusing on the social structure of society and the social function of ideas (Whiteside, 1978). Therefore, sociologists are more inclined to discuss ideology than belief. Berger (1963) alleges that ideology depicts certain ideas that have an established interest in society. To Hamilton (1989), an ideology appears to be a system of beliefs that is shared within a society.

Rokeach (1968), a sociologist, investigated beliefs from an individual standpoint, proposing that beliefs can be any proposition inferred from what a person says or does, capable of being preceded by the phrase "I believe . . ." He furthered that notion by characterizing all beliefs as predispositions to action where beliefs, attitudes, and values are associated with one whole functionally integrated cognitive system. A change in any part of the system will affect another part of the system resulting in behavioral change. Borhek and Curtis (1975), on the other hand, consider beliefs to be a social process. They describe belief systems as a set of related concepts that are learned, shared, and generally unchanging.

Many anthropological studies have touched upon the concept of beliefs (Needham, 1972). Wallace (1970) maintained that beliefs are divisions of things, both self and non-self. Stromberg (1986) decided on the term commitment, instead of belief, claiming that a person is committed when there is an emotional investment which encompasses
greater certainties that reflect upon the world. On the other hand, Jahoda (1970) proposed that a person's beliefs are affected by the prevalent things in his/her social environment.

Goodenough (1971), an anthropologist, suggests that beliefs are propositions accepted as true and that accepting the truth value of a proposition does not suggest a logical consideration, just that it is valued in a particular manner and can, therefore, be held despite disconfirming evidence. He continues to suggest that there are three kinds of beliefs: 1) private, 2) declared, and 3) public. Private beliefs are those which are accepted as true irrespective of others' beliefs, declared beliefs are those which appear to be accepted in public and are cited in argument to justify action; and public beliefs are those which are accepted by group members as their common declared beliefs.

More recently the cognitive anthropologists, who borrowed the philosophical explanation of beliefs (Eisenhart, Shrum, Harding, & Cuthbert, 1988) suggest that culture is a socially constituted understanding of the world. Quinn and Holland (1987) point out that according to this perspective, beliefs are what people must know in order to act as they do and how they interpret their experience. This encompasses both personal beliefs and those beliefs about customs, oral traditions, and artifacts held by other members of the culture.

Educational researchers' have acquired their understandings from the social sciences (Hamilton, 1989). Eisenhart et al. (1987) via Goodenough (1971) suggests that a belief is a shared statement of a
relationship between things accepted as true. Klein and Smith (1987) borrow their description of beliefs from Rockeach (1968). They argue that beliefs are simple conscious or unconscious propositions that can be inferred from what a person says. Taking a more philosophical position, Green (1971) maintain that beliefs are statements which are arranged in clusters with other beliefs and accepted as true. Cognitive anthropologists have furthered this notion by contending that a value is placed on the proposition. For instance, Goodenough (1971) indicates that to adopt a definition as fact is to value it in some way because of its logical and empirical base or social and emotional justification.

Only a few staff development programs have taken teachers' beliefs into account when trying to make a change in their practices. Fenstermacher (1979), Hollingsworth (1987), and Russell (1987) have indicated that teachers do not adopt and utilize educational concepts if they are not closely aligned with their own beliefs. By reinterpreting research to fit their own beliefs, McCloskey (1983) suggests that teachers' are able to maintain their preexisting beliefs throughout formal training. Therefore, it is imperative that those involved with the change process consider teachers' preexisting beliefs and theories. The literature suggests that when research-based practices are presented to teachers, both teachers' beliefs and theories should be taken into account (see Hollingsworth, 1989; Munby, 1983; Richardson, Anders, Tidwell, & Lloyd, 1991; Russell & Johnston, 1987). Teachers should be encouraged to examine their belief systems in order to consider a change in their theories concerning the way certain aspects of their life as a
practitioner operates (Richardson-Koehler, 1987).

Summary

Since the goal of this study was to explore the teachers' current beliefs, understandings, and practices concerning reading comprehension, how they were thinking about change three years after the completion of the Richardson and Anders (1990) study, and the role of dialogue in teacher change, I continued to move back and forth between the preceding literature and the data collected throughout this study.

Chapter III will present the methodology used in this study to gather and analyze data while creating a grounded theory concerning the long-term effects of a staff development process on teacher change. Hopefully, this theory can be used for planning and conducting other staff development processes concerned with teacher change. Qualitative research was chosen as the methodology most suited to accomplish the goals of this study; and therefore, the next chapter will describe the qualitative methods employed.
CHAPTER III
METHODOLOGY

Introduction

This qualitative case study was designed to examine two teachers' beliefs, understandings, and practices concerning reading comprehension over a five year period and the role of speech in teacher change. The two teachers, who will be called Alec and Kristi for this study, were among 39 fourth, fifth, and sixth grade teachers from three different schools who participated in the study that began in the winter of 1987. They were also 2 of 24 teachers who participated in the group staff development portion of the Richardson and Anders (1990) study in the fall of 1988. Alec was a member of a group of nine teachers who participated in individual practical argument sessions that occurred at the beginning and end of the group staff development process. Kristi was in a group of seven who only participated in one practical argument session at the beginning of the staff development process, since the students and teachers at her school were moved to other schools for the remainder of the year due to environment problems at their school. Both teachers were also 2 of 13 teachers participating in the 1991-92 follow-up study (Richardson, 1991a) to the original study.

The data analyzed for this study were obtained from the following data sets.

1) Transcriptions of the initial belief interview; transcriptions of the initial practical argument session; a videotape of teaching; and field notes obtained during the various initial observations. This set
of data was collected from each teacher before the Richardson and Anders (1990) staff development process.

2) Transcriptions of the second belief interview; transcriptions of the second practical argument; and a videotape of the teacher instructing reading comprehension. This set of data was collected after the completion of the Richardson and Anders (1990) staff development process.

3) Transcriptions of the follow-up belief interview; transcriptions of the follow-up practical argument; a videotape of the teacher instructing reading comprehension; and field notes from the various follow-up observations which were conducted during 1991-92.

The exact dates of Kristi's belief interviews, practical arguments, observations, and videotaping of her teaching is provided in Figure 1; while the exact dates of Alec's belief interviews, practical arguments, observations, and videotaping of his teaching is furnished in Figure 2.

This chapter focuses primarily on the data collected in the follow-up, since it is this data set that I was involved in collecting, and which contributes new knowledge concerning the change process.

---

1 A final practical argument was not conducted with Kristi since the teachers at her school were moved to other schools, during the 1988-89 school year, due to environmental problems at her school.

2 Same as above.
**Figure 1**

**Time-line for Data Collection—Kristi**

<table>
<thead>
<tr>
<th>Opening Data</th>
<th>Staff Development</th>
<th>Closing Data</th>
<th>Follow-Up Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation 1</td>
<td>1988</td>
<td>Observation 2</td>
<td>Observation 3</td>
</tr>
<tr>
<td>a. 1/11/88</td>
<td></td>
<td>a. 2/3/92</td>
<td>a. 2/3/92</td>
</tr>
<tr>
<td>b. 1/21/88</td>
<td></td>
<td>b. 4/1/92</td>
<td></td>
</tr>
<tr>
<td>Belief Interview 1</td>
<td></td>
<td>Belief Interview 2</td>
<td>Belief Interview 3</td>
</tr>
<tr>
<td>a. 2/10/88</td>
<td></td>
<td>a. 11/1/89</td>
<td>a. 1/22/92</td>
</tr>
<tr>
<td>Videotape 1</td>
<td></td>
<td>Videotape 2</td>
<td>Videotape 3</td>
</tr>
<tr>
<td>a. 2/14/88</td>
<td></td>
<td>a. 11/26/91</td>
<td></td>
</tr>
<tr>
<td>Practical Argument 1</td>
<td></td>
<td>Practical Argument 2</td>
<td>Practical Argument 3</td>
</tr>
<tr>
<td>a. 3/8/89</td>
<td></td>
<td>a. 3/13/92</td>
<td></td>
</tr>
</tbody>
</table>

---

3 Observations were not made at the completion of the staff development process.

4 A video-taped lesson and practical argument were not collected on Kristi due to extreme conditions at her school.

5 Same as above
Figure 2

Time-line for Data Collection—Alec

<table>
<thead>
<tr>
<th>Opening Data</th>
<th>Staff Development</th>
<th>Closing Data</th>
<th>Follow-Up Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation 1</td>
<td>1988</td>
<td>Observation 2</td>
<td>Observation 3</td>
</tr>
<tr>
<td>a. 1/11/88</td>
<td></td>
<td>a. 1/5/92</td>
<td>a. 6/23/89</td>
</tr>
<tr>
<td>b. 1/21/88</td>
<td></td>
<td>b. 5/4/92</td>
<td>a. 12/1/91</td>
</tr>
<tr>
<td>Belief Interview 1</td>
<td>a. 2/10/88</td>
<td>Belief Interview 2</td>
<td>a. 6/23/89</td>
</tr>
<tr>
<td>Videotape 1</td>
<td>a. 11/21/87</td>
<td>Videotape 2</td>
<td>a. 11/20/91</td>
</tr>
<tr>
<td>a. 11/4/87</td>
<td></td>
<td>a. 4/27/89</td>
<td>a. 11/20/91</td>
</tr>
<tr>
<td>Practical Argument 1</td>
<td>a. 11/4/87</td>
<td>Practical Argument 2</td>
<td>a. 5/17/89</td>
</tr>
<tr>
<td>a. 11/4/87</td>
<td></td>
<td>a. 5/17/89</td>
<td>a. 3/12/91</td>
</tr>
</tbody>
</table>

\[6\] Observations were not made at the conclusion of the staff development process.
Research Approach

This study borrows its methodologies from a qualitative research tradition. Educational researchers rely on various qualitative research traditions and methods to understand and describe the meaning of human behavior (Bogdan & Biklen, 1982). Richardson (1989) suggests using interpretive research when teachers' beliefs and understandings are being examined in relation to the nature of the teaching-learning process. A qualitative methodology offers a rich description and theory from data gathered in a particular setting (Goetz & LeCompte, 1981). Qualitative research can be used for testing ideas and establishing relationships, as well as for generating theories and hypotheses well-grounded in data (Glaser & Strauss, 1967). As investigators' hypotheses evolve, they rapidly become integrated, constituting the foundation of a central analytic framework (Hamilton, 1989). Qualitative research involves the process of conscious inquiry into a setting with the investigators collecting data to progressively solve a problem (Erikson, 1986). When researchers start to narrow their focus, they consider possible patterns between settings and context (Hamilton, 1989).

Cognitive anthropologists (Dougherty & Keller, 1985; Durbin, 1973; Kronenfeld, Armstrong, & Wilmoth, 1985; Goodenough, 1964; Spindler, 1955) use linguistic methods to comprehend the cognitive organization of cultural knowledge through the study of semantic systems (Jacob, 1987). They assume that most of a culture's knowledge is reflected in its language, specifically in semantics (Tyler, 1969). This kind of ethnography uses language itself as data for the description rather than
as a tool to obtain data (Chilcott, 1987). A methodological goal of cognitive anthropology is to describe the participants' cultural categories in their own terms and identify the organizing principles underlying these categories (Jacob, 1987) using methods such as observations and eliciting heuristic interviews (Black & Metzger, 1969).

In qualitative research, the researcher is the research tool and all data are filtered personally through the researcher's eyes. Therefore, the researcher needs to adopt some disciplined subjectivity (Erickson, 1973; Wolcott, 1975) and safeguards, thus preventing accidental biases from interfering with the research project. A self-conscious and rigorous examination of bias along each step of the investigative process is required (Borman, LeCompte, & Goetz, 1986); therefore, a researcher should seek dialogue with other researchers on the project and/or the participants in the study (Borman, LeCompte, & Goetz, 1986). It is also the responsibility of the researcher to make a teacher's personally held system of beliefs and principles explicit in a way that is faithful to the teacher's own description for the system (Au, 1990; Clark and Peterson, 1986; Richardson, 1991b).

Sample

Kristi and Alec were chosen for this study after a belief interview was conducted with each of the 13 teachers in the follow-up study to the Richardson and Anders (1990) study. Alec was chosen because of his love of teaching and his willingness to share. Alec
loves to be directly involved with teaching and learning. Of teaching, he said

... When, when my life is done, I want to have people say that I made a difference somehow. You're making something with your life when you become a teacher.

He continued by saying

... I'm enjoying doing what I'm doing now... it's harder to teach in some ways than it is others and it's more interesting. And I find the older I get it's the more interesting ways that are the more fun ways for me too and if it's, if it's, um, like pulling teeth, I want to get away from it. I want to do something that's more fun.

Alec has been teaching for 12 years, 9 of which have been at his present location. He teaches reading, writing, speaking, and listening in both languages across the curriculum—in Spanish to his Spanish speakers and in English to his English speakers. The language which is not prominent is then taught as a second language to both hispanic and anglo students.

Kristi was selected because she was eager to keep abreast of new ways of thinking and to talk about her teaching. For the last two years, Kristi has been working with a collaborative study group of which she says

I think that has been one of the biggest learning experiences. It's not for a grade, it's for us to learn what we're going through the process. So in the study group, we've, we've created a path that we're going down. What do we want to do next... last year she [the researcher] came into our classroom every other week and said, "What do you want me to do? Demonstrate, watch, give you feedback, what do you want me to do?" So, sometimes it was small groups of kids reading. It was how we presented it and how we worked it in.
Kristi has been teaching for 10 years. She is presently team-teaching with another teacher who also participated in the original Richardson and Anders (1990) study.

Context

Kristi and Alec work for the same school district in a Southwestern urban area. This large school district is comprised of approximately 55,000 students attending over 70 elementary schools, 20 junior high/middle schools, and 15 high schools. More than 50% of the students are Anglo, 30% are Hispanic, with African-Americans, Native-Americans and Asian-Americans making up the remainder. The schools that Kristi and Alec teach in are an accurate cross-section of the general population in their ethnic and socio-economic makeups. Alec teaches in a K-6 school on the southwest edge of the city. Kristi teaches at a somewhat new K-5 school located within walking distance of the school in which Alec is teaching.

Data Collection

Belief Interviews

Belief interviews with Kristi and Alec were conducted prior to and following the staff development process which took place in the fall of 1988. For this follow-up study, belief interviews were again conducted in the fall of 1991 with an interview schedule that was adapted from the one used after the staff development process. All
interviews attempted to elicit what Goodenough (1971) described as private and public beliefs. In the follow-up interviews, the teachers were eager to discuss their experiences without any formal encouragement; therefore, it was decided the interview would be even more conversational, with the interviewer checking off a concept list. Teachers were only asked more formal questions if they did not touch upon certain topics. The belief interview started with a question about what the teachers had been doing since the staff development process. Other categories of concepts the interviewers made sure to address during the belief interviews included students, teaching, reading comprehension, their school situation, interaction with other teachers, staff development, and the teachers themselves (See Appendix A). The belief interviews with the two teachers were audio-taped and the audiotapes were transcribed.

Practical Arguments

Alec and Kristi were each videotaped, before, after, and three years following the staff development process, as s/he presented a reading lesson. The videotape was used as a catalyst for conversation between the 'others' and the teacher concerning the teacher's practices in reading comprehension. In this study, the 'others' included one of the original staff developers with a specialty in teaching and teacher education and the researcher for this study--a graduate student with specialties in both teaching & teacher education and reading. The staff developer and researcher asked the teachers questions to aid in the
articulation of theories and beliefs that up until then may have been tacit. The staff developer and researcher also introduced alternative premises and practices for the teachers to possibly contemplate and employ in the classroom. The staff developer and researcher offered the teacher any kind of help needed to experiment with the implementation of various practices. The practical arguments with the two teachers were audio-taped and the audiotapes were transcribed.

Alec and Kristi participated in individual practical arguments prior to the staff development process. Alec also participated in one at the closure of the staff development process. For this study, follow-up practical arguments were conducted with Alec and Kristi in the spring of 1992.

Observations and Field Notes

Spradley (1980) offers five criteria for choosing a focus of observation. First, an investigator may base his/her particular focus on a "personal interest" (p. 105) resulting from previous research or reading. Second, the informants in the research may propose topics they feel are important to study. Third, some cultural domains may be chosen because they relate to a "theoretical interest" (p. 106). Fourth, by describing cultural problems through "strategic ethnography" people's lives might be improved. And fifth, "a large domain" could organize the "cultural meaning of a particular scene" (p. 106). The field notes for this study originated in a personal interest from previous research and focuses on the teachers' beliefs, understandings, and practices.
concerning reading comprehension.

In taking field notes, researchers should systematically record interpretive and analytical remarks so reference points concerning place and time, as well as catalysts for specific conclusions can be retrieved and subjected to examination against any possible disconfirming evidence (Borman, Lecompte, & Goetz, 1986). These notes are kept during field observations and they depict a condensed version of what actually occurred. An expanded version is written after each field experience, where occurrences and details that were not recorded at the time of the observation are recalled and inscribed (Hamilton, 1990).

Observations and field notes were made preceding the staff development process. For this study, field notes were collected in Kristi’s and Alec’s classroom during announced and unannounced observations of each teachers’ classroom and details were added immediately afterwards. This occurred once in the fall and four times during the spring for at least two hours each. In Kristi’s classroom, observations were usually made on Kristi and her students from 8:00 to 10:30 a.m. at which time they usually had free choice reading; conducted a class meeting; and did literature groups which required reading, writing in their response journals, and discussing various books in small or entire class groups, in that order. Observations were made on Alec and his students from 8:00 to 10:30 a.m. when his students were usually practicing their handwriting by copying a Spanish poem, individually reading materials of their choice, reading the same piece of literature everybody in class was reading in groups of two or more,
and discussing what they read through questions. Chapter IV includes an illustration of a typical day in the classroom of each teacher during the time they teach reading.

**Videotaped Lesson**

Audiovisual equipment can be used as a data-gathering device to overcome certain shortcomings in the conventional field studies since it greatly increases the accuracy of data collection (Cicourel, 1974). Videotapes can also serve as an external memory, allowing researchers to examine materials extensively, often frame by frame (Briggs, 1986; McDermott, 1976; Mehan, 1979). Yet, events depicted on videotape are not always equivalent to their original form; and therefore rigor of the study warns against solely using videotaped materials (Mehan, 1978).

Alec and Kristi were first videotaped at the beginning of the staff development process, at a time they designated as being devoted to teaching reading comprehension. Alec was also videotaped at the closure. For this study Alec and Kristi were videotaped in the fall of 1991. The videotapes were used to encourage a conversation with each teacher about what they did in the classroom during a practical argument and were also analyzed for additional evidence concerning teachers’ practices.

**Informal Interviews**

For this study, informal interviews consisted of Alec and Kristi being asked open-ended questions or offering stories on their own. Data
gathered during informal interviews were used to clarify information already gathered or to confirm generalizations. Informal interviews would generally occur after a belief interview, a practical argument, or an observation. The informal interviews were written down immediately after the encounter.

Data Analysis

In this qualitative case study, data were constantly analyzed as it was being collected. This allowed data to be organized, classified, and categorized as any patterns were recognized, explored, and synthesized. In following this procedure, it was possible to decide on what data still needed to be collected. Data were continually gathered as a result of analyzing the currently collected data. Spradley (1980) suggests a qualitative researcher asks qualitative questions, collects qualitative data, makes a qualitative record, and analyzes qualitative data. This cycle repeats itself until the research project is concluded and it is time to write the qualitative study. Glasser and Strauss (1967) suggest that the constant comparative strategy is one process of research that generates a theory. It evolves from the data collected and is then analyzed for patterns and categories. A pattern of relationships is established, resulting in the formation and refinement of theory.

In a recent review of teacher cognition, Kagan (1990) described a number of approaches to assess teacher cognition. She defined teacher cognition as "pre- or inservice teachers' self-reflections; beliefs and
knowledge about teaching, students, and content; and awareness of problem-solving strategies endemic to classroom teaching" (p. 419). Kagan suggests that using multimethod approaches is superior to using a single approach when examining the kind of teachers' discourse that describes their practices and rationale for these practices. This is because the multimethod approaches "capture the complex, multifaced aspects of teaching and learning" (p. 459). It was also determined that no single system of discourse analysis could adequately show the changes in discourse found while reading the transcripts for this study. Thus, in this study, a number of procedures were adapted to describe the practical argument as well as differences in discourse from the beginning of the staff development process to the end.

Approaches to the Analysis of the Data

Each transcription of a belief interview, practical argument, or a written record of an individual observation was first read in its entirety to gain a better sense of its content. The teachers' primary topics from their beliefs interviews and practical arguments were noted as were the primary topics from my field notes. These topics generally revolved around beliefs about teaching reading and writing and teaching in general, and methods used to teach reading and writing and to teach in general. They also included topics on what teachers felt influenced their teaching. The individual data collections were also analyzed in the following ways:
Practical Arguments

An adaption of the three analyses performed on the practical argument data in the Richardson and Valdez (1991) study were used for this study to analyze the data gathered from Kristi and Alec’s practical arguments. The first analysis divided the conversation into cycles of a practical argument (see Richardson and Valdez, 1991) according to MacKinnon’s (1987) three cycles of reflection and Fenstermacher’s three distinctions of a practical argument (Richardson and Valdez, 1990). The second analysis utilized an adaption of the Richardson and Anders’ (1990) topic map system to reveal topics of reflection and initiators of those topics. The third analysis consisted of a content analysis designed to identify the type of changes the teachers had made or were making in their practices as discussed in the practical arguments.

The three researchers involved in the follow-up study would periodically get together to discuss what she had seen in the transcriptions, particularly with respect to differences and similarities in Kristi and Alec’s first, second, and final practical arguments. To check the reliability of the following coding systems, they would code a practical argument separately according to the following criteria and then come back together to compare their results, a process that led to high reliability.

Nature of conversation. Fenstermacher and Richardson (In Press) stated that one of the first tasks of the 'other(s)' in a practical argument session is to assist teachers in framing the practical
arguments undergirding their actions because, for many teachers, these are likely to be tacit. Next, the 'other(s)' assist(s) teachers in identifying and clarifying their practical arguments in order to assess the bearing evidence on the premises in these arguments. This process was designed to encourage teachers to consider alternative premises, and perhaps alter or change their beliefs, and ultimately their practices with the help of 'others'.

When MacKinnon (1987) analyzed a set of clinical supervision transcripts, he developed a way of describing a clinical supervisory process by borrowing from Schon's (1983) notion of reflection-in-action. MacKinnon defined acts of reflection as "moves undertaken from various perspectives or theoretical lenses, employed to make sense of the method students' teaching experience" (p. 139). He conceptualized three stages in each reflective cycle that occurred during a clinical supervisory process: 1) initial problem framing, 2) reframing, and 3) the resolve. Richardson and Valdez (1991) argue that these phases resemble Fenstermacher's practical argument process, even though Fenstermacher does not describe his process in stages or steps.

An adaption of Richardson and Valdez' (1991) method for examining the nature of conversation in practical arguments was used in this study to analyze the nature of conversation in Kristi and Alec's practical argument. In their study regarding the discourse that surrounded practical arguments, Richardson and Valdez (1991) found that the conversation between the teacher and staff developers could be placed in three categories, which somewhat corresponds to MacKinnon's (1978) three
stages and Fenstermacher's (1986) three distinctions. The three categories of conversation were:

1) Initial Framing, in which the teacher and/or staff developer(s) bring(s) specific aspects (not necessarily problematic) of the teacher's beliefs and practices to the attention of others in the diad or group.

2) Reframing, in which the educators and/or teacher examine(s) specific aspects of teaching from several different theoretical perspectives as taken from research and/or the teacher's experience.

3) Alternate Frame, in which the teacher accepts a new frame and states s/he will consider making a change in teaching practices.

In all cases, the first stage--initial frame, led to the second--reframing. However, these two stages were not always completed with a third stage. Furthermore, there were pieces of conversation that did not fit into any of the three stages, in particular, personal comments about the news, about plans for summer vacation, etc. The analysis in this study will use the same process.

Topics of reflection and Initiators of the Topics. This study adapted a part of the Richardson and Anders' (1990) topic map system to determine the topics of reflection and the initiator of those topics in Alec's and Kristi's practical arguments. Richardson (In Press a) developed a way of describing the sense of the flow of a conversation during their group staff development process by using a topic map provided information about the major and minor topics of discussion, the initiator of those topics, the discourse mode used, and the type of
discourse that followed if any. The topic map process will be used in this study on practical arguments.

**Type of change made.** An adaption of the process Richardson and Valdez (1991) used to determine changes in practices teachers were discussing in their practical argument was used in this study to code the types of changes Kristi and Alec were making in their practices. While Richardson and Valdez (1991) examined the data for their study, they noticed that changes could be seen either in the conversations about the videotapes of the teachers' lessons and/or in the practical arguments which surrounded their practices. Categories were chosen to reflect the differences between the kinds of changes in practices the teachers were talking about. The categories of change included:

Category 1: No change discussed or seen on videotape

Category 2: Discussion of present practice concludes with a consideration for change

Category 3: Discussion of a change already made in practice while viewing it on the videotape

Category 4: Discussion of a change in practice while viewing the videotape and consideration of further change

**Belief Interviews**

This study also used an adaption of the Richardson et. al (1991) two-way continuum to better understand Alec's and Kristi's theoretical orientations to reading comprehension. Richardson et. al (1991)
developed categories for analyzing the belief interviews by randomly choosing six interviews, analyzing each of them separately, and then glancing across analyses to detect categories for organizing responses (Hamilton, 1989). Teachers' responses were coded and placed in the following categories to develop a sense of each teacher's theoretical orientations to reading comprehension and the teaching of reading: Teaching Reading, Reading, Reading Comprehension, Learning to Read, and Questioning. From the teachers' responses within the categories, it appeared the teachers could be placed along a dimension that represented teaching and learning to read which moved from a word and skills approach at one end to a literature approach at the other end.

Richardson et al. (1991) indicated the teachers could easily be placed along this continuum. For instance, a teacher who strongly believed in using literature, still used the basal for stories, and felt skills should be taught because of district mandates and the standardized test was placed three-quarters of the way along the teaching/learning to read continuum, on the literature side. If a teacher believed in using a skill and word approach and used a lot of plays and library books with the students to motivate the students but not to teach them to read, s/he was placed a quarter of the way along the teaching/learning to read continuum on the skills/word approach.

Richardson et al. (1991) maintained the teachers could also be placed on a second dimension. This dimension represented reading and the purpose of reading and it reflected the teachers' definition of reading comprehension, and their sense of where to find meaning. This
dimension moved from a constructivist—meaning is derived from the interaction between the student and the text—at one end to the meaning is what the author is trying to convey—at the other. Richardson et. al contended it was more difficult to place teachers on this continuum. For example, the teachers seemed to differentiate between reading in the content areas and reading literature when they referred the purpose of reading.

Richardson et. al (1991) then placed each teacher within one of four quadrants depending upon his or her location on the continua. Three of the quadrants came close to representing three leading approaches to reading or the study of reading even though the continua was developed from teachers’ own beliefs. Richardson et. al explain the quadrants in the following way:

Quadrant I represents a skills/word approach reading in which the subskills of reading must be learned before the meaning of the text can be determined, and the purpose is to determine what the author meant. Quadrant II embodies a literary structuralist approach in which learning to read is accomplished by reading, and the purpose is to determine what the author meant. The whole language philosophy is represented in Quadrant III, in which authentic literature is used as the vehicle through which students construct meaning. Quadrant IV is unique and does not represent an extant approach. In this quadrant, a skills approach leads to the construction of meaning (pp. 570-571).

I analyzed and coded Kristi's first belief interview, and placed her on the two-way continua according to the criteria described above. The results were compared to the Richardson et. al's (1991) results, a procedure that showed high reliability.
Observations and Field Notes

Teacher's practices were analyzed and patterns quickly became evident which helped determine which approach the teachers were using to teach reading and where they were teaching their students meaning was found. Their practices fell into categories according to how their students were grouped for reading, if their students read silently or out loud, how their students' comprehension was assessed, if an emphasis was placed on skills or reading, and where the meaning of reading presides. Their practices were then placed within one of four quadrants as described above to gain a better sense as to how they taught reading.

Triangulation

Each piece of information gathered, or each question resolved, must be contingent until it has been confirmed by other means or from other sources (Denzin, 1978; Borman, LeCompte, and Goetz, 1986). Denzin (1978) maintains that this can be accomplished through data, investigator, or methodological triangulation. Hammersley and Atkinson (1983) contend that triangulation involves examining conclusions deduced from one set of data sources by collecting data from other sources. Miles and Huberman (1984) suggest that if you purposely set out to gather and confirm findings by utilizing multiple sources and modes of evidence, the verification process will be built into the data-collection process, and the only remaining step is to report on one's procedures. Stainback and Stainback (1984) claim that triangulation involves the application of multiple indicators to evaluate a single
phenomenon, thus enhancing its credibility. Mathison (1988) argues that enhancing the validity of the research findings can be accomplished through the process of triangulation. He simply defines triangulation as using multiple methods, data sources, and researchers.

In this study, belief interviews, practical arguments, observations, and informal interviews were conducted with Kristi and Alec; and the results were discussed with other researchers from the original and follow-up study for the purpose of triangulation (Denzin, 1978; Hammersley and Atkinson, 1983; Miles and Huberman, 1984; Stainback and Stainback, 1984; Borman, LeCompte, & Goetz, 1986; Mathison, 1988).

Analysis of the Research Questions

The analysis of the data collection approaches were used to answer the four research questions in the following ways.

1. What are the teachers' current beliefs and understandings concerning reading comprehension? The analyses of the belief interviews and practical arguments from the follow-up study provided data for the response to this question.

2. What are the teachers working on in terms of their reading comprehension practices? The analyses of the follow-up observations and video-taped lesson provided the data to answer this question.

3. Have the teachers' beliefs, understandings, and practices changed since the beginning of the Richardson and Anders (1990) staff development process over four years ago? The analyses of the belief interviews, practical arguments, observations, and video-taped lessons
from the first, second, and follow-up study provided the data in order to respond to this question.

4. **Are the teachers' beliefs consistent with their practices?**

The analyses of the belief interviews, practical arguments, observations, and video-taped lessons from the first, second and follow-up study provided the data for the response to this question.

5. **What is the role of speech in teacher change?** The discourse analyses of the practical arguments sessions from the first, second and follow-up study provided the data for the response to this question.

**Summary**

The focus of inquiry, the data collection techniques, and data analysis techniques used to answer the focus of inquiry have been introduced. The data for this study were gathered through belief interviews, practical arguments, observations, and informal interviews. Belief interviews, observations, and practical arguments were analyzed by using an adaption of the Richardson and Anders (1990) coding system that places teachers' theoretical orientations to reading comprehension and the teaching of reading on a two-way continuum--teaching reading and learning to read, and the purpose of reading. Practical arguments were analyzed by examining the nature of conversation, the topics of reflection and initiators of those topics, and the type of changes the teachers are making in their practices. Chapter IV discusses in more detail Alec and Kristi, their classrooms, students, schools, principals, and other teaching-related matters.
CHAPTER IV
PARTICIPANTS AND CONTEXT

Change is perhaps the only constant in our lives and in the world (Houston & Clift, 1990, p.212).

Introduction

The purpose of this chapter is to provide a glance at the participants in this study—Kristi and Alec. This chapter also touches upon the context in which they teach— their schools and their classrooms—and the other players they encounter in their work— their principals, their students, and their aides or teammates. The data for this part of the study consist of observations, belief interviews, and practical arguments from before, after, and three years following the staff development process. Because this study focuses on teaching and learning reading comprehension, the teachers generally wanted to be observed during a time they felt a reading event was occurring in their classrooms. This meant some observations were prearranged during the first two hours of their school day while others were unannounced.

Alec

Alec’s School

Alec teaches in a K-6 school located in a quiet suburban neighborhood on the southwest edge of the city. It was built ten years ago to accommodate a rapidly growing area which is comprised of a mostly working class to middle class population of first-time homeowners,
according to the principal. There are approximately 380 students consisting of about the same percentage of Anglos as Hispanics—50% are Hispanic, 47% Anglo, and 1% African-American, Asian-American, and Native American. Over a third of the students qualify for free or reduced lunch.

The school is made up of four connecting buildings enclosing a well cared for courtyard. The amount of children's work displayed inside the hallway varies from month to month. Outside of Alec's classroom, there are always assorted teaching posters and students' work. For example, there are displays of LOGO commands that demonstrate how to use the LOGO computer program, and student art work which revolves around a book the class is reading.

When asked him what encouraged him to be able to teach reading comprehension the way he wanted to, he said, "Probably the support of everybody around me . . ." The researcher inquired about other teachers at Alec's school during his follow-up belief interview on December 1, 1991. He responded:

We, we exchange ideas at, at faculty inservices and, and, um, informally in the car going places. [Teachers are] very good about leaving things laying around that we can look at.

The researcher went on to ask him about exchanging ideas with the teacher he had been teaming with during "center time." He answered

I went over there on Friday and talked with her and then she, she came over here today after . . . it was really hectic the other week though because, um, I had a, I had meetings every day after school and could not do planning at all. I wanted to start it, but, you know, I was here till 4:30 working with the peer
mediation. On Monday it was, um, Student Council and getting the minutes done and doing some phone calls afterwards, and Wednesday was a faculty meeting, and Friday was talking to a person who is a speech therapist. So I had no planning time at all.

Alec's Principal

The principal at Alec's school is very visible and the teachers talk positively about her. She has taught in a classroom, worked with Chapter I, tested students for language proficiency, and been an administrator elsewhere before she became a principal at Alec's school. The principal contends her goal is to "improve the school with programs such as writing across the curriculum."

During his December 1, 1991 belief interview, Alec said the following about his principal:

Our principal is, is, um, very facilitative and she doesn't ever say you have to do it this way, but what she does is she throws out some ideas that she'd like for us to try and then lets us see if that's where we want to go with (it). And I think that's a very positive way to direct or not direct, but to, to, um, to help workers.

Alec's Class

Alec had twenty-six students in his class--fifteen girls and eleven boys. More than 88% of them were Hispanic and while the other 12% were Anglo. Two of his Anglo students had an Hispanic stepparent and were eager to learn Spanish in his classroom. His students were generally relaxed and quiet except when they wanted to join in class discussions. During these times, they were eager to be heard and yet,
they raised their hands for a turn.

**Alec’s Classroom**

Often Alec will sit on a tall chair on the south side of the room while he is teaching. There is a large chalkboard and a display of the students’ jobs on that side of the room. That chalkboard and a chalkboard on the west side of the room are constantly in use. For example, Alec writes a new poem in Spanish and marks the rows of students who have been doing a nice job on a chalkboard. The students’ art and school work decorate many of the bulletin boards in the classroom. A map of Alec’s classroom can be seen in Figure 3.

**A Typical Day**

8:45 Alec tells his students about the book he is presently reading and asks if any of them want to talk about the books they are reading. One girl says her book is about a tree that has money growing on it. The entire class starts talking about what they would do if they came across such a tree. It appears as if the class has just finished a period in which they were silently reading.

9:00 Alec asks the students to get ready for Handwriting. First he writes a riddle on the board, and then proceeds to ask the students to copy it “in their best handwriting.” After they are done copying the riddle, students take turns guessing the answer to the riddle.
Figure 3

Layout of Alec's Classroom

<table>
<thead>
<tr>
<th>Display</th>
<th>Chalkboard</th>
<th>Calendar</th>
<th>Books in Shelves</th>
</tr>
</thead>
<tbody>
<tr>
<td>J o b s</td>
<td>X X G B B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C h a</td>
<td>G G G X G G</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k T e C</td>
<td>B G B B G B</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>b a h c a o h i e r</td>
<td></td>
<td>H i l e</td>
<td></td>
</tr>
<tr>
<td>a r r d</td>
<td>B B G G X</td>
<td>D s e e B c o o  k r k s s</td>
<td></td>
</tr>
<tr>
<td>R u l e s</td>
<td>B B X X B</td>
<td>D o o r</td>
<td></td>
</tr>
<tr>
<td>D o o r e r</td>
<td></td>
<td>F o u n t a i n</td>
<td></td>
</tr>
<tr>
<td>B u i l d I n C u p b o a r d s n</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References Books

Key G--Girl B--Boy X--Absent Students
9:15 Alec leads the group in a discussion about the book they are presently reading—*Island of the Blue Dolphin*. They discuss what they read yesterday, make predictions for what they will read today, and so on. Next, they break up into groups. Most groups are made up of two and three students while two other groups have more.

Two of the smaller groups and one of the larger groups are reading in the hall. The large group is reading typed pages of the same story in Spanish. They are accompanied by an aide who speaks Spanish. The students take turns reading the story out loud in a "round robin" manner. The two smaller groups, with two or three boys and girls in each, are sitting at a table taking turns reading aloud to each other.

Inside the classroom, there are small groups consisting of all girls or all boys with two or three students in each group. A large group, consisting of all boys, are in the back of the room having an argument. Alec has to keep leaving a pair of students he is reading with to help the boys in the large group to "solve their own problem." Alec later said he felt they were having difficulties because there were not enough books for them to share and everyone wanted to read for the tape recorder I was using for my research. Eventually they solve their own problem by breaking up into smaller groups.

After the students read a chapter to each other, they work together to record a summary of what they read. Alec continues to work with the two boys. Then he circulates around the room and asks for the retellings. One group of three boys, who branched off from the large group of boys, take turns giving Alec their retelling of the chapter.
Alec says he feels they need to read it again because they were more involved with the argument than they were with reading the book.

10:00 Alec asks the students to get ready for recess. When they are all in their own seats, he leads a discussion about the chapter. Some of the questions are open-ended and some have prespecified answers that come from the book (as taken from the videotape of Alec teaching a reading lesson on November 20, 1991).

The Teacher

Alec is a bilingual teacher. He has been teaching for twelve years, nine as a bilingual teacher and nine at his present location. Alec says he is a bilingual teacher because he wants people to be good thinkers, distinguish between justices and injustices, and be able to do something about the injustices. He has a Masters degree in learning disabilities and has taught everything from third to fifth grade. He has also worked with Teachers Training Teachers, a K-3 program in which teachers demonstrate thinking and language arts lessons in other teachers' classrooms. He feels a class he took on Reading Miscue Analysis has been helpful to him because "I used the Basal readers. I go beyond those though because of the training I had there. I remember what I was taught as far as not just listening for mistakes . . . but . . . looking for meaning in what they are getting at."

By his November 11, 1989 belief interview, Alec felt he was teaching reading differently than before the staff development process
even though he does not like to change. Yet, he said he tries "to fight that instinctive urge to do things the way they've always been done."

Alec added:

Frankly, I do want to be better. I know there's room that everybody can improve and I'm no exception to that. And throughout the [staff development] program, I've been trying to be open to that. Trying to use new techniques. . . . if I see an idea that's appealing to me, I'll pop on it right away and immediately try to change some behaviors. If I think there's validity to it.

In his follow-up belief interview, Alec expressed his anxiousness at the same time he expressed his eagerness in experimenting with anything new.

. . . and I thought I was happy with that, but I, but I really found that, that there was a better way. But I, you know, being kind of bull headed sometimes, I, I, I resist change see and that's [laughs] I have to get my feet wet. Every time I go in the water it's the same way. I don't jump in like some people do, I have to get my ankles wet and then decide well, do I want to . . . And what happens when it's up to my neck? You know, but, um, and that's, that's the way I am in a lot of things and I know that I am that way so I have to set situations where I'm going to force myself to do it. And I, I, I've done it on my own a lot. I've invited people to come to the classroom and teach me to do things and show me how they do it and, and I participated in, in groups where I had to do things a different way and, and had to learn that way, you know. I know that I have to do that, but I don't feel comfortable just stagnating and not going. I have to find out something that's going to make me stretch and grow. It's just trying to figure out the best way to do that is.

When asked how he learned to teach, Alec said, "It's kind of my own thing, I think. I just try and see what works; you pick up things and you don't think you do and suddenly you realize you are using them."
He pointed out that he is the type of teacher that changes his practices gradually. Alec added the following about the way he learns.

... I don't know how other people's minds work, but the way my mind works is if I learn, I learn better by doing it, you know, and having somebody come in and show me how to do it and work that way. And even looking at a video I could see some, some things, but then there's little fine tuning things that, that, um, are hard for me to get through. Just myself and I . . . (as taken from Alec's belief interview, December 1, 1991).

Kristi

Kristi's School

Kristi teaches at a 6 year-old K-5 school located within two miles of Alec's school. The two neighboring schools are architecturally identical. Her school serves a similar population of approximately 47% Hispanic, 45% Anglo, 4% African-American, 2% Native-American, and 1% Asian-American. Of the total student population, almost one-half is on the free or reduced lunch program.

For the last two years, Kristi and her teammate have been attending a study group led by a professor at the local university. The following is an example of some of what Kristi has said about that study group:

We were asked to go to a study group, and I came away from that thing, 'what is going on here?' This is a waste of our time. [laughs] And what, what in the end I realized she (the staff developer) was doing was through examples she was teaching collaboration. I didn't know her background. Didn't know who she was. I was just told, you know, 'drop out prevention money. You're going to go to this. You know, there's not a possibility that you could really learn something.' I said, 'wait a second,' but let me tell you (as taken
When Kristi was asked what encouraged her to change, she answered:

Number one, trusting myself that I am right in what I feel and then the support group. But the support group also gave back to me, or enforced, reinforced in me the feeling that I do make good decisions. To trust myself you know and um, that I might not agree with . . . something. And that is fine to go ahead and do what I think is right and, and finding other people who are interested in doing the same thing I am. I graduated in 1969. I mean that's a long time ago. A lot of things have changed you know. A lot of things have changed (as taken from the January, 22, 1992 belief interview.

**Kristi's Principal**

Kristi's principal has been at her site for three years. She has a background in psychology and counseling. Before she came to this school, she taught at the high school and the middle school levels and was a principal at another middle school. Kristi feels her principal is the best principal she has ever had for several reasons, including the fact that she is totally supportive of Kristi in trying new things. Kristi also likes her as a person since she is always doing a lot of positive things. Kristi is proud of her school and how the principal encourages the teachers to keep up with current practices through staff development. During her follow-up belief interview, Kristi said the following about one of her principal's accomplishments during the January 22, 1992 belief interview:

Last year in our faculty meetings, [the principal] had people do presentations. You know, then we'd learn things from each other.

The principal wants the school to become a whole language school
in five years. Kristi says the principal pushes homework but not for grades because she feels that is how a student learns. During her October 15, 1991 belief interview, Kristi went on to say

She's the best principal I've ever had too. I wanna say that. And not because of her organizational skills necessarily and some of the things that she does. Once she figures out how to work with us, she's totally supporting.

Kristi's Class

Kristi and her teammate shared approximately fifty-six students between them. Each quarter, they would exchange students in such a way that they would never have the exact same group of students each time. Kristi described having approximately twenty-eight students on her roll at any given time with an average of fourteen boys and fourteen girls. The ethnic balance in both Kristi and her teammate's classrooms had were comparable to the school's--approximately 54% minority and 46% anglo.

About her students, Kristi says,

Ah, they're great, they're real loving and they share with each other, they really know each other well, and they work so much on communications and acceptance of other people, we use to communicate with each other. Uh, keeping our self-esteem intact and other peoples too; they're great, there absolutely fantastic, I really love them.

Kristi's Classroom

Kristi is presently team-teaching with another teacher who also participated in the original Richardson and Anders (1990) study. They teach in two side-by-side rooms that are connected by an open divider. Kristi has a desk which appears to be used only for storage because she
is always where the students are: sitting on the floor working with cooperative groups, walking around to the students' desks monitoring individual progress, etc. Students' art work and samples of their writing are displayed everywhere in the classroom. There are also a lot of positive phrases posted around the room which Kristi explains are used to promote good feelings in individual students and in the class as a whole. The students reflect this positive attitude through their dialogue and actions like working cooperatively with each other. Maps of Kristi's classroom during silent reading and literature groups time can be seen in Figures 4 and 5.

Kristi's Teammate

Kristi talked about her partner during the follow-up belief interview in the following way:

My teammate and I have been close even though we don't teach [together] all the time. This is our, this'll be two and a half ... years, then, we had last year and this year. Well, cause we didn't know each other, we moved. That was the first year, and then we [found out that we had] all these things in common. Well, 'let's put our classes together . . .' We were always in the same rooms--always collaborating. And it was his first year teaching . . . something in common there, and he had all these ideas, you know fresh out of college, and I was so impressed with his education.

When I asked Kristi if she was able to teach reading the way she wanted to, she quickly replied, "Yes." And she followed by explaining that her teammate was one of the reasons why.

The support I get from my teammate . . . My teammate is a . . . journal reader of all this little print stuff about studies that were done and stuff in
**Figure 4**

Set up for Silent Reading in Kristi's Classroom.

<table>
<thead>
<tr>
<th>Door</th>
<th>K.'s Display</th>
<th>Chalkboard Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>B e</td>
<td></td>
</tr>
<tr>
<td>U i k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U l d</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 -</td>
<td>x x</td>
<td>x x</td>
</tr>
<tr>
<td>I</td>
<td>x x</td>
<td>x x</td>
</tr>
<tr>
<td>1 n</td>
<td></td>
<td>x x</td>
</tr>
<tr>
<td>e C</td>
<td>x x</td>
<td>x x</td>
</tr>
<tr>
<td>u</td>
<td>x x</td>
<td>x x</td>
</tr>
<tr>
<td>t p</td>
<td>x x</td>
<td>x x</td>
</tr>
<tr>
<td>b i o a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a n d</td>
<td>x x</td>
<td></td>
</tr>
<tr>
<td>s</td>
<td>x x</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a n d</td>
<td>x x</td>
<td></td>
</tr>
<tr>
<td>o n d</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>x x</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>r o u n d t e r s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D o o r s</td>
<td>Chair</td>
<td>Books in Shelves</td>
</tr>
</tbody>
</table>

**Key**

X--Students Sitting at Their Desks
Figure 5

An Example of the Way Kristi's Students Get Together for Literature Groups and the Books They Are Reading.

**The Real Me**

(B--Kristi's 3rd group)

**Charlie and the Chocolate Factory**

(S.T.'s 1st group)

(B--Kristi's 2nd group)

**The Upstairs Room**

(S.T.'s 2nd group)

Key: B--Boy, G--Girl, K--Kristi, ST--Student Teacher

really into it, really.
A Typical Day

9:00 Kristi and her teammate are getting the last of the children to choose three books, one of which they will be reading during their new literature group. Kristi gets all the books out and explains what they will be doing today. When students get their books from her, they go to silently read at their own desks. They also record the copy number of their book onto a card.

9:15 The light goes off and Kristi’s teammate reminds students of the directions. Kristi goes over to one boy and touches his back at the same time she thanks him for following directions.

9:25 Silent Reading Time. All students are reading at their own desks except one who is reading on the floor with a pillow.

9:30 Kristi announces that there are three more minutes to read.

9:35 Kristi tells the entire team room that it is time to stop reading. The class reviews what to do with their literature logs. Kristi reminds them of things like, "Back up your opinion when you tell how you feel"; "Predict"; "Talk about the author"; "Write what you don’t like"; and "Tell about any problems you are having with the book." The class breaks up into groups. They are reminded not to just retell the story in their groups.
The students start writing in their own steno pads. Kristi walks around to the different pods talking to a student here and there. The student teacher also wanders around the classroom working with one student at a time. Kristi carries a clipboard with her which her teammate says is used for recording the locations of the literature groups.

9:47 Kristi tells the students to finish saying what they want to say in their logs.

9:50 A bell on an egg timer goes off. Kristi announces where various groups will go for their literature groups. Students take their books and their journals with them. Kristi asks them to sit in a circle like they do for cooperative groups. She walks around to make sure all of the groups are working together.

10:05 The egg timer goes off again. The literature groups come together as a total group of 26 students to talk about challenges they had with their books (e.g., plot jumping around, certain authors writing styles, etc.) and successes (e.g., how a particular girl was a good leader for her group today, how everyone in the group participated, etc.). Kristi tells everyone how she liked what they were doing as groups today (as taken from the videotape of Kristi teaching a lesson, November 26, 1991)
Kristi has been teaching for eleven years. During the follow-up belief interview, Kristi explained that she was teaching in Los Angeles, and... began to take some courses, we were really put under the gun, we had... centers, which was kind of a dirty word at the time. A lot of parents, once they saw what was going on, they were more comfortable. It was just an unheard of thing in the little town... I felt a little rebellious. I found the things I choose to do weren't always what was most acceptable at the time.

Kristi talked about going through a transitional period at home and at school. Kristi had just taken a six year leave of absence at which time she had only one child in her family. But upon her return to teaching, she had three. She feels it has been a challenge to manage both home and school at the same time and yet it has been fun because she enjoys teaching very much.

Kristi said a lot of things to indicate how she was thinking about teaching and learning. About learning, she remarked, "If I hear about something that sounds exciting, sounds fun, sounds like it's going to work, I'm willing, oh yeah, so, give me some, give me some, that's what I want out of this you know." About change, she explained, "I mean... why do we change what we're doing? It's because we sense something's not working. We see it. We feel it. We hear little things here and there." She reflected:

I learned a lot about not quitting if something doesn't look like it's working. You know there might be minor adjustments here and there. You know but set a goal and I've really thought it out and it's been talked about and... you shouldn't quit when it
looks, looks like it's falling apart.

When Kristi was asked how she learned to teach, she said from the school of hard knocks . . . any teacher has, ah, is looking around for what works, what does somebody else do, 'boy that looks good, let me try that. Yeah, this isn't working for my class, what can I do,' and put it out there to some other people and I might get some ideas (as taken from the February 10, 1988 belief interview).

She added how she enjoys doing what she is doing now but she constantly wonders if there are more things that she and her teammate could be doing that they are not doing now.

When Kristi was asked about her own personal reading during her February 10, 1988 belief interview, she talked about reading positive types of books. She had not read a novel in quite awhile since she didn't have much time with three children at home. She read a little bit of something that could help her get through her life before going to bed at night.

Discussion

Both Kristi and Alec work in schools that are alike in many ways—the architecture of the schools, the makeup of the school population, and the support they receive from their principals. Yet, they are also different. Kristi said many teachers at her school are attending a cooperative "study group" in which the teachers are learning by doing. She also talked about how her teammate and other teachers have always supported her. Alec's faculty also exchanges ideas. While he talked about having a lot of support in the past; he says his busy school
schedule limits him from participating in the exchanges (see Chapter IV). Wildman and Niles (1987) suggest for teachers to systematically reflect on their practices they need support from other teachers and administrators.

According to the analysis of their belief interviews, observations, and practical arguments, Alec and Kristi appear to have different personalities and learning styles, too. Kristi feels that she is "rebellious" and wonders if there are more things she could be doing in her classroom that she is not currently doing. She appears to be eager about trying new practices. Sometimes, when things aren't working well in her class or when another teacher is doing something that looks interesting, Kristi asks those teachers for new ideas to try in her classroom. Alec wants to find things that will make him "stretch and grow" so he can always become better at what he is doing. If he sees an idea that's appealing to him, he will give it a try and ultimately change some of his practices if the ideas are valid. Yet at the same time, Alec feels he is "bull headed" because he resists change. He said he prefers to learn by inviting someone in his classroom to show him how, and by adapting new practices to his own style of teaching. It appears as if Alec wants to find new ways of teaching at the same time he is a "reluctant learner." Fenstermacher (1979), Hollingsworth (1987), Lakoff (1987), and Russell (1987) have indicated that teachers do not adopt and utilize educational concepts if they are not closely aligned with their own beliefs. interviews, practical arguments, and observations.
Summary

The chapter provided an account of each participant, his/her school, classroom, principal, students, and any other adults in her/his classrooms. Chapter Five presents the findings concerning Kristi's and Alec's beliefs, understandings, and practices concerning reading comprehension, from before and after as well as three years following the staff development process in more detail. The findings were derived from analyzing Kristi's and Alec's belief interviews, observations, and practical arguments.
CHAPTER V

ANALYSIS OF THE DATA AND FINDINGS

Introduction

This chapter will describe the findings concerning changes in Kristi’s and Alec’s beliefs, understandings, and practices concerning reading comprehension since the beginning of the Richardson and Anders (1990) staff development process over four years ago. Part I will address these changes by analyzing primary topics in their 1988, 1989, and 1992 belief interviews, 1987 and 1991-92 observations, and 1988/89, 1989, and 1992 practical arguments. Part II will provide a better understanding of Kristi’s and Alec’s changing theories by analyzing the discourse in their initial, subsequent, and follow-up practical arguments.

Part I

Kristi’s Primary Topics

Kristi’s Beginning Beliefs, Understandings, and Practices

The data sources used to determine Kristi’s original and follow-up beliefs, understandings, and practices concerning teaching reading comprehension included belief interviews, observations, video-taped lessons, and practical arguments.

By analyzing belief interview 1, observations 1a & 1b, and

Kristi’s belief interview 1 was conducted on February 10, 1988.
Observations 1a and 1b were made in Kristi’s classroom on January 11, 1988 and January 21, 1988.
practical argument from the beginning of the Richardson and Anders (1990) staff development process, it was determined that Kristi's original reading comprehension beliefs were closely aligned to the literary structuralist theory. According to Richardson and Anders (1990) study, teachers belonging in this quadrant infer that the purpose of reading is to decipher what the author is trying to convey and that a student learns to read by reading. Yet, observations of Kristi's practices appeared to be more aligned with a word and skill approach. This approach maintains that learning how to read means acquiring word attack skills, reading basal stories out loud, answering comprehension questions, and being grouped by ability levels. Refer to Figure 6 on page 120 to see where Kristi's beliefs and understandings concerning reading comprehension fell on the Richardson and Anders (1990) continuum.

The analysis of Kristi's definition of reading comprehension, as found in belief interview 1, revealed the internal struggle she was experiencing because of the inconsistencies in her beliefs and practices. Kristi defined reading comprehension as the ability to demonstrate an understanding of what is read by applying it and being able to answer the comprehension questions. She added that just answering the questions is very tedious; therefore, her class does other activities like reading plays, drawing pictures, discussing, researching, and reporting on what they have learned. Kristi discussed

9. Kristi's practical argument session 1 was conducted on March 8, 1989.
her desire to have students learn that reading can be both enjoyable and informational because anything they want to know about "in the whole wide world" can be found in books.

By analyzing practical argument 1, it appeared that Kristi was more confident about using comprehension type questions. When asked if she used the comprehension questions in the basal, Kristi replied, "Oh you bet, as we go along." The observations confirmed this. When asked what Kristi felt was a good response to the comprehension question, she answered

Well, just about anything is a good response, something that shows that they're actually listening, . . . I'm really pleased, I'm pleased when they're paying attention. I'm really pleased when they have a comment that might remind them of something else they've done in the past.

An analysis of belief interview 1 and her observations 1a and 1b concerning grouping students by ability confirmed the difficulties Kristi was facing with changing her practices to accommodate her beliefs. Kristi explained how she and the teacher next door exchanged students for reading; she worked with the above average and below average groups. In regard to grouping students for reading, Kristi said, "Ya, I know this is a really dirty word but it's ability grouping, that's what we've done. That's how I was taught, so that's the way I'm comfortable with." She taught her two groups quite differently; her higher group was working independently with literature while her lower group was working with her in the basal. When asked what accounted for the differences between the abilities of her students, Kristi answered,
"The role modeling of parents." She related this to how she has three children and has read to them from day one. She has given them experiences with books which she thinks is valuable. Her two year old has always been exposed books—"in the car and in his crib."

An analysis of observations 1a & 1b and belief interview 1 showed Kristi felt she possessed undesirable practices according to current theories on teaching reading, like having her students read aloud. She explained that her students read out loud, although she knew it wasn’t real good modeling to have them do this a lot. Kristi could be seen reading passages aloud while her students were silently reading along, and reading poetry chorally with her entire class.

The analysis of observation 1a, belief interview 1, and practical argument 1 revealed that even though Kristi used workbook skill pages to teach and reinforce reading, she was frustrated with the practice. Kristi discussed some "stuff" she felt her students would never understand

Well we were working on syllables you know, and ah, accents. Are they going to be tested on this . . .? You know, I really don’t think that they’re ever going to get this, and I don’t think they care, and frankly I don’t care either . . . I can just see them glazing over when I’m doing this . . .

Kristi wanted to learn other ways to teach reading skills. She envisioned grouping students according to skills, but later decided that might only defeat her purpose. During practical argument 1, the staff developers and Kristi examined the rationale for grouping by skills, teaching skills in context, and teaching for the standardized test.
An analysis of practical argument 1 revealed how Kristi was questioning teaching reading with district recommended materials. Using the basal to introduce literature, using a literature based teaching approach, and selecting homogeneous groups by students' interest were discussed during the practical argument. Kristi expressed a desire to alter her reading program by having her entire class read the same thing at the same time without missing out on learning skills to which she added

... I could take them out of the, of the workbook, or I could just use the skills as objectives for use in fourth grade. ... well, like right now we're doing main ideas. That, that's important ... but for this group knowing how to write a main idea sentence is, is more important because that's what they're doing in class...

Analyzing practical argument 1 helped determine that Kristi was not content with using the basal reader to teach reading but felt mandated by administrative requirements to do so. The staff developers and Kristi explored the idea of using stories in the basal as an introduction to self-selected books from the library. Kristi said

I've never done that before, but that's what we were instructed to do. Well, they'd say, give them this test. Where they fall is the group they go into. And, you know, you had to put them in the book, they just told you, you know. They require that we go through that workbook, too.

Kristi felt that when her students were doing the "regular"—reading out of the text book and answering comprehension questions—their answers were "off the wall." She didn't feel it was a productive time, so she talked to them about being readers and needing experience with books.
By analyzing belief interview 1, it was evident Kristi was feeling both enthusiastic and insecure about using literature in her classroom. She shared what reading literature had done for one of her lower readers.

I have a student who is in a lower group, and she checks books out of the library that are really thick, and she's motivated by what she's chosen. She goes through those books, and I know because of that practice she's becoming a better reader, because that's what it is, it's doing it, over and over again.

She also expressed how pleased she was with her independent group because they were not working in the basal and doing "really, really well." Kristi wished her low group could do the same, although she didn't feel they could do it any time soon. Kristi said she felt insecure about using literature since she only had experience with book sharing.

An analysis of belief interview 1 illustrated Kristi's clashing viewpoints about teaching writing. Kristi utilized the district adopted Language Arts Book—a skill oriented approach to teaching writing. She believed the students needed skills in reading for writing, spelling, and everything. Kristi accentuated the importance of learning certain writing skills through worksheets.

An analysis of practical argument 1 revealed Kristi was having a great deal of difficulty determining how to best grade her students' writing. She explained this meant for writing. Not for handwriting, but for stories, cause, you know, we conference. They rewrite. They're happy. Everything's, you know, progressing, moving along. How do I grade that? I make it up. I look and
see what they did before. Have they been moving along? Ok, you know. How’s he doing?

Kristi’s use of her own judgment and sense of the criteria to assess writing was explored during this same practical argument.

An analysis of observations 1a & 1b revealed how Kristi’s practices concerning student directed learning were contradictory. She controlled more of her low group’s learning by requiring them to read certain stories, answer certain comprehension questions, complete certain workbook pages, and do certain introduction or reinforcement lessons in a group with her. This was not as prevalent with Kristi’s independent group who could be seen reading literature of their choice. About her independent group, Kristi said, "Oh they have other books. Ya, and they work on their projects as soon as they’re done. They’re not all in the same book, they’re in different books."

Analyzing belief interview 1 showed Kristi believed that learning to read is different than learning to write or do math. Kristi explained they were different because math is more active than reading and writing has more of a purpose than reading.

**Kristi’s Beliefs After the Staff Development Process**

A belief interview was administered immediately following the Richardson and Anders (1990) staff development process. An analysis of this belief interview determined that Kristi’s beliefs concerning reading comprehension beliefs were still closely aligned to the literary structuralist theory. Her beliefs that reading means to decipher what
the author is trying to convey had changed little and yet her beliefs about using literature to teach reading had changed significantly. Kristi's practices and understandings about teaching reading could not be determined at this point in the study due to the complications at her school. To see how Kristi's beliefs concerning reading changed from 1988 to 1989, refer to Figure 6 on page 120.

The analysis of belief interview 2 determined Kristi had somewhat changed her definition of and objectives for reading comprehension. She felt comprehension was reacting to literature and analyzing characters' motives; and yet, Kristi still believed meaning came from the author. She explained that reading used to mean using the basal but now they

... have book sharing everyday and there is a sign-up sheet. ... I have not required a book report, nothing. ... And they have a journal that they keep and, um, they don't have to write ... about their book in the journal everyday ... I want them to start analyzing characters, and why they do things the way they do, and motives, and things like that. So we have done a lot of work on that.

Kristi told the researcher her objective was to have the students enjoy reading, become readers, and read for thirty minutes of each day by the end of the year. Her students were reading silently for ten minutes a day, at the beginning of the year, and were reading for twenty minutes by the date of belief interview 2. Kristi was pleased that her librarian had given her several lists of literature for "fifth, sixth, seventh, and eighth graders."

Kristi's belief interview 2 was conducted on November 1, 1989.
Analyzing belief interview 2 acquainted the researcher with Kristi’s struggle with how to group her students for reading.

... I still haven’t figured out how to work with groups while the rest of them are reading. I still haven’t figured that out. I have never had more than one reading group at a time. Oh, I had two once but I had one... independent group. So, I don’t know how you get somebody who is reading... [with] one group of five... and then how to keep the others reading...

The analysis of belief interview 2 revealed that Kristi was confused about how beneficial is was to have her students read aloud and learn the process of reading and writing through language arts skills. She explained

... I have read so much information, so many articles that say there is not necessarily a correlation between oral reading and silent reading. When... we [do] silent reading, we want to read a section together or something. Read out loud. I just let it go you know. We help each other out with the words and stuff like that but. Maybe there is something I am missing here. This little piece of me nags at me, says oh, but what about all these skills, you know, that we went through with the workbook. And I don’t know if those skills help them to be a better reader or not, or to enjoy reading or not. I got to look at what my goal is. And my goal is for them to enjoy reading and to be readers who really read for pleasure. Then if I stick them with a lot worksheets and all the workbook stuff?

By analyzing belief interview 2, it was evident that Kristi felt reading for pleasure and reading in the content areas were different, yet reading comprehension could be taught through social studies since it taught them "to find things." Kristi tried to teach United States history through literature but felt her selection of books did not
arouse the students' interest. Kristi also felt reading could be integrated with other subjects areas. For example, she encouraged the students to pull information out of the science book, paraphrase it with what they already know, and write a report.

An analysis of belief interview 2 revealed Kristi was in the process of examining her beliefs concerning teacher directed versus student directed learning. In this excerpt, Kristi talked about integrating literature around a social studies unit.

But what I did at the end of last year was, when we were doing the prairie states, the plain states rather, that we read Little House on the Prairie. We all read the same book. But then I realized I made, I still was making their choice for them. I wanted them to make the choice to read a book. . . . I'll offer to them, but I won't make the choice for them. So that was fun, but it was still, I was in a lot of control, I was really the controller. And to get them to be readers, I really needed to pull back on that control. Otherwise it is my idea and not theirs . . .

In analyzing belief interview 2, it became evident that Kristi felt more definite about her beliefs concerning teaching reading. When one of the original researchers asked her how she felt about her first interview, Kristi said she didn’t have a lot of confidence or thought she wasn’t using the most up-to-date methods to teach reading because it was her first year back after six years off from teaching. She thought everybody else knew so much more than she did because they had just gotten out of school or were up with current educational theory. After the staff development process, Kristi felt much more confident.

An analysis of belief interview 2 determined what motivated Kristi to change her beliefs about teaching and learning.
And then Ben, I gave him that book . . . He is and has been . . . a behavior problem . . . But ah, he is making some moves, some changes . . . I asked him later on if he thought he might like that book. He said yeah I think I might. Cause he will get excited about a book . . . Well, I've just seen, I've seen results that I didn't see before, so (many) more positive results. And so that is enough for me, because I had never seen a change in the readers like I've seen this year. In fact, maybe one student out of all of them I could say would be in the basal reader . . . I mean beyond my expectations rather than just plodding along at their same level. Well, there is much more excitement, they are excited in the morning.

The topics of teaching writing and barriers that kept Kristi from teaching the way she wanted to never came up in her belief interview 2.

**Kristi’s Current Beliefs, Understandings, and Practices**

An analysis of belief interview 3\textsuperscript{11}, observations 3a & 3b\textsuperscript{12}, and practical argument 3\textsuperscript{13} revealed how Kristi’s beliefs had moved into the ‘whole language’ quadrant. Those who advocate a ‘whole language’ contend that literature should be used to teach reading and the purpose for reading is to construct meaning. Since the beginning of the Richardson and Anders (1990) study, Kristi’s reading comprehension practices had become consistent with her beliefs. Everyone in Kristi’s class was now choosing and reading quality literature, discussing how

\textsuperscript{11} Kristi’s belief interview 3 was conducted on January 22, 1992.

\textsuperscript{12} Kristi’s observations 1a and 1b were made on February 3, 1992 and April 1, 1992.

\textsuperscript{13} Kristi’s practical argument session 3 was conducted on March 13, 1992.
they felt about what they read, and learning to read and write for a purpose. To see how Kristi’s beliefs and practices concerning reading changed from 1988 to 1989 to 1992, refer to Figure 6.

An analysis of interview 3, observations 3a & 3b, and practical argument 3 revealed changes in Kristi’s beliefs, understandings, and practices concerning how to teach reading comprehension. Kristi now believed a literature approach should be used to teach reading.

Reading out of the basal and answering questions at the end of the chapter and doing the workbook pages was not making them readers... and I analyzed that... We started out just reading... I let them pick the books they wanted to choose and everyday we had a book sharing that became so exciting. There wouldn’t even be enough time for all the kids who wanted to... share. And we would have more overdue books than anybody because they would be so excited about what somebody else was saying.

Kristi told the researcher her students had begun the year by silently reading "quality" books of their choice for fifteen minutes a day and had extended that time to half an hour by the end of the year. She determined quality by the literature her librarian had recommended. She continued, "They learned to enjoy reading. You could hear a pin drop." During the March observation, students were seen reading quality books like Escape to Freedom, Pinball, and Something Upstairs for thirty minutes.

Analyzing practical argument 3 acquainted the researcher with Kristi’s current practices concerning reading comprehension and Kristi’s new criteria for grouping students. She described how she used literature to teach reading.
Figure 6

Kristi's Changing Beliefs and Practices

Key P--Practices  B--Beliefs
[We] have a variety of easy reading books, interest level and all those things. ... we present like nine or ten [books from which they select three.]

... when they [the students] make a book choice they put their three choices on the card. And sometimes they don't get their choice. When it works out that way, we try and give them first choice next time. ...

reluctant readers, we try to give them first choice ...

Kristi took certain factors into account when she organized groups. She said, "We always look for someone who will be a leader in the group to get it rolling." Groups were also selected so each group contained students with varying ability levels.

Analyzing practical argument 3 and videotape 3 helped determine how Kristi was managing literature groups. Students were seen silently reading their own books first and then getting together with their groups for student run discussions. The groups discussed how they felt about the books they were reading, without summarizing or retelling the story. Kristi could be seen circulating around to a few of the different literature groups. She expressed how pleased she was with the changes she had made in managing her literature groups.

Oh we were doing it with the whole class weren't we. We got smart now. We're doing it half and half. ... yeah, and if there's something going on one side that's discussion group, and the other side gets together to talk, it just, it doesn't work. We find that ... because the number's so big, the circle's so big.

By analyzing belief interview 3, it became evident that Kristi was using more of a process-oriented approach for teaching writing. Her

---

14 Videotape 3 was taken in Kristi's classroom on November 26, 1991.
students were generating their own writing during writer’s workshop instead of using the old language book. She talked about writers’ workshop.

... Um. Ok. Silent writing is the, the bulk of the, of the period ... They would work on editing. They could still work at their seats by themselves. They could be doing, um, publishing. Any of those things is Ok during the processing time. This is time to think and to be creative. Then we get in groups cause now and, um, we share, we all say something where everybody goes around the circle and they just tell something about what they’re working on ... Yeah. And, um, after the, oh, we always do something. Check on them on those days to find out where they are. What they’re writing. The title of it, rough draft, final copy.

Kristi added that the students were also practicing their own skills by proofreading other students’ writing. She explained how she was currently utilizing a more subjective system—student portfolios—to assess her students’ progress in writing. Students looked through everything they had ever done in connection with writing, chose the pieces that were most important to them, and placed them in their portfolio.

Analyzing belief interview 3 revealed Kristi’s reluctance to completely stop using a skill-oriented approach to teach language arts skills. She pointed out that she sends home packets with two weeks worth of skill work and spelling that are related to what they were doing in class. Kristi also talked about spending twenty minutes to a half an hour a week working on separate language arts skills in the classroom. She said this way she was “getting it all in.” Kristi expressed her frustration with using the language arts textbook in the
past because she wondered if her students would ever need or use skills like underlining nouns. This frustration caused Kristi to stop using the textbooks. Yet, she would begin again when she would think about the standardized test and how the format of the textbook and the standardized test were so similar.

The analysis of belief interview 3 and practical argument 3 showed that Kristi was handing over more control to her students. Kristi talked about how student directed learning in literature groups has continued to evolve alongside the development of literature groups in her classroom. She preferred not participate or mirror back what the students had said without offering her opinion during discussions groups since students looked to her for the right opinion. Concerning teachers' opinions, Kristi said, "... I think it's still pretty, it holds a lot of weight. Yeah I do because we're very controlling people..." Kristi expressed concern about being too controlling.

... We direct kids to do stuff. I feel I direct kids to do stuff more than I would really. In theory I would really like to let them, if you feel like writing today or if you feel like doing this you know but I, like it's silent writing now, it's process time now, it's group sharing time now. So they don't have as much freedom to move as I would like to in theory. In practice it seems more difficult to do.

Kristi pointed out that her students' opinions about books are valued in her classroom. She went on to say that students not liking their books is just as respected as liking their books as long as they are able to express their opinions and back them up. She said, "Their opinion and being able to express it really counts."
Even though Kristi wanted her students to take control over themselves and their learning, she also wanted to have the final say if need be. She verbalized

No it's just, what I do is what's needed in this particular case with this particular group of people right here and right now. You know if they're... having a lot of trouble I'm not going to stay out of it. You know I'm going to get in there and try and ask them questions and get things rolling.

Analyzing practical argument 3 revealed how Kristi’s students reacted to using literature in the classroom. Kristi shared that since doing literature groups, her students no longer viewed reading as a subject. She said, "We don’t capital R-E-A-D (anymore.)" Kristi explained that in the past, kids in basal readers said they did not enjoy reading and what they meant was they did not enjoy the subject of reading like when we read in the book and we answered the questions at the end of the story. They did not mean that they did not enjoy hearing about or reading a good book though.

Kristi pointed out how her students had become active participants in reading—

not so in just words that they’re reading but there’s actually some meaning behind it. There’s connections that they’re making to previous stories... by the same author or a book that has a similar theme to it. Um, being more involved in the, in their books so that they’re reflecting, um, personally reflecting on their own.

Kristi was watching her videotaped lesson, in which her students were reacting to their books, during her recent practical argument. She explained that the students on the video were relating their books to
their own lives. Kristi felt the students' thinking, discussions, logs, and enthusiasm towards reading had improved.

By analyzing practical argument 3, it was determined that Kristi integrates reading with other subjects and uses literature to introduce her students to other subject areas. She said, "I want to introduce them to interesting subjects ... broadening of who they are." Later Kristi discussed how the class was studying American history.

I mean when we're studying Columbus we're looking at all these different points of view. You know all the ways different writers have written about Columbus and the different views they've held. ... And what I keep saying is 'there's no right or wrong answer about how you feel about Columbus, but I want you to think and analyze it. The social studies book is just one source of information, you know.' After we've talked and they've read in the literature book about Columbus and then we read in the social studies book ... [I say,] 'So don't ever take your social studies book as the gospel, as the truth. ... it's OK to question. Question everything.'

In analyzing Kristi's follow-up data, it became evident that Kristi was constantly changing her beliefs and practices about teaching and learning. She even talked about changes she had made since she viewed her videotaped lesson only days before her practical argument. Referring to the videotape, in which she and her teammate were handing out new books one at a time, at the onset of new literature groups, she said, "We don't even do this anymore. It's painful to watch ..." The researcher asked Kristi what her sources of change were for teaching reading differently. She answered, "Well, the reactions of the kids ... oh yeah, 'can I, what about this, well let's go do that.' You know, their enthusiasm ... ?"
Discussion

An analysis of the belief interview conducted before the staff development process revealed that Kristi beliefs aligned with a literary structuralist theory which maintains learning to read is accomplished by reading, and the purpose is to determine what the author means. Yet, the analysis of her first observations and practical argument indicated she employed a skills and word approach to teach reading. An analysis of the belief interview conducted immediately following the staff development process determined Kristi's beliefs concerning reading comprehension were still closely aligned to the literary structuralist theory even though she was constantly using literature to teach reading at this time. Analyzing Kristi's follow-up belief interview, observations, and practical argument, determined she currently believes in and employs a 'whole language' approach. Kristi's beliefs and practices had become more consistent since the beginning of the Richardson and Anders (1990) staff development process till the follow-up study as can be seen in Table 1.

It appeared others' support, students' reactions, her ability to reflect on change, and a lack of barriers assisted Kristi in the change process. The findings suggest Kristi might have explored and changed some of her beliefs and/or practices without the staff development process because of her personality and learning style, and her ability to reflect on practices she wants to change. Discrepancies between Kristi's beliefs and practices concerning teaching reading with a skill/word approach versus a literature approach and her frustration
Insert Table 1 Here
<table>
<thead>
<tr>
<th>Topics</th>
<th>1st</th>
<th>2nd</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition of Reading Comprehension</td>
<td>Basal Approach to Reading</td>
<td>Analyze Character</td>
<td>Literature Approach</td>
</tr>
<tr>
<td>Grouping Students</td>
<td>Ability</td>
<td>Unsure How to Manage</td>
<td>Interest</td>
</tr>
<tr>
<td>Oral vs. Silent Reading</td>
<td>Chorally</td>
<td>Chorally and Silently</td>
<td>Silently</td>
</tr>
<tr>
<td>Questioning Techniques</td>
<td>Comprehension Check</td>
<td>React in Journal</td>
<td>Discussions/React in Journal</td>
</tr>
<tr>
<td>Teaching Skills</td>
<td>Reading Workbook, Language Book</td>
<td>Integrate Skill Pages</td>
<td>Homework Packet</td>
</tr>
<tr>
<td>Control of Learning</td>
<td>More Teacher Directed</td>
<td>Moving Towards Student Directed</td>
<td>Student Directed</td>
</tr>
<tr>
<td>Teaching Reading Approach</td>
<td>Basal</td>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Topics</td>
<td>Content</td>
<td>Area</td>
<td>Reading</td>
</tr>
<tr>
<td>----------------</td>
<td>---------</td>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>1st</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teach</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Literature to</td>
<td></td>
<td>Reading</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Literature to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Introduce Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Introduce Subjects, Integrate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1st</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. No information concerning this topic could be found in Kristi's data.
with reading comprehension practices that were not "working" or were not supported by current theory also seemed to encourage her to examine and change her beliefs and practices.

Before the staff development process, Kristi said standardized testing, administrative policy, and her lack of knowledge of certain practices limited the extent to which she could teach the way she wanted. By the follow-up study, she didn’t bring up any barriers that stood in her way. Yet, Kristi was not sure she would ever incorporate some practices at the expense of eliminating others as could be seen when Kristi still sent home language arts skill worksheets even though she ascribed to a process-oriented approach to teaching writing. She said she still teaches language arts skills because the 'whole language' approach ignores teaching skills like "punctuation, capitalization, and spelling."

Alec’s Primary Topics

Alec’s Beginning Beliefs, Understandings, and Practices

A thorough examination of Alec’s belief interview 1, observations 1a & 1b, and practical argument 1 from the beginning of the Richardson and Anders (1990) staff development process revealed

---

15 Alec’s belief interview 1 was conducted on February 10, 1988.

16 Observations 1a and 1b were conducted in Alec’s classroom on January 11, 1988 and January 21, 1988.

17 Alec’s practical argument session 1 was conducted on November 4, 1987.
Alec's beliefs were aligned with a 'whole language' approach to teaching reading comprehension. This approach contends literature should be used to teach reading comprehension and the purpose of reading is for the reader to construct meaning. Before the staff development process, Alec's practices did not reflect his beliefs. They were aligned more with a skill/word approach to teaching reading. This approach advocates learning to read through mastering word attack skills, defining vocabulary words, reading basal stories out loud, answering comprehension questions, and grouping by ability. To view Alec's initial beliefs and practices in 1987-88, refer to Figure 7 on page 139.

An analysis of Alec's definition of reading comprehension, as found in belief interview 1, confirmed his theoretical beliefs were not consistent with his practices concerning teaching reading. He said reading comprehension meant synthesizing what is real with what is read, judging the motivation of the characters, drawing from one's own sense of right and wrong, and being aware that not everything you read is true just because somebody wrote it. He also claimed it was the interweaving of comprehension charts and questions as the basal suggests.

Analyzing belief interview 1 and practical argument 1 revealed Alec used a traditional approach to reading concerning grouping students for reading. Alec pointed out that he had four to six ability groups for reading, with two of the groups going to other teachers. Alec could be seen meeting with three out of four of his ability groups a day during his November 18 and November 21 observations. He noted big differences between the speed at which his four levels were able to work
so he tried to see his "slow readers" first since they needed the most

time. Alec explained, "I have found that, across the board, the

children who don't read well usually don't have a model for them at

home, so those skills are caught and not taught, as the old saying
goes." The staff developers and Alec explored the possibility of

combining students with different abilities for reading groups.

An analysis of belief interview 1 and practical argument 1 showed

Alec was unsure if some of his reading practices were helpful to his

students progress in reading. During observation 1a, Alec could be seen

reading a passage aloud while his students were silently reading along

although he said he preferred everyone read chorally as a group. Alec

talked about how reading aloud helped his students. Then he asked, "Is

it really helping with their speed or what, has there been any research

on that?" The staff developers and Alec explored the functions of

having students read aloud (e.g., being a control mechanism.) Every

once in a while, Alec would check his students' reading skills by having

them read a passage out loud. One minute Alec said if his students

could not figure out a word, he just "drops back" but "if one of the

other kids supplies it, fine." Yet the next minute, he said he provided

the word if they got stuck.

Analyzing his belief interview 1, observations 1a & 1b, and

practical argument 1 demonstrated how Alec employed traditional

practices like asking comprehension questions from the basal and using

the accompanying workbooks to teach skills. Alec said he does not wait
till he gets to the end of a story to ask the questions; he stops as
they go along to try to fit the pieces of the puzzle together, modeling skills every good reader needs. Alec talked about going over the students' workbook pages in a group and dismissing them to read their story, write out the comprehension check, and complete the skills check on their own. He stressed the importance of having them write out answers to the questions because it provided a jumping off place and it was seat work while he was working with other groups. Alec could also be seen using the basal workbooks and pages from the language arts book as seatwork.

During belief interview 1 and practical argument 1, Alec didn't believe he could teach reading the way he wanted because of those damn green things in there that we have to be accountable for. Someone looks and sees whether or not you've been doing your work.

The staff developer asked, "What are the green things?" to which, Alec replied, "They're folders that show where kids are in their, in their [skills development]."

Alec could be seen introducing vocabulary, before each story in the basal reader, during observations 1a & 1b. He asked students to find the meaning of the words by using their dictionaries and glossaries. He explained his lower students could "experience more success in decoding the words so they can understand what they are reading" if he introduced the vocabulary words in the context of the story. Alec did not believe his top group needed to preview the vocabulary. He said:

[Group] 1 has such a high level of, um, understanding
of their vocabulary that to me it's a waste of time to get them to do the, those sorts of things. Because, they'll read stories and understand them and we get some really good discussions without me having to go over that in the first, first place.

An analysis of practical argument 1 showed how Alec felt about having control over his students' learning. Alec's students could be seen copying a Spanish riddle from the board. Alec and the staff developers explored whether having students copy from the board was a valuable task that prepares students for high school or controls students' speaking, listening, writing and reading. Alec could be seen directing his students' learning during observations 1a & 1b. Yet, he discussed how it bothered him to go into other classes where teachers had too much control over their students. He felt kids in those kinds of classes were afraid to give an answer because they might be wrong.

Analyzing practical argument 1 showed Alec did not want his students to learn to read the same way he did. Alec finds himself sounding out, guessing, and rehearsing new words without even knowing why. He feels his students should not pay attention to the little letters in the middle of a word because it is not an effective reading strategy. Therefore, he wants his kids to use more efficient cues like using context clues to construct meaning. Alec said when he administers placement tests for reading he gives them a passage to read instead of having them read words out of context.

An analysis of belief interview 1 demonstrated how Alec activated his students' background knowledge concerning a story before they would
actually read it. He said he spends more time with his lower reading group to find experiences they may have had that are similar to the story because it helps with their comprehension. During his November 27, 1987 observation, Alec could be seen asking his students questions to relate what they already knew to what they were going to be reading. Alec explained

if I were to give the kids a question about the main idea of the whole story, I'd probably get five answers from . . . from each of those kids . . . But, I would be willing to bet that they would probably link into what we had in our discussion before they read the story.

**Alec’s Beliefs, Understandings, and Practices**

**After the Staff Development Process**

Alec’s beginning beliefs fell into the 'whole language' quadrant. He believed reading comprehension should be taught by exposing children to lots of literature and that the purpose of reading is for the reader to construct meaning. Yet, Alec’s beginning practices were more aligned with a skill/word approach to teaching reading. By analyzing Alec’s belief interview 2\(^{18}\) and practical argument 2\(^{19}\), it was determined Alec’s beliefs moved from a "whole language" to a more traditional skill and word approach. To view Alec’s beliefs concerning reading comprehension at the completion of the staff development process, refer to Figure 7 on page 139.

\(^{18}\) Alec’s belief interview 2 was conducted on June 23, 1989.

\(^{19}\) Alec’s practical argument 2 was conducted on March 17, 1989.
An analysis of Alec's definition of reading comprehension by belief interview 2, confirmed some of his beliefs about teaching reading had remained consistent and some had changed concerning teaching reading. Alec described reading comprehension as discriminating what the interesting part of the story or other piece of written material is and integrating that into a total schema and then acting upon it in such a way that I can relate it to similar incidents or abstract concepts. . . . students learn that by application. By discussing it with themselves, with me, talking about what's important to them and perhaps relating it to past instances . . . If you're interested in it, you're comprehending it. If you're not interested in it you may or may not be comprehending it. But by interest I'm talking about, not talking about getting excited about it but using it, storing it, categorizing it somehow so that you can call on it later on.

In the same interview, Alec said he finds out if his students are comprehending what they are reading by having them tell him "basically what the author is trying to tell us."

Analyzing belief interview 2 and practical argument 2 revealed Alec had changed in the way he grouped his students for reading.

I tried cooperative education for the first time on a grand scale, and [I] have always agreed with the contention that students learn really well from themselves. . . . Last year I started off day one with kids grouping in groups of six. I eventually changed that to four. I found the dynamics of the group . . . were better with four instead of six. I could move some of the materials around easier with four.

Alec talked about changing his groups every four weeks. He placed one good student in each group and tried to mix in the rest of the students.

An analysis of belief interview 2 and practical argument 2 showed
Alec was moving away from the basal and workbooks. He explained that he had never done literature before but he was pleased because his kids were reading books like *Old Yeller* and he was not using the workbooks so much anymore.

I found myself stopping the use of workbooks as I have in the past. I used to go from one end of the book to the other and got them done, and had all this accountability . . . look parents, see what we did. And I did that at my own expense because some of those pages I really hated doing. And I found myself not doing some of those because of the time that I was devoting to the literature and I felt that I was enjoying the literature a whole lot more.

When asked if he would still use any of the stories from the basal, he said, "I'm not willing to throw the baby out with the bath water. I think there are some good things with the basal and some good activities too."

Analyzing belief interview 2 revealed Alec beliefs concerning how to figure out unknown words while reading were inconsistent. He said he usually does not use a dictionary when he cannot figure out a word; he continues to read unless it affects his comprehension. Yet, he said students should look up a word if they cannot define that word from the context of the text. Later in the same interview the interviewer asks Alec about his students using the same strategies he uses when reading. He replied, "Looking up words? They usually don't look them up."

By analyzing belief interview 2 and practical argument 2, it became obvious Alec felt deeply about using a questioning technique he had adapted from a questioning technique the staff developers had introduced at the group level staff development. The interviewer asked
Alec how he felt comprehension was best taught. He discussed how he liked the kids to identify what they thought was important by discussing it amongst themselves. He felt this was more effective than responding to prepared questions that had been identified beforehand. He would have them think up five of their own questions to write. Sometimes they incorporate one or two questions from the back of their book, but usually they make up their own questions, based on what they have read.

The analysis of belief interview 2 revealed that Alec felt the support of others at his school and in the 3T program, the curriculum, and his principal had all been influential on him being able to teach the way he wants to. Alec associates with a group of teachers that are very supportive of each other. Alec attributed change to the fact that reading had become “more fun and not such a chore.” He said it was never a difficult chore, but it was tedious; and therefore, he eliminated or revised to the point where it became more manageable, easier, or fun to do. He also gave credit to the success his students were having. He explained the students tended to work individually in the past, whereas now they grouped together and solved their problems.

Alec’s Current Beliefs, Understandings, and Practices
Analyzing Alec’s belief interview 3\textsuperscript{20}, observations 3a & 3b\textsuperscript{21},

---

\textsuperscript{20} Alec’s belief interview 3 was conducted on December 1, 1991.

\textsuperscript{21} Observations 3a and 3b were made in Alec’s classroom on January 5, 1992.
and practical argument 3, revealed Alec had changed to where he now believes reading comprehension should be taught through a literature approach and the purpose of reading was to construct meaning. Since the beginning of the Richardson and Anders (1990) study, Alec’s reading comprehension practices had become more consistent with his beliefs. Yet, he was still utilizing some of his old practices with his Spanish readers and students who needed help. Alec’s students were now reading literature, answering more open-ended questions about what they read, learning skills through the process of reading and writing, and grouping themselves by choice. His Spanish group was still reading round-robin style for an aide and his lower students’ were still learning techniques that emphasize decoding skills and a sight word vocabulary. Alec’s first, second, and follow-up beliefs and practices concerning reading are shown in Figure 7.

Analyzing belief interview 3 and observations 3a & 3b helped reveal changes Alec had made in his definition of reading comprehension and his approach to teaching reading, although he is still not sure whether the meaning the story comes from the author, the reader, or somewhere in between. Alec now describes reading comprehension as an interfacing of our own experiences with what the author is saying. He added, "It is . . . reflecting on past notions and maybe doing some reconstruction of thinking." Alec has moved from using the basal to using literature. His students could all be seen reading the same

---

22 Alec’s practical argument 3 was conducted on March 12, 1992.
Figure 7

Alec's Changing Beliefs and Practices

Key P—Practices  B—Beliefs
novel—*Island of the Blue Dolphins*. Alec said that sometimes he has his students read to the end of the chapter and then give a reaction, not necessarily a summary. Other times he asks them what they thought the author was trying to say. Alec talked about being able to assess his students when they read to one another and discussed what they read. He felt they were comprehending if they are able to react.

By analyzing belief interview 3 and observations 3a & 3b, it became evident Alec felt more confident about some new techniques he was using to teach reading and less confident about others. Alec discussed how well his new way of grouping was going.

I, um, I used to label them and I had kids basically in their ability group as we used to call them and I don't do that anymore. I do some groupings where I get together with the kids that are having trouble in various subject areas. So I'll let, um, some of the kids go on in, in some of the areas at their level . . . and I'll help the kids that are having trouble . . . I have the kids help themselves too, you know, where they're, where some kids are more able than others in, in . . . different areas. One person may, you know, everybody has different strengths and weaknesses and [I] try to capitalize on what their abilities are to help each other out in their, in their smaller groups too.

Alec was more apprehensive about managing literature groups though. Generally, Alec either read a novel aloud while the whole class silently read along or students read aloud to one another in groups of two or three as they shared a book. Alec expressed his concern about getting the logistics down, you know, where you have different people reading different books at the same time and reporting on that too. I'd like, yeah, I'd like to try that, but I need some direction with that cause I'm not real sure how to, how to handle the
logistics of that.

Since Alec mentioned he would like to find out how his different groups could be reading different books at the same time, the researcher offered to substitute for him. Because of this, Alec was able to visit another teacher who organized her literature groups in this way.

By analyzing practical argument 3, it was obvious Alec's Spanish group was reading for a different purpose than his English groups. His Spanish group could be seen reading a Spanish version of Island of the Blue Dolphin on videotape 3. They were all sitting at one table taking turns reading—round robin style—to a Spanish aide. The rest of the class had divided themselves into smaller groups of two or three students. They were reading the novel to one another while sitting anywhere they wanted. The staff developers asked Alec about this in his practical argument. Alec decided his other students had been reading for meaning; whereas, his Spanish readers had been reading for his aide and for pronunciation. He made a change in the Spanish reading groups the next day.

The analysis of belief interview 3 and practical argument 3 revealed he did not actually teach skills the way he professed to teach them. In his practical argument, Alec talked about not teach reading comprehension with a skills and word approach anymore. For instance, he no longer uses the basal workbooks. Instead, he keeps a list of things the class needs to accomplish, like punctuation and capitalization, and integrates it into whatever else they are learning. Yet in his belief interview, Alec discussed how he goes over new words with and makes
flashcards for students who were having problems in reading.

Analyzing the follow-up belief interview, observations, and follow-up practical argument demonstrated that Alec was still using the think and search questions he invented. Alec explained that these questions required anything from simple answers—where students have to examine two or three sentences—to complex answers—where they have to examine a whole chapter, and maybe even tie it into another book. Alec illustrated some of the features of the questioning techniques he had devised.

Tomorrow what I'm going to do is give them seven of the questions that I've thought up for the next chapter and see how well they respond to those. Um, sometimes I have them make their own questions that they turn into me . . . and then I put the questions on the board and they respond to those . . .

Alec discussed using think and search questions in other content areas, too. Alec could be seen leading a discussion about Island of the Blue Dolphins and asking both open-ended and close-ended questions after the students had read a chapter of their novel. The staff developers and Alec explored using his questioning techniques during his practical argument.

An analysis of practical argument 3 showed that Alec was pleased with the content of his students' writing but felt their organization still needed work. A handwritten outline could be seen on one of the chalkboards during videotaped lesson 3. Alec described his objective for the lesson.

---

---

23 A videotape was made in Alec's classroom on November 20, 1991.
I'm organizing for writing, uh, paragraphs and this is the first time I've done, uh, outlines. First, you know, I want them to be thinking about how the main idea has something you want to say and then you think about what kinds of things you want to add in (the) . . . paragraph, and then . . . this is another way I'm attacking paragraphs cause I see that some of them still aren't doing it right.

Analyzing his follow-up practical argument and belief interviews revealed Alec was confused about the ramifications of student directed learning. Alec and the staff developers explored differences in how his students were responding to being given more control. Alec pointed to his lesson on outlining and explained how he had started out the year by doing 15 minutes of silent reading with them everyday. Since then he has relinquished some of his control because the students were wanting more time—a half an hour—to go to the library. Alec’s class had been studying sea life because it “fit in real well” with Island of the Blue Dolphins. The students were showing a great deal of interest in using the data base to research other kinds of fish on their own. He also explained how his students were using literature from the library and their six centers to research and report on a series of subjects including the State of Arizona. Alec said his students seemed to be writing their own agenda on top of what he had planned.

Alec expressed his frustration over having less time since his students started directing more of their own learning. He explained he always feels the need to

get caught up with what we haven’t finished and plan maybe over a two day period. . . . But uh, what I'm having to do now is I’ve been building in blocks of time. Get finished with stuff that we started in the
week that we didn't finish.

He also talked about how much fun it had been for him to see "all the kinds of things his students have been doing." Alec felt he has not given up control as much as he has flowed with it.

Analyzing belief interview 3 showed how Alec still focuses on vocabulary, activating students' background knowledge, and having his students copy off the board. He models how students can extend their vocabulary by referring to word lists on the bulletin board or in their pockets every once in a while. Before a new unit, Alec finds out what prior knowledge his students possess and the direction in which they want to go. Alec still talked about the importance of learning to copy off the chalkboard since they will have to do it in high school.

Analyzing his follow-up practical argument demonstrated how Alec no longer worries about the standardized test. When asked why his students had not scored higher on the standardized tests, Alec said the students' progress in reading was not showing up on the test. He added, "I don't worry about them so much. I know that I do my job and I don't like the idea of teaching to the test."

The analysis revealed that Alec attributes changes he has made to the District’s change in curriculum. He said they adopted a new literature series and were no longer requiring worksheets. Alec was pleased with the new curriculum because he loved having kids read books like Island of the Blue Dolphins, Ole Yeller, and Blue Willow. Alec has been aware of practices he has wanted to change but says it has been tough for him to change. He remarked, "... even looking at a video,
I could see some, some things, but then there's little fine tuning things that, that, um, are hard for me to get through."

**Discussion**

An analysis of Alec's belief interview 1 revealed that he believed in a whole language approach to teaching reading. Yet, the analysis of his first observations and practical argument indicated he employed a skills and word approach. Analyzing Alec's belief interview 2 showed Alec's beliefs moved from a "whole language" to a more traditional skill and word approach. An analysis of Alec's belief interview 3, observations 3a & 3b, and practical argument 3 determined Alec currently believes in and employs a 'whole language' approach. The findings suggest Alec's beliefs, understandings, and practices changed considerably from the beginning of the Richardson and Anders (1990) staff development process as can be seen in Table 2. Alec's reading beliefs had become more consistent by the follow-up study, except for his group that read in Spanish. As he watched his videotaped lesson during his practical argument, Alec easily detected the inconsistencies in his practices and subsequently attempted to change them.

Alec was the only teacher in the original study to move backwards on the two-way continuum during the staff development process as compared to the other teachers. The staff developers in that study agreed in their notes on Alec, that his first belief interview gave indications of an effort to please the staff developers by speaking about current holistic theory: something he felt was endorsed by
Table 2

Changes in Alec's Primary Topics

<table>
<thead>
<tr>
<th>Topics</th>
<th>1st</th>
<th>2nd</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition of Reading Comprehension</td>
<td>Comprehension Check</td>
<td>Application, Author's Mng.</td>
<td>Interface Author and Readers' Mng.</td>
</tr>
<tr>
<td>Grouping Students</td>
<td>Ability</td>
<td>Cooperative</td>
<td>Choice of Partner(s), except Spanish Readers' are Grouped Together</td>
</tr>
<tr>
<td>Oral vs. Silent Reading</td>
<td>Chorally</td>
<td>Silently</td>
<td>English--Chorally, Spanish--Orally Round Robin Style</td>
</tr>
<tr>
<td>Questioning Techniques</td>
<td>Comprehension Check</td>
<td>Comprehension Check</td>
<td>Open and Closed Ended</td>
</tr>
<tr>
<td>Teaching Skills</td>
<td>Reading Workbook, Language Book</td>
<td>Trying to Not Use</td>
<td>Integrate Except for Low Students</td>
</tr>
<tr>
<td>Control</td>
<td>More</td>
<td>Wants to Give Up</td>
<td>Moving Towards Student Directed</td>
</tr>
<tr>
<td>Teaching Reading Approach</td>
<td>Basal</td>
<td>Literature From Basal</td>
<td>Literature and Other Text</td>
</tr>
<tr>
<td>Topics</td>
<td>1st</td>
<td>2nd</td>
<td>Follow-up</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------</td>
<td>------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Content Reading Area</td>
<td>Taught as Separate Subjects</td>
<td>Reading in the Content Areas</td>
<td>Integrated</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>Define Words Out of Context</td>
<td>By Context, Next from Dictionary</td>
<td>Display Words/Models How to Memorize</td>
</tr>
<tr>
<td>Student Responses</td>
<td>Right or Wrong</td>
<td>Author's Meaning</td>
<td>Respect Students' Opinions</td>
</tr>
<tr>
<td>Students' Background Knowledge</td>
<td>Emphasizes</td>
<td>Emphasizes</td>
<td>Emphasizes</td>
</tr>
<tr>
<td>Writing</td>
<td>Skill-Oriented</td>
<td>Skill-Oriented</td>
<td>Process-Oriented</td>
</tr>
<tr>
<td>Barriers</td>
<td>Assessment</td>
<td>1.</td>
<td>Time Restraints</td>
</tr>
<tr>
<td>Sources of Change</td>
<td>1.</td>
<td>Support, Kids' Reactions, &quot;Reading Not So Much of a Chore,&quot; Curriculum</td>
<td>&quot;Fun&quot; for Teacher, Kids' Reactions, New Curriculum</td>
</tr>
</tbody>
</table>

1. No information concerning this topic could be found in Alec's data.
everyone at the University. It appears as if Alec felt he could share
more about his private beliefs by the end of the staff development
process because of the trust he had developed with the staff developers.

It appears as if change was not as easy for Alec. This may have
been because of his personality, his learning style, time restraints, or
other limitations. He talked about how he learns better by doing it and
by having somebody come into his classroom to show him how. The
teachers at Alec’s school exchanged ideas with one another, and yet he
felt a shortage of time limited him from participating in these
exchanges. For example, Alec has had to plan in two day increments ever
since his students had taken more control of their own learning and
stretched their assignments over a longer periods of time.

Sources for Alec’s change came from the enjoyment he was having by
utilizing a new reading approach, the district’s newly adopted
curriculum, and his students’ reactions to his new reading practices.
He talked about how great it had been for him to witness his students
accomplishments and for the district to adopt a new literature series
which no longer required worksheets. He also discussed how pleased he
had been with the new curriculum because the kids read literature,
wanted more time to go to the library, showed a great deal of interest
in using the data base to research, used literature to research and
report, and wrote their own agenda on top of what he had planned.

Even though Alec had many incentives for change, he also perceived
barriers. Before the staff development process, Alec felt the
accountability system his district required placed restrictions on the
way he taught. By the time of the follow-up study, he no longer worried about assessment and yet he felt confined by classroom management and time constraints instead. Alec didn't feel he could manage different groups reading different books at the same time.

Part II

Discourse in the Practical Arguments

Nature of Conversation

The teachers and the staff developers' dialogue could generally be placed into Richardson and Valdez' (1991) three stages of a cycle of conversation of a practical argument. These three stages of dialogue included:

Initial Framing Stage, in which the teacher and/or staff developer(s) bring(s) specific aspects of the teacher's beliefs and practices to the attention of the others in the group.

Reframing Stage, in which the educators(s) and/or teacher examine(s) specific aspects of teaching from several different theoretical perspectives as taken from research and/or the teacher's experience.

Alternate Frame Stage, in which the teacher accepts a new frame and states s/he will consider making a change in teaching practices.

In the cycles of conversation in Kristi's and Alec's practical argument 3, the initial frame stage generally led to the reframing stage. In over 65% of the cases, the cycles of conversation were completed with a third stage. Sometimes, the initial frame was not
followed by a reframing stage because the initial frame could not get off the ground, the initial frame skipped straight to an alternate frame, or change occurred within the initial frame. Two types of dialogue did not fit into a cycle of conversation at all. One was similar to the type Richardson and Valdez (1991) found—personal comments about the news, plans for summer vacation, etc. The other kind centered around inquiries and explanations concerning the teachers’ individual students. By analyzing the data, it became evident that teachers were discussing changes in their beliefs and practices in the alternate frame of the initial practical arguments; whereas, change was discussed in all of the frames in the follow-up practical arguments.

The staff developers and teachers’ dialogue could also be categorized into two of the three types of discourse Richardson and Valdez (1991) found existed in a practical argument.

Informational Dialogue probes for more information or clarifies information already obtained. In practical arguments, it is used by the teachers or staff developers to learn or explain more about the teachers’ actions, intentions, or beliefs.

Recasting Dialogue moves the conversation along in a certain direction or changes the direction of the conversation on purpose. In a practical argument, these are used by the teachers or staff developers to allow the same topic of conversation to be examined from several different viewpoints.

The analysis of the data indicates that the cycles of conversation usually began with the staff developers questioning Alec and Kristi
about their practices concerning the teaching of reading comprehension as taken from their videotapes. Only after the staff developers were successful at learning information about Alec's and Kristi's present premises and practices did the staff developers introduce related premises and practices as taken from the recent research. A cycle of conversation can be seen in the following excerpt from Kristi's practical argument 1. In the initial frame stage, Kristi brings up the topic of grouping students for reading. The staff developers elicit more information about Kristi's current premises and practices concerning the same. A topic is settled into on lines 16-25 which sets the reframing stage in motion.

1 Kristi: We've always had reading groups . . . that's what we were instructed to do. Well, they'd say, give them this test. Where they fall is the group they go into. And, you know, you had to put them in the book, they just told you, you know.

6 SD1: You have the whole group, this is the whole group coming out, right?

8 Kristi: Yeah. Five classes we level, so I have all of those kids around . . . in one group. That was the idea. We perceived levels among all the fourth graders. We decided among ourselves that to make it simpler, we would level fourth and fifth that way. Fifth graders could come into fourth grade rather than a teacher having several reading groups. It might be easier.

16 SD1 Literature, ah, grouping and literature would seem to be two things that you might want to explore.

19 Kristi: Yeah, I'd like to know how to do that. How, how would I if I had my whole class and all these different reading levels and a literature-based reading program without necessarily having three groups . .
24 SD1: At least homogeneous groups.

25 Kristi: Yeah.

During the reframing stage, the staff developers used recasting dialogue to introduce several alternative premises and practices as taken from the current research about and/or the teachers' experiences with reading comprehension. Several theoretical viewpoints about grouping students for reading, grouping by skills, and teaching skills were discussed in relation to Kristi's current understandings and practices concerning the same as can be seen in this continuation of the same excerpt from above.

26 SD1: You might select groups by interest.

27 Kristi: Yeah, but then what would I do with the skills? Do I then group the skills, which would seem to be defeating the purpose, maybe?

30 SD1: I just, I feel it was less of a rationale for the grouping skills together than almost anything else.

33 Kristi: Really? Ok.

34 SD1: I'm not an expert in reading.

35 Kristi: Oh.

36 SD1: Does it make sense?

37 SD2: Well, the problem is that lots of times kids can do skills in context when they're in the activity that they can't do as a skill sheet.

41 Kristi: And vice versa.

42 SD2: And vice versa. Exactly right. For example, this morning, we were talking with another teacher about using context groups. She says, she sees kids doing context skills all the time, day in and day out. They go to the bloody test, they can't do
the context skills. Well, which is true, what she sees everyday or what five items on the, on the test. Well, you tend to think it might be what you see in a day in purposeful, functional, everyday the use of language and, so, the question is do we need to teach kids and a way to do stuff so that they, on this work sheet isolated from pract[ice] . . . isolated from context so that they can pass the test.

Kristi: Every time I give instructions, I think . .

SD2: Then if that's true then maybe what we should do is do the worksheets we need to do in order to do the test.

Kristi: Or we should, yeah.

SD1: And then we can say, this is our test taking class.

Kristi: Or while we're writing or as we're learning to write and use certain skills, let's use the worksheets then.

SD1: They might correspond.

Kristi: They correspond, so then why do we do, the skills in reading are skills that you need for writing, spelling and everything. But it's so, it's so . . . We used to love, like I was talking before, we loved the language arts . . .

[inaudible]

SD2: You like that better?

Kristi: I liked it better than this.

SD2: This is real choppy.

In this cycle of conversation, the preceding two frames led to a third--alternate frame stage. After examining all the theoretical viewpoints in relation to her practical knowledge, Kristi considered integrating skills with the process of writing.

Kristi: Integrate, I like that word, because I
77 don't feel that we're, it's like when we [are]
78 teaching skill lessons, we just like, we're doing
79 it.

Approximately 13% of the dialogue in Kristi's original practical argument was informational and 87% was recasting. By her follow-up practical argument the percentage of her informational dialogue had fallen to 5% and her recasting had risen to 95%. Approximately 33.5% of the dialogue in Alec's initial practical argument was informational while 67.5% was recasting. Thirty-eight percent of the dialogue was informational while 62% was recasting by his second practical argument. By his follow-up practical argument, approximately 8.5% of his dialogue remained informational while his recasting dialogue had risen 25% for a total of 91.5%. Refer to Figure 8 to see how the amounts of the different kinds of dialogue changed from the first to the follow-up practical arguments.

**Topics of Reflection**

In Kristi's first practical argument, the staff developers asked questions about individual students and basal reading groups. They introduced the topics of literature, purposes of reading, and process of writing into the conversation; whereas, Kristi introduced the basal reader, workbook, reading skills, oral reading, and ability grouping. By her second practical argument, the staff developer introduced the topics of managing literature groups and assessing students' progress in literature. Kristi introduced the topics of literature, process-
Figure 8

Kinds of Talk in Kristi’s Practical Arguments

<table>
<thead>
<tr>
<th></th>
<th>1st PA</th>
<th>2nd PA</th>
<th>Follow-up PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st PA</td>
<td>13%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd PA</td>
<td></td>
<td>87%</td>
<td></td>
</tr>
<tr>
<td>Follow-up PA</td>
<td>5%</td>
<td></td>
<td>95%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1st PA</th>
<th>2nd PA</th>
<th>Follow-up PA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Informational | Recasting

Kinds of Talk in Alec’s Practical Arguments

<table>
<thead>
<tr>
<th></th>
<th>1st PA</th>
<th>2nd PA</th>
<th>Follow-up PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st PA</td>
<td>93.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd PA</td>
<td></td>
<td>38%</td>
<td></td>
</tr>
<tr>
<td>Follow-up PA</td>
<td>6.5%</td>
<td></td>
<td>91.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1st PA</th>
<th>2nd PA</th>
<th>Follow-up PA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Informational | Recasting
oriented writing, student directed learning, students' progress, literature discussions, and reflecting on change. Table 3 illustrates who introduced the primary topics of conversation in Kristi's 1989 and 1992 practical argument.

In Alec's first practical argument, the staff developers asked questions about individual students and reading groups. They introduced the topics of purpose of reading and teacher directed learning; whereas, Alec introduced the basal reader, workbook, reading skills, and writing skills. By his second practical argument the staff developers were bringing up Alec's questioning techniques; whereas Alec was introducing topics which centered around literature. By his follow-up practical argument, the staff developers were still asking about individual students and his Spanish group in particular. They introduced the topics of student directed learning and assessment. Alec introduced the topic of literature, skill-oriented writing, and questioning techniques. Table 4 demonstrates who introduced the main topics of discussion in Alec's 1988 and 1992 practical argument.

Change

Seventy percent of the the cycles of conversation in Kristi' first practical argument ended in a discussion of future change and 30% ended without any discussion of change. Whereas 38% of the cycles of conversation in Kristi's follow-up practical argument involved discussions about changes that Kristi had already made in her practices while 62% of the cycles contained discussions of fine tuning her new
Table 3

Occurrences of Who Introduced Primary Topics of Conversation in Kristi's Practical Arguments

<table>
<thead>
<tr>
<th>Topics</th>
<th>Initial PA</th>
<th>Follow-up PA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S.D.</td>
<td>K.</td>
</tr>
<tr>
<td>Basal Rdng. Approach</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Literature Approach</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Purpose of Reading</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Writing</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Control of Learning</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Students</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Integrating Subjects</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Grading/Accountability</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Management/Organization</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Questioning Techniques</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Background Knowledge</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Behavior</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 4

Occurrences of Who Introduced Primary Topics of Conversation in Alec's Practical Arguments

<table>
<thead>
<tr>
<th>Topics</th>
<th>Initial PA</th>
<th>2nd PA</th>
<th>Follow-up PA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S.D.</td>
<td>A.</td>
<td>S.D.</td>
</tr>
<tr>
<td>Basal Rdg. Approach</td>
<td>10</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Literature Approach</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Purpose for Reading</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Writing</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Control of Learning</td>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Students</td>
<td>9</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Integrating Subjects</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Grading/Account.</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Management/Organization</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Questioning Techniques</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Background Knowledge</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Behavior</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
practices. In Alec's first practical argument, 62% of the cycles of conversation ended without any discussion of change, 22% ended in discussions of future change, and 56% revolved around changes he had already made. In his follow-up practical argument, 18% of the cycles discussion of future change; whereas, 38% of ended without any discussion of change, 45% revolved around changes already made, and 37% contained discussions of fine tuning his new practices. To visualize the various kinds of change Kristi and Alec were making in their initial and follow-up practical arguments, refer to Figure 9.

In Kristi’s first practical argument, informational topics that involved no change revolved around her students. The recasting topic that did not end in change was a skill-oriented approach to teaching writing. The recasting topics that ended in change most often included the basal and literature approaches to teaching reading; process-oriented writing; and purposes of reading. In Kristi’s follow-up practical argument, students were discussed around topics of change and not around informational. Recasting topics that did not end in change included how to teach writing skills. Discussions of change contained topics pertaining to the literature approach, management of literature groups, students, process-oriented writing, control of learning, assessment of literature groups, and discussions/voicing opinions in literature groups.

In Alec’s first practical argument, informational topics that involved no changes revolved around students and how he used the basal
Figure 9

Various Kinds of Change
Discussed in Kristi's PA

<table>
<thead>
<tr>
<th>Category</th>
<th>1st PA</th>
<th>2nd PA</th>
<th>Follow-up PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>30%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Category 2</td>
<td>70%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Category 3</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Category 4</td>
<td>62%</td>
<td>38%</td>
<td>38%</td>
</tr>
</tbody>
</table>

Discussed in Alec's PA

<table>
<thead>
<tr>
<th>Category</th>
<th>1st PA</th>
<th>2nd PA</th>
<th>Follow-up PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>38%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Category 2</td>
<td>62%</td>
<td>56%</td>
<td>45%</td>
</tr>
<tr>
<td>Category 3</td>
<td>0%</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>Category 4</td>
<td>22%</td>
<td>22%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Types of Change

Category 1—No change discussed or seen on videotape
Category 2—Discussion of present practice concludes with a consideration for change
Category 3—Discussion of a change in practice while viewing it on the videotape
Category 4—Discussion of a change in practice while viewing the videotape and consideration of further change
reading approach to teach reading. Recasting topics that did not end in change were practices pertaining to the basal reading approach and his own comprehensional questioning technique. Recasting topics that ended in change included basal reading practices, purposes for reading, management and organization, and assessment of reading. In his follow-up practical argument, informational topics still revolved around students. Recasting topics that did not end in change were practices pertaining to the basal reading approach and his own topics in discussions containing no change included writing and questioning techniques. The recasting topics that revolved around discussion of change included the literature approach, the basal reading approach, purposes for reading, control of learning, assessment, and writing. To compare Kristi’s and Alec’s primary topics of conversation in their initial and current practical arguments, refer to Table 5.

Who Owns the Agenda

In Kristi’s first practical argument, the staff developers constructed 25% of the topics; whereas, 50% of the topics were constructed by Kristi and 25% were jointly constructed by the staff developers and Kristi. The way the topics of conversation were constructed had shifted significantly by Kristi’s follow-up practical argument. The staff developers constructed 19.3% of the topics, the teachers constructed 23.3%, whereas, 57.3% of the topics were jointly constructed. In Alec’s first practical argument, staff developers constructed 41.3% of the topics of conversation, as compared to 26.3% by
Table 5

Primary Topics of Conversation in the Practical Arguments

<table>
<thead>
<tr>
<th></th>
<th>K's 1st PA</th>
<th>K's F. Up PA</th>
<th>A's 1st PA</th>
<th>A's 2nd PA</th>
<th>A's F. Up PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basal</td>
<td>5</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Reading</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Approach</td>
<td>7</td>
<td>0</td>
<td>8</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Literature</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Approach</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Purposes</td>
<td>6</td>
<td>14</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>for Reading</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Control of</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Learning</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Students</td>
<td>0</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Integrating</td>
<td>4</td>
<td>1</td>
<td>13</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Subjects</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Grading/</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Account.</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Classroom</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Management</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Questioning</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Techniques</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Behavior</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**KEY**

Top Line – Topics of Elicitation (Never End in a Change)
Middle Line – Topics of Reconstruction (Did Not End in Change)
Bottom Line – Topics of Reconstruction (Ended in Change)
Alec and 33.3% jointly constructed by the staff developers and Alec. By Alec's 2nd practical argument, the staff developers constructed approximately 54% of the agenda, Alec constructed 23%, and 23% of the agenda was jointly constructed. The topics of conversation were constructed differently in Alec's follow-up his cycles ended without any discussion of change. In his second practical argument, 22% of his practical argument. Staff developers constructed 45% of the topics of conversation; whereas, 0% were constructed by Alec and 55% were jointly constructed. To compare who owned the agenda in Alec's and Kristi's initial and follow-up practical argument, see Figure 10.

Discussion

The analyses of the dialogue in the practical argument showed that over a five year period, the staff developers' and teacher's dialogue changed in terms of the nature of conversation; type of language used; topics of reflection; initiators of the topics; topics that did not end in change; topics that ended in change; types of changes made in the teachers' practices; and who owned the agenda. Content analysis of the belief interviews, observations, and practical arguments have been included in this section to reinforce the findings from the discourse analysis of the practical arguments wherever they are applicable.

Analyses of the discourse determined that in the first practical argument, discussions of change were only occurring after certain aspects of the teacher's practices were introduced and examined from several theoretical viewpoints. By the follow-up study, discussions of
Figure 10

Who Owns the Agenda in Kristi’s Practical Arguments

- 1st PA: Teacher 50%, Staff Developer 25%, Jointly Constructed 25%
- 2nd PA: Teacher 23.3%, Staff Developer 23.3%, Jointly Constructed 54.3%
- Follow-up PA: Teacher 45%, Staff Developer 55%

in Alec’s Practical Arguments

- 1st PA: Teacher 26.3%, Staff Developer 33.3%, Jointly Constructed 41.3%
- 2nd PA: Teacher 23.3%, Staff Developer 23.3%, Jointly Constructed 54.3%
- Follow-up PA: Teacher 0%, Staff Developer 0%, Jointly Constructed 55%
change were emerging earlier and throughout the conversations. From the findings, it appears the teachers have acquired a schema for examining their beliefs and practices in relation to the formal theory theory and their own practical knowledge which has encouraged them to engage in reflective conversations with themselves and/or with others throughout the three years since the staff development process. MacKinnon (1987) examined a similar kind of reflective framework used by preservice teachers to think about their science lessons. He suggests preservice teachers become reflective in practical argument became the kind that encouraged beliefs, their analysis of their teaching when they are guided through the cycle of reflection consisting of problem setting, reframing, and resolution.

Discourse analyses revealed informational talk in both teachers' initial practical arguments revolved around students although the amount of Alec's was significantly greater than Kristi's. The findings suggest the staff developers needed to learn more about Kristi's and Alec's students in order to relate appropriate theories and practices to the teachers' practical knowledge concerning their individual students. Richardson (In Press b) suggests "genuine changes will come about when teachers think very differently about what is going on in their classrooms, and are provided with the practices to match the different ways of thinking." Alec's informational talk revolved around his bilingual students in his first practical argument; whereas in his second, it centered on students who were being disruptive on the videotape. It seemed as though the staff developers needed to know even
more about Alec's bilingual students since they were not trained in bilingual education. It also appears as if it was difficult for educator(s) and teachers to separate beliefs and practices concerning reading comprehension from beliefs and practices about ecologically created concerns like classroom management (see Doyle, 1986).

The analysis of the data showed that by Alec's follow-up practical argument, only a small amount of the dialogue was used by the staff developers or teachers to learn more or explain more about the students and the context of the classroom. It also revealed that most of the dialogue in both of Kristi's practical arguments and in Alec's follow-up practical argument was the kind that allowed the teachers' beliefs, understandings, and practices to be examined from several theoretical viewpoints. It appears the staff developers had become familiarized with how Alec incorporated bilingual education into his beliefs and practices concerning reading comprehension, and this knowledge was not easily forgotten even three years after the staff development process. The findings also suggest both teachers had become more reflective when discussing their beliefs, understandings, and practices, although it appears Kristi might have already been reflective even before or had become reflective early on in the staff development process. Schon's (1983, 1987) term—reflection-in-action—via Russell and Munby (1991) describes a similar kind of phenomenon in which teachers use discourse to find a consistency between theory and practice and the theories and beliefs that guide their practice.

Analyses of the discourse showed that in the first practical
argument, the discussions in which the staff developers were the initiators of the topics were consistently ending in discussions of change. By the follow-up practical arguments, these same topics (e.g., a literature approach to teaching reading and process-oriented writing) were introduced by the teachers while the staff developers had become concerned about issues arising from the teachers' new practices (for instance, management of literature groups and assessment of discussions about literature.) These findings suggest this type of a staff development process encourages teachers to examine, try, and possibly adopt the practices discussed in the interactive conversations, and then continue to examine and change the practices even further in relationship to the formal theory and their own practical knowledge.

Discourse analyses revealed that most of the conversations in Kristi's and Alec's first practical arguments contained discussions of future change. By her follow-up practical argument, all of Kristi's conversations contained discussions about and reflections on changes she had made or was making in her practices. By his follow-up practical argument, Alec's conversations were filled with discussions of and reflections on changes he had made, but discussions of future change were not present and there were some discussions that did not end in change at all. Content analysis gave some insight into what influenced the teachers into making these kinds of changes. Kristi felt she did not encounter any barriers from teaching the way she wanted, while Alec did. Kristi was an eager learner, while Alec was not. Kristi felt she
was encouraged by other people's support and her students' reactions to her new teaching practices. Alec felt his encouragement came from the enjoyment he was experiencing by utilizing his new reading approach which included some ideas from the district's newly adopted curriculum and from his students' reactions to his new reading practices. These findings suggest teachers' learning styles, their sense of being in control of their teaching, and their students' reactions to their new practices relate to changes they make in their beliefs and practices. Researchers have suggested that teachers are motivated by student performance and engagement instead of salary incentives and other external rewards (Stern & Keisler, 1977). Eisenhart et. al (1988) suggests that "teachers are likely to accept innovations that allow them to obtain more of the rewards they already value and/or to diminish the impact they perceive" (p. 67).

Discourse analyses revealed topics of conversation that did not end in change. They were skill-oriented writing practices for both teachers and questioning techniques for Alec. Content analysis of the belief interviews reinforced these findings. It showed that over three years after the completion of the staff development process, Alec was still using his own questioning techniques for reading and teaching his students the importance of syntax in writing, while Kristi was still worrying about how to include writing skills in a process-oriented approach to teaching writing. Kristi said that from experience she believed the 'whole language' approach did not adequately cover this aspect. These findings suggest when teachers' beliefs are closely
linked to their biographies and personal practical knowledge, the layers of rationalization grows so thick that even considering change becomes exceedingly difficult for teachers. It appears these deeply held beliefs are similar to what Green (1971) calls core beliefs. Eisenhart et al. (1988) maintain that belief systems limit dissonance, contradiction, and chaos. Change can be difficult when giving up certain belief systems can actually cause cognitive disorder.

By analyzing the discourse, it was determined that the owner(s) of the topics had shifted dramatically by both teachers' follow-up practical arguments. Most of the agenda had become jointly constructed by the staff developers and teachers. It appears the reflective conversations between the staff developers and the teachers had taken on a more constructivist nature over the three years since the completion of the staff development process suggesting a staff development process which takes the teachers' previous beliefs and knowledge into account promotes constructivist learning (Glasersfeld, 1987).

Summary

This study was designed to examine changes in two teachers' beliefs, understandings, and practices concerning reading comprehension since the beginning of the Richardson and Anders (1990) staff development process over five years ago. It was also designed to determine the consistency of their beliefs to their practices. The analysis of the content in the belief interviews, observations, and practical arguments and the discourse analysis of the practical
arguments determined that Kristi's and Alec's original beliefs were not consistent with their practices at the beginning of the staff development process. Their beliefs looked more like the recent research on teaching reading comprehension—using a literature approach—while their practices looked more like a traditional approach—using a word attack approach. The data analysis revealed that five years after the beginning of the staff development process, the teachers had changed their beliefs, understandings, and practices concerning teaching reading comprehension in directions similar to the recent research and their practices had become more consistent with their beliefs.

The discourse analyses also revealed the staff developers' and teacher's dialogue had also changed over a five year period. Discussions of change were emerging earlier and throughout the conversations; informational talk about their students decreased; dialogue which encouraged the teachers to examine their beliefs, understandings, and practices from several theoretical viewpoints increased; teachers began to initiate topics only the staff developers had been introducing; discussions concerning change increased; and the staff developers and teachers were mutually constructing the agenda of the conversations.
CHAPTER VI
CONCLUSION

Introduction

This study was designed to address the following questions: 1) What are the teachers' current beliefs and understandings concerning reading comprehension?; 2) What are the teachers presently working on in terms of their reading comprehension practices?; 3) Have the teachers' beliefs, understandings, and practices changed since the beginning of the Richardson and Anders (1990) staff development process over five years ago?; 4) Are the teachers' beliefs and practices consistent?; and 5) What is the role of dialogue in teacher change?

Richardson and Valdez (1991) described the staff development process employed in the Richardson and Anders' study (1990) as being more interactive than the usual staff development process. It was Richardson and Anders' (1991) goal to create an environment in which teachers were encouraged to explore the explanations of their practices in relation to alternative premises and practices as taken from the latest research concerning reading comprehension, try different practices in their classrooms, and reflect on the results.

Results

Before the Richardson and Anders (1990) staff development process, both Kristi's and Alec's statements indicate that they believed reading comprehension should be taught by using literature. Alec stated meaning was constructed by the reader, while Kristi believed meaning came from
the author. Yet, both of their students were being taught reading comprehension through learning word attack skills, reading basal stories out loud, answering comprehension questions, and being grouped according to their ability levels. After the staff development process, Alec's beliefs looked more like his original practices—traditional; whereas Kristi's beliefs about using literature to teach reading comprehension had deepened.

Three years after the completion of the staff development process, both teachers stated that the purpose of reading was to construct meaning and that reading comprehension should be taught through a literature approach. Alec's current beliefs placed him back in the 'whole language' camp where he was originally situated. Both teachers' practices had become more consistent with their beliefs. Their students were reading literature, grouped according to their choice or interest, participating in discussions about books, and learning to write through the process of writing.

Before the staff development process, the teachers employed a skills/word approach for teaching reading even though they believed in a literature approach; whereas they currently believed in and employed a literature based approach. From these findings, it was concluded that the teachers had changed their entire philosophies concerning teaching reading comprehension, what Cuban (1988) would call a second order change in their beliefs. Cuban defines a second order change as reframing "the original problems and restructuring organizational conditions to conform with the redefined problems" (p. 229).
The teachers were changing their beliefs before they were changing practices concerning reading comprehension. Yet, when they experimented with new practices in their classrooms, it was the students’ reactions that helped decide which practices were adopted and which were not. Richardson (In Press) suggests that there are three different viewpoints on the relationship between teachers’ beliefs and teachers’ practices: 1) A change in teachers’ practice precedes a change in their beliefs (see Fullan, 1985; Gallimore & Tharp, 1990; Guskey, 1986); 2) A change in teachers’ beliefs precedes a change in their practice (see Hollingsworth, 1990; Munby, 1983; Richardson, Anders, Tidwell, and Lloyd, 1991; Russell & Johnson, 1988) 3) The process of teachers changing their beliefs and their practices is an interactive one (Richardson, In Press b). The third viewpoint comes closest to the findings from this study.

The teachers were continuing to have reflective conversations concerning reading comprehension even three years after the conclusion of the Richardson and Anders’ (1990) staff development process. This occurred even though the staff developers had not seen the teachers since the original study. From these findings, it can be concluded that speech played a significant role in the change process. Vygotsky (1978) suggested that speech begins by being externally and socially regulated (see Diaz, Neal, and Amaya-Williams, 1990) and it is only later that speech is turned inward. Yet, speech serves to make a person’s beliefs and thoughts accessible to the process of social influence and change.

The teachers were also continuing to make changes in their
beliefs, understandings, and practices concerning reading comprehension long after the formal staff development process ended. One can conclude from these findings that the constructivist and reflective nature of the staff development process encouraged the teachers to take more control of their own change process as they reflected on and made changes in their practices. Richardson (1990) suggests that an interactive approach to staff development in which the teachers examine their theoretical frameworks, empowers teachers since it moves them beyond their personal biographies, political demands, and ecological demands by reflecting and developing the means to express justifications.

Even though the teachers in this study changed and were continuing to change their beliefs, understandings, and practices in relation to the recent research on reading comprehension, they did not change in the same way, at the same rate, or for the same reasons as the data analysis revealed. One can deduct from these findings that it is important to learn about each teachers' individual circumstances, intentions, and personal practical knowledge so the recent research can be individualized to the needs of each individual teacher. Richardson (1990) suggests the focus of staff development be on teachers' practical knowledge and cognitions, and the content should come from the practical knowledge and value premises held by the teacher and the empirical premises derived from research when a "significant and worthwhile change" (p. 10) in teachers' practices is warranted in directions supported by recent research.

Nisbett and Ross (1977) maintain that part of teachers' knowledge
is arranged in schematic cognitive structures while the other part is represented as beliefs and theories. From the findings of this study, it can be concluded that cognition and beliefs might be much more interrelated since the teachers were developing a schema for examining their beliefs, understandings, and practices in relation to personal practical knowledge and formal theory through reflective conversations with themselves and others. These kinds of reflective conversations encouraged the teachers to keep on changing their practices long after the staff development was over.

Implications for Research and Practice

The findings from this study imply the individualized type of staff development described here should significantly influence future teacher education because it appears to help teachers develop a framework in which they continue to change their beliefs, understandings, and practices in directions of the recent research long after the formal staff development is completed.

The analysis of the literature indicates that until recently, there have been two conceptual frameworks that have driven staff development. The first takes a top-down approach and does not consider the teachers' perspective about a proposed change (Fullan, 1981). The alternative view focuses on group processes of problem identification and solution development (Richardson, 1992). A new conceptual framework for staff development is emerging which attempts to introduce teachers new ways of thinking about practice in relation to the research on how
and why teachers change their practices (for example, Au, 1991, Munby, 1986; Richardson and Anders, 1990; Tobin, 1990a. The findings from this study indicate this new type of an individualized and interactive staff development process will have a significant effect on the way teachers' change their beliefs, understandings, and practices, and their ways of thinking about change.

The findings from this study imply discourse analysis will play an important role in future research on teacher change because of its ability to help detect and better understand how teachers' premises, thoughts, and actions are related in the change process. Clark and Peterson (1986) present a model concerning teachers' thoughts and actions which demonstrates a reciprocal relationship between the domain of thought and the domain of action. They maintain that teachers' actions are in a large part caused by teachers' thought processes, which in turn affects teachers' actions (p. 258) and that the process of teaching will only be entirely understood when these two domains are studied in relation to one another. Vygotsky proposed that the mind and behavior be reconceptualized so they can be studied in an integrated way (Minick, 1986; Au, 1990). "From a Vygotskian prospective, it is argued that teaching behavior cannot be understood apart from the thought processes of the teacher" (Au, 1990, p.271).

Future Research Questions

The discourse analysis system described in this study is being utilized to help examine the beliefs and understandings of eleven other
teachers from the follow-up study possess concerning reading comprehension. Will the findings from that study verify the findings from this study?

Early on in the study, the two-way continuum proved to be too stagnant in revealing how the teachers beliefs and practices were in perpetual dissonance because the teachers are continually questioning their beliefs and practices in relation to premises derived from formal theory, other teachers, and their own personal practical knowledge. Is there a way to show change is in constant motion?

This type of an interactive staff development process proved to be highly successful in encouraging teachers to change their entire philosophies concerning teaching. Could it be used with preservice teachers just as well as it was with inservice teachers since they do not possess as much practical knowledge concerning teaching? How successful would it be if used to help teachers examine and change such deeply held beliefs as those discussed in the critical theory literature?
I just want to talk to you about what has been going on in your classroom since the staff development with Patti and Virginia. I'll let you begin by telling me what you think.

BACKGROUND:
changed schools
how affect teaching

READING AND LEARNING TO READ:
entering student expectations
exiting student expectations
describe poor reader
describe average reader
describe great reader
what accounts for the difference between a better/poor reader
teacher/other help to make a better reader
define/example reading comprehension now

READING INSTRUCTION
describe teaching reading comprehension
typical day
objectives
assessment
materials students reading
experimenting w/ different ways
what worked/did not work
teach reading differently
sources of change
future things to try

change in teaching of other content areas
sources of change

feel you are behind

STUDENTS:
describe your students

THE CONTEXT:
school situation changed in the last few years
describe present school situation

observe other classrooms
exchange stuff with teachers
get things from others
able to teach rdg. comprehension way you want
able to teach in general the way you want
things that encourage/discourage

reflect on & describe V & P SD
took anything with you
things that encouraged/discouraged from doing so

any other SD
compare

Why did you decide to attend the staff development
with Staff Developer 1 and Staff Developer 2?

stuff you are reading
doing 5 yrs. from now
anything else
## CODING SYSTEM: BELIEF INTERVIEW

### The Teacher
- Anxiety: AN
- Efficacy/Attribution: EF
- Personal Reading: PR
- Future Plans: FP
- Learning to Teach: LE
- Control: CT

### Students
- Students in General: ST
- Teachers' Expectations for Students: SE
- Good Readers: SG
- Average Readers: SA
- Poor Readers: SB
- Learning Disabilities: LD
- Motivation/Self Concept/Affect: AF
- Student Learning: SL

### Reading/Language
- Reading: R_
- Learning to Read: LR
- Vocabulary: V_
- Talking/Communication: T_
- Listening: L_
- Spanish: SPA
- English: ENG

### RIS
- Staff Development - Descriptions/Outcomes: SD
- Other Staff Development: OSD
- Change in Practice/Beliefs: CH

### Teaching/Teaching Reading
- Teaching in General: TG
- Teaching Reading: TR
- Planning: PL
- Objectives/Purposes for Reading: OBJ
- Management/Organization: MAN
- Letters: LT
### APPENDIX C
CODING SYSTEM: PRACTICAL ARGUMENTS

<table>
<thead>
<tr>
<th>The Teacher</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>AN</td>
</tr>
<tr>
<td>Efficacy/Attribution</td>
<td>EF</td>
</tr>
<tr>
<td>Personal Reading</td>
<td>PR</td>
</tr>
<tr>
<td>Future Plans</td>
<td>FP</td>
</tr>
<tr>
<td>Learning to Teach</td>
<td>LE</td>
</tr>
<tr>
<td>Control</td>
<td>CT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students in General</td>
<td>ST</td>
</tr>
<tr>
<td>Teachers’ Expectations for Students</td>
<td>SE</td>
</tr>
<tr>
<td>Good Readers</td>
<td>SG</td>
</tr>
<tr>
<td>Average Readers</td>
<td>SA</td>
</tr>
<tr>
<td>Poor Readers</td>
<td>SB</td>
</tr>
<tr>
<td>Learning Disabilities</td>
<td>LD</td>
</tr>
<tr>
<td>Motivation/Self Concept/Affect</td>
<td>AF</td>
</tr>
<tr>
<td>Student Learning</td>
<td>SL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reading/Language</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>R_</td>
</tr>
<tr>
<td>Learning to Read</td>
<td>LR</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>V_</td>
</tr>
<tr>
<td>Talking/Communication</td>
<td>T_</td>
</tr>
<tr>
<td>Listening</td>
<td>L_</td>
</tr>
<tr>
<td>Spanish</td>
<td>SPA</td>
</tr>
<tr>
<td>English</td>
<td>ENG</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RIS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Development - Descriptions/ Outcomes</td>
<td>SD</td>
</tr>
<tr>
<td>Other Staff Development</td>
<td>OSD</td>
</tr>
<tr>
<td>Change in Practice/Beliefs</td>
<td>CH</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching/Teaching Reading</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching in General</td>
<td>TG</td>
</tr>
<tr>
<td>Teaching Reading</td>
<td>TR</td>
</tr>
<tr>
<td>Planning</td>
<td>PL</td>
</tr>
<tr>
<td>Objectives/Purposes for Reading</td>
<td>OBJ</td>
</tr>
<tr>
<td>Management/Organization</td>
<td>MAN</td>
</tr>
<tr>
<td>Word</td>
<td>W_</td>
</tr>
<tr>
<td>Letters</td>
<td>LT</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----</td>
</tr>
<tr>
<td>Background Knowledge</td>
<td>BK</td>
</tr>
<tr>
<td>Skills</td>
<td>SK</td>
</tr>
<tr>
<td>Questioning</td>
<td>Q_</td>
</tr>
<tr>
<td>Content Area Reading</td>
<td>CAR</td>
</tr>
<tr>
<td>Grouping</td>
<td>GR</td>
</tr>
<tr>
<td>Peer Teaching (Cooperative Learning)</td>
<td>PT</td>
</tr>
<tr>
<td>Grading/Assessment</td>
<td>G _</td>
</tr>
<tr>
<td>Reflection/Inquiry</td>
<td>RF</td>
</tr>
<tr>
<td>Barriers</td>
<td>BA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Materials</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Basals</td>
<td>B_</td>
</tr>
<tr>
<td>Workbook</td>
<td>WB</td>
</tr>
<tr>
<td>Literature</td>
<td>LI</td>
</tr>
<tr>
<td>Other Texts (Including Library)</td>
<td>TX</td>
</tr>
<tr>
<td>Word Processor</td>
<td>WP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Subjects</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration</td>
<td>IN</td>
</tr>
<tr>
<td>Art</td>
<td>A_</td>
</tr>
<tr>
<td>Social Studies</td>
<td>SS</td>
</tr>
<tr>
<td>Science</td>
<td>SCI</td>
</tr>
<tr>
<td>Writing</td>
<td>W_</td>
</tr>
<tr>
<td>Spelling</td>
<td>SP</td>
</tr>
<tr>
<td>Handwriting</td>
<td>HW</td>
</tr>
<tr>
<td>Math</td>
<td>M_</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>SC</td>
</tr>
<tr>
<td>Other Teachers</td>
<td>OT</td>
</tr>
<tr>
<td>Specialists</td>
<td>SP</td>
</tr>
<tr>
<td>Principal</td>
<td>P_</td>
</tr>
<tr>
<td>Parents</td>
<td>PA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Who's Agenda</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher's Agenda</td>
<td>TA</td>
</tr>
<tr>
<td>Staff Developer's Agenda</td>
<td>SDA</td>
</tr>
<tr>
<td>Jointly Constructed</td>
<td>JC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initiator of the Topic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alec</td>
<td>AB</td>
</tr>
<tr>
<td>Kristi</td>
<td>CA</td>
</tr>
<tr>
<td>Staff Developer I</td>
<td>VI</td>
</tr>
</tbody>
</table>
Staff Developer II  PA  
Graduate Assistant I  LO  
Graduate Assistant II  KA  

Topic of Conversation  
Put a Star in Front of the Regular Code  *

Kinds of Discourse  
Informational  IND  
Recasting  RCD  
Supportive  SPD  

Frames of a Cycle of Conversation  
Initial Frame  IFR  
Reframing  RFR  
Alternate Frame  AFR  

Types of Change  
Type One  TON  
Type Two  TTW  
Type Three  TTH  
Type Four  TFO  

REFERENCES


England: Cambridge University Press.


Erickson, F. (1986). Qualitative methods in research on teaching. In M.
C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 119-161). New York: MacMillan.


Tucson, AZ.


thought and language (pp. 67-77). Cambridge: Cambridge University Press.


Staff Development for Education in the '90s (pp. 15-36). Teachers College Press: New York.


Richardson, V. & Valdez, A. (1991). *Changes in teachers' beliefs about*


