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UNIVERSITY OF ALBERTA

EXPLORATION OF CHANGE IN PRIMARY TEACHERS' THEORETICAL ORIENTATIONS TO READING PROGRAMS

BY

HELEN J. ORD 

A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled Exploration of Change in Primary Teachers' Theoretical Orientations to Reading Programs submitted by Helen J. Ord in partial fulfilment of the requirements for the degree of Master of Education in Elementary Education.

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THIS THESIS IS DEDICATED TO CLASSROOM TEACHERS IN RECOGNITION OF THEIR GENUINE INTENTIONALITY AND UNWAVERING CONCERN FOR CHILDREN

ABSTRACT

The purpose of this longitudinal study was to explore change in primary teachers' theoretical orientations to reading programs over thirty-three months and within the context of everyday professional experience. The impetus for the study lay in expectations implicit in policy and curricula for experienced classroom teachers to demonstrate theoretical compatibility with whole language-like orientations to literacy acquisition in Alberta's elementary school programs by 1993. The study sought to determine whether or not primary teachers' theoretical orientations to reading programs were changing, to describe the nature of such change, to indicate the compatibility of teachers' theoretical orientations with whole language-like reading programs, and to explore relationships between such theoretical change and teacher characteristics of age, professional training, years of teaching experience, and grade level designation. Additionally, the natural evolvement during the study of three inservice models relating to whole language-like programs allowed exploration of relationships between theoretical change and organized inservice experience.

The sample group for the panel study consisted of twenty-seven experienced teachers of regular grade one, two and three reading programs in one mid-sized rural school district in northern Alberta. The teachers beliefs about reading were surveyed in a pre-test / post-test format utilizing the Theoretical Orientations to Reading Profile (TORP) (DeFord, 1985). Change in the teachers' theoretical orientations was measured and classified by the TORP. Statistical comparative analysis of pre-test / post-test TORP data included t-tests, two way anovas with repeated measures on one factor, Scheffé post-hoc comparisons, group mean comparative profiles of TORP Phonics, Skills and Whole Language oriented belief statements, and individual change in theoretical tendencies was described in terms of a continuum derived from the TORP.

The exploratory nature of the research generated a number of findings which suggested;

— that measured change in the teachers' theoretical orientations reflected trends of modifying existent beliefs and a growing eclecticism rather than development of new theoretical orientations.

— general trends of less agreement or more disagreement with Phonics and Skills belief statements and less disagreement or more agreement with Whole Language belief statements.

— individual differences in direction, degree and rate of theoretical change which did not appear to be accelerated by i) predisposition to either Phonics or Whole Language alignments, ii) differing characteristics of age, professional training or grade level designation, or iii) differing experiences with organized inservice models including traditional formats and intensive developmental models.

— that theoretical compatibility with Whole Language reading programs was not indicated by the majority of teachers. Additionally, teachers having moderate or strong Phonics tendencies at the pre-test did not indicate moderate or strong Whole Language theoretical tendencies at the post-test.

The findings, conclusions and implications drawn from this study raised serious questions about change in experienced teachers' theoretical orientations to reading programs, particularly in view of the present climate of accelerating change at all levels of the educational community. Hopefully, this exploratory study will serve as a springboard for much needed further research into all aspects of change in teachers' theoretical orientations.

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Chapter 1

OVERVIEW OF THE STUDY

INTRODUCTION

> Although educational change is all around the teacher at any given time, each new policy or curriculum, psychologically speaking, does "enter" when it is first proposed or arrives on the scene.
>
> (Fullan, 1982, p. 113)

Experienced classroom teachers recognize that proposed educational change means, in reality, proposed teacher change. If the change initiative constitutes an innovation to fine-tune the established system, classroom teachers are expected to fine-tune their established practices accordingly. However, if the new policy, program or curriculum constitutes a significant philosophical and theoretical shift to achieve new educational goals through different educational approaches, classroom teachers are faced with the greater expectation of "reconceptualizing" (Goldman, 1989, p. 47) their educational philosophies and theories, or theoretical orientations, as well as their practices. The question of whether or not classroom teachers' theoretical orientations do change under such circumstances is basic to the present study.

Current educational thought focuses on teachers' personal philosophies and theories as key variables in educational change and stresses benefits of compatibility between teachers' role expectations and theoretical orientations (Combs, 1988; Langer & Applebee, 1984; Olson, 1980). Proponents of this non-behaviourist view of teaching contend that effective educational change begins with helping teachers to change their theoretical assumptions about teaching and learning (Combs, 1986). In

fact, Dobson, Dobson and Kessinger (1980), suggested that change initiatives which discount teachers' theoretical realities might be likened to "rearranging the deckchairs on the Titanic" (p.33). In broad terms, significant educational change is becoming acknowledged as theoretical change and a developmental process which occurs, ultimately, one teacher at a time.

Acceptance of this model of educational change raises important questions of how experienced teachers with unique personal histories and characteristics might be helped to change their theoretical orientations within the context of their working environments. O'Loughlin and Campbell (1988) pointed to a common perception that teachers' subjectively reasonable theories about education culminate from years of "salient personal experience... and are likely to be particularly resistant to change " (p.27). Moreover, teachers' theoretical perspectives are widely recognized as perceptual lenses which filter, translate and possibly distort potential alternatives (Anderson, 1984). Furthermore, given the history of limited success in past attempts to change teachers' superficial classroom behaviours (Parish & Arends, 1983), it could follow that efforts to effect change in teachers' theoretical orientations to teaching and learning may prove to be more difficult again. Such considerations emphasize the complexity of the change process and the possible need to rethink traditional approaches to organized inservice in the professional development of experienced teachers. Questions of whether or not teachers' theoretical orientations change in relation to different approaches to organized inservice experiences are addressed in this study.

The current field of emerging knowledge in education affords a strong rationale for teachers to recognize and, if necessary, change their theoretical orientations to school learning. New insights and knowledge generated by research in fields of psychology, sociology, anthropology, and education have seriously challenged

traditional theories and practices of schooling in terms of children's learning and developmental needs. New knowledge about human learning has influenced educational leaders to propose alternatives to the behaviourist learning theories and practices which have dominated education throughout this century (Langer, 1984) and to initiate educational approaches and programs which reflect cognitive-field theories and practices now believed to be conducive to the physical, social, emotional, creative and intellectual development of children. The ongoing educational change efforts of one provincial authority constitutes the ecological context and background for this study of change in teachers' theoretical orientations to reading programs.

BACKGROUND TO THE STUDY

Since 1973, the Department of Education in Alberta (Alberta Education) has actively promoted current educational thought in curriculum, program and policy. Classroom teachers in Alberta have worked under conditions of accelerating change towards more progressive, continuous and integrated learning experiences in elementary education. The following chronology compares significant developments in that theoretical position with the organized professional development of elementary teachers in one rural school district between 1968 and 1988.

Alberta Education's comprehensive service bulletin for classroom teachers, A Reading Handbook (1968), suggested that 80% of the elementary school reading program be devoted to basic reading lessons and extension reading. Basic reading lessons focused on basal readers, workbooks and teachers' guides to ensure systematic instruction in four logical and orderly sequenced steps "for each selection, or story, in the reader" (p. 35):

1. Preparation (i.e. establish a background of experience - teach new vocabulary - review the new words - set the purpose for reading),

2. Interpreting (i.e. guided reading - discussion - rereading),

3. Extending skills and abilities (i.e. logical, sequential skills pattern - each new skill building on learned skills - sufficiently practicing each skill before meeting a new one - one basic reading program to ensure systematic skill development), and

4. Extending interests (i.e. develop creative expression, pursue aroused interest, enjoy and appreciate related literature).

Extension reading referred to independent, individual reading from alternate reading series or content subjects under the guidance and direction of the teacher in order that "skills and abilities initiated during the basic reading lessons" (p. 7) should improve. The remaining 20% of the reading program time was equally divided between recreational reading of personal choice and the sharing of quality literature within the classroom. In summary, A Reading Handbook (1968) reflected an emphasis on traditional philosophy in education in that the reading program was separate and content-centred and children's learning was initiated, regulated and controlled through programmed instruction by the classroom teacher. Between 1968 and 1974 no organized inservice on reading programs was initiated in the selected school district.

In 1973 a changing Alberta Education philosophy appeared in the financing of holistic, developmental, child-centred kindergarten education through the Early Childhood Services (ECS) branch of Alberta Education. Also, schools received the progressive Elementary Language Arts Handbook (Interim Edition, 1973) which stated:

> The multitude of new ideas and thinking which have emanated from research and writing in the fields of linguistics, psychology, psycholinguistics, and language arts generally is one important reason for... the first step in a series of actions designed to meet the current and future communicative needs of our children (p. 1).

The interim handbook introduced, rationalized, elaborated, and emphasized language and:

- "a philosophy of an integrated approach to the total language arts program" (p. 1).including listening, speaking, reading, writing, and viewing.
- "a basic focus on the child as a flexible user of language" (p. 1).
- a belief that " we must begin with the present experience and competence of the child and fit our teaching into the natural language situation which is an integrated, whole situation" (p. 1).

Teachers were requested to continue using A Reading Handbook 1968 pending a second stage of program revision. In 1974 the elementary teachers in the school district received a two-day inservice on progressive approaches to literacy acquisition.

The Program of Studies for Elementary Schools (1975) re-emphasized the interim handbook's position on language arts and upheld the traditional separateness and nature of the reading program. The document mentioned "the advantages of integrating language development with reading development" (p. 7), re-emphasized the need for reading instruction in "basic reading, extension reading, recreational reading, reading in the content fields [and] corrective reading" (p. 9) and added:

> It is necessary to make provision for all these types of reading lessons and to *maintain a proper balance among them*. Overemphasis on one or more, to the neglect of the others, makes it impossible to realize the objectives of the reading program. [italics original] (p. 10)

The Program of Studies for Elementary Schools (1978) integrated reading into the language arts program and included integrated scope charts for grade level content and skills as adjustable guidelines "according to the needs of the pupils" (p. 9). A lengthy statement on the philosophy of the program included the principles of integrated language learning and resulting implications for classroom teachers which reflected the principles and rationale of the interim handbook of 1973.

The Elementary Language Arts Curriculum Guide (1978) re-emphasized the philosophy, goals and 14 specific objectives of the integrated language arts program, provided teachers with knowledge about Piaget's stages of cognitive development, children's language developmental growth patterns, diagnostic approaches to evaluation, integrated instructional strategies, development of literacy and oracy skills, and several sample units. The guide pointed out that reading in the elementary school is "part of the communication process" (p. 44), "is a cognitive and affective process" (p. 44), and that a child's interaction with print involves personal interpretation, interests, beliefs and feelings. It asserted that:

> In the beginning stage, the child gains the basic word recognition skills as well as an understanding of what he reads... It is not intended that these skills be developed in isolation... but, rather, that they will be part of the total communication process. (p. 44)

In 1978 the school district administration devoted the first week of the school year to an organized three-day inservice on ECRI (Exemplary Centre for Reading

Instruction) teaching methods for elementary teachers . The ECRI method emphasized direct stimulus-response instruction, isolated skills and drills, scientific economy of teacher time, motion and verbal communication, individually paced skills mastery units, and stopwatch product-oriented evaluation procedures. ECRI teaching methods were 'encouraged' in the district, follow-up inservice sessions over two years were organized with the presenter from Utah, and teacher applicants were advised of ECRI expectations.

The Program of Studies for Elementary Schools (1982) and the Elementary Language Arts Curriculum Guide 1978 (revised edition (1982)) re-emphasized the philosophy and integration of reading in the language arts program and is currently in use. All educational programs are being revised at this time to ensure compatibility with continuous, integrated, child centred learning experiences. In the school district centrally organized inservice specific to language arts was not offered to elementary teachers until 1988. However, two professional days allocated to each school staff per year after 1981 allowed for optional participation in organized language arts inservice apart from those sessions offered during teachers' conventions.

Since 1982, Alberta Education's advancing progressive philosophy towards literacy programs in elementary schools has been supported by ongoing initiatives. For example, a Diagnostic Reading Program (1986) was rumoured, developed, extensively field-tested, piloted and disseminated province-wide to familiarize all elementary classroom teachers with process approaches to reading and the diagnosis of individual reading strategies. Further to that, Alberta Education developed a major policy for Education Program Continuity (1988) which mandated continuity of educational experiences for all kindergarten to grade six students by 1993 "in keeping with principles of child development" (p.5). The policy culminated from years of discussion, draft stages, and dissemination among ECS and primary personnel

because it had originally targeted kindergarten through grade three education. Alberta Education's emerging programs involve progressive cognitive-field learning theories which are similar to descriptions of whole language reading approaches (Cochrane et al., 1984; Evans & Carr, 1985) and are compatible with characteristics of whole language theoretical orientations (DeFord, 1985; Harste & Burke, 1977). Given the chronology of educational change in Alberta since 1973 it is reasonable to assume that such change had psychologically entered (Fullan, 1982) the professional lives of primary teachers by 1986 through direct experience, acquaintance and rumour.

RATIONALE FOR THE STUDY

Cumulative pressures of provincial curriculum, program and policy in conjunction with school district policy suggested official imperatives for experienced primary teachers in the selected school district to reconceptualize their theoretical orientations to reading programs more than once since 1973. Alberta Education's theoretical shift away from traditional behaviourist teaching and learning theories implies an expectation that all primary teachers in Alberta hold or will have developed progressive,whole language-like theoretical orientations. Research evidence indicates, however, that not all teachers hold such orientations to early reading programs (DeFord, 1985; Watson, et al., 1984) and proponents of whole language reading approaches contend that the success of such programs depends on teachers doing so (Altwerger, Edelsky & Flores, 1987; Goodman, 1986; Harste & Burke, 1977).

The biographical nature of theoretical orientations suggests that teachers with compatible world views, childhood experience or specialized training in child-centred learning might hold or develop progressive, or whole language, theoretical orientations

more readily than others who lack those supports. In any event, theoretical change, if necessary, is regarded as a long-term project of at least two years (Waugh & Punch, 1987) and one achieved through a gradual process of cultural diffusion (Clifford, 1973) or active recruitment and re-education. There is much informal evidence in Alberta to suggest that some teachers and school administrators continued to view the emerging curricula, programs and proposed policies as foreign directions in education beyond the mid 1980's. Therefore, in order to accommodate Alberta Education's theoretical guidelines, some teachers may be seeking more organized inservice experiences than are usually available, particularly in rural areas of the province.

For this primary teacher-researcher, the situation raised a genuine curiosity to explore whether or not, and if so, how, primary teachers in the somewhat traditional rural school district were achieving theoretical compatibility with Alberta Education's progressive guidelines for early reading programs within a naturalistic professional context.

THE PURPOSE OF THE STUDY

The major purpose of this longitudinal study was to explore change in the theoretical orientations to reading programs of primary teachers in one rural school district in Northern Alberta. Specifically, the teachers' theoretical orientations to reading programs were sampled by means of the Theoretical Orientation to Reading Profile (TORP) (DeFord, 1985) and were sampled again, after 33 months, to determine whether or not a comparative analysis of both samples would reveal changes in the teachers' theoretical orientations to reading programs as measured by the TORP.

Subsumed in this purpose were three sub-purposes of the study. The first was to explore trends of change within the teachers' theoretical orientations to reading programs according to the TORP classifications for Phonics, Skills and Whole Language theoretical orientations to reading. The second was to explore differences between change in the teachers' theoretical orientations to reading programs and the teachers' characteristics of age, years of teaching experience, professional training, and grade level designation. The third was to determine whether or not differences might be found between change in the teachers' theoretical orientations to reading programs and the teachers' exposure to regular or more intensive organized inservice experience about progressive teaching and learning theories and practices.

The following research questions were explored in the study:

Question 1. Will comparative analysis of the teachers' pre-test and post-test total scores on the TORP reveal that the teachers' theoretical orientations to reading programs have changed significantly over 33 months?

Question 2. Will comparative analysis of the teachers' pre-test and post-test mean scores for TORP item sub-groups classified as Phonics, Skills or Whole Language reveal significant differences and trends of change within those item sub-groups?

Question 3. Will comparison of the teachers' pre-test and post-test TORP scores with DeFord's Phonics-Skills-Whole Language continuum reveal trends of change in theoretical tendencies towards reading programs and compatibility with Whole Language theoretical orientations to reading as classified and measured by the TORP?

Question 4. Does change in the teachers' theoretical orientations to reading programs, as measured by the TORP, differ significantly among teachers having different characteristics of age, professional training, years of teaching experience, or grade level designation?

Question 5. Do teachers having different organized inservice experiences relating to whole language-like learning theories and practices also differ significantly in change in theoretical orientations to reading programs?

DEFINITION OF TERMS

Attrition Group: refers to those teachers in the study who completed only the pre-test of the TORP.

Instruction-based Inservice: is teacher inservice which entails the transmission of ideas and concepts through verbal and audio-visual presentations.

Instruction-Practice Inservice: combines characteristics of both Instruction-based and Practice-based teacher inservice.

Item Sub-group: is a subset of belief statements within the TORP which have been classified as reflecting Phonics, Skills or Whole Language theoretical orientations to reading programs.

Phonics Theoretical Orientation to Reading Programs: is a belief system that views learning to read as "essentially, the mechanical skill of decoding, of turning the print symbols into the sounds which are language" (Harste & Burke, 1977, p. 36).

Practice-based Inservice: is on-going teacher inservice which emphasizes individual needs and experiential learning through classroom practice, coaching, and feedback.

Sample Group: refers to those teachers who completed both the pre-test and the post-test of the TORP.

Skills Theoretical Orientation to Reading Programs: is a belief system that views learning to read as the rapid development of a basic sight vocabulary on which sequential hierarchies of word recognition skills and subskills can be built (Dean, Kambeitz & Roth, 1977).

Teacher Inservice: is organized professional development experiences for practicing teachers.

Theoretical Orientation to Reading Programs: is "the particular knowledge and belief system held toward reading" (Harste & Burke, 1977, p. 32).

Theoretical Orientation: is knowledge and theories that "form a system of beliefs and attitudes which in turn, directs perceptions and behaviours" (DeFord, 1985, pp. 352-353).

Whole Language Theoretical Orientation to Reading Programs: is a belief system that views learning to read as the natural acquisition of literacy through exposure to predictable printed language in whole texts (Stahl & Miller, 1989).

DELIMITATIONS OF THE STUDY

Although educational change affected all primary teachers in Alberta, only teachers of "regular" grade one, two, and three reading programs in one rural school district in Northern Alberta were included in the study. Primary teachers of resource rooms, special education classes and readiness classrooms in that rural school district were not included. This delimitation resulted from the researcher's curiosity to explore change in the theoretical orientations to reading programs of classroom teachers who were working under typical conditions and subject to the typical constraints and expectations of the educational context.

LIMITATIONS OF THE STUDY

Several features of this study will have a limiting effect on the generalizability of its findings:

1. As the study was limited to primary teachers of "regular" classroom reading programs, findings may not be generalizable to teachers at other grade levels or to primary teachers of specialized programs.

2. Because the study was limited to primary teachers in one school district, the findings may not be generalizable to primary teachers in other school jurisdictions.

3. The possibility of response effect was heightened by the teachers' personal acquaintance with the researcher.

4. The study's reliance on self-report as the basic source of data introduces the possibility of bias regarding the information that the teachers offered about themselves.

5. Because this study deals only with primary teachers' theoretical orientations to reading programs, the findings do not predict the teachers' theoretical orientations to other aspects of the curriculum.

6. Because organized inservice information was documented from teacher report and recollection, and the researcher did not attempt to monitor the quality of inservice content, context or delivery, the generalizability of the findings may be limited.

7. The majority of the teachers who experienced intensive organized inservice opportunities found their personal and professional lives seriously disrupted in July, August and September of 1988 by a flood disaster in their community. This may have resulted in a serious limitation to the generalizability of those teachers' post-test responses to the TORP in January, 1989.

ASSUMPTIONS

This longitudinal study, which explored change in primary teachers' theoretical orientations to reading programs, was based on the following assumptions:

1. That teachers' theoretical orientations to reading programs do exist and directly influence teachers' perceptions of what counts as important in those reading programs.

2. That teachers' theories about reading programs are largely implicit and DeFord's TORP can raise them to an observable level.

3. That the primary teachers included in the study responded honestly when completing the TORP and in their self-reports about organized inservice experiences.

4. That the TORP is a valid and reliable instrument which can classify and measure teachers' theoretical orientations to reading programs consistently.

5. That the TORP can serve as a valid indicator of change in teachers' theoretical orientations to reading programs.

SIGNIFICANCE OF THE STUDY

If the projections of educational futurists are in any way accurate, educational change has only just begun. It has become important to recognize and understand how experienced classroom teachers in typical educational environments meet administrative expectations to develop new perspectives on education. In this, it is necessary to understand teaching, not as a job, but as a manifestation of the personal theoretical orientations of classroom teachers. However, the notion of teachers holding theoretical orientations is relatively new.

The present longitudinal study sought to make a significant contribution to the apparently limited field of research knowledge regarding change in teachers' theoretical orientations to reading programs at the primary level. Some research studies have identified teachers' theoretical orientations to reading programs. Others have related teachers' theoretical orientations to reading programs to those teachers'

classroom instructional behaviours. To date, this researcher has been unable to locate any longitudinal study relating to change in primary classroom teachers' theoretical orientations to reading programs. This study may offer some insights in that area. Additionally, the longitudinal nature of the present study raised opportunities to explore the influence of certain teacher characteristics on classroom teachers' willingness or ability to change their theoretical orientations to reading programs and to gain insights into different models of organized teacher inservice as vehicles which might assist teachers in the process of changing their theoretical orientations to reading programs.

ORGANIZATION OF THE THESIS

Chapter 2 presents a review of literature relevant to the study. The first section of the chapter addresses the psychological context of teaching and relates to teachers' theoretical orientations, change in theoretical orientations, two major educational orientations which influence teachers' theoretical orientations, and three identified theoretical orientations to reading programs. The second section of the chapter addresses the ecological context of theoretical change in terms of educational change and teacher inservice experience.

Chapter 3 describes the design of the study including the school district and teachers involved in the research, the study design, the instrument, the organized inservice programs, procedures for data collection and an overview of general data analysis procedures.

Chapter 4 describes the data analysis procedures, findings and discussions specific to each of the five research questions which guided the study.

Chapter 5 presents the summary, conclusions, and implications drawn from the findings of the present research and proposes implications for further research into the area of change in classroom teachers' theoretical orientations.

Chapter 2

REVIEW OF RELATED LITERATURE AND RESEARCH

This longitudinal study, set within the broader context of educational change, sought to explore change in primary teachers' theoretical orientations to reading programs over 33 months and to determine whether or not specified teacher characteristics or different organized inservice experiences were related to such change.

According to Christopher Clark (1978-79), teachers' educational judgements are grounded in two major contexts. The first is a psychological context of "implicit theories or beliefs and values about teaching and learning" (p. 55). The second is an ecological context of "resources, external circumstances, administrative requirements, etc. that limit, facilitate and shape teacher... thought and action" (p. 55). Both contexts are relevant to the present study and are addressed as separate sections in this review of literature and research. The first section, The Psychological Context, seeks to 1) clarify the concepts of theoretical orientation, and 2) change in theoretical orientations, 3) exemplify traditional and progressive orientations underlying education today, and 4) examine Phonics, Skills, and Whole Language theoretical orientations to reading programs. The section on The Ecological Context addresses 1) educational change, and 2) organized inservice as a vehicle for theoretical change. Relevant data regarding teacher characteristics of age, years of teaching experience, professional training, and grade level designation are subsumed within both sections.

THE PSYCHOLOGICAL CONTEXT

Since the early 1970's, educational literature and research has de-emphasized the traditional, mechanistic view of teaching as an other-directed and prescribed set of ideal classroom behaviours. Instead, considerable research energy has been directed toward understanding the complex psychological factors which influence and guide teachers in their professional lives. The emerging perceptions of teachers are those of relatively self-determining individuals whose educational judgements and perspectives reflect theoretical orientations, or personal systems of knowledge and theories, beliefs and values, concerning appropriate and worthwhile educative experiences for children.

Theoretical Orientation

This section serves as a theoretical foundation for the present study. It seeks to clarify the philosophical and theoretical nature and subjectivity of theoretical orientations, offer support for the existence of teachers' theoretical orientations, and forward evidence that differences in teachers' theoretical orientations make a difference in educational programs, particularly when teachers are empowered to act as decision-makers within their classrooms.

The concept of theoretical orientation can be likened to a conceptual hierarchy of educational philosophy, theory, and practice (Seaver & Cartwright, 1977) in which "the initial entry point - philosophy - is a subjective choice" (p. 311). Within this conceptual hierarchy, a philosophy of education can be described as a coherent and consistent organization of beliefs and values (Dobson, et al., 1980) or as a general theory (Dewey, 1916) about education. A theory is a form of insight about "a set of related principles" (Seaver & Cartwright, 1977, p.309) that help to explain, guide,

predict, or describe events within a realm of knowledge (Ornstein & Hunkins, 1988). Practice refers to teachers' practical application of their philosophies and theories in learning activities and experiences for children.

Seaver and Cartwright (1977) contended that the strength and internal consistency of educational programs relies on the conceptual hierarchy relating not only a teacher's theory to practice, but that teacher's philosophy to theory and practice. They asserted that although teachers' theories "serve as a basis for selection, classification, and evaluation of methods and activities" (p. 311) the ultimate acceptance or rejection of any theory or construction of personal theory, is influenced, initially, by those teachers' values and beliefs, or philosophy, about the world and what "is educationally good or worthwhile' (p. 311) for children who live in it. Harste and Burke (1977) exemplified this point when they ascribed repeated observations of internal consistency in a variety of early reading programs to the classroom teachers' subjective "deep philosophical principles" (DeFord, 1985, p. 353) regarding the nature of reading and learning. Harste and Burke attributed the internal consistency within the different reading programs to the teachers' theoretical orientations to the world of reading.

Harste and Burke's conception of 'theoretical orientation' is consistent with Max van Manen's (1977) reference to "orientation" as including "notions of point of view, perspective, a person's way of looking at things, outlook, standpoint, and so on" (p. 211). Van Manen explained that "a person's orientation is composed of what he believes to be true, to be valuable, and to be real" (p. 211). The philosophical nature of theoretical orientations is also noted in Ornstein and Hunkins' (1988) observation that educational theory is frequently derived from "professional experiences and knowledge of the world" (p. 280). As such, educational theories commonly "formulate

consistent and logical explanations of humans' place in the world... [and] produce a set of assumptions and beliefs that explain *what ought to be* " [italics original] (p. 280).

In terms of the conceptual hierarchy of philosophy, theory and practice, theoretical orientation subsumes both philosophy and theory in a complex, but personally cohesive conceptual framework, or system, of beliefs, values and attitudes about education or a particular field of knowledge in education. The generic concept of theoretical orientation also subsumes notions of belief systems (Brophy & Good, 1974), conceptual systems (Duffy, 1977; Murphy & Brown, 1970), implicit theories (Clark, 1988, Clark & Yinger, 1977), epistemological and pedagogical assumptions (O'Loughlin & Campbell, 1988), teacher constructs (Olson, 1980), personal philosophies (Dobson et al., 1980), schema (Anderson, 1984), scripts, practical knowledge (Calderhead, 1989; Elbaz, 1981) and, intrasubjective personal knowledge (Fullan, Connelly & Watson, 1987). The complexity of theoretical orientations is illustrated in an instrument (Dobson et al., 1980) designed to identify teacher beliefs "that collectively constitute a personal philosophy of education" (p. 110). The pencil and paper profile contained belief statements about human nature, motivation, conditions of learning, social learning, intellectual development, knowledge, and society, in addition to instruction, curriculum, organization, content, materials and resources, and evaluation.

An extensive body of literature and research supports the claim that teachers theoretical orientations do exist, albeit implicitly (Buike & Duffy, 1979; Child, 1981; Dobson et al., 1980; Duffy, 1981; Elbaz, 1981; Fullan, 1982; Gutek, 1988; Harste & Burke, 1977; Hill, 1971; Hoffman & Kugle, 1982; Munby, 1983; Seaver & Cartwright, 1977; Scibior, 1987; Shulman, 1986; Shynal, 1987). Further to that, Ornstein & Hunkins, (1988) contended that theoretical orientations are necessary because, without them, people could not decide which "facts and relationships are relevant to

them" (p. 281). This relates to Bruner's belief that "the concepts we use to organize our world form the basis of our observations, our thinking, and most probably, our actions... and make it possible to manage the flow of sensory input with which we are being constantly bombarded" (Morine-Dershimer, 1978-79, p. 43). Research studies conducted by Elbaz (1981) and Munby (1983) supported the existence of teachers' theoretical orientations.

Freema Elbaz (1981) conducted a longitudinal case study of one high school teacher's practical knowledge. The qualitative data confirmed in Elbaz' mind that the teacher's implicitly held principles and beliefs were unique, varied, important, and philosophically cohesive. Elbaz stated:

> The notion of a theoretical orientation emerged from confrontation with the data: the teacher... had certain views of her subject matter (English literature); when similar views appeared with respect to other areas of knowledge, it was found that these similarities could be explained in terms of a general orientation to theory. (p. 49)

Elbaz concluded that the teacher's theoretical orientation was "significant in determining how the teacher makes use of her theoretical knowledge, how she seeks to extend her understanding, what theories she is willing to accept, and how she construes her knowledge" (p. 60)

Hugh Munby (1983) conducted a qualitative study into the content, nature and diversity of the beliefs and principles of 12 middle grade teachers using Kelly's Repertory Grid Technique. When the researcher highlighted the data of four teachers he noted important differences in orientation in "what counts as important, in conceptions of what it is to be a teacher and a person, and in views of what knowledge

and learning is" (p. 52). Munby concluded that comprehending teachers' theoretical orientations was an effective way to improve teaching.

Differences in the theoretical orientations of educational planners result in significantly different curricula for schools (Gutek, 1988; Ornstein, 1982; Ornstein & Hunkins, 1988). Differences in teachers' theoretical orientations are believed to effect important differences in the ways in which the common curricula are implemented at the classroom level. Research studies indicate that teachers' theoretical orientations do translate into significantly different writing programs (Proctor, 1986), science programs (Hughes & Keith, 1980; Morris, 1988; Olson, 1980), social studies programs (Langer, 1984), integrated language arts programs (Schmidt, Roehler, Caul, Buchman, Diamond, Solomon & Cianciolo, 1985), classroom interaction models (Barnes & Shemilt, 1974; Murphy & Brown, 1970) and reading programs (Bean, Bishop & Leuer, 1981-82; DeFord, 1985; Gove, 1983; Harste & Burke, 1977; Watson, Crenshaw & King, 1984). In terms of reading programs, Harste and Burke (1977) contended that the classroom teacher's theoretical orientation influenced:

- the goals set for the reading program
- teacher perceptions of "good" reading behaviour
- diagnostic procedures, materials and information
- the weighting of diagnostic information
- selection and use of instructional materials
- perceptions of conducive environments for reading growth
- the criteria determining growth in reading.

The research studies of DeFord (1985) and Watson et al. (1984) offer strong support for Harste and Burke's claim in that the selected reading teachers exhibited classroom behaviours that were very consistent with their identified theoretical

orientations. Concerns have been raised about too ready an acceptance of the validity of teachers' intuitively reasonable, subjective theoretical orientations (Garrison & MacMillan, 1987). However, the literature and research material provide considerable support for the notion that if teachers are to be respected as fully functioning professional individuals their viewpoints remain, to a large extent, the important ones (Bullough, 1987; Clark & Lampert, 1986; Combs, 1988; Dobson et al., 1980; Elbaz, 1981; Fullan, Connelly& Watson, 1987; Munby, 1983; Powell, 1979; Seaver & Cartwright, 1977).

Given the weight of evidence that teachers' theoretical orientations do exist, the question arises as to whether teachers are encouraged, or feel, empowered to translate their subjective philosophies and theories into personally authentic practice. Several studies (Buike & Duffy, 1979; Duffy, 1981; Duffy & Roehler, 1986; Hoffman & Kugle, 1982) have confirmed that teachers theoretical orientations are diluted and situational in the classroom. Gerald Duffy (1981) rightly pointed out that teachers are not always given a choice in the conduct or content of prescribed, commercial reading programs. Cloud-Silva and Sadoski (1987) concluded from a survey of 251 elementary reading teachers that top-down administrative influences and constraints cause teachers to act more as technicians managing prescribed materials than active decision-makers in their reading programs, particularly at the primary level. Duffy and Roehler (1986) noted that the explicitness of teachers' theoretical orientations has a considerable impact on the teachers' sense of ownership and empowerment to adapt and change prescribed commercial programs. Hoffman and Kugle (1982) found clearer relationships between the identified theoretical orientations and focused interview data of 35 experienced second and third grade teachers than were found between the teachers' theoretical orientations and verbal feedback during reading instruction.

CHANGE IN THEORETICAL ORIENTATIONS

This section seeks to clarify the complexity of theoretical change and looks at different approaches believed to facilitate change in teachers' theoretical orientations.

When teachers' theoretical orientations are conceptualized as a blend of subjective, implicitly held philosophy and value-laden practical knowledge and theories, change in those theoretical orientations is best viewed as a gradual and complex process of reconceptualization. According to Christopher Day (1988) this process "inevitably involves people in a reappraisal of values, attitudes and feelings as well as practice" (p. 339). Van Manen (1977) likened change in orientation to the shock of experiencing "a transition between two worlds - as a shift from one reality to another" (p. 212). If this transition is to be accomplished, theoretical change must be a slow, reflective learning process of internalizing new knowledge, beliefs, skills and values. The learning process cannot be hurried or coerced but is achieved only over the long term (Clifford, 1973; Combs, 1988; Day, 1988; Dobson et al., 1980; Gutek, 1988; Holly & Blackman, 1981; O'Loughlin & Campbell, 1988; Schön, 1983; Scibior, 1987; Shynal, 1987; Waugh & Punch, 1987).

Much of the literature relating to change in teachers' theories, or theoretical orientations, is couched specifically in terms of reflective inquiry or reflection in action and focuses to a large extent on changing subjective theories at the professional training level (Calderhead, 1989; Dobson et al, 1980; Eraut, 1985; O'Loughlin & Campbell, 1988; Zeichner, 1981-82). Reflection research involving experienced teachers is generally qualitative in design and engages personally committed individuals or small, cohesive groups voluntarily in relatively long-term dialogic experiences. The research data generally describes how implicit theories about education are raised through conversation, discussion or scenarios to an explicit level,

negotiated, and replaced or adapted through either formal reconstruction techniques (exchange approaches) (Kroath, 1989) or action-reflection paradigms (action-research approaches) (Combs, 1988; Kroath, 1989, Whitehead, 1989). Both generic approaches are exemplified in Franz Kroath's (1989) research.

According to Day (1988) probably all teachers engage in some form of reflection as a natural and necessary part of survival in organizing the complexity of the human environment of the classroom. Whitehead (1989) described an action-reflection cycle which teachers might naturally invoke in modifying their subjective theories as: i) I experience problems when my educational values are negated in my practice ii) I imagine ways of overcoming my problems iii) I act on a chosen solution iv) I evaluate the outcomes of my actions v) I modify my problems, ideas and actions in the light of my evaluations... (and the cycle continues) (p. 43). Current literature and research on various aspects of reflection in teaching shares an optimistic view that the field of reflective inquiry has significant potential for the ongoing professional and theoretical development of classroom teachers.

The impetus for change in theoretical orientations for some experienced teachers lies more in the ecological context of educational change, curriculum change and administrative expectation than in any abiding psychological commitment to personally enriching professional development. This model of theoretical change, which is common, relies on the active recruitment and re-education of teachers through organized and, at times, involuntary inservice experiences which focus on the presentation and promotion of appropriate alternative theories and practices. Walter Borg (1972) contended that the probability of teachers changing without such intervention is slight. In the inservice situation teachers are engaged in what Van Manen (1977) termed as "co-orientational grasping" (p. 213) in which a person suspends personal beliefs and realities temporarily and "partakes in the orientation of

another" (p. 213). Teachers then, (usually at the classroom level), "interpret, understand, codify, and assign meaning to new ideas, insights, skills, and knowledge in the context of their own experiences" (Brookfield, 1986, p. 17). Although the catalyst for theoretical change is external, meaningful change in teachers' theoretical orientations remains, as with reflective models, a "lengthy, time-consuming business" (Day, 1988, p. 340) and ultimately, a highly individual and developmental learning process (Church, 1987; Fullan, 1982, 1985; Holly & Blackman, 1987; Scibior, 1987; Shynal, 1987).

A sustained search of the literature revealed only one empirical research study (Bean, Bishop & Leuer, 1981-82) directed specifically at change in teachers' theoretical orientations to reading approaches. Interestingly, the study appears to contradict much of what is believed to be true about theoretical change as a gradual and developmental learning process. The study sought to "appraise the degree to which teacher beliefs about the reading process might be updated through attendance at a weekend mini-conference [which] focused on classroom application of findings from contemporary psycholinguistic research" (p. 85). The participants were 88 voluntary teachers who responded to advertisements publicizing Dr. Yetta Goodman as the major speaker in conference sessions from 4:00 p.m. to 10:00 p.m. Friday and 9:00 a.m. to 5:00 p.m. Saturday. Change in teachers' beliefs was measured in a pre-test - post-test format using the Bishop adaptation of DeFord's TORP (1978). The conference format included Dr. Goodman's keynote address, small group 30 minute sessions with Dr. Goodman to discuss reading related questions, a further major program by another speaker, and one hour small group presentations relating to the conference theme.

Comparison of the pre-test (mean = 76) and post-test (mean = 86) responses to the TORP revealed that the teachers significantly ($p > .01$) altered their beliefs

about the reading process. According to the researchers, the teachers also "displayed an informed acceptance of the psycholinguistic view of the reading process promoted throughout the conference sessions" (p. 89). These results offer strong support for the idea that a focused, comprehensive, organized inservice experience can serve as a powerful catalyst to initiate teachers' reappraisal of their theoretical orientations to reading processes. However, the negatives of time limitation and lack of opportunity for practical and reflective application in the classroom coupled with the positive influences of volunteerism and Dr. Goodman's personal attention suggest that the results may reflect a certain degree of Van Manen's "co-orientational grasping" and only superficial evidence of change in teachers' beliefs.

The idea that teachers could not substantially change their theoretical orientations in a matter of hours relates to the gradual, ongoing nature of theoretical change. Donald Schön (1983) claimed that theories, whether subjective or scientific, reflect an interconnectedness of the logical relationships among the component propositions. This means that change in propositions at one point in the theory entails further changes in other propositions. When this principle is applied to the broader context of a teacher's theoretical orientation which subsumes knowledge and theories, beliefs and values the sheer volume of interconnected and logically related propositions becomes impossible to imagine. Clearly, change of this nature is a process involving exploration and experimentation in real-life experience rather than an overnight cerebral event. Ornstein and Hunkins (1988) described the evolutionary nature of this type of change in their description of philosophical change. They stated that an "individual's philosophy evolves and continues to evolve" so long as one "continues to grow and develop, and... continues to learn from experience" (p. 27). Olga Scibior (1987) captured the essence of theoretical change when she stated:

> Learning occurs over time. We construct knowledge and beliefs, not simply adopt a new belief system. Development is uneven, not all or none. As we move toward constructing new beliefs, we still hold remnants of the old which gradually fall away. Thus development should be seen as falling on a continuum, not as an either / or dimension. (p. 185)

TRADITIONAL AND PROGRESSIVE ORIENTATIONS TO EDUCATION

This section serves as a reference for the remainder of the review of literature and research as it seeks to clarify and underline what "change" means to the primary teachers in the present study.

Theoretical orientations subsume the subjectively reasonable philosophy and theories which guide, inform, and become legitimated by practice. Teachers' and educational planners' subjective positions reflect different "life experiences, common sense, social and economic background, education, and general beliefs about... people" (Ornstein & Hunkins, 1988, p. 26-27). These translate into different ideas and convictions about the nature of knowledge and learning and, in general, what is to be valued as important educational experience for children (Child, 1981; Dobson, et al., 1980; Evans & Carr. 1985; Frost, 1972; Gutek, 1988; Hill, 1971; Ornstein, 1982; Ornstein & Hunkins, 1988; Seaver & Cartwright, 1977; Stahl & Miller, 1989).

Traditional education and progressive education are two clusters of educational opinion which most strongly influence public education today (Ornstein, 1982), both as platforms of curriculum (Leithwood, 1981) and policy, and as experiential shapers of teachers' subjective theories and practical knowledge (Fullan, et al., 1987; O'Loughlin & Campbell, 1988). Traditional education models characterize beliefs, values and methodologies associated with behaviourist, teacher-centred and subject-centred

theories of learning. Progressive education reflects anti-traditional and humanistic views of education associated with cognitive-field, developmental and learner-centred theories of learning.

Traditional and progressive orientations occupy the middle ranges of a scientific, subject-centred to humanistic, child-centred continuum of educational beliefs and values (Dobson, et al., 1980; Doll, 1986). This accounts for some merging eclecticism between the two and some differences among proponents within each camp. (Dobson, et al., 1980; Frost, 1973; Gutek, 1988; Ornstein & Hunkins, 1988). Ronald Doll (1986) contended that conflict arises between educators holding different beliefs and values on the continuum to the point that "teachers and administrators who are clearly divided in philosophy can seldom work together in close proximity for long periods of time" (p. 30). Dewey rejected such ideological conflict and " 'either-or' thinking regarding 'progressive' vs. 'traditional' education" (Frost, 1973, p.426) in favour of constructive development of sound educational theories in practice.

Notwithstanding Dewey's sensible advice, generic differences between progressive and traditional education do exist to the point of dispute in education (Cuban, 1987: Honig, 1985; Gutek, 1988). Those differences warrant explication in the interests of clarity and example for the remainder of this review. Therefore, while acknowledging the problems inherent in presenting a simplistic, static view of theoretical orientations which are in reality, complex, dynamic relationships of philosophical and practical knowledge, theories, values and beliefs, two brief examples of traditional and progressive educational thought are presented here.

A Traditional Orientation

Two major perceptions are central to traditional education. The first is a view of human beings as products of their "environments" (Seaver & Cartwright, 1977, p. 316). The second is a view of knowledge which holds that an important, organized and systematized essential body of factual knowledge and fundamental skills does exist for each curriculum subject and can be learned through disciplined study and a focus on cognitive development (Ornstein, 1982).

Assumptions According to Dobson, et al. (1980), Gutek (1988), Ornstein and Hunkins (1988) and Seaver and Cartwright (1977), traditional viewpoints reflect the following assumptions about education. Children are shaped by their cultural environment and the purpose of education is to transmit the knowledge, skills and rules of the culture to children. Schooling effects that transmission efficiently and to the limit of each child's capabilities. Children do not know what knowledge and skills are important to their future well-being so responsible adults determine and organize essential bodies of knowledge and skills. Classroom teachers are responsible for transmitting program content to all students in a systematic and organized fashion. Because teachers initiate, regulate, and control the daily learning in their classrooms they are responsible and accountable for their students' productivity and achievement.

Associated Learning Theories Behaviourist theories of stimulus and response (S-R) learning, often termed as part to whole or bottom-up learning, are commonly associated with assumptions of learners as receivers of knowledge and skills (Child, 1981; Gutek, 1988; Hill, 1971; Mifflen & Mifflen, 1982; Ornstein & Hunkins, 1988; Seaver & Cartwright, 1977). Behaviourist theories view knowledge as a predetermined body of existing truth which can be analyzed, broken down to its smallest and simplest components and restructured in a linear, highly sequential and

hierarchical fashion. The learner will logically move in a sequence of small steps from the smallest to the largest components, through the simplest to most complex skills hierarchies. Learning is thus viewed as observable and measurable and as "a matter of links" (Child, 1981, p. 83).

Important contributions to behaviourist learning theories in education are attributed to Watson (S-R, trial and error learning), Thorndike (motivation, reinforcement of good learning behaviour, influence of reward and punishment, programmed learning, laws of readiness, exercise and effect), Pavlov (classical conditioning), B. F. Skinner (operant conditioning, programmed instruction, behaviour modification, small learning steps from familiar to unfamiliar material, regulation and control of learning through rewards and reinforcement), and Gagné (hierarchical organization of skills in learning) (Child, 1981; Hill, 1971; Mifflen & Mifflen, 1982; Ornstein & Hunkins, 1988). Contemporary behaviourist learning theories are commonly applied to both classroom management and instruction in modern schooling (Cuban, 1987; Honig, 1985, Langer, 1984; O'Loughlin & Campbell, 1988; Ornstein, 1982; Smith, 1981).

Associated Practices If knowledge is an organized system of skills and sub-skills and learning is a defined set of behaviours, associated practices must facilitate both. According to Dobson et al. (1980), Gutek (1988), and Ornstein and Hunkins (1988) such practices commonly focus on expert opinion of skill-building sequences and hierarchies found in textbooks and related workbook, drill and memorization activities to practice each skill to mastery level. Learning deficiencies are remediated through reteaching and extended practice. Individual differences are recognized in individual pacing of the program. Emphasis in instruction and feedback to learners is placed on conformity to conventional form, mechanics, and standards of performance. Evaluation is generally objective and norm referenced and emphasizes product.

A Progressive Orientation

Two major perceptions are central to progressive education. The first is a view of human beings as products of their "own design" (Seaver & Cartwright, 1977, p. 318). The second is a view that knowledge, to be counted as important, must be relevant to the real-life experience of the learner. In this, knowledge is based in experience, is tentative, and is actively constructed and reconstructed by the learner through interaction with the environment (Dobson et al., 1980; Gutek, 1988; Ornstein & Hunkins, 1988).

Assumptions According to Dobson et al. (1980), Gutek (1988), Ornstein and Hunkins (1988), Seaver and Cartwright (1977), and Stephens (1974), progressive orientations reflect the following assumptions about education. Children actively shape themselves from within through self organization, self determination and authentic experience. The purpose of education is to foster the growth and enhancement of the whole child in terms of affective, cognitive, physiological, emotional, social and creative domains. Schooling provides opportunities for learners to remain active agents and responsible stakeholders in their own life-long learning. As such, children are worthy of respect and trust, are capable of sharing decision-making and assuming productive roles in their own education. Teachers guide, facilitate, consult, diagnose, and are catalytic to consequential interactive and integrated learning experience. Teachers are also active and decisive in planning and managing the learning environment, defining choice-making, and guiding learners' development towards general curriculum goals in accordance with individual development and needs. Learning is a shared responsibility between teacher and student.

Associated Learning Theories Cognitive-field and gestalt theories of learning, often termed whole to part or top-down learning, are generally associated with views of children as active directors of their own learning (Hill, 1971; Ornstein & Hunkins, 1988). Cognitive-field theories focus on holistic cognition of the ways in which the world works through experience with the world. Gestalt theory views perception and learning as inextricably linked and learning as a process of perceiving the whole and thereby developing insight into the dynamic interrelationships of its parts (Hill, 1971). Thus individual human learning involves initial awareness of the whole, intentionality, hypothetical success, risk-taking, active participation, feedback, integration of new and existing knowledge, refining and expanding schemata, and comprehending the new meaning (Cochrane et al., 1984).

Important contributions o progressive learning theories are attributed to Pestalozzi (sensory experience, concrete before abstract), Herbart (individual needs and interests, active learning), Froebel (value of play, active learning, freedom of choice), Tolstoy (respect for children's exercise of responsibility), Wertheimer (gestalt psychology, insight) Kohler (insight) Koffka (laws of proximity and closure), Lewin (life space), Dewey (the 'father' of progressive education, situation, interaction, continuity), Kilpatrick (project method), Montessori (individual attention), Piaget (children's intellectual growth, stages of mental development, schemata assimilation, accommodation, and equilibration, language and thought), and Bruner (intuitive thinking, curiosity, inquiry-discovery learning). (Hill, 1971; Ornstein & Hunkins, 1988; Stephens, 1974).

Associated Practices If knowledge is viewed as a personal construction of meaning about the world and learning is perceived as holistic cognition and insight into dynamic interrelationships therein, associated practices involve an holistic melding of subjectivity and objectivity. According to Gutek (1988), Ornstein and Hunkins (1988)

and Stephens (1974), facilitative practices focus on learning processes according to individual style and in an interactive context of integrated themes, projects, literature, research activity, field trips, and learning centres. Functional literacy and numeracy skills are developed within these holistic experiences as they become relevant to children's needs. Emphasis is placed on higher thinking as per Gagné's concept and rule learning and problem solving and the upper levels of Bloom's taxonomy. Therefore, the teacher's role is one of raising questions more than supplying answers. In this, whole class instruction is minimized in favour of flexible small group and individual assistance according to need. Evaluation minimizes grading and marking in favour of ongoing diagnosis of processing strategies as children's experiences guide them toward conventional forms and approaches.

Although Gutek (1988), Hill (1971), Ornstein and Hunkins (1988) and Stephens (1974) noted generic incompatibility between traditional and progressive orientations they also expressed optimism that a middle ground exists and that classroom teachers' tendency towards eclecticism might ensure learners the inherent benefits in both. As well, Seaver and Cartwright (1977) suggested pluralistic professional training to ensure a thorough understanding of different orientations to children's learning and developmental theory in order to a) better explicate one's own theoretical orientation and b) maintain flexibility in a climate of educational change. Constance Kamii (1985) explained that primary teachers trained in the child development philosophy of early childhood education are specifically trained for child-centred, developmental education of the whole child. Michael Howe (1972) suggested that some experienced teachers, particularly older teachers, may lack the knowledge and flexibility required in process-oriented approaches due to the nature of their traditional teacher training.

THEORETICAL ORIENTATIONS TO READING PROGRAMS

This section seeks to explicate the Phonics, Skills, and Whole Language theoretical orientations to reading programs which are basic to the present study.

Early reading programs in schools have been a controversial issue for decades (Chall, 1983a; Flesch, 1955). In 1973, Clifford listed several determinants of reading programs as committees and commissions, opinions of parents and other teachers, personal experiences, ideologies, sentiments, tradition, administrative rulings or "a bookseller's persuasiveness" (p. 26). Robert Aukerman (1971) isolated 10 different approaches to early reading instruction. There are probably dozens more. Frank Smith (1972) contended that no one best method to teach reading exists because reading can only be learned by children in their own ways. More recently, educational research has emphasized the influence of teachers' "intrasubjective personal knowledge" (Fullan et al., 1987, p. 56), or theoretical orientations, on children's early reading programs.

Harste and Burke (1977) hypothesized that the teaching of reading is theoretically based despite atheoretical statements made by teachers. After testing the hypothesis in a variety of classroom settings the authors stated that teachers have "distinctive and identifiable theoretical orientations to reading and that once we had identified these orientations, subsequent reading performance and classroom behavior was found consistent with the model from which the person was operating" (p. 33). Harste and Burke isolated and classified three distinct theoretical orientations to early reading programs as Phonics, Skills, and Whole Language. These orientations range on a continuum of emphasis on different units of language from isolated elements (Phonics) to larger units of meaning (Whole Language) with

the Skills orientation occupying the more eclectic middle ranges (DeFord, 1985; Harste & Burke, 1977; Hoffman & Kugle, 1982).

A Phonics Theoretical Orientation

Harste and Burke classified Phonics as a sound-symbol, or decoding, orientation in which teachers viewed reading as "first of all, and essentially, the mechanical skill of decoding, of turning the print symbols into the sounds which are language" (p. 36). According to Downing (1979) and Chall (1983b) phonics methods are concerned with mastery of the accurate decoding of print and automaticity "which is best accomplished through direct instruction of sound-symbol correspondences" (Stahl & Miller, 1989, p. 90). Harste and Burke represented Phonics methods as a broad-based pyramid with a heavy initial emphasis on sound-symbol relationships and a gradual movement towards words and meaning. The Phonics theoretical orientation can be described as a part to whole or bottom-up concept of reading associated with behaviourist learning theories. In Mary Gove's (1983) Conceptual Framework of Reading Interview, teachers holding this orientation to early reading programs believe that: a) students must recognize each word in a selection to be able to comprehend the selection; b) students should use word and sound-letter cues exclusively to determine unrecognized words; c) reading acquisition requires mastering and integrating a series of word recognition skills; d) accuracy in recognizing words is important in reading instruction, and; e) students need to be tested on discrete subskills. (p. 267)

DeFord (1985, p. 353) also noted that in Phonics early reading programs: a) reading materials "were controlled for phonemic consistency and systematic introduction of consonant-vowel combinations."; b) teachers' guidebooks advocated

"large segments of time for the practice of decoding isolated letters and letter combinations."; c) once a foundation in sound-letter correspondence was built, texts became more complex", and; d) "'sight word' instruction was utilized only for those words which did not lend themselves to use of phonics."

Rudolph Flesch (1981), a persistently vocal advocate of phonics methods in early reading programs, isolated 181 sound-symbol combinations which he considered crucial to mastery of decoding skills. Flesch contended that unless all of these phonic elements were individually introduced, drilled, and practiced to mastery, "Johnny" would never learn to read. Jeanne Chall (1983b) and John Downing (1979) also emphasized phonics methods for early reading programs in grades one and two.

Watson, Crenshaw and King's (1984) "skills teacher" was, according to comparison of her TORP profile with DeFord's (1985) TORP scoring system, a teacher holding a Phonics theoretical orientation to reading (the researchers combined the Phonics and Skills orientations under the term "Skills"). Watson et al observed that the grade one teacher focused on smaller than word level units of language, stressed the acquisition and mastery of phonics and rules, required exactness in the reading of text, determined and directly controlled all reading activity, used drill with flashcards and practice workbooks, and relied on basal reading texts with controlled vocabulary. Basal reading series most compatible with the Phonics orientation might include Language Patterns (Holt, Rinehart & Winston, 1976) and McCracken and Walcutt's Basic Reading Series (Lippincott, 1975). Associated instructional approaches include DISTAR, linguistics, artificial orthographies like Initial Teaching Alphabet (ita), and Words in Colour (Spodek, 1972).

A Skills Theoretical Orientation

Harste and Burke (1977) described the Skills orientation to reading programs as a perception of reading as one of four language arts (listening, speaking, reading, writing), each learned as a collection of discrete skills but sharing a common base. Thus, the language arts are perceived as a pie from which skill hierarchies can be extracted, studied, and returned to the meaningful whole of the total language arts program. According to Harste and Burke, an initial emphasis is placed on building a basic sight vocabulary as the foundation for sequential skill mastery. In Harste and Burke's words, "Initially a child must learn to identify printed individual words and relate them to a meaningful context. This is best done by a) rapidly developing a basic sight vocabulary and b) teaching word recognition skills' (p. 37).

DeFord (1985) pointed out the eclecticism of the orientation. She noted that teachers holding Skills orientations to reading programs generally introduced vocabulary items in meaningful contexts specifically generated to give multiple opportunities for practice. Overlapping with the Phonics orientation was noted in the systematic instruction of sound-symbol correspondences but with a greater focus given to initial and final consonants, and hierarchical sequences of word attack skills like prefixes, root words, word shapes, compound words, and context clues. In DeFord's view the reading materials "were generated for further practice in sight vocabulary [and] story quality improved as a greater number of vocabulary items were incorporated" (p. 353-354). According to John Micklos (1980) most teachers uphold eclectic approaches and include structural analysis and phonics as well as context and whole word strategies in their reading programs.

DeFord (1985) exemplified the Skills theoretical orientation in the basal reading series Reading 720 (Ginn & Company, 1976). The orientation is also

reflected in Starting Points in Language Arts (Ginn & Company, 1977) which served as the district reading program in the present study. In this basal series which teachers commonly term "Mr. Mugs", each story is used as a basis for the instruction of comprehension, integrative options, decoding skills, language development (e.g. developing sentence structure awareness), writing including letter formation, workbook and worksheet practice activities, alternative skill strategies, literary appreciation, and listening activities (e.g. to identify sound-symbol correspondences). The series' focus is heavily oriented toward the development and awareness of word attack skills and 'correct' writing conventions.

The Skills theoretical orientation has been termed an eclectic model because it assumes both top-down and bottom-up information processing in reading print material. Gove (1983) suggested that this orientation is more a top-down model. However, the teacher-centred approaches, organized and sequential skill hierarchies, and so forth, associate the Skills theoretical orientation more closely with behaviourist learning theories and part to whole or bottom-up learning models. For this reason some researchers combine Phonics and Skills theoretical orientations into one generic 'skills' category (Morris & Fagan, 1987; Watson, et al., 1984). For example, Bawden, Burke and Duffy (1979), in a study of 23 teachers, found that about 90% of the grade one teachers and the older, more experienced teachers held 'skills' orientations to reading programs while teachers at other grade levels and younger teachers with less experience were more child-centred in their orientations to reading. Seaver and Cartwright (1977) implied that teachers with Early Childhood professional training would be less likely to hold 'skills' orientations to early reading programs regardless of their grade level designation because they "know that they cannot confine their efforts to the dissemination of information or the directing of instructional lessons" (p.324).

A Whole Language Theoretical Orientation

Harste and Burke (1977) described the Whole Language, or language based, model of reading as "a sphere composed of a meaning core enwrapped in a syntactic structure and sheathed with a phoneme-grapheme system' (p. 37). Teachers holding this orientation to early reading programs assume that the systems of language are shared, interdependent and interactive aspects of a whole process. According to Harste and Burke, Kenneth Goodman, a leading spokesman for whole language approaches, described reading as "the active process of reconstructing meaning from language represented by graphic symbols (letters), just as listening is the active process of reconstructing meaning from the sound symbols (phonemes) of oral language" (p. 38) Whole Language teachers maintain integrated, developmental, child-centred reading programs which begin with the child's own language and interest and emphasizes a developing sense of story from quality literature and personal writing from the outset. Word and letter activities are integrated into the reading of whole texts which are commonly generated by the children (DeFord, 1985)

Commercial reading programs which are compatible with Whole Language theoretical orientations include Sounds of Language Program (Holt, 1972), Impressions (Holt, Rinehart & Winston, 1984) and Networks (Nelson Canada, 1983-1985). Such programs are generally integrative, thematic literature anthologies which promote literary response, divergent thinking and creativity. However, Goodman (1986) described teachers holding Whole Language theoretical orientations as knowledgeable, empowered and autonomous professionals who accept responsibility and ownership of their classroom literacy programs and often reject commercial programs in favour of trade books and a wide variety of 'natural' reading materials. The Whole Language grade one teacher in Watson et al's (1984) study demonstrated this more independent stance by involving the children in program planning and used

library and trade books as reading materials. The researchers also noted that she consistently attended to larger units of language, encouraged the children to reconstruct their own meanings from text, and permitted miscues that made sense in context.

Whole Language theoretical orientations are generally associated with gestalt, cognitive-field learning theories which subsume whole to part and top-down reading models compatible with progressive views of education. Teachers holding these orientations are said to share a psycholinguistic view of reading in that children acquire reading and language in much the same way (Goodman, 1986; Lindfors, 1987; Ruddell & Singer, 1970; Mickelson, 1988; Smith, 1981). According to Ruddell and Singer (1970) psycholinguistic views of reading are incompatible with phonics approaches to reading programs. As a generic term, whole language might subsume language experience and open education approaches although differences in emphases do exist (Altwerger, Edelsky & Flores, 1987). Gove (1983) summarized top-down beliefs about reading in her Conceptual Framework of Reading Interview: a) comprehension does not rely on the recognition of every word in the text; b) meaning and grammatical cues are also helpful in determining unrecognized words; c) students learn to read by reading personally meaningful and authentic material; d) instruction emphasizes sentences, paragraphs and text selections; e) reading for meaning is of paramount importance in instruction, and; f) children are evaluated on the amount and kind of information gained through reading.

Norma Mickelson (1988) suggested that activities which involve children in their own literacy acquisition often include personal diaries, dialogue journals, co-operative reading and writing, discussions, fieldtrips, class newspapers, 'publishing' children's writing, authoring stories and poetry, reading with friends, relevant library research activity, literacy with technology, choral reading and readers' theatre, and

integrated thematic unit planning with children, adding that "no set of strategies can be used carte blanche" (p.20). Altwerger et al (1987) claim that such strategies result from teachers holding a certain view of children and learning.

Before leaving this section of the review of literature and research it is timely to note that important comparative studies of different orientations to early reading programs (Bond & Dykstra, 1967; Stahl & Miller, 1989) do not ascribe superiority to any one instructional emphasis over another. A quantitative synthesis of 180 studies comparing the effects of whole language/language experience and basal reading methods convinced Stahl and Miller (1989) that Phonics, Skills, and Whole Language approaches (as described by DeFord) should be amalgamated at the early reading level.

DISCUSSION

Thus far, the review of literature and research supports the existence and importance of classroom teachers' theoretical orientations, clarifies the nature of the theoretical changes which teachers are facing and raises some notions relating to them. It would appear that understanding the psychological context of teaching is crucial to efforts promoting educational change of any description. Implications for teachers, administrators and professional development are subsumed in the critical importance of teachers' implicit knowledge, theories and values. If teachers' personal theories about knowledge, children and learning result from a lifetime of experience, are developed gradually through experience, trial and error, and ultimately represent the teacher's best intentions for children "colored by emotion, built on aesthetics and functioning morally" (Fullan et al., 1987, 9. 56), change in teachers' theoretical orientations actually translates into change in teachers' personal identities. Further to

that, developing new identities and theories about knowledge, children and learning must become effective practice in an added cyclical process of application and revision, and often in classrooms where neither the children nor their parents have experienced philosophical change of any kind. Clearly, a theoretical change process of such magnitude involves a great deal of personal intentionality, takes years, and is probably best not considered in terms of administrative timeline agendas.

THE ECOLOGICAL CONTEXT

In terms of the present study, the ecological context of change in teachers' theoretical orientations to reading programs will be viewed in terms of educational change and teacher inservice only.

EDUCATIONAL CHANGE

This section seeks to observe the influence of teachers' theoretical orientations on educational change with particular emphasis on the roles of teachers in educational change, those change initiatives aimed at moving education from traditional to progressive models, and conditions considered as facilitative to educational change.

The educational change initiatives outlined in the background for this study are not unique to the province of Alberta. The 1980's are being acknowledged as a decade of world-wide educational reform as major political systems attempt to prepare themselves for the anticipated social, political, and economic realities of the post-industrial future (Goldman, 1989; Layton, 1987). In North America, controversial philosophical shifts from traditional to progressive educational models in several Canadian provinces are paralleling equally controversial shifts from progressive to

traditional educational models in several of the United States (Cuban, 1987; Honig, 1985; Layton, 1987; McNeil, 1988 a,b,c). Ultimately, the success or failure of both enterprises rests in the hands of classroom teachers who must implement the respective master plans at some personal cost of psychological stress and increased workloads (Fullan, 1982, Waugh & Punch, 1987).

The Role of Teachers in Educational Change According to Arthur Combs (1988) old assumptions for implementing educational change which ignored classroom teachers' knowledge,beliefs and values have shown disappointing results "for over 40 years" (p. 40) and lead to teacher "frustration, resentment and burnout" (p. 39). Combs' assessment is supported by a litany of failed R & D innovations, characterizations of teachers as rational adopters, pragmatic sceptics, or stone-age obstructionists (Doyle & Ponder, 1977), and as generally "short-sighted, change-resistant forces who have to be co-opted into adopting innovation' (Pappagiannis, Klees & Bickel, 1982, p.247). In Gough's (1978) view the peripheral roles granted to teachers in many failed change initiatives resulted from a commonly held perception of teachers as, at best, "neutral transmitters" (p.101), and at worst, mere practitioners who would "foul it up' (p. 101). Parish and Arends (1983) pointed to an innovation success rate of approximately 20% by the time Fullan and Pomfret (1977), among others, concluded that the successful implementation of educational change was difficult and complex.

Since the late 1970's a more humanistic view of teachers has emerged in the literature about educational change. Classroom teachers became viewed as "reasonable and informed people who know their own situation best" (Pappagiannis et al., 1982, p. 247), and who "operate well functioning systems" (Olson, 1980, p. 3). As well, it has become an accepted idea that classroom teachers should adapt new programs to suit their personal situations (e.g. Alberta Education, 1978) and teachers

have demanded the autonomy in their classrooms to do so (Parish & Arends, 1983; Waugh & Punch, 1987). Increasingly, research evidence and educational literature relating to teachers' perceptions, interpretations, intentionality, and acceptance of educational change initiatives mention teachers' subjectively reasonable theories about teaching, learning and knowledge as major determinants in educational change. (Anderson, 1984; Calderhead, 1989; Clark, 1988; Combs, 1988; Langer, 1984; Leithwood, 1981; O'Loughlin & Campbell, 1988; Olson, 1980; Parish & Arends, 1983; Shuell, 1986; Waugh & Punch, 1987). Combs (1988) reflects current thought in stating that "truly effective change in education can only be accomplished by effecting change in people" (p. 38).

Teachers' Theoretical Influence on Educational Change Under relatively stable conditions in education, the cohesiveness of teachers' theoretical orientations might be considered a strength. However, in the event of educational change, cohesive theoretical orientations become a serious obstacle to effecting the desired changes within the schools. In Combs' (1988) opinion, "No matter how promising a strategy for reform, if it is not incorporated into the teacher's personal belief systems it will be unlikely to effect behaviour in the desired directions" (p. 39). A number of research studies have supported Combs' position in this.

Waugh and Punch (1987) reviewed 40 years of research studies about teacher receptivity of system-wide educational change focusing on teacher beliefs relating to the change and "overall feelings and attitudes towards the previous educational system" (p. 237). The authors found that the difficulty of unfreezing, or effecting changes, in teachers' values, attitudes and behaviours was "grossly underplayed and often ignored" (p.244) and pointed out that teachers are not likely to be readily receptive to change that conflicts with traditional values of a school system. Waugh and Punch concluded that 60% of variance in receptivity to change was accounted for

by teachers' beliefs, feelings and attitudes which, in turn, influenced behaviour intentions. They also concluded that teacher characteristics, subject areas taught and school type accounted for only 2% of variance in teachers' receptivity to educational change.

Whereas Waugh and Punch (1987) focused on educational changes which had been in place for some years, Parish and Arends (1983) interviewed teachers in mid-west schools about new externally developed programs. They found that the teachers expressed general agreement to consider the programs and attend inservice but voiced a universal determination that the programs must fit the teachers' beliefs about teaching in the classroom. Theoretical compatibility has been found to be important in other studies on educational change as well (Hughes & Keith, 1980). For example, Olson (1980) illustrated the theoretical distortions evidenced in teachers' interpretations of a progressive science program element, pupil discussion. Olson reported that the eight science teachers translated the incompatible element into instruction, end of chapter text review and free talk or ignored it as a waste of time, pointless, and "pure waffle" (p. 7). Theoretically incompatible progressive educational change initiatives in Hong Kong (Morris, 1988) fared no better. Eight years after the introduction of the program, Paul Morris observed in 56 classrooms that program intentions for active pupil involvement in process oriented discovery learning were translated into teacher-centred instruction, prescribed written assignments, emphasis on form and neatness, model answers, and rote learning from texts. Morris concluded that the teachers had distorted and/or rejected the change initiative because it lacked compatibility with their theoretical orientations toward what counts as important in teaching, learning, and education.

In some research studies, teachers have seriously attempted to adopt progressive classroom strategies superficially. For example, Judith Langer (1984)

reported her case study (Langer & Applebee, 1984) of an excellent traditional social studies teacher who initiated a process-oriented, co-operative learning program. The program foundered on the teacher's unchanged theories about information transmission, control of learning, and student dependence on the teacher. The researchers concluded that a reconceptualization of knowledge, learning, and the roles of teacher and student in the classroom were fundamental to the ultimate success of such programs. Harste and Burke (1977) arrived at a similar conclusion after observing a teacher inadvertently reduce a whole language reading activity to a skills exercise because her theoretical orientation to reading remained basically unchanged.

Conditions for Educational Change

Two sets of conditions for meaningful educational change appear to be basic and complementary. The first involves conditions for a changing system and the second involves conditions for teachers in change.

For the System. Major factors associated with successful implementation of change appear to include the following:

- meaningful change occurs as a process (Crofton, 1981; Fullan, 1982, 1985; Holly & Blackman, 1981; Shynal, 1987),
- personal involvement of objective, aware, enthusiastic and respected change agents with teachers may be a necessary condition of change (Conley, 1985; Crofton, 1981; Joyce & Showers, 1980; Urick, Pendergast & Hillman, 1981; Waugh & Punch, 1987),

- continual personal participation of everyone from high-level administrators down to classroom aides is necessary (Crofton, 1981; Holly & Blackman, 1981; Rallis & Bucci, 1981; Urick et al., 1981), and

- administrative involvement and support in a team approach are necessary to set the change process in motion (Holly & Blackman, 1981; Rallis & Bucci, 1981; Urick et al., 1981).

For the Teachers Combs (1988) pointed out that in order to implement educational change teachers require, firstly, an explicit awareness of their beliefs and acknowledge a need for changing them, and secondly, a conducive environment in which "relationships are friendly, individuals feel important, and their participation is encouraged and valued' (p. 39). As well, teachers require opportunities to:

- confront their ideas, problems, and beliefs and the possibility of alternatives (Combs, 1988; Holly & Blackman, 1981; Scibior, 1987; Shynal, 1987; Urick et al., 1981),

- explore and experiment with new ways of seeing and thinking in accordance with principles of human growth and development (Combs, 1988; Church, 1987; Holly & Blackman, 1981; Scibior, 1987; Shynal, 1987), and

- in the process of exploration and experimentation, to feel respected and supported in modifying positions and trying again over an extended period of time (Combs, 1988, Holly & Blackman, 1981; Shynal, 1987; Yates, 1987).

Fullan (1982) claimed that the conditions of educational change are more important than the personal characteristics of teachers involved. He contended that research findings relating to teacher characteristics were largely inconsistent, and

pointed out that "depending on the conditions, innovators and hard-core resisters are found among all ages and levels of education" (p. 72). Waugh and Punch (1987) concluded that teacher characteristics, while appearing interesting, offered little enlightenment to research on educational change because of their non-manipulable nature.

TEACHER INSERVICE AS A VEHICLE FOR THEORETICAL CHANGE

This section seeks to provide information on teacher inservice in terms of conceptual development, different types and intensities of organized inservice opportunities, and current thought on conducive inservice experience for teachers.

Earl Russell (1975) claimed that for effective implementation of educational change to occur, classroom teachers must have knowledge and a general concept of where and how curriculum changes fit into the larger scheme of education. In Alberta, teachers usually receive this information through teacher conventions, conferences, coursework, and inservice experiences. At the school or system level, organized inservice is the dissemination and implementation strategy most frequently employed to effectively and affectively recruit teachers to new roles and viewpoints in education. Organized inservice has been referred to as "a special tension" (Shynal, 1987, p. 154). a source of "disequalibrium and challenge" (Holly & Blackman, 1981, p. 5), or more commonly, as methods of intervention (Borg, 1972) resocialization (Fullan & Pomfret,1977,) and as processes of professional revitalization (Donlan 1981; Thies-Sprinthall & Sprinthall, 1987). Walter Borg (1972) viewed intervention, or inservice, as a necessary prerequisite for change in experienced teachers. Others have suggested that not all teachers are able or willing to change (Fordham, 1983; Fullan, 1982, 1895; Howe, 1972; Morris, 1987; Scibior, 1987). Further to that, Shynal (1987)

illustrated in her interviews with classroom teachers that willingness to change may be hampered by a lack of knowledge and problems with applying inservice information in the classroom.

Teacher Inservice for Conceptual Development

Currently, the major thrust in teacher inservice in Alberta involves influencing teachers' traditional theories about teaching and learning toward more progressive theories which require higher-order cognitive abilities, or conceptual systems (Kitchener & King, 1981). There is believed to be a strong link between levels of conceptual functioning and teaching styles (Harvey, 1967; Hunt, 1966). As Holly & Blackman (1981) explained, "According to cognitive developmental theory, the higher the stage of development, the more comprehensive and empathetic will be the functioning of the individual" (p. 4). Harvey, Hunt and Schroder (1961) associated four conceptual systems with teachers' concepts of learning and knowledge. They found that teachers characterized by unilateral dependence (the lowest concrete stage of conceptual development) delivered information to students, asked narrow questions with one right answer, rewarded student conformity, viewed textbooks as authority sources, and saw student independence as inappropriate or unnecessary. However, teachers characterized by informational interdependence (the highest conceptual level of abstraction and complexity) regarded knowledge as tentative, respected doubt, were open to new experience, considered learning from the pupils' point of view, encouraged pupils to test, relate and reflect on their own ideas and to hypothesize and synthesize content, questioned without seeking precise answers, and rewarded learning process over product.

In a study based on this conceptual developmental theory, Murphy and Brown (1970) examined the verbal classroom interaction of 136 student teachers. The researchers identified 75% of the student teachers as either having (55.9%), or being strongly influenced by (19.8%) unilateral dependence (the lowest level of development) while only 8.9% held the highest informational independence conceptual systems. However, David Strahan (1989) concluded from a comparative study of experienced and novice teachers' knowledge structures that experienced teachers reason in more complex fashions, hold higher-order abstraction systems, and display more student-centred views of teaching. A series of studies conducted by Norman Sprinthall and Lois Thies-Sprinthall and their associates over a decade illustrated that if experienced teachers are placed in more complex roles with appropriate reflection, balance, and continuity, some conceptual development does occur (Glassberg & Sprinthall, 1980; Oja & Sprinthall, 1980; Sprinthall & Bernier, 1978; Sprinthall & Thies-Sprinthall, 1983; Thies-Sprinthall, 1986; Thies-Sprinthall & Sprinthall, 1987). For example, Thies-Sprinthall (1986) found no noticeable difference in the impact of ongoing inservice on mentoring among 350 experienced teachers aged between 30 and 55 years. Gliessman, Pugh, Dowden and Hutchins (1988), who demonstrated a traditional view of inservice as skill training, found no differences according to years of teaching experience among teachers' receptivity to inservice on questioning skills. The researchers claimed that varied skills, including indirect teaching styles, can be effected through inservice training.

Given that experienced teachers are able to develop new conceptual systems, or stages, the question of willingness to do so becomes important. Howe (1972) commented that older teachers may experience extreme difficulty and reject changing from traditional teaching to process learning, a role change which he described as "both intellectually and emotionally more demanding" (p. 251). Claude Mathis (1987)

contended that as experienced teachers move into mid-life career stages, they are less eager to please others, seek more to satisfy themselves, feel a sense of competence in what they do, are less dependent on others for support, and tend to maintain competencies rather than acquire them. Dan Donlan (1981) noted research sponsored by the Rand Corporation in the late 1970's which indicated that after five years of experience, teachers seldom change their teaching behaviour as a result of inservice. However, Paul Burden (1980) characterized teachers in the mature career stage (i.e. five plus years) as being confident, child-centred and willing to try new teaching methods.

Types of Inservice

Many types of organized inservice experience exist but traditional or progressive assumptions about knowledge, learning and learners are reflected in the different approaches. Donlan (1980) described two generic inservice types as the social interaction, or developmental model ("what teachers perceive they need") and the structured instruction, remedial or deficit model ("what teachers don't know but should") (p. 320). The deficit model is most common in practice (Boag, 1980; Elliott, 1989; Hopkins & Bollington, 1989; Joyce & Showers, 1980) and is characterized by traditional, subject-centred learning theories (e.g. 'expert' dispensing knowledge and teachers receiving it.) in lecture formats which include a variety of teaching resources and both small-group and whole-group experiences. In the present study, this model describes the 'instruction' model. Donlan's developmental model is associated with progressive, learner-centred theories (e.g. facilitation of group-priorized and/or individual objectives and needs) in clinic and workshop formats which emphasize high degrees of experiential learning. The developmental model is termed the 'practice' model in the present study.

Donlan (1980) investigated the effects of the two different models (developmental and instruction) with 24 experienced teachers in a summer workshop. Donlan sought to explore interactions between the different models, teachers' years of experience and teachers' internal or external locus of control. After 120 workshop hours Donlan found no significant interactions between models, experience and control. However, teachers from the developmental group rated the overall usefulness of the summer workshop to their own teaching of composition significantly higher ($p < .05$) than did the teachers from the structured group. The more experienced teachers rated their summer inservice program significantly higher than did less experienced teachers. Donlan also noted that the more experienced teachers were more confident and open to the inservice opportunity than were less experienced teachers who demonstrated more inhibitions and misgivings in their coursework.

Joyce and Showers (1980) concluded from a review of 200 studies that learning conditions in traditional teacher inservice models limit teachers' learning potential. They perceived necessary conditions for effective inservice as including presentation of the theory, description of the strategies, modelling or demonstration, practice in classrooms, feedback and exchanging experiences, and ongoing coaching as teachers apply the learning in their classrooms. This represents a combination of both 'instruction' (deficit) and 'practice' (developmental) models and, in terms of the present study, is similar to the 'instruction-practice' model.

Intensity of Inservice

The literature on teacher inservice reflects a growing conviction that effective inservice requires much more than the traditional, didactic one-shot 'instruction' sessions which are generally portrayed as being chronically ineffective (Conley, 1985;

Donlan, 1980, 1981; Elliott, 1989; Fullan & Pomfret, 1977; Hopkins & Bollington, 1989; Joyce & Showers, 1980; Wedman & Robinson, 1988). Protracted exposure to ongoing inservice, practical experience and feedback or coaching opportunities is deemed important in the development of complex cognitive abilities (Anderson, 1982, Conley, 1985; Thies-Sprinthall, 1986; Thies-Sprinthall & Sprinthall, 1987). According to Fullan and Pomfret (1977), "intensive inservice training (as distinct from single workshops) is an important strategy" (p. 373) for the implementation of new programs. They pointed to a need for time "for teachers to familiarize themselves with new materials and methods, and to reflect and work on problems of implementation both individually and collectively" (p. 373). This represents a commonly held view in the literature (Brookfield, 1986; Combs, 1988; Conley, 1985; Holly & Blackman, 1981; Rallis & Bucci, 1981; Scibior, 1987; Shynal, 1987; Urick et al., 1981). However, Gliessman et al. (1987) found that longer time frames and more intensive inservice opportunities for practice in micro-teaching did not result in significantly greater gains in teachers' acquisition of questioning strategies.

An inservice model which seeks to combine economy with intensity can be found in the pyramid structure. The Alberta Diagnostic Reading Program (1986) employed the pyramid model in that key teachers throughout the province received three days of intensive inservice training in order to serve as inservice leaders in their own school jurisdictions. Judy Wedman and Richard Robinson (1988) designed intensive inservice of this nature to influence the instructional practices of 50 secondary teachers towards content reading. The first phase of the study involved the key teachers in one six-hour inservice session per month from January to June. The inservice format was similar to Joyce and Showers' (1980) effective inservice criteria. After five sessions 80% of the teachers felt somewhat prepared to implement the strategies themselves, 18% felt very prepared and 2% felt very unprepared. In terms

of the teachers sense of readiness to help others to implement content reading in their programs (phase two of the study), 75% felt somewhat prepared, 10% felt very prepared and 15% felt very unprepared. These results suggest that pyramid inservice structures may have limited potential. However, Wedman and Robinson concluded that the protracted intensive inservice experience provided teachers with benefits of time and opportunity to incorporate new learning into their instructional practices.

The need for time and on-going experience and experimentation is emphasized in many studies and articles. For example, Millicent Conley (1985) prepared a detailed ten-month schedule of weekly 40 minute sessions in her inservice plan to assist an elementary school staff with a new (and apparently progressive and integrated) basal reading program which had been selected by administrators. In order to overcome the teachers' resentment toward the new reading program and meet her own obligations, Conley focused on sustained and systematic inservice presentations which emphasized a school-focus, classroom relevance and co-operative planning and implementation of between-session practice and application. Conley suggested that this format served as one "effective way to retrain teachers on the job" (p. 196). Hopkins and Bollington (1989) also emphasized the importance of linking ongoing inservice training to the particular school and teachers' classrooms. As well, Thies-Sprinthall (1986) employed a year long weekly schedule of three-hour sessions in her successful mentoring inservice program. Gliessman et al. (1984) however, challenged the necessity of multiple inservice experiences as inefficiency because no significant differences in actual gain appeared to exist between teachers who received more or less than the equivalent of one full day of inservice training on questioning strategies and micro-teaching.

DISCUSSION

This section of the review of literature and research appears to further the discussion about traditional and progressive orientations to education, knowledge, learning and, in this case, teachers as learners. Traditional, behaviourist approaches to educational change and teacher inservice appeared to be largely ineffective in accomplishing the desired changes within the classroom. More humanistic, progressive learning theories are accorded greater promise of success but entail substantially more time and consultancy. Both approaches present problems for administrators who face accountability for effecting significant educational change in a climate of budgetary constraint. Moreover, educational futurists agree that educational change will accelerate in the next decade. Solutions to the perennial problems of influencing teachers to change their educational theories and practices might well be found in the teachers themselves who constitute a body of intelligent, highly educated personnel who have within them their own best collective resources. In other words, promotion of the willingness and ability of teachers to work and solve problems collegially, to share and help one another through the disequalibrium wrought by change pressures together with the catalytic influence of inservice sessions may provide some helpful directions for the future. In this, the conditions for change in the ecological context, including the psychological support required in risk taking and teacher empowerment may eclipse formal inservice experience as a major vehicle for educational change.

Chapter 3

THE DESIGN OF THE STUDY

The study design describes the school district, schools, professional development opportunities within the district, the distribution and characteristics of teachers sampled in the study, and the research design. This is followed by details of the instrument, the Theoretical Orientation to Reading Profile (TORP) (DeFord, 1985), the pilot with the instrument, three different types of organized inservice which evolved during the 33 months, data collection procedures, and the data analysis procedures used in the study which explored change in primary teachers' theoretical orientations to reading programs over 33 months.

THE SCHOOL DISTRICT

The rural school district includes a large geographic area which serves approximately 3600 students in Northern Alberta. In 1986, approximately 215 certificated teachers conducted K - 12 programs in 14 public schools. The schools were located in 9 small to mid-size communities geographically dispersed along 160 miles of a main highway. The district's central administration has changed since 1980 and includes a superintendent, three assistant superintendents and a seven-member schoolboard. One assistant superintendent is responsible for elementary language arts programs which are conducted in English, Francophone French and French Immersion classrooms in 10 of the district schools. All elementary students receive second language instruction in either French or Woodland Cree. Classroom teachers have input into the selection of commercial reading materials. In 1986 the commercial

reading series, Starting Points in Language Arts (Ginn and Company, 1977), was in use throughout the district's primary grades.

THE SCHOOLS

The modern, well equipped elementary schools throughout the district range in size from 45 to 500 plus students and serve communities which reflect a rich mosaic of cultural, socio-economic and economic bases including agricultural communities, native reserves, and oil and lumber centres. Four of the district schools underwent major reconstruction and remodernization and five schools received new administrative appointments from within the district during the course of the study.

A significant number of primary pupils and teachers live in one community and are served by two large schools. A primary school of 450 students houses kindergarten, grade one and grade two classrooms and an elementary school of 500 plus students caters to children from grade three to grade six.and includes approximately 140 grade three pupils. These two schools, including 16 teachers in the sample group for the present study, were affected by the major flooding of their community in July, 1988 as was noted in the limitations for the study. For example, Disaster Services temporarily expropriated half of the primary school facility to serve as the local hospital until the end of October.which resulted in 10 of the study sample primary teachers working in extraordinary conditions of space limitations and overcrowding for the first two months of the school year. The situation influenced the researcher to delay the post-test of the TORP until January, 1989. The remainder of primary teachers and students in the school district are housed in elementary or community kindergarten to grade nine or twelve schools. A district policy promotes a

student-teacher ratio of 20-25 students per teacher at the primary level. Multiple grades, or split grades, are commonly found in the smaller communities.

PROFESSIONAL DEVELOPMENT

Professional development for the district since 1980 includes teachers' conventions, two instructional days per year allocated to district level mini-conventions or school-based inservice, and an individual choice of subsidized attendance at two specialist council or conference days per year. In February-March, 1987, 15 teachers representing all elementary staffs in the district received a total of six half-day inservice training sessions on Alberta Education's Diagnostic Reading Program (1986). In October, 1987, a special whole language committee of progressive teachers within the district was formed by the new assistant superintendent to conduct needs assessments and outline dissemination and implementation strategies for progressive, integrated, process-oriented literacy programs throughout the district. This resulted in November, 1988, in the first centrally organized whole language inservice day for all teachers in the system. The school district's official position was stated at the inservice, follow-up sessions were planned for the next term, and decisions were made to investigate more holistic commercial reading materials.

TEACHERS IN THE STUDY

All except one of the grade one, two, and three teachers of "regular" classroom reading programs in the school district were participants in the study in April, 1986. The excluded teacher had participated in a pilot run with the instrument a month previously. The distribution and characteristics of these 49 teachers who formed the 'pre-test sample' for the study are noted in Tables 1, 2 and 3. Over the course of 33

months an 'attrition group' developed as 20 teachers left the school system, another teacher opted not to continue in the sample group as she was predominantly a junior high school teacher and one teacher was believed to have left and was inadvertently missed from the post-test group. The teachers who left the system were not followed up because they no longer shared the sample group's inservice experiences or ecological context. The attrition group consisted of 22 teachers all (see Tables 1, 2 and 3). Finally, 27 primary teachers representing seven schools in the district comprised the subjects, or the 'sample group', for the panel study of change in the teachers' theoretical orientations to reading programs (see Tables 1, 2 and 3).

Table 1

Distribution of teachers in schools according to Pre-test Sample, Attrition Group and Sample Group

Schools	Pre-test Sample	Attrition Group	Sample Group
A	5	0	6*
B	12	7	5
C	3	0	1*
D	3	2	1
E	7	5	2
F	12	3	10*
G	2	0	2
H	1	1	0
I	2	2	0
J	2	2	0
Totals	49	22	27

* indicates within district transfer

TEACHER CHARACTERISTICS

Teacher characteristics of gender and years of professional training were not included as variables in the study because of the relative homogeneity of the sample group as shown in Table 2.

Table 2

Teacher characteristics of gender and years of professional training

Characteristics	Pre-test Sample	Attrition Group	Sample Group
Gender - male	4	2	2
- female	45	20	25
Professional training			
- four-year B. Ed.	45	22	23
- five years	2	0	2
- less than four years	2	0	2

Teacher characteristics of age, years of teaching experience, Early Childhood Education (ECE) or 'other' professional training, and grade level designation, were explored as variables of change in the teachers theoretical orientations to reading programs. Teachers were designated as grade one teachers if they taught regular grade one reading programs in their classrooms in either single or split grade groupings. Designated grade two teachers taught no grade one students but did teach regular grade two reading programs in either single or split grade groupings. Designated grade three teachers taught no grade one or two students but did teach regular grade three reading programs in either single or split grade groupings. Table 3 indicates the distributions of teacher characteristics among the pre-test sample, attrition group and the sample group.

Table 3

Distribution of teacher characteristics of age, designated grade level, professional training and years of teaching experience.

Characteristics	Pre-test Sample	Attrition Group	Sample Group
Age - mean	39.1	9.5	38.9
- range	23 - 65	23 - 57	28 - 65
Grade - one	24	11	13
- two	10	4	6
- three	15	7	8
Training - ECE	8	1	7
- other	41	21	20
Teaching experience			
- mean years	12.8	11.8	13.7
- range in years	1 - 33	1 - 32	4 - 33

Two t-tests employed to determine whether significant differences existed between the attrition group and sample group in age or years of teaching experience revealed no significant difference in either age ($T = -0.21$; $p = 0.83$) or years of teaching experience ($T = 0.75$; $p = 0.46$). Chi-square tests determined that no significant differences existed between the attrition group and sample group in grade level designation ($p = 0.94$ NS) or, after Yates correction, professional training ($p = 0.10$ NS) , although there was a tendency for fewer teachers who did not complete the study to have Early Childhood Education as a major field of training. Further data relating to the determination of significant differences in the mean scores of the attrition group and the study sample are located in the description of the Theoretical Orientation to Reading Profile (TORP) which served as the research instrument (see Table 4).

THE RESEARCH DESIGN

According to Helen Robinson (1974), exploratory research is founded on a genuine curiosity to learn something helpful for the benefit of school personnel. At the same time, Blake and Allen (1974) pointed out that longitudinal research has two purposes. Firstly, it seeks to describe change in terms of inferences like whether a change occurs or, if a change occurs, about the nature of the change, or whether different groups of subjects show similar trends of change. Secondly, longitudinal studies seek to ascribe the change which is observed to independent variables. The present study of change in teachers' theoretical orientations to reading programs seeks to do those things. However, the quasi - experimental design of the study might best be described as 'emergent' because the main independent variable, Time, allowed new independent variables (e.g. different types of organized inservice experiences) to emerge naturally during the course of the study. Given the exploratory nature and intent of the study, the emergence of new independent variables was viewed positively as enriched opportunities to explore the process of theoretical change in terms of real life circumstances that simply emerged "without artificial restraint of their covariation" (Barr, 1986, p. 231).

In April, 1986, the study was initiated as a tentative TIME DESIGN. The design reflected an all things being equal rationale in that all primary teachers in the school district worked under the same policies and constraints, all were utilizing the same commercial reading materials, and all received the same inservice opportunities. By January, 1987, the design had become a TIME X GROUPS DESIGN, partly due to further research of the literature and partly due to observation of teacher reaction to rumour and information regarding the articulation of kindergarten and primary educational experiences. Early Childhood certification was rumoured as a possible prerequisite for primary teachers, grade one teachers expressed concern about basic

skills, and older teachers appeared troubled about educational change. Therefore, the groups of teachers having different characteristics of age, years of teaching experience, professional training, and grade level designations were included in the exploration of change in teachers' theoretical orientations.

The research design emerged into a TIME X TREATMENTS X GROUPS DESIGN in October, 1987, when it became obvious that teachers in the study were receiving two very different types of inservice experience about progressive, process-oriented literacy programs in the school district. By February, 1988, a third type of inservice had begun. This meant that while some primary teachers were receiving "regular" instruction-based inservice opportunities as per the district policies, another group of primary teachers was involved in on-going, intensive practice-based inservice while a third group was receiving intensive instruction-practice inservice experiences. Therefore, the longitudinal study emerged as a non-equivalent control group design which afforded the opportunity to explore change in the teachers' pre-test/post-test TORP data in terms of time, three distinct types of inservice experience, and four specified teacher characteristics.

The nature of the longitudinal study, the length of time between the pre-test and post-test data collection, and the researchers' intent to describe any change in the teachers' theoretical orientations in the natural course of being a teacher in the school district, prevented the control of extraneous variables. The internal validity of the study may have been threatened by such factors as personal life experiences, maturation, the volunteer spirit, the John Henry effect, and the possible diffusion of the content and materials from the two intensive inservice experiences. Variables which could be controlled, were. The extended period of time between the pre-test and post-test administrations of the TORP made test-wiseness unlikely, the instrument and its

method of delivery did not, in most instances, change, and the research study was, in terms of the sample group, "forgotten" for the intervening period of 33 months.

INSTRUMENT FOR THE STUDY

Edward Fry (1977) contended that , as a research tool, "a good paper and pencil test can be every bit as important as a heart beat counter" (p. 5). The Theoretical Orientation to Reading Profile (TORP) (DeFord, 1985) is considered to be a good paper and pencil test. DeFord described the TORP as "an instrument developed to sample a teacher's theory of the world of reading. In this view of theoretical orientation, the theory acts as a filter in perceiving, understanding, organizing and acting upon experiences in that world" (p. 363). The TORP was designed within Harste and Burke's (1977) conceptual framework of theoretical orientations to reading.

In order to explore change in the primary teachers' theoretical orientations to reading programs, the TORP was administered in a pre-test / post-test format over 33 months (see Appendix A). The TORP is a pencil and paper survey which requires the teachers to respond to 28 statements about reading in terms of a five-point Likert scale ranging from Strongly Agree (1) to Strongly Disagree (5). As a research instrument, the TORP has consistently differentiated among teachers' theoretical orientations to reading programs in terms of instructional priorities and beliefs (Bean, et al., 1981-82; DeFord, 1985; Hoffman & Kugle, 1982; Watson et al., 1984). DeFord described the TORP as a one-factor test which measures theoretical orientations to reading against a continuum from isolation to integration of language (Hoffman & Kugle, 1982). According to DeFord, the Likert scale format allows change between pre-test and post-test profiles to be measured in terms of the degree to which beliefs

are held and the direction of change in such beliefs. As a research instrument, the TORP has demonstrated high reliability (Cronbach Alpha = .98) and good validity (DeFord, 1985).

The 28 statements in the TORP reflect beliefs and practices representative of Phonics, Skills, and Whole Language theoretical orientations to reading programs. Of these, 10 statements are representative of a Phonics orientation (see Figure 1), 10 statements are representative of a Skills orientation (see Figure 2), and 8 statements are representative of a Whole Language orientation (see Figure 3). DeFord pointed out that Phonics and Skills orientations tend to share practices, Skills and Whole Language orientations tend to share practices, but Phonics and Whole Language orientations tend not to share practices. The items noted as 'strong' Phonics (items 1, 6, 10, 20, 22) (see Figure 1) or 'strong' Whole Language (items 15, 17, 23, 26, 27) (see Figure 3) assist in clarifying orientations when fine discriminations become advisable. All facets of DeFord's (1985) research indicated "the validity of the construct of theoretical orientation in reading as measured by the DeFord Theoretical Orientation to Reading Profile " (p. 363). DeFord stated that:

> Teachers of known theoretical orientation responded in consistent, predictable patterns to statements about practices in reading instruction. Judges from the field of reading concurred on the pattern of responses for each model of reading, and observers were able to predict teacher orientation from observations of their teaching. (p. 363)

In spite of DeFord's findings relating to the reliability and validity of the instrument she recommended that TORP data be confirmed through either observation or interview. Such indepth confirmation was beyond the resources of the researcher in the present study. Therefore, the teachers in the study sample were requested to submit written details of their classroom reading programs instead (see Appendix C).

Figure 1

The Phonics Sub-Group Items

*1.	A child needs to be able to verbalize the rules of phonics in order to assure proficiency in processing new words.	1___2___3___4___5 SA A D SD
*10.	It is a good practice to correct a child as soon as an oral reading mistake is made.	1___2___3___4___5 SA A D SD
*22.	Phonic analysis is the most important form of analysis used when meeting new words.	1___2___3___4___5 SA A D SD
	[illegible]hen children do not know a word they should [illegible] instructed to sound out its parts.	1___2___3___4___5 SA A D SD
*20.	Controlling text through consistent spelling patterns (The fat cat ran back. The fat cat sat on a hat.) is a means by which children can best learn to read.	1___2___3___4___5 SA A D SD
9.	Reversals (e.g., saying "saw" for "was") are significant problems in the teaching of reading.	1___2___3___4___5 SA A D SD
3.	Dividing words into syllables according to rules is a helpful instructional practice for reading new words.	1___2___3___4___5 SA A D SD
21.	Formal instruction in reading is necessary to insure the adequate development of all the skills used in reading.	1___2___3___4___5 SA A D SD
#12.	Paying close attention to punctuation marks is necessary to understanding story content.	1___2___3___4___5 SA A D SD
#2.	An increase in reading errors is usually related to a decrease in comprehension.	1___2___3___4___5 SA A D SD

* denotes items most strongly indicative of the Phonics theoretical orientation.
# denotes beliefs commonly shared by teachers holding a Skills theoretical orientation.

The score range for the Phonics sub-group of items is 10 - 50. A lower score registers stronger agreement. A higher score registers stronger disagreement. In DeFord's study (1985) the Phonics item sub-group mean scores for teachers (n =90) of known orientation were Phonics (n =30) teachers 19.47 (SD =3.34), Skills (n =30) teachers 26.87 (SD =5.50), and Whole Language (n =30) teachers 48.40 (SD =2.08) (p. 359).

The score range for the Skills sub-group of items is 10 - 50. A lower score registers stronger agreement. A higher score registers stronger disagreement. In DeFord's study the Skills item sub-group mean scores for the teachers (n =90) of known theoretical orientation were Phonics (n =30) teachers 24.37 (SD =3.18), Skills (n =30) teachers 23.87 (SD =5.60), and Whole Language (n =30) teachers 47.50 (SD =3.06) (p.359).

Figure 2

The Skills Sub-Group Items

#19. Ability to use accent patterns in multisyllable words (pho 'to graph, pho to' gra phy, and pho to gra' phic) should be developed as part of reading instruction. 1___2___3___4___5 SA A D SD

#8. The use of a dictionary is necessary in determining the meaning and pronunciation of new words. 1___2___3___4___5 SA A D SD

28. Some problems in reading are caused by readers dropping the inflectional endings from words (e.g. jumps, jumped) in new words. 1___2___3___4___5 SA A D SD

11. It is important for a word to be repeated a number of times after it has been introduced to insure that it will become a part of sight vocabulary. 1___2___3___4___5 SA A D SD

16. Young readers need to be introduced to the root form of words (run, long) before they are asked to read inflected forms (running, longest). 1___2___3___4___5 SA A D SD

13. It is a sign of an ineffective reader when words and phrases are repeated. 1___2___3___4___5 SA A D SD

4. Fluency and expression are necessary components of reading that indicate good comprehension. 1___2___3___4___5 SA A D SD

*25. It is important to teach skills with other skills. 1___2___3___4___5 SA A D SD

*14. Being able to label words according to grammatical function (nouns, etc.) is useful in proficient reading. 1___2___3___4___5 SA A D SD

*24. Word shapes (word configuration) should be taught in reading to aid in word recognition. 1___2___3___4___5 SA A D SD

# denotes beliefs commonly shared by Phonics teachers
* denotes beliefs commonly shared by Whole Language teachers

Figure 3

The Whole Language Sub-Group Items

5.	Materials for early reading should be written in natural language without concern for short, simple words and sentences.	1___2___3___4___5 SA A D SD
7.	It is a good practice to allow children to edit what is written into their own dialect when learning to read.	1___2___3___4___5 SA A D SD
18.	Flashcard drill with sightwords is an unnecessary form of practice in reading instruction.	1___2___3___4___5 SA A D SD
*27.	It is not necessary to introduce new words before they appear in the reading text.	1___2___3___4___5 SA A D SD
*17.	It is not necessary for a child to know the letters of the alphabet in order to learn to read.	1___2___3___4___5 SA A D SD
*15.	When coming to a word that's unknown, the reader should be encouraged to guess upon meaning and go on.	1___2___3___4___5 SA A D SD
*26.	If a child says "house" for the written word "home", the response should be left uncorrected.	1___2___3___4___5 SA A D SD
*23.	Children's initial encounters with print should focus on meaning, not upon exact graphic representation.	1___2___3___4___5 SA A D SD

* denotes items most strongly indicative of the Whole Language theoretical orientation.

The score range for the Whole Language sub-group of items is 8 - 40. A lower score registers stronger agreement. A higher score registers stronger disagreement. The 90 teachers of known orientation in DeFord's sample registered the following

Whole Language sub-group mean scores: Phonics teachers 30.37 (SD =2.59); Skills teachers 28.23 (SD =4.01), and; Whole Language teachers 9.13 (SD =1.38) (p. 359).

To obtain a total score on the TORP as a whole, it is necessary to invert the Likert scale values on the Whole Language items (SA=5, SD=1) in order to obtain a possible score range of 28 - 140. Total scores in the 28 - 65 range indicate a Phonics theoretical orientation, in the 65 - 100 range a Skills theoretical orientation, and in the 100 - 140 range, a Whole Language theoretical orientation to reading. In DeFord's study sample the 90 teachers of known theoretical orientations obtained TORP mean scores as follows; Phonics teachers 61.50 (SD =6.67); Skills teachers 70.40 (SD =12.36), and; Whole Language teachers 134.60 (SD =4.45) (p. 357). DeFord suggested that checks could be made against the mean scores generated within her study but cautioned that fine discriminations should be related to the key items (i.e. items noted as 'strong' or most indicative).

The pre-test TORP data for the attrition group and sample group in the present study were analyzed for significant differences in Phonics, Skills, and Whole Language item sub-group mean scores, 'strong' Phonics and Whole Language item mean scores, and total TORP mean scores. No significant differences were found to exist (see Table 4).

Table 4

T - Test Results Comparing Attrition Group and Study Sample Mean Scores for Pre-test TORP Responses

Variable		Mean	Standard Deviation	T Value	2 - Tail Probability
Phonics	- S	23.81	5.14	- 0.27	0.79 NS
	- A	24.14	3.12		
Strong P	- S	12.78	3.07	- 0.05	0.96 NS
	- A	12.82	2.65		
Skills	- S	26.81	5.44	0.60	0.55 NS
	- A	26.00	3.68		
Whole Language	- S	25.96	4.52	0.69	0.50 NS
	- A	25.09	4.32		
Strong WL	- S	16.19	3.90	0.18	0.86 NS
	- A	16.00	3.04		
Total TORP	- S	72.67	12.43	- 0.14	0.89 NS
	- A	73.05	6.76		

S = Study Sample (n =27) A = Attrition Group (n =22) Strong P = Strongest Phonics Items (items 1, 6, 10, 20, 22). Strong WL = Strongest Whole Language Items (items 15, 17, 23, 26, 27).

PILOT WITH THE INSTRUMENT

A pilot with the TORP was conducted in March, 1986, in order to check the clarity of the instructions, format and readability of the instrument. Four graduate

students specializing in language arts at the University of Alberta individually completed the TORP. It was determined that the instructions required some clarification of the word "feelings". Also, the students questioned the procedural statement "select one best answer that reflects the strength of agreement or disagreement". Items 7, 23, and 24, required some oral clarification.The format of the instrument presented a problem in that the print was too small and too close together. The TORP was retyped with the recommended changes to format and simplification of the procedural statement. A reading clinician confirmed that the meaning was kept intact. In item 7, the word "dialect" was clarified as "way of speaking", in item 23 the word "(decoding)" was added after the statement, and in item 24 an example "e.g. [but]" was included in the bracket. The TORP was then completed by two primary teachers who found the procedural statement and instructions clear, the format suitable and the itemized statements also clear. The 28 item TORP was completed by all pilot subjects in less than 15 minutes.

ORGANIZED INSERVICE PROGRAMS

Three different types of organized inservice experience evolved for the teachers in the study sample over the course of 33 months. These were classified as instruction-based, practice-based, and instruction-practice inservice experiences.

The Instruction-Based Inservice Group. All primary teachers in the study sample shared the "regular" organized inservice experiences and opportunities offered by the school district policies during the 33 month duration of the study. Therefore, every primary teacher received the opportunity to engage in four teacher-planned inservice days and one district-planned inservice day apart from attendance at teachers' convention and optional conference participation which was not monitored in

this study. The content of teacher-planned inservice days resulted from staff consensus on priorities. A telephone survey of representative teachers in the study sample revealed that several school staffs devoted one teacher-planned inservice day to school organizational matters, other inservice time was allocated to a variety of curriculum areas, for example, art and music, leaving on the average, less than half of the inservice allocation over 33 months being devoted to language arts and reading. All teachers were required to attend the whole language inservice day sponsored by the school district in November, 1988.

The researcher, a classroom teacher within the district, was unable to monitor the quality of presentation or content of teacher-planned, school-based inservice throughout the district other than by telephone survey. These informal teacher reports revealed a heavy emphasis on external resource personnel (including the researcher in some schools), traditional transmission formats, a focus on instruction about implementation strategies in the classroom, little time given to questions or discussion, and little or no follow-up by the presenter after the session. Due to geographic locations within the school district, 12 teachers from five schools in the study sample received this "regular" organized inservice experience over the 33 months of the study and evolved as the 'instruction-based' inservice group. Informal conversation revealed that the five schools had no "whole language resident experts" on staff. Two of the teachers were involved in the district Diagnostic Reading Program inservice in February-March, 1987. None of the 12 teachers reported voluntary attendance at university summer school reading coursework between 1982 and 1988. Of these 12 teachers, 10 were teaching in the district during the term of the school district's support of ECRI in 1978-1980.

The Practice-Based Inservice Group. In June, 1987, five grade three teachers in one school voluntarily initiated a team project to implement thematic whole

language approaches in their classrooms in the coming school year. An exemplary whole language "resident expert" (AB) on staff had modelled the approaches in her successful resource room programs for a year and agreed to act as a guide, coach and mentor for the team project. One teacher created the first thematic unit over the summer and that unit was adopted and implemented by the group as a beginning. The teachers met with AB informally during breaks every day and formally after school on a weekly basis September-February, bi-weekly until April, and less frequently until AB left the school and district in June.

The ongoing "intensive" inservice was practical and emphasized each teacher's classroom experiences. Sessions involved group theme planning, discussion, feedback, material selection and utilization, and instructional strategies. Therefore, this group evolved as the practice-based inservice group in the study. The participants reported informally that the inservice experience had resulted in the successful implementation of integrated, thematic whole language approaches in the five classrooms. The project mentor, AB, attended the Diagnostic Reading Program inservice and made the materials available to the practice-based group. None of the five teachers reported voluntary attendance at university summer school reading coursework between 1982 and 1988, however, one teacher did attend such a course in the summer of 1989 (after the study was completed) to learn about the theories behind the practice. All teachers in this group participated in ECRI inservice and teaching between 1978 and 1980.

The Instruction-Practice Inservice Group. This "intensive" inservice group was voluntarily initiated by an entire K-2 primary school staff in January, 1988 when staff members became aware that , the "whole language resident expert" (the researcher (CD)), was leaving the staff in June. Of the staff members, 10 teachers were in the study sample and all participated in the inservice sessions which evolved

from the staff's request to "teach us everything you know about whole language before you leave". The request led to the development of a series of after school inservice sessions between February and June, 1988. Approximately 14 formal sessions were conducted.

An average of 23 teachers, administrators and staff aides attended each session regularly. The formal inservice sessions were oriented towards instruction with ongoing informal classroom practical experimentation, kid watching, mentoring, individual problem-solving, informal discussion, classroom demonstration on request, and informal sharing between sessions. The formal sessions were designed to help the teachers understand the what's, why's, and how's of process-oriented approaches to integrated writing, reading, literature, dialogue journals, diagnostic evaluation, active learning, and teachers as facilitators of children's literacy development . The Diagnostic Reading Program was specifically adapted to the grades one and two levels by CD and worked through systematically. No evaluations of the instruction-practice inservice experiences were sought by the researcher. Of the 10 teachers in the study sample, one reported voluntary attendance at a university summer reading course in 1982 and eight teachers were involved in ECRI inservice and methodology from 1978 to 1980.

The organized "regular' and "intensive" inservice experiences which evolved over 33 months were viewed by the researcher as important independent variables in the study of change in the teachers' theoretical orientations to reading programs and offered a rich opportunity for exploration in terms of the different organized inservice opportunities. Therefore, t-tests were done to determine whether significant differences existed between the two groups at the time of the TORP pre-test. No significant differences were recorded in any of the TORP item sub-groups, or in the teacher characteristic of age. Significant difference was found to exist in years of

teaching experience . The "regular" inservice group registered an experience mean of 17.33 years (SD =9.10) compared to the "intensive" inservice group mean of 10.73 years (SD =5.16) (T = 2.24, P = 0.04). Therefore, the "regular" inservice group within the study sample included more experienced teachers. Chi-square tests revealed no significant differences in terms of grade level designation or professional training.

COLLECTION OF DATA

This research study received support and approval from the superintendent of the school district in a personal meeting in April, 1986. The researcher also addressed and received endorsement from the Principals' Association who were meeting in an adjacent room. All school administrators were present at the meeting and offered to carry an outline of the research and possible classroom visitations to their primary teachers. The voluntary nature of teacher participation, assurances of confidentiality in the research documentation and on the part of the researcher were emphasized at the meeting. The system of reciprocity by which each participating teacher was offered one half-hour of time while the researcher (an experienced primary teacher and long-term district employee) supervised the students, was also explained. The longitudinal nature of the study was emphasized in that no feedback would be available to the teachers for approximately three years. Two days later, all school principals were contacted by telephone to ascertain teacher interest in participation in the study. Without exception, the principals reported that their primary teachers were unanimous in their support, "happy to help" and "very enthusiastic" about the system of reciprocity. Appropriate blocks of time for each school visitation were arranged at that time with the classroom schedule left open for teacher selection. See appendix A for a copy of the TORP as received by the teachers.

Administration of the Pre-test. The TORP pre-test administration and reciprocity were conducted in 49 classrooms in 10 schools within a period of 12 school days in April-May, 1986. The following routine was established and maintained in every school but one:

i) The researcher arrived at the school either early in the morning or before a school break to facilitate informal conversation, answer any teacher questions, and to develop rapport with new teachers and old acquaintances in their school setting.

ii) Prompt arrival in each classroom according to the scheduled times was maintained as far as possible. Adjustments to the schedule were pre-arranged with the teachers or principals. At times the teachers' personal schedules were disrupted and classroom visitation was rescheduled for later in the day or, in one instance, the following day.

iii) Upon arrival at each classroom approximately five minutes was spent in meeting the children and briefing the teacher with regard to;

- asking for clarification if an item seemed unclear
- completing the TORP at ease and privately outside the classroom
- feeling confident that individual beliefs were most important because the TORP has no "correct" answers
- pencilling the teacher's first name and school initials on the removable cover page of the TORP
- returning to the classroom after 30 minutes.

iv) Reciprocity involved the researcher in self-selected class activities like literature, sing-alongs, story telling for acting along, sharing news,

favourite reading stories in read-alongs, and poetry. Observation of the classroom or program was neither intended nor conducted. Reciprocity was a comfortable and enjoyable situation for the children and the researcher in every classroom.

v) When the teacher returned to the classroom the TORP was scanned with the teacher only for completeness and questions were asked as to whether any problems had arisen in terms of understanding the items or privately completing the TORP. On several occasions items were missed unintentionally and were completed by the teacher immediately. Items missed intentionally for want of clarification were clarified and completed also. Responses to completed items were not mentioned unless the teacher sought confirmation of the item's meaning. Two teachers reported being interrupted by telephone calls but had ample time to complete the TORP. One teacher spent the half-hour in an emergency meeting in the principal's office and mailed her completed TORP to the researcher within the 12 school-day collection period.

vi) The researcher thanked each teacher and class for their assistance before leaving the classroom and each principal before leaving the school building.

The researcher learned a valuable lesson about rigorously maintaining the data collection procedures in one school. Accumulating time pressure led the researcher to attempt to separate the TORP data collection from the reciprocity system. With the principal's approval and assurance that there would be no problem the TORP's were delivered to the school at 8 AM for early distribution to the teachers. They were picked up from the school office in the same envelope at 3.45 PM. Cursory scanning revealed some TORP's missing and others partially completed. The researcher

telephoned each of the teachers that evening. The conversations revealed that the teachers preferred the original data collection plan and some feared loss of confidentiality by submitting the TORP to anyone other than the researcher. However, all of the teachers expressed a personal willingness to participate in the study. Therefore, classroom visitations were immediately arranged with each of the teachers. At the time of visitation, some teachers completed the TORP according to the routine established in other schools. Others who had intentionally omitted items for want of clarification were assisted and proceeded from step five (v) of the collection routine. Those who had completed the TORP alone were also interviewed as outlined in step five (v) of the routine. The researcher accepts that the problem did occur but remains confident that it was quickly overcome and that the TORP data were valid.

The 49 completed TORP's were not analyzed in any way. The cover pages bearing the teachers' names were removed and each TORP was identified with a letter code A through W2. The pre-test TORP's along with a master list of teachers' names and letter codes, schools, grade level designations, and data collection information were filed for safekeeping until the post-test data were collected. The research study went 'underground' for 33 months. The researcher returned to university until August and then to full-time teaching duties within the school district for two years. The research task became one of informally keeping informed of naturally occurring developments which might hold importance for a study which was not discussed in any way during that time. The task of loosely monitoring naturally evolving independent variables was achieved through sporadic informal telephone conversations, personal contact with district teachers at meetings and inservice sessions, and more informally 'the grapevine'.

Administration of the Post-test. Permission to conduct the post-test of the TORP and continued support was received verbally in telephone conversations with the district superintendent and seven school principals in early January, 1989. As all administrative changes within the school district during the 33 months were internal the school principals were personally acquainted with the research study and the researcher. Each of the 28 teachers known to be still working in the district was contacted personally or by telephone to ascertain whether the teacher personally wished to participate in this phase of the study. All of the contacted teachers expressed willingness to participate and classroom visitation and reciprocity schedules were organized at that time. One teacher pointed out that she had been working as a junior high school French immersion teacher since the pre-test data collection. By mutual agreement the teacher did not participate in the post-test.

The post-test administration of the TORP and teacher reciprocity were conducted in 25 classrooms in seven schools over a period of seven school days in late January, 1989. The post-test TORP was photocopied from the pre-test TORP master but did not have a cover page. Instead, each teacher's identification code letter was premarked on the instrument. In every classroom administration procedures followed the optimal routine established for the pre-test administration. However, in view of the researchers' leadership roles in whole language related areas over the 33 months, additional emphasis was placed on the importance and legitimacy of the teacher's own beliefs and the relative anonymity of the intended statistical analysis procedures . The data collection proceeded smoothly as planned. The teachers reported no interruptions or problems in completing the TORP. One teacher on maternity leave completed the TORP in her home. Another who was absent for several days completed the TORP independently at home and delivered it to the school. The 27 post-test TORP's were not analyzed in any way but were placed with the pre-test

data in safekeeping until late July, 1989, when all of the TORP data were submitted to statistical analysis at the University of Alberta (see Appendix D for individual teachers' pre-test and post-test TORP profiles).

Collection of Correlate Data. At the time of the TORP post-test administration, arrangements were made with the teachers and principals for the researcher to return within a month to collect relevant correlate information for the study. The data were perceived as a necessary supplement to the informal data which had been gathered over 33 months and as a means of accessing personal information known only to the teachers. With the permission of principals, schedules for 45-60 minute classroom reciprocity visitations were arranged individually with the 27 teachers by telephone. The visitations were conducted in 26 classrooms in seven schools over a period of eight school days in early February, 1989. The teacher on maternity leave was visited at home.

The data were collected by means of a pencil and paper questionnaire (see Appendix B) which asked teachers to provide information relating to teacher characteristics, teacher perceptions of their own professional training as preparation for whole language, and teachers' descriptions of their school, community and students with particular emphasis on major changes between 1986 and 1989. The instrument also asked the teachers to describe the most important elements of their classroom reading programs in 1985-86 and the present. In order to do that, many teachers referred to their 1985-86 lesson plan books which were retained according to district recommendation. Others referred to class lists for the 1985-86 school year and found that the student's names "brought it all back". The teachers' questionnaires were identified by letter codes only and the procedural routines for the TORP data collection were followed. The 27 completed questionnaires were not analyzed in any way but were packaged with the TORP data for safekeeping. In some instances teachers in

the attrition group left the district before relevant information relating to characteristics of age, years of teaching experience or professional training could be recorded. In these cases the information was obtained from close colleagues, principals and central office personnel.

In early July, 1989, a 90 minute interview was held with one teacher from the "intensive" practice-based inservice group in order to check the researcher's perceptions of the nature of the inservice content and format. The interview was conducted with an informal and non-standardized format and notes were taken.

DATA ANALYSIS PROCEDURES

This section describes only the initial procedures for data analysis. Procedures specific to each of the research questions are described with the findings in Chapter 4.

The 49 teachers' completed pre-test and post-test TORP's were collated and hand-coded by the researcher. The initial coding consisted of 10 columns:

Columns 1 and 2	= ID numbers 01-49
Column 3	= 1 (complete / study sample group), 2 (incomplete / attrition group)
Column 4	= 1 (regular inservice), 2 (intensive inservice), or 3 (N/A attrition group)
Columns 5 and 6	= teachers' ages 23-65
Columns 7 and 8	= years of teaching experience 01-33
Column 9	= grade level designation 1 (grade one), 2 (grade two), or 3 (grade three)
Column 10	= professional training 1 (Early Childhood Education) or 2 (other)

The coded TORP data was submitted to the Department of Educational Research Services at the University of Alberta on July 21, 1989. A key-punch operator within the department prepared the 49 IBM computer cards which contained the teachers' 10 column codes and the numerical responses (1-5) for the TORP pre-test items (columns 11-38 coded as pre 1, pre 2, through pre 28) and post-test items (columns 39-66 coded as post 1, post 2, through post 28). On July 26, 1989, statistical analysis of the data was begun with the help of a research assistant in the Department of Educational Research Services and utilizing the SPSS-X program. To facilitate the data analysis, further coding of TORP items was necessary as follows:

Phonics Items (phonpre) = pre-test items 1, 2, 3, 6, 9, 10, 12, 20, 21, 22
(phonpos) = post-test items 1, 2, 3, 6, 9, 10, 12, 20, 21, 22
(item 1 pre) = strong phonics pre-test items 1, 6, 10, 20, 22
(item 1 pos) = strong phonics post-test items 1, 6, 10, 20, 22

Skills Items (skillpre) = pre-test items 4, 8, 11, 13, 14, 16, 19, 24, 25, 28
(skillpos) = post-test items 4, 8, 11, 13, 14, 16, 19, 24, 25, 28

Whole Language Items (wholepre) = pre-test items 5, 7, 15, 17, 18, 23, 26, 27
(wholepos) = post-test items 5, 7, 15, 17, 18, 23, 26, 27
(item 2 pre) = strong whole language pre-test items 15, 17, 23, 26, 27
(item 2 pos) = strong whole language post-test items 15, 17, 23, 26, 27

Total Scores = totalpre and totalpos (items 1-28 pre-test and post-test). The computer was instructed to recode whole language item response scores (5=1) (4=2) (2=4) (1=5) for summing of totalpre and totalpos scores.

A significance level of .05 was established for the data analysis in this study.

Initially the data analysis focused on tests to determine whether or not bias might be found to exist between the study sample group (n = 27) and the attrition group who did not complete the study (n = 22). The measures used and results of the

tests were previously reported in this chapter in Teacher Characteristics and Table 4. From this point forward, all data analysis refers to the study sample group of teachers who did complete the pre-test and the post-test TORP surveys. To ensure teachers of confidentiality in the final report the teachers' unknown ID numbers were recoded with changed letter codes at the time of data analysis.

Different statistical measures were used to generate findings in four research questions. These measures included paired t-tests for dependent samples, two way analysis of variance with repeated measures on one factor and Scheffé post-hoc comparisons. Question 3 did not involve statistical analysis. Relevant findings were represented in a variety of formats including descriptive text, statistical tables, figures drawn from statistical findings, comparative profiles, and a continuum. In the interests of clarity, statistical and non-statistical data analysis procedures specific to each of the five research questions are described within the context of the respective questions which guided the exploration of change in primary teachers' theoretical orientations to reading programs

This chapter described the design of the research study. It included details of the school district and schools, teachers and teacher characteristics, and official guidelines for organized professional development within the district. Information relating to statistical tests for bias within the study sample group was presented. Additionally, the chapter described the development of the research design, the data collection instrument and procedures, pilot work with the instrument, three different organized teacher inservice models, and initial data analysis procedures. The following chapter provides information concerning specific data analysis procedures and relevant findings for each of the five research questions which guided the study.

Chapter 4

ANALYSIS OF THE DATA AND FINDINGS OF THE STUDY

This chapter is divided into six sections of which sections one through five address each of the five research questions which respectively guided the study. Section one describes the data analysis procedures and findings relating to overall change in the teachers' theoretical orientations to reading programs. Section two presents the data analysis procedures and findings pertaining to change and trends of change in the teachers' theoretical orientations to reading programs in terms of the TORP sub-group items classified as Phonics, Skills, or Whole Language. The third section describes the teachers' pre-test and post-test TORP scores in relation to a Phonics to Whole Language continuum in order to infer trends of change in the teachers' theoretical orientations to reading programs and compatibility with Whole Language reading programs. Section four describes the data analysis procedures and findings relating differences in pre-test / post-test TORP total mean scores to teacher characteristics of age, years of teaching experience, professional training, and grade level designation. The fifth section presents the data analysis procedures and findings relating to change in the teachers' theoretical orientations to reading programs and the teachers' differing experiences with organized inservice about progressive, child-centred educational programs. The final section is devoted to a summary of the findings of the study.

Question 1 Will comparative analysis of the teachers' pre-test and post-test total scores on the TORP reveal that the teachers' theoretical orientations to reading programs have changed significantly over 33 months?

The SPSS-X release revealed that the teachers' total TORP scores ranged 55 - 109 on the pre-test and 58 - 119 on the post-test. Changes in individual teacher's total TORP scores were computed manually and checked by calculator. All teachers' pre-test scores, post-test scores and noted changes are shown in Table 5.

Table 5

Teachers' total TORP pre-test scores, post-test scores and recorded changes

Teacher	Pre-test	Post-test	Change	Teacher	Pre-test	Post-test	Change
A	80	90	+10	O	68	77	+9
B	75	75	0	P	88	99	+11
C	65	81	+16	Q	63	70	+7
D	55	58	+3	R	71	91	+20
E	77	88	+11	S	71	103	+32
F	71	95	+24	T	75	80	+5
G	69	100	+31	U	85	74	-11
H	62	66	+4	V	109	119	+10
I	75	90	+15	W	77	111	+34
J	83	81	-2	X	57	83	+26
K	56	76	+20	Y	76	83	+7
L	67	62	-4	Z	93	114	+21
M	68	83	+15	A2	75	101	+26
N	51	84	+33				

Almost all teachers changed their pre-test scores on the total TORP at the post-test level. Four teachers maintained or lowered their pre-test scores (Teachers B(0), J(-2), L(-5), and U(-11)). Changes in the remainder of the group's post-test scores ranged between +3 and +34. Of this group, six teachers indicated a low

incidence of change (Teachers D(+3), H(+4), T(+5), Q(+7), Y(+7), O(+9)); seven teachers demonstrated a moderate incidence of change (Teachers V(+10), A(+10), P(+11), E(+11), M(+15), I(+15), C(+16)) and ten teachers indicated a high incidence of change (Teachers R(+20), K(+20), Z(+21), F(+24), A2(+26), X(+26), G(+31), S(+32), N(+33), W(+34)). In order to determine whether the numerical changes in the teachers' pre-test and post-test total TORP scores could be considered statistically significant, a paired t-test was used for comparative analysis of the teachers (n=27) total score means. The results of the paired t-test comparative analysis are shown in Table 6.

Table 6

Comparative analysis of teachers' pre-test and post-test TORP total score means

Variable	Mean	Standard Deviation	T-value	Prob.
Pre-test	72.67	12.43	-5.92	0.000
Post-test (n=27)	86.44	15.31		

The paired t-test revealed a statistically significant difference between the teachers' total TORP pre-test and post-test means (m=72.67, SD=12.43; m=86.44, SD=15.31 respectively). Significant correlations between the teachers' pre-test and post-test mean scores of r= 0.638 (p= 0.000) were revealed. The lower standard deviation at the pre-test level (SD= 12.43) suggests that the group of teachers' became less unified in their beliefs about reading programs over 33 months. When couched in terms of percentages the post-test total TORP mean represented an

18.95% increase (dm = -13.78) over the pre-test mean score. Given the relatively small size of the study sample the significance level (p= .000) is considered to be very strong. These results allowed the researcher to infer that as a group the primary teachers' theoretical orientations to reading programs changed over 33 months. The nature of that change is explored further in Question 2.

Question 2 Will comparative analysis of the teachers' pre-test and post-test mean scores for TORP item sub-groups classified as Phonics, Skills, or Whole Language reveal significant differences and trends of change within those item sub-groups?

Different methods of data analysis were used to determine whether significant differences existed between the teachers' pre-test and post-test TORP scores and to explore trends of change within the TORP sub-group items classified as Phonics, Skills or Whole Language items. Each method of data analysis is described in conjunction with its relevant findings. The TORP Phonics, Skills and Whole Language item sub-groups are treated separately for the purpose of clarity.

The Phonics Item Sub-group

The Phonics item sub-group on the TORP consists of 10 belief statements (see Figure 1 in Chapter 3). Of these 10 statements, DeFord noted items 1, 6, 10, 20, and 22 as being most strongly indicative of a Phonics orientation to reading programs. The scoring for the Phonics item sub-group ranges from 10 - 50 with a lower score registering stronger agreement with the belief statements and a higher score meaning stronger disagreement. The SPSS-X output data revealed that the teachers' scores on the Phonics item sub-group ranged between 16 - 40 on the pre-test and 17 - 45 on the

post-test of the TORP. The teachers' individual pre-test and post-test scores and changes between them are listed in Table 7. The scores are taken from the SPSS-X data. The changes were computed manually and checked for accuracy by calculator.

Table 7

Teachers' Phonics sub-group item pre-test scores,
post-test scores and recorded changes

Teacher	Pre-test	Post-test	Change	Teacher	Pre-test	Post-test	Change
A	21	29	+8	O	19	21	+2
B	25	25	0	P	29	4	+5
C	18	23	+5	Q	22	23	+1
D	16	17	+1	R	20	28	+8
E	26	28	+2	S	22	34	+12
F	24	35	+11	T	26	28	+2
G	18	35	+17	U	28	21	-7
H	23	23	0	V	40	45	+5
I	30	38	+8	W	25	36	+11
J	29	26	-3	X	18	29	+11
K	21	27	+6	Y	26	29	+3
L	23	17	-6	Z	30	39	+9
M	22	26	+4	A2	24	35	+11
N	18	34	+16				

The data in Table 7 indicates that five teachers either maintained (Teachers B(0), H(0)), strengthened their agreement (,Teachers L(-6), U(-7)), or lessened disagreement (Teacher J(-3)) with Phonics belief statements at the post-test level. The higher post-test scores of the other 22 teachers generally indicates less

agreement or greater disagreement with Phonics belief statements at the post-test level than was exhibited at the pre-test level. Changes in 11 teachers' pre-test/post-test scores suggested a slight change in their beliefs relating to the Phonics item sub-group (Teachers D(+1), Q(+1), O(+2), E(+2), T(+2), Y(+3), M(+4), C(+5), P(+5), V(+5), K(+6)). Nine teachers indicated a moderate change (Teachers A(+8), R(+8), I(+8), Z(+9), A2(+11), X(+11), W(+11), F(+11), S(+12)) and two teachers registered a high change (Teachers N(+16), G(+17)). To determine whether the noted changes in the teachers' pre-test/post-test scores on the Phonics item sub-group reached a level of statistical significance a paired t-test was used on the teachers' (n=27) mean scores for the item sub-group. The results of the paired t-test are given in Table 8.

Table 8

Comparative analysis of pre-test and post-test Phonics item sub-group mean scores

Variable	Mean	Standard Deviation	T-value	Prob.
Pre-test	23.81	5.14	-4.54	0.000
Post-test	29.07	6.89		

(n=27) A lower score registers stronger agreement. A higher score registers stronger disagreement. Possible score range = 10 - 50.

These results indicate a highly significant difference (p = .000) between the teachers' pre-test and post-test mean scores on the Phonics item sub-group. Change in the teachers pre-test/post-test mean scores was calculated at 22.09% (dm= -5.26). A significant correlation of r=.531 (p= .004) was revealed between the pre-test and

post-test mean scores. The higher post-test standard deviation (SD= 6.89) suggests less unity in the group's beliefs about Phonics in reading programs at the post-test level. The results of the paired t-test suggest an inference that the teachers were significantly less in agreement with belief statements accorded to Phonics theoretical orientations to reading programs at the post-test level. However, these results do not indicate whether the confirmed changes in the teachers' level of agreement with Phonics belief statements extended into those sub-group items which DeFord noted as being most strongly indicative of the Phonics orientation. A paired t-test was done to determine whether the teachers' mean scores on the strong Phonics items (items 1, 6, 10, 20, and 22) also changed at a statistically significant level. The scoring range for this test was 5 - 25 with a lower score registering stronger agreement with the belief statements. The results of the comparative analysis of the teachers' (N=27) strong Phonics item sub-group mean scores appear in Table 9.

Table 9

Comparative analysis of TORP pre-test and post-test strong Phonics item sub-group

Variable	Mean	Standard Deviation	T-value	Prob.
Pre-test	12.78	3.07	-3.97	0.001
Post-test	15.48	4.32		

(n=27) A lower score registers stronger agreement. A higher score registers stronger disagreement. Possible score range = 5 - 25.

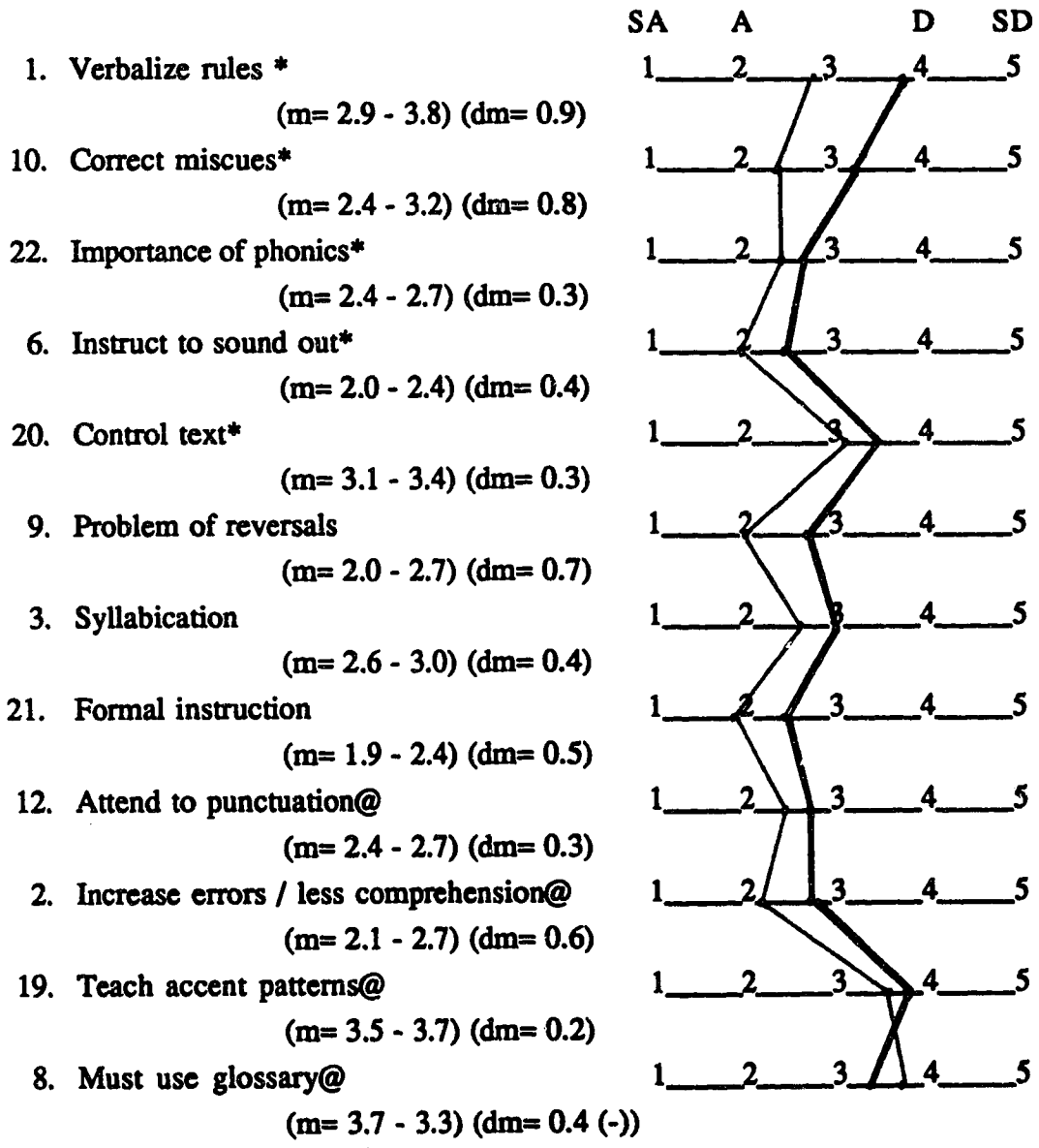
The test results in Table 9 confirmed that significant change (p= .001) occurred in the teachers' post-test TORP responses to the strong Phonics item sub-group. The change between the pre-test mean (m= 12.78, SD= 3.07) and post-test mean (m= 15.48, SD= 4.32) and a mean score increase of 21.13% (dm= -2.70) revealed a significant correlation of r=.586 (p= .000). Change in the teachers' mean scores for the Phonics item sub-group and strong Phonics item sub-group indicated similarities (22.09% and 21.13% respectively) which suggested that the confirmed changes in the teachers' pre-test / post-test scores were distributed throughout the Phonics item sub-group. The tendency for the teachers to exhibit less group unity at the post-test level in the Phonics item sub-group was also noted in the pre-test / post-test standard deviations for the strong Phonics items.

The higher post-test mean scores in Table 8 and Table 9 suggested a general trend that the teachers were becoming less committed to beliefs associated with a Phonics theoretical orientation to reading programs. However, the data analysis to this point did not show clearly whether the teachers agreed or disagreed with Phonics belief statements at either the pre-test or the post-test level. To clarify where the group of teachers' beliefs stood and to highlight any trends of change in the Phonics item sub-group, the researcher opted for a visual representation of the relevant data in the form of comparative pre-test/post-test mean score profiles for the Phonics item sub-group. The mean scores of the teachers' pre-test and post-test responses to each item in the Phonics item sub-group (Items 1, 2, 3, 6, 9, 10, 12, 20, 21, and 22) plus the two Skills items noted by DeFord as beliefs commonly shared by Phonics oriented teachers (Items 8 and 19) were extrapolated from the data print-outs. Pre-test / post-test mean scores for each item were rounded to the first decimal point and plotted manually on a Likert Scale grid as was used in the TORP (see Figure 4). The computations and positioning were double checked for accuracy.

Figure 4

Profiles of teachers' pre-test and post-test item means

for Phonics oriented TORP items



(n=27) Pre-test profile _____ Post-test profile ═══

* indicates strong Phonics items

@ indicates shared practice Phonics and Skills items

The belief statements in Figure 4 are presented in an abbreviated form as per DeFord's descriptive item analysis format (p. 358).

As illustrated in Figure 4, the teachers' pre-test / post-test group means for TORP items associated with Phonics orientations tended to be moderate in that no item mean reflected either strong agreement or strong disagreement. However, interesting trends of change were noted in the comparative profiles. As a general trend, teachers registered less agreement at the post-test level with belief statements associated with Phonics theoretical orientations to reading programs. That is, 11 of the 12 Phonics item sub-group and shared Skills-Phonics items were accorded less agreement or more disagreement in the teachers' post-test TORP responses than had been evident at the pre-test level.

The largest difference mean (dm= 0.9) related to the importance of children's ability to verbalize the rules of phonics (Item 1 m=2.9 - 3.8). As a group, the teachers changed their beliefs from a slight tendency to agree to a strong tendency to disagree with the belief statement. A similar trend was noted in Item 10 where the teachers' moderate tendency to agree (m= 2.4) that oral reading miscues required immediate correction changed on the post-test to a slight tendency to disagree with that belief (m= 3.2 ; dm= 0.8). The teachers appeared less willing to relinquish other Phonics beliefs. Item 6 (children should sound-out words), Item 9 (reversals e.g. 'saw' for 'was'), Item 21 (formal instruction is important), and Item 2 (more reading errors = less comprehension) received solid agreement at the pre-test level (m= 2.0, 2.0, 1.9, 2.1 respectively) and a moderate tendency towards agreement at the post-test level (m= 2.4, 2.7, 2.4, 2.7). The least changes were noted in the teachers' sustained tendency to disagree with teaching accent patterns (Item 19 dm= 0.2) and the phonetic control of reading text vocabulary (Item 20 dm= 0.3). Teachers maintained a moderate tendency to agree with the importance of phonic analysis (Item 22 m=2.4 -

2.7) and paying attention to punctuation in reading (Item 12 m= 2.4 - 2.7) as well as a moderate to slight tendency to agree with syllabication in reading. Only one belief statement (Item 8) concerning the importance of using glossaries and dictionaries was accorded less disagreement in the teachers' post-test responses (m= 3.7 - 3.3).

Summary of Findings for the Phonics Item Sub-group

A highly significant change was found to have evolved in the teachers' beliefs relating to phonics instruction in reading programs over 33 months. Significant differences were indicated between the teachers' pre-test and post-test mean scores for the TORP Phonics item sub-group. Individual pre-test / post-test score ranges were 16 - 40 and 17 - 45 respectively. Group pre-test / post-test mean scores for the Phonics item sub-group (m= 23.81; SD= 5.14: m= 29.07; SD= 6.89) and pre-test / post-test mean scores for the strong Phonics item sub-group (m= 12.78; SD= 3.07: m= 15.48; SD= 4.32) were found to have high significance levels (p= 0.000) and (p= 0.001) respectively (see Table 8 and Table 9). Lower standard deviations at the pre-test level and higher standard deviations at the post-test level for both item sub-groups (SD= 5.14, 3.07 and 6.89, 4.32 respectively) indicated that the group of teachers' beliefs about Phonics were less homogeneous at the post-test level. Similar percentage increases in scores for the Phonics item sub-group (22.09%) and the strong Phonics item sub-group (21.13%) suggested that the significant changes were distributed throughout the Phonics item sub-group belief statements. This suggestion was confirmed by the comparative profiles of the teachers' group mean scores on individual Phonics and shared practice Phonics - Skills items (see Figure 4).

The profiles revealed a general trend for the teachers to agree less and disagree more with belief statements associated with Phonics theoretical orientations

to reading programs at the post-test level. However, there was still a tendency for teachers to agree with belief statements concerning the importance of phonics, desirability of sounding out words, importance of formal reading instruction, and attention to punctuation in reading. As well, the teachers maintained a tendency to agree that reversals in reading were a problem, to equate reading accuracy with comprehension and support syllabication. Teachers demonstrated the most change in their pre-test tendency to agree and post-test tendency to disagree with beliefs about the importance of verbalizing phonics rules and correcting oral reading miscues. The teachers' tendencies to disagree with phonetically controlled texts and the teaching of accent patterns in reading were increased while a tendency to disagree with the use of glossaries and dictionaries in reading decreased at the post-test level.

The Skills Item Sub-group

The Skills item sub-group on the TORP consists of 10 belief statements (see Figure 2 in Chapter 3). The scoring possibilities for the item sub-group ranges from 10 - 50 with a lower score registering stronger agreement and a higher score registering stronger disagreement with the Skills belief statements. The SPSS-X release revealed that the teachers' individual scores on the Skills item sub-group ranged between 18 - 41 on the pre-test and 20 - 40 on the post-test. The teachers' individual pre-test and post-test scores and score changes are listed in Table 10. The scores were taken from the SPSS-X data and the changes were computed manually and checked for accuracy by computer.

Table 10

Teachers' Skills item sub-group pre-test scores,

post-test scores and score changes

Teacher	Pre-test	Post-test	Change	Teacher	Pre-test	Post-test	Change
A	32	37	+5	O	23	28	+5
B	29	26	-3	P	31	33	+2
C	25	29	+4	Q	30	35	+5
D	18	20	+2	R	32	38	+6
E	29	33	+4	S	26	34	+8
F	26	34	+8	T	31	31	0
G	25	34	+9	U	28	29	+1
H	18	21	+3	V	41	40	-1
I	26	32	+6	W	29	40	+11
J	28	29	+1	X	18	29	+11
K	19	29	+10	Y	30	33	+3
L	22	21	-1	Z	34	40	+6
M	26	31	+5	A2	28	36	+8
N	20	29	+9				

The data in Table 10 indicate that four teachers maintained (Teacher T(0)), minimally strengthened agreement (Teacher L(-1)) or lessened disagreement (Teachers V(-1), B(-3)) with Skills belief statements at the post-test level. The 23 teachers who increased their pre-test scores indicated less agreement or more disagreement with TORP statements associated with a Skills theoretical orientation to early reading programs. Changes in 15 teachers' pre-test / post-test scores suggested a slight change in the Skills item sub-group (Teachers J(+1), U(+1), D(+2), P(+2), H(+3), Y(+3), C(+4), E(+4), A(+5), M(+5), O(+5), Q(+5), I(+6), R(+6), and

Z(+6)). Eight teachers indicated a moderate change (Teachers F(+8), S(+8), A2(+8), G(+9), N(+9), K(+10), W(+11), and X(+11)) and no teacher indicated a high change. A paired t-test was used to determine whether the noted changes in the teachers' pre-test / post-test scores on the TORP Skills item sub-group reached a level of statistical significance. The results of the paired t-test based on the teachers' mean scores for the item subgroup are given in Table 11.

Table 11

Comparative analysis of pre-test and post-test

Skills item subgroup mean scores

Variable	Mean	Standard Deviation	T-value	Prob.
Pre-test	26.81	5.43	-6.41	0.000
Post-test	31.52	5.48		

(n=27) A lower score registers stronger agreement. A higher score registers stronger disagreement. Possible score range = 10 - 50.

The results in Table 11 indicate a highly significant difference (p = 0.000) between the teachers' pre-test and post-test mean scores for the Skills item sub-group. The difference in pre-test / post-test mean scores (m= 26.81; 31.52) represented a significant correlation of r=.756 (p= .000) and a 17.53% increase (dm= -4.70) over the pre-test mean score. The similar pre-test / post-test standard deviations (5.43 and 5.48) suggest that the teachers maintained a degree of unity in their beliefs about Skills in reading programs over the 33 months. The statistical data support inferences that a significant change had occurred in the the teachers attitudes

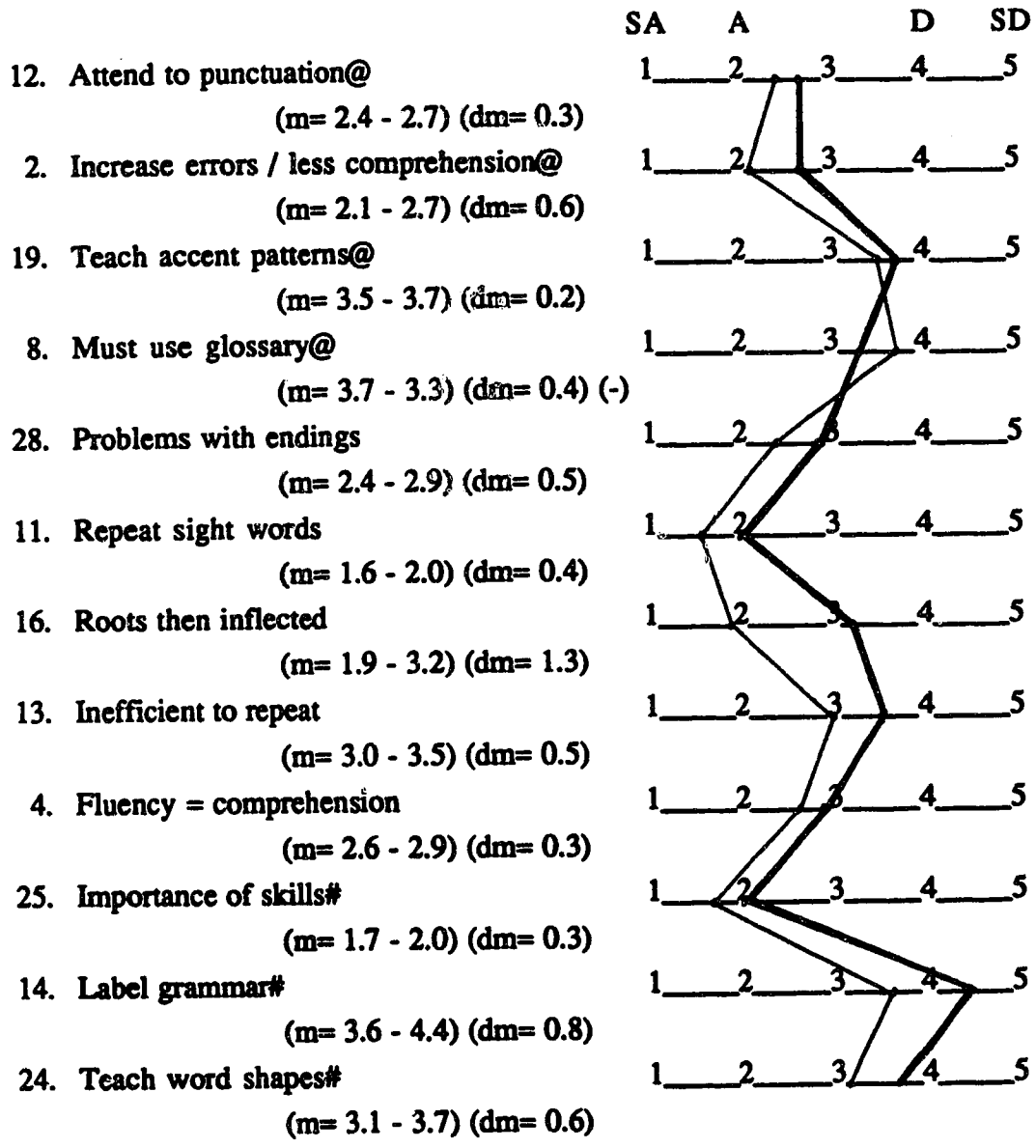
towards Skills in reading and that the teachers were significantly less in agreement with belief statements associated with Skills theoretical orientations to reading programs at the post-test level.

Although the statistical data confirmed the existence of significant change, it did not clarify the nature of that change or the change trends which might be found to exist. Therefore, a comparative pre-test / post-test profile of mean scores for each Skills item was prepared using data analysis procedures similar to those used in the Phonics item profile. The mean scores of the teachers' pre-test and post-test responses to each item in the Skills item sub-group (Items 4, 8, 11, 13, 14, 16, 19, 24, 25 and 28) and the two Phonics - Skills shared practice items (2 and 12) were extrapolated from the SPSS-X data. Although items 2, 8, 12, and 19 were included in the Phonics comparative profile the data are duplicated in Figure 5 in order to present a complete picture of change and change trends in items associated with a Skills theoretical orientation to reading programs.

Figure 5

Profiles of teachers' pre-test and post-test item means

for Skills oriented TORP items



(n=27) Pre-test profile _____ Post-test profile ═══

@ indicates shared practice Phonics and Skills items

# indicates shared practice Skills and Whole Language items

The Skills comparative profile in Figure 5 indicated less moderate item means than had been observed in the Phonics comparative profile (see Figure 4). Two Skills item mean scores reflected moderately strong agreement at the pre-test level (Items 11 and 25) and Item 14 reflected moderately strong disagreement at the post-test level. The profile indicated a general trend for the teachers, as a group, to register less agreement or more disagreement with belief statements associated with Skills theoretical orientations to reading programs at the post-test level in 11 of the 12 included items. The item mean which indicated less disagreement at the post-test (Item 8) was discussed previously as a shared practice Phonics and Skills item. The largest difference mean (dm=1.3) related to change from solid agreement (m=1.9) to a slight tendency to disagree (m= 3.2) in the teachers' beliefs about introducing root words before inflected forms (Item 16). In all other items the teachers modified but retained their pre-test tendencies to either agree or disagree with the belief statements. The least changes in group means were reflected in Items 19, 12, 4 and 25 with respective difference means of 0.2, 0.3, 0.3, and 0.3. The teachers maintained solid agreement with beliefs concerning the repetition of sight words (Item 11, m= 1.6 - 2.0) and the importance of teaching skills (Item 25, m= 1.7 - 2.0). A moderate tendency to agree with attention to punctuation was maintained (Item 12, m= 2.4 - 2.7). The teachers also maintained tendencies to agree with belief statements equating reading accuracy and reading fluency with comprehension (Items 2 and 4) and pointing out problems with word endings (Item 28). In terms of disagreement, the teachers maintained tendencies to disagree with beliefs concerning inefficiency of repetition in oral reading (Item 13), teaching word shapes (Item 24) and teaching accent patterns (Item 19). The strongest disagreement was accorded to Item 14 (m= 3.6 - 4.4) which related to the usefulness of children's ability to label grammar in reading.

Summary of Findings for the Skills Item Sub-group

A significant difference (p= 0.000) between the teachers' pre-test and post-test mean scores for the Skills item sub-group suggested a significant change over 33 months in the teachers' beliefs relating to skills instruction in reading programs. Similar levels in homogeneity of beliefs were noted in the pre-test and post-test standard deviations (SD= 5.43, 5.48) and the respective mean scores revealed a significant correlation of r=.756 (p= 0.000). The percentage increase in the pre-test item sub-group mean score (17.53%) was less than the increase noted for the Phonics item sub-group. The individual teachers' score changes between the pre-test and the post-test, as shown in Table 10, were described as being slight or moderate with no teacher indicating a high score change. The comparative profile data in Figure 5 confirmed that the teachers, as a group, showed stronger agreement or disagreement with Skills belief statements than with Phonics belief statements (see Figure 4).

The pre-test / post-test comparative profiles in Figure 5 revealed a general trend for teachers to agree less or disagree more with belief statements associated with Skills theoretical orientations at the post-test level. Group means for individual Skills sub-group items revealed sustained solid agreement with the importance of teaching skills (Item 25) and of the repetition of sight words (Item 11). In addition, the teachers sustained their agreement with belief statements equating reading accuracy (Item 2) and fluency (Item 4) with comprehension and the importance of attending to punctuation (Item 12) and word endings in reading (Item 28). As a group, the teachers indicated sustained but increased disagreement with teaching accent patterns (Item 19) and word shapes (Item 24) and labelling grammar (Item 14). They also sustained disagreement with a belief that repetition of words or phrases in oral reading denotes an ineffective reader (Item 13). The largest pre-test / post-test mean score difference indicated a belief change from solid agreement to a

slight tendency to disagree that root words should be introduced before their inflected forms (Item 16). The smallest difference mean reflected the teachers' sustained disagreement with teaching accent patterns (Item 19).

The Whole Language Item Sub-group

On the TORP the Whole Language item sub-group consists of eight belief statements (see Figure 3 in Chapter 3). DeFord noted five of the eight statements as being most strongly indicative of Whole Language theoretical orientations to reading programs (Items 15, 17, 23, 26, 27). The Whole Language item sub-group score range is 8 - 40 with a lower score registering stronger agreement with the beliefs and a higher score registering stronger disagreement. The SPSS-X release for the present study revealed a pre-test score range of 19 - 37 and a post-test score range of 13 - 36 for the Whole Language item sub-group. The teachers' individual pre-test and post-test scores and changes between them are listed in Table 12. The individual scores were derived from the computer data. Changes between pre-test and post-test scores were computed manually and checked for accuracy by calculator.

Table 12

Teachers' Whole Language sub-group item pre-test scores, post-test scores and changes

Teacher	Pre-test	Post-test	Change	Teacher	Pre-test	Post-test	Change
A	21	24	+3	O	22	20	-2
B	27	24	-3	P	20	16	-4
C	26	19	-7	Q	37	36	-1
D	27	27	0	R	29	23	-6
E	26	21	-5	S	25	13	-12
F	27	22	-5	T	30	27	-3
G	22	17	-5	U	19	24	+5
H	27	26	-1	V	20	14	-6
I	29	28	-1	W	25	13	-12
J	22	22	0	X	27	23	-4
K	32	28	-4	Y	28	27	-1
L	26	24	-2	Z	19	13	-6
M	28	22	-6	A2	25	18	-7
N	35	27	-8				

The teachers' individual data in Table 12 indicate that four teachers maintained their disagreement (Teachers D (0) and J (0)), increased disagreement (Teacher A (+3)) or changed from agreement to disagreement (Teacher U (+5)) with Whole Language belief statements at the post-test level. The lower post-test scores of the other 23 teachers indicate either stronger agreement or less disagreement with Whole Language belief statements at the post-test level. Changes in 18 teachers' pre-test / post-test scores suggested a slight change (Teachers H (-1), I (-1), Q (-1), Y (-1), L (-2), O (-2), B (-3), T (-3), K (-4), P (-4), X (-4), E (-5), F (-5), G (-5), M (-6), R (-6), V (-6), Z (-6)) and five teachers indicated a moderate change (Teachers C (-7),

A2 (-7), N (-8), S (-12), W (-12)). To determine whether the noted changes in the teachers' scores reached a level of statistical significance a paired t-test was done using the teachers' (n= 27) mean scores for the Whole Language item sub-group. The results of the paired t-test are shown in Table 13.

Table 13

Comparative analysis of pre-test and post-test Whole Language item sub-group mean scores

Variable	Mean	Standard Deviation	T-value	Prob.
Pre-test	25.96	4.51	5.13	0.000
Post-test	22.15	5.54		

(n=27) A lower score registers stronger agreement. A higher score registers stronger disagreement. Possible score range is 8 - 40.

The results of the paired t-test in Table 13 indicate a significant difference (p= 0.000) between the teachers' pre-test and post-test mean scores (m= 25.96, 22.15) on the Whole Language item sub-group. A significant correlation of r=.723 (p= 0.000) was revealed between the pre-test and post-test mean scores. A 14.68% decrease was noted in the pre-test mean score. The lower post-test mean score suggests that the teachers were significantly more in agreement or less in disagreement with belief statements associated with Whole Language theoretical orientations at the post-test level. The higher post-test standard deviation (SD= 4.51, 5.54) indicates that the teachers' responses were more unified at the pre-test level. The results do not show whether the confirmed changes in the teachers' agreement or disagreement with

Whole Language belief statements extended into those sub-group items which DeFord noted as being most strongly indicative of the Whole Language theoretical orientation. A paired t-test was used to determine whether a statistically significant difference in pre-test / post-test mean scores might be found on the strong Whole Language item sub-group. The scoring range for this test was 5 - 25 with a lower score registering stronger agreement and a higher score registering stronger disagreement with the sub-group items. The results of the comparative analysis of the teachers' (n=27) strong Whole Language item sub-group mean scores appear in Table 14.

Table 14

Comparative analysis of TORP pre-test and post-test strong Whole Language item sub-group mean scores

Variable	Mean	Standard Deviation	T-value	Prob.
Pre-test	16.19	3.90	4.62	0.000
Post-test	13.52	4.15		

(n=27) A lower score registers stronger agreement. A higher score registers stronger disagreement. Possible score range is 5 - 25.

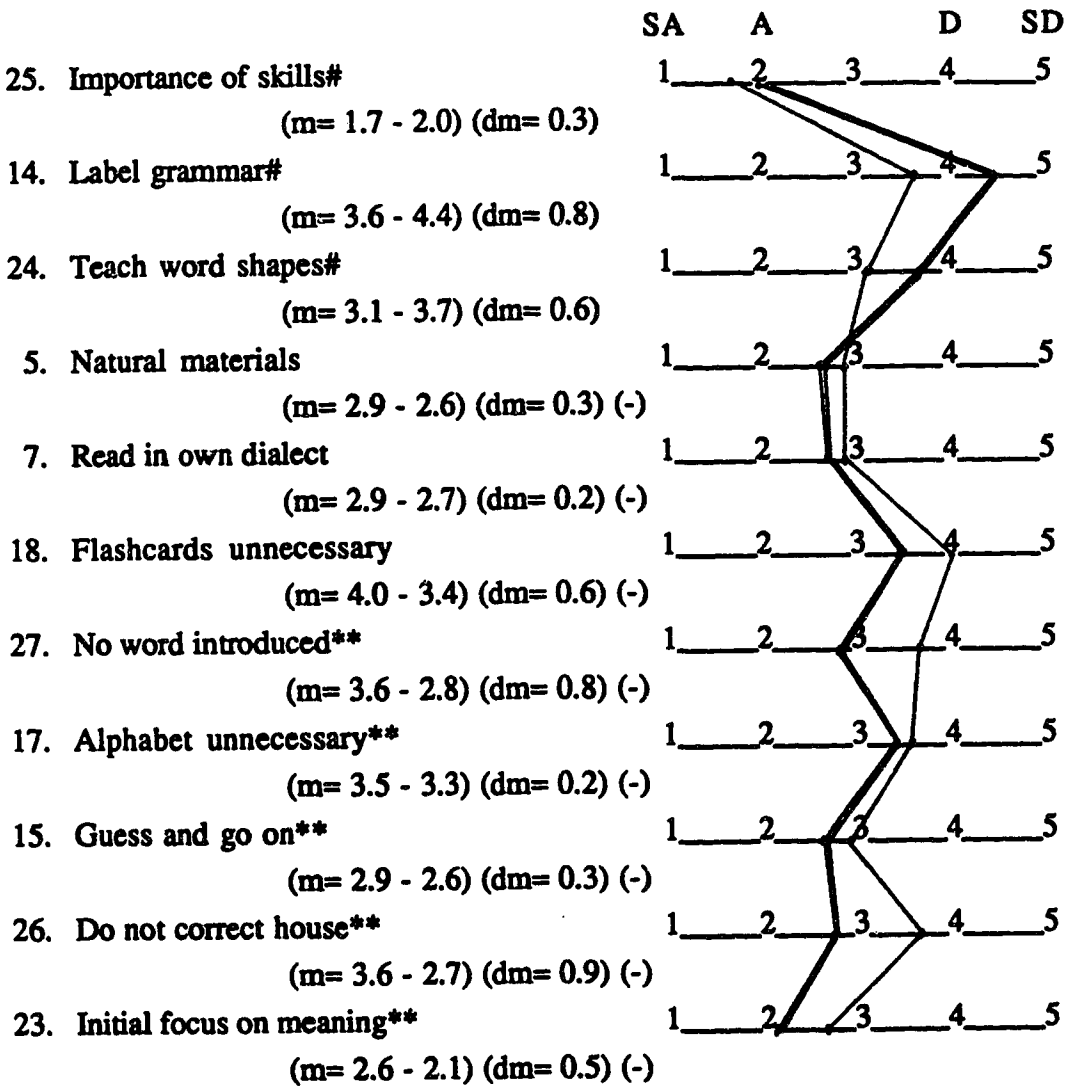
The paired t-test results in Table 14 confirmed a significant difference (p= 0.000) in the teachers' pre-test / post-test TORP responses to the strong Whole Language item sub-group. The pre-test / post-test mean scores revealed a significant correlation of r=.724 (p= 0.000). The teachers were more unified in their post-test responses to this item sub-group than to the Whole Language item sub-group as

indicated by the respective post-test standard deviations of 4.15 and 5.54. The difference in the pre-test / post-test mean scores represents a 16.49% decrease in the pre-test mean score which is higher than the decrease percentage recorded for the Whole Language item sub-group and suggests that the confirmed change in the teachers' beliefs about Whole Language belief statements was distributed throughout the Whole Language item sub-group.

The lower post-test means in Table 13 and Table 14 suggested a general trend that teachers were becoming more committed or less in disagreement with beliefs associated with Whole Language theoretical orientations to reading programs. However, the data give little information on the actual nature of the change which evolved. In order to clarify this and any trends of change in the Whole Language item sub-group a comparative profile of sub-group item mean scores was prepared following the same data analysis procedures as those used for the Phonics and Skills comparative profiles. In the Whole Language pre-test / post-test comparative profile three shared practice Skills and Whole Language items are included in order to present a complete picture of change and change trends in items associated with Whole Language theoretical orientations to reading programs. The comparative profile appears as Figure 6.

Figure 6

Comparative profile of teachers' pre-test and post-test item mean scores for Whole Language oriented TORP items



(n=27) Pre-test profile _____ Post-test profile ═══

# indicates shared practice Skills and Whole Language items

** indicates strong Whole Language items

As shown in Figure 6, the teachers' pre-test / post-test group item means were moderate in all Whole Language sub-group items and less moderate in the Skills - Whole Language shared practice items. In addition, a reversal of change trends was noted between the Whole Language and Skills - Whole Language items in that change trends in Whole Language items consistently increased agreement or decreased disagreement while change trends in Skills - Whole Language items decreased agreement or increased disagreement with the respective belief statements. The largest pre-test / post-test difference means for the Whole Language item sub-group related to the teachers' changing beliefs from tendencies toward disagreement to tendencies toward agreement that reading miscues may not require correction (Item 26, dm= 0.9) or that new words need not be introduced (Item 27, dm= 0.8). The smallest pre-test / post-test differences were noted in the teachers' sustained tendencies to agree that children should read in their own dialect (Item 7, dm= 0.2) and to disagree that teaching of the alphabet is unnecessary (Item 17, dm= 0.2). The teachers maintained but modified their solid disagreement that flashcards are unnecessary (Item 18, m= 4.0 - 3.6) and maintained agreement with items relating to the use of natural reading materials (Item 5), the initial focus in reading on meaning (Item 23), and the encouragement of guessing at unknown words in text (Item 15).

Summary of Findings for the Whole Language Item Sub-group

A significant change was noted in the teachers' beliefs relating to Whole Language practices in reading programs. Significant differences (p= 0.000) were found between the pre-test and post-test mean scores for both the Whole Language and the strong Whole Language item sub-groups. Individual item sub-group score ranges were 19 - 37 (pre-test) and 13 - 36 (post-test). The pre-test / post-test mean scores for the Whole Language item sub-group (m= 25.96 ; 22.15) and strong Whole

Language item sub-group (m= 16.19 ; 13.52) indicated percentage decreases of 14.68% and 16.49% respectively. The lower post-test means suggested either stronger agreement or less disagreement with belief statements associated with Whole Language theoretical orientations after 33 months. Lower pre-test standard deviations for both item subgroups (SD= 4.52, 5.55 ; 3.90, 4.15) suggested that the teachers' beliefs were more unified at the pre-test than at the post-test. The comparative profiles of mean item scores for statements relating to Whole Language practices indicated general trends of change toward increased agreement or less disagreement with Whole Language sub-group items and less agreement and more disagreement with Skills - Whole Language shared practice items. The teachers indicated sustained agreement with the use of natural reading materials, children reading in their own dialects, initially focusing on meaning in reading and encouraging readers to guess at unknown words (Items 5, 7, 23, and 15). There was sustained disagreement that flashcards and the alphabet are unnecessary (Items 18 and 17). The teachers changed their pre-test disagreement to post-test agreement tendencies that new words need no introduction and that miscues which do not interfere with meaning can be left uncorrected (Items 27 and 26).

Summary of Findings for TORP Phonics, Skills and Whole Language Item Sub-groups

Significant differences and correlations were found between the teachers' pre-test and post-test mean scores on all TORP item sub-groups (Phonics, strong Phonics, Skills, Whole Language, and strong Whole Language). Higher post-test standard deviations in all item sub-groups suggested that the teachers were less unified in their beliefs after 33 months. The highest percentage differences between pre-test and post-test mean scores were found in the Phonics item sub-groups and the

lowest related to the Whole Language item sub-groups. Changes in individual teachers' scores on each of the Phonics, Skills and Whole Language item sub-groups indicated that five teachers maintained or strengthened their pre-test commitment to Phonics beliefs, four teachers maintained or strengthened their pre-test commitment to Skills beliefs and four teachers maintained or lessened their pre-test commitment to Whole Language beliefs. General trends of change in the majority of teachers' individual scores indicated either slight or moderate movement in beliefs towards less commitment to Phonics and Skills belief statements and more commitment towards Whole Language belief statements.

Comparative profiles of the teachers' mean scores on individual TORP items confirmed the general trends of change. On the post-test, the teachers' indicated less agreement and more disagreement with 19 of 20 Phonics and Skills items and more agreement and less disagreement with all Whole Language items. The pre-test / post-test item mean scores revealed high levels of eclecticism in the teachers' beliefs. That is, the teachers sustained but modified pre-test tendencies of agreement with 15 separate TORP items (Phonics - 7, Skills - 4, Whole Language - 4) and sustained but modified tendencies of disagreement with 8 items (Phonics - 1, Skills - 5, Whole Language - 2). Only 5 items involved a shift in beliefs from tendencies of agreement to disagreement (Phonics - 2, Skills - 1) and tendencies of disagreement to agreement (Whole Language - 2). Examination of the difference means for each of the 23 TORP items in which the teachers modified but sustained their pre-test beliefs revealed that 61% of the modifications involved only a slight change (dm= 0.1 - 0.4) in the pre-test position and 39% were viewed as moderate changes (dm= 0.5 - 1.0). It was also noted that the teachers' sustained agreement tendencies were modified less than sustained disagreement tendencies (Agree - 66.6% slight, 33.3% moderate; Disagree - 50% slight, 50% moderate). Not surprisingly, the highest pre-test / post-test

difference means (dm= 0.8 - 1.3) related to a shift in belief tendencies from disagreement to agreement or vice versa.

Discussion of Findings

Although significant differences were determined between the teachers' pre-test and post-test mean scores for every TORP item sub-group, exploration of those differences revealed that much of the confirmed change involved only slight or moderate adjustment of the teachers' pre-test beliefs about reading programs. Therefore, over a period of 33 months, actual change in teachers' beliefs might be viewed as limited in that only five TORP belief statements reflected tendencies towards changed beliefs. This finding offers support to the common perception in the literature that change in theoretical orientation is a lengthy process of gradually modifying and replacing old theories about knowledge, children and learning with new theories through experience and experimentation over an extended period of time. In terms of Whole Language theoretical orientation goals for the teachers, the general trends of change in the teachers' pre-test and post-test scores appear to support inferences that the teachers' commitments to traditional, behaviourist Phonics and Skills theories are slowly decreasing while progressive, process-oriented Whole Language beliefs are slowly increasing. Predictions of how long such a process might eventually take are beyond the scope of this study but the present findings suggest an inference that theoretical change requires much longer than 33 months.

Question 3: Will comparison of the teachers' pre-test and post-test TORP scores with DeFord's Phonics - Skills - Whole Language continuum reveal trends of change in theoretical tendencies towards reading programs and compatibility with Whole Language theoretical orientations to reading as classified and measured by the TORP?

No statistical analysis was used in answering this question. Instead, a descriptive and numerical continuum was developed and the teachers' individual pre-test and post-test numerical positions and directions of change were accurately plotted and recorded in order to clarify trends of change over 33 months in those positions and to visually represent an accurate picture of the compatibility of teachers' theoretical tendencies with Whole Language theoretical orientations,as measured and classified by the TORP.

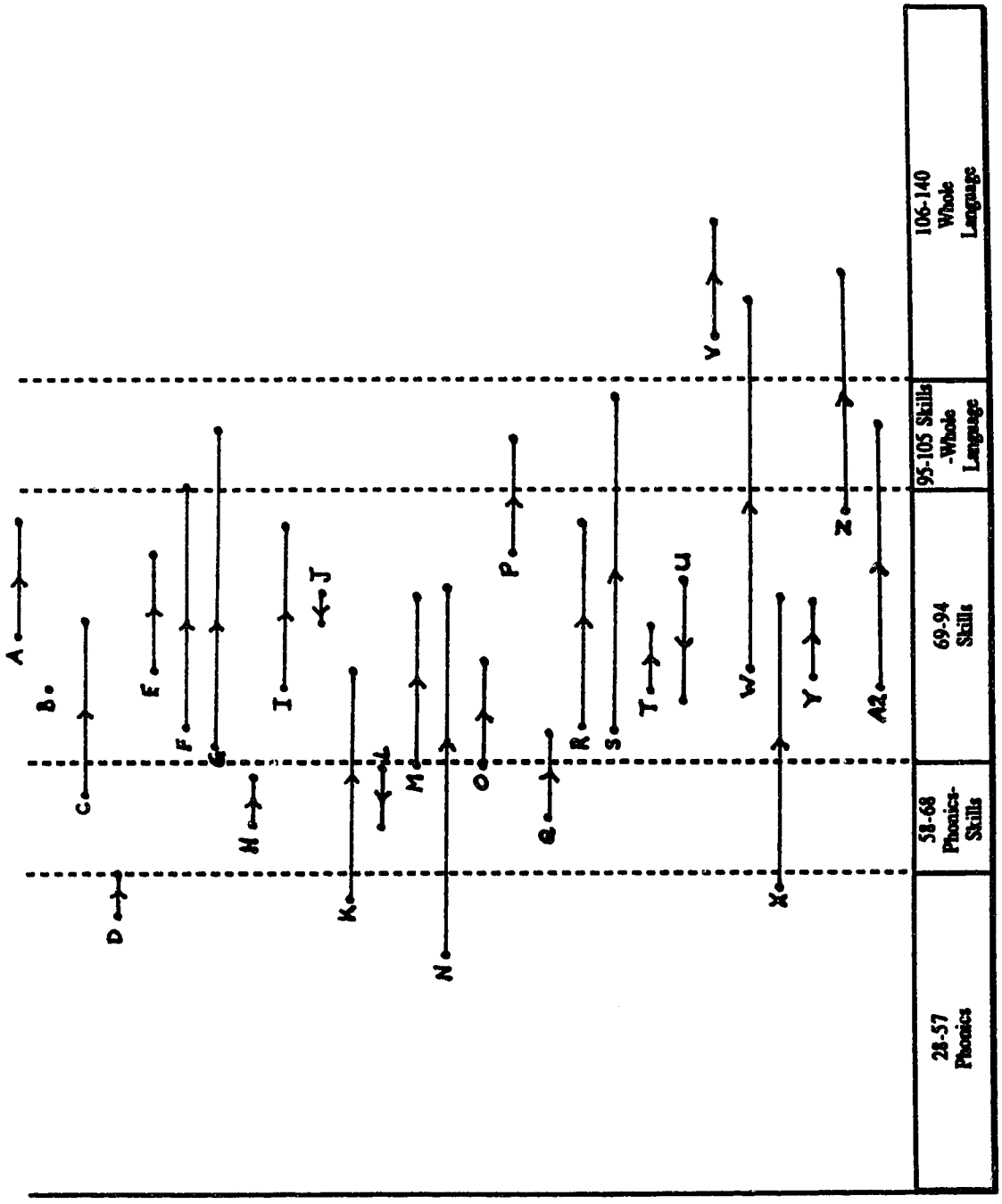
DeFord (1985) noted that most reading programs fall along a continuum of practices rather than into three distinct categories of Phonics, Skills and Whole Language. She pointed to important areas of overlapping between Phonics and Skills and between Skills and Whole Language and noted that belief systems characterizing eclecticism fall in the middle ranges of the Phonics - Skills - Whole Language continuum. The continuum format used for the present data analysis reflected two adaptations to DeFord's generic continuum. The first involved labelling the areas of overlapping influence as 'Phonics - Skills' and 'Skills - Whole Language' in order to facilitate discussion specific to those areas. This resulted in five ranges on the descriptive continuum (Phonics - Phonics-Skills - Skills - Skills-Whole Language - Whole Language).

The second adaptation involved combining the descriptive continuum with a corresponding numerical continuum to facilitate accurate positioning of the teachers'

pre-test and post-test TORP scores. This proved a more difficult task because DeFord omitted numerical ranges from her descriptive data. However, she did include mean scores and standard deviations for each of her teacher sample groups (n=30) and suggested that they might serve as reference data (Phonics m= 61.5, SD= 6.67; Skills m= 70.4, SD= 12.36; Whole Language m= 134.6, SD= 4.45). From these data, a numerical range of 58 - 68 was accorded as a reasonably accurate Phonics-Skills range on the continuum. However, DeFord's mean scores and standard deviations were not helpful in determining the Skill-Whole Language overlap numerical range. Hoffman and Kugle (1982) used numerical equivalencies of Phonics 28 - 66, Skills 66 - 100, Whole Language 100 - 140 in their research based on DeFord's earlier work in developing the instrument. On this basis, the Skills-Whole Language range was approximated at 95 - 105 on the adapted continuum but that approximation is viewed with caution as a discussion range only. Therefore, the numerical continuum was established as Phonics 28 - 57, Phonics-Skills 58 - 68, Skills 69 - 94, Skills-Whole Language 95 - 105, Whole Language 106 - 140. Further cautions are in order before proceeding with the findings. The teachers' individual positions on the continuum are accurate representations of numerical equivalencies and, as such, suggest theoretical tendencies rather than specific definitions of individual teacher's theoretical orientations. In addition the problems of regression toward the mean, inherent in individual pre-test / post-test score comparisons, suggest an inferential rather than absolute interpretation of the continuum data. The teachers' positions on the continuum are shown in Figure 7.

Figure 7

Comparison of teachers' pre-test and post-test theoretical tendencies to a descriptive and numerical continuum



As illustrated in Figure 7, the theoretical tendencies indicated by the teachers' pre-test and post-test ( ) scores included Phonics 4 (0), Phonics-Skills 6 (3), Skills 16 (16), Skills-Whole Language 0 (4) and Whole Language 1 (3). The teachers' individual positions on the continuum clearly reflect differences in direction and degree of change and suggested interesting change trends. In terms of direction of change, the general trends away from Phonics and towards Skills and Whole Language which were noted previously in Questions 1 and 2 were highlighted by the continuum format in that 23 teachers moved away from Phonics, Teacher B maintained the pre-test position and Teachers J, L and U moved towards Phonics and away from Whole Language tendencies.

In terms of degree of change over 33 months, an important trend appeared in the individual nature of theoretical change in that some teachers indicated more flexibility and made substantial movement (e.g. Teachers K, N, W, Z) while others moved very slightly (e.g. Teachers J, D, H, T) in the same period of time. In terms of the ranges on the continuum, a change trend was revealed in that 22 teachers moved within the pre-test range (13) or into the adjoining range (9). In the latter, the movement into an adjoining range was considered borderline for Teachers D, F, M and O. The remaining teachers moved within two ranges of their pre-test position only. It was interesting to note a further trend that no teacher moved from pre-test Phonics or Phonics-Skills theoretical tendencies to Skills-Whole Language or Whole Language theoretical tendencies as determined by the continuum ranges. Exploration of this trend suggested that 4 of 7 teachers who did move from Phonics or Phonics-Skills ranges into the Skills range maintained their alignment with Phonics within that new position (Teachers C, K, O, Q) while Teachers X and M indicated only marginal change in their alignment with Phonics also. Exploration of the teachers' changing positions within the Skills range indicated that 6 of the 10 teachers who stayed within

the Skills range realigned their theoretical tendencies from a Phonics alignment to a Whole Language alignment (Teachers A, E, F, G, I, R, Y), and 2 teachers reversed that trend (Teachers J, U).

It might be expected that teachers exhibiting some predisposition towards Whole Language at the pre-test level would indicate a higher degree of change at the post-test level. The teachers' pre-test and post-test positions on the continuum do not support that line of thinking and suggest a trend that pre-test disposition in theoretical tendencies do not translate into different degrees of change. In other words, teachers who indicated some alignment with Whole Language theoretical tendencies at the pre-test (Teachers J, P, U, V, Z) did not register a higher degree of change than other teachers who indicated pre-test alignment with Phonics theoretical tendencies (e.g. Teachers K, N, X, S, R, W).

In terms of the teachers' compatibility with Whole Language theoretical orientations, the teachers' pre-test and post-test positions on the continuum suggest that one teacher (Teacher V) indicated compatibility at the pre-test and three teachers (Teachers V, W, Z) indicated compatibility at the post-test. However, the approximation of the Skills-Whole Language range on the continuum may introduce some caution in acceptance of that number of teachers. Also, the three teachers' post-test scores (111, 114, 119) were quite low compared to DeFord's known Whole Language teachers' mean score (m= 134.6, SD= 4.45) on the TORP. The pre-test / post-test positions of 21 teachers suggest an increasing level of compatibility and a potential for compatibility with Whole Language reading programs but do not suggest that theoretical compatibility was achieved within 33 months.

The teachers' brief written descriptions of their classroom reading programs in 1985-86 and 1988-89 (see Appendix C) were not analyzed as such but were studied

by the researcher in terms of their general "fit" with the trends of change noted in the TORP data in Questions 1, 2 and 3. It was concluded that the noted trends of change and potential for theoretical compatibility with Whole Language theoretical orientations in the future were generally supported in the written descriptions. For example, the 1985-86 descriptions reflected the teachers' general pre-test alignment with Phonics and Phonics-Skills theoretical tendencies and traditional approaches. The teachers generally emphasized adherence to commercial reading materials, associated workbooks, phonics practice and skill development print materials, structured teacher-centred programs and objective evaluation methods. The 1988-89 descriptions reflected the increased eclecticism and trends of change in that the teachers acknowledged more adaptation and ownership of commercial reading materials, wider varieties and techniques relating to reading resources, thematic and integrated approaches, more focused integration of personal writing in reading programs, less isolation of skills, greater amounts of literature sharing among teachers and students in classrooms, and more personalized evaluation approaches. Some teachers noted personal changes in beliefs and values while others noted personal misgivings about the changing expectations for their programs. It was noticed that change in some teachers' TORP scores was not reflected in their written descriptions of reading programs (e.g. Teachers F, G, K, S). The discrepancy could be accounted for in a host of different ways ranging from the teachers' inability to describe the program fully to the very real possibility that some teachers did not know how to translate their changing beliefs into classroom practice.

Summary of Findings

Interesting trends of change over 33 months were noted in the teachers' pre-test and post-test positions in relation to the continuum. The directional trends of

change suggested in the findings for Questions 1 and 2 were highlighted in the continuum format. That is, 23 teachers moved away from Phonics tendencies and towards Whole Language tendencies. The noted increase in eclecticism in Question 2 resulted in a clustering of teachers within the middle ranges of the continuum as DeFord had predicted.

Important change trends related to the degree of change in teachers' theoretical tendencies over 33 months. Firstly, the diversity noted in the teachers' degrees of change suggested a trend that theoretical change is a highly individual process. Secondly, 22 of 27 teachers remained within one or two ranges on the five-range continuum which suggested that change is a slow, gradual process over an extended period of time. Thirdly, no teachers indicated a change in theoretical tendencies from strong alignment with Phonics beliefs (Phonics or Phonics-Skills ranges) to strong alignment with Whole Language beliefs (Skills-Whole Language or Whole Language ranges) over 33 months. In fact, the pre-test alignment with Phonics beliefs persisted in the majority of these teachers' theoretical tendencies despite their growing eclecticism. That trend of increased eclecticism also appeared to translate into a re-alignment of theoretical tendencies for 80% of teachers who remained in the Skills range over 33 months. Finally, a trend of change was noted in observations that predisposition to theoretical alignment did not effect the degree of change in the teachers' theoretical tendencies. In other words, teachers predisposed towards Whole Language beliefs at the pre-test did not indicate a higher degree of change than teachers who exhibited pre-test Phonics predispositions.

In terms of compatibility of teachers' theoretical tendencies with Whole Language theoretical orientations, the continuum ranges used in this study suggested that three teachers may have achieved some degree of theoretical compatibility but 24 teachers did not achieve that goal. However, the teachers' increased eclecticism and

observed directions of change suggested a potential for future theoretical compatibility with Whole Language theoretical orientations for 21 teachers, given that the trends of gradual change in that direction are maintained over a further extended period of time. The teachers written descriptions of their 1985-86 and 1988-89 reading programs generally support the noted trends of change in the teachers' theoretical tendencies. However, some discrepancy did appear between the TORP data and described reading practices for some few teachers. Such discrepancies may indicate that teachers' beliefs and classroom practices change as two distinct processes.

Discussion of Findings

The general trends in degree of change in the teachers' theoretical tendencies raised some interesting thoughts relating to the general process of theoretical change. The individual character of teachers' theoretical orientations and contentions in the literature that theoretical change is a highly personal and individual process appear to be supported in these findings. As well, there is some evidence that there are no quantum leaps in theoretical change among practicing classroom teachers but slow and gradual movement over extended periods of time and experience. This raises questions of whether such change might possibly evolve more quickly among non-practicing educators like university students. The finding that no teacher's theoretical tendencies moved from a Phonics to a Whole Language alignment in 33 months is very interesting and may suggest important implications for teacher change agents within the educational community, particularly in terms of planned inservice experience and expectations for implementation of progressive educational programs within pre-determined time schedules. The observation that discrepancies can appear between change in teachers' beliefs and change in teachers' classroom practices adds emphasis to a previous discussion point that there may be two different change processes

involved in theoretical change for classroom teachers. The trends of change suggested by the data raise more interesting questions than are answered at this point.

Question 4: Does change in teachers' theoretical orientations to reading programs, as measured by the TORP, differ significantly among teachers having different characteristics of age, professional training, years of teaching experience, or grade level designation?

A series of two way anovas with repeated measures on one factor (time) was done to determine whether or not groups of teachers differing in characteristics of age, professional training, years of teaching experience, or grade level designation also differed significantly in change in their pre-test / post-test Phonics, Skills and Whole Language sub-group items and total TORP means. Significant, or near significant interactions revealed by the anova were tested using Scheffé post-hoc comparisons in order to determine the nature of significant interactions. It will be noted that Time in all anova tables indicate consistent significance between pre-test and post-test means. This finding is not discussed as it bears a strong relationship to the findings in Questions 1 and 2. The data analysis procedures, tables and figures relating to significant differences and interactions for each of the specified teacher characteristics are introduced separately. The findings are presented briefly, then summarized and discussed jointly.

Teacher Characteristics of Age

The teachers (n= 27) were categorized into three separate age groups. The age categories, computer codes ( ), and numbers of teachers within each category were Lo - 34 (1) (n= 10), 35 - 42 (2) (n= 9), and 43 - Hi (3) (n= 8). Two way anovas with repeated measures on one factor were used to determine whether significant

differences might be revealed between the three age groups in terms of change in pre-test / post-test Phonics, Skills and Whole Language item sub-groups and total TORP means. The results of the data analysis are described in Tables 15 and 16 and Figure 8.

The data in Table 15 confirmed that no significant difference relating to change in theoretical orientations, as measured by the TORP, was evident between groups of teachers having different characteristics of age. However, the anovas revealed the Phonics item sub-group as having a near significant interaction ($p = 0.052$) between change over time in the teachers' theoretical orientations to reading programs and three groups of teachers having different characteristics of age. A Scheffé post-hoc comparison of the Phonics sub-group means for the groups of teachers (see Table 16) revealed no significant interactions between the three age groups but did reveal one significant interaction ($p < 0.05$) between the pre-test and post-test means of the youngest group of teachers (Group (1)). The interaction data in Figure 8 suggested that the oldest group of teachers registered the lowest degree of change in their pre-test / post-test Phonics, Skills, Whole Language and total TORP means but the interactions were not significant.

Table 15

Anova table of pre-test and post-test Phonics, Skills and Whole Language item sub-groups and total TORP means for teacher characteristics of age

SOURCE	DF	MS	F	PROB	
Phonics					
Age (a) (b) (c)	2, 24	40.497	0.708	0.503	NS
Time	1, 24	336.419	21.784	0.001	S*
Age x Time	2, 24	51.932	3.363	0.052	
Skills					
Age	2, 24	64.798	1.256	0.303	NS
Time	1, 24	284.574	39.140	0.001	S*
Age x Time	2, 24	7.113	0.978	0.390	NS
Whole Language					
Age	2, 24	32.040	0.715	0.499	NS
Time	1, 24	184.666	26.281	0.001	S*
Age x Time	2, 24	11.956	1.702	0.204	NS
Total TORP					
Age	2, 24	71.283	0.212	0.811	NS
Time	1, 24	2381.502	36.112	0.001	S*
Age x Time	2, 24	158.168	2.398	0.112	NS

*(p = 0.05) (a) = Lo - 34 years (n= 10) (b) = 35 - 42 years (n= 9)
(c) = 43 - Hi years (n= 8)

Table 16

Scheffé post hoc comparison of pre-test and post-test interactions between TORP Phonics item sub-group and teacher characteristic of age

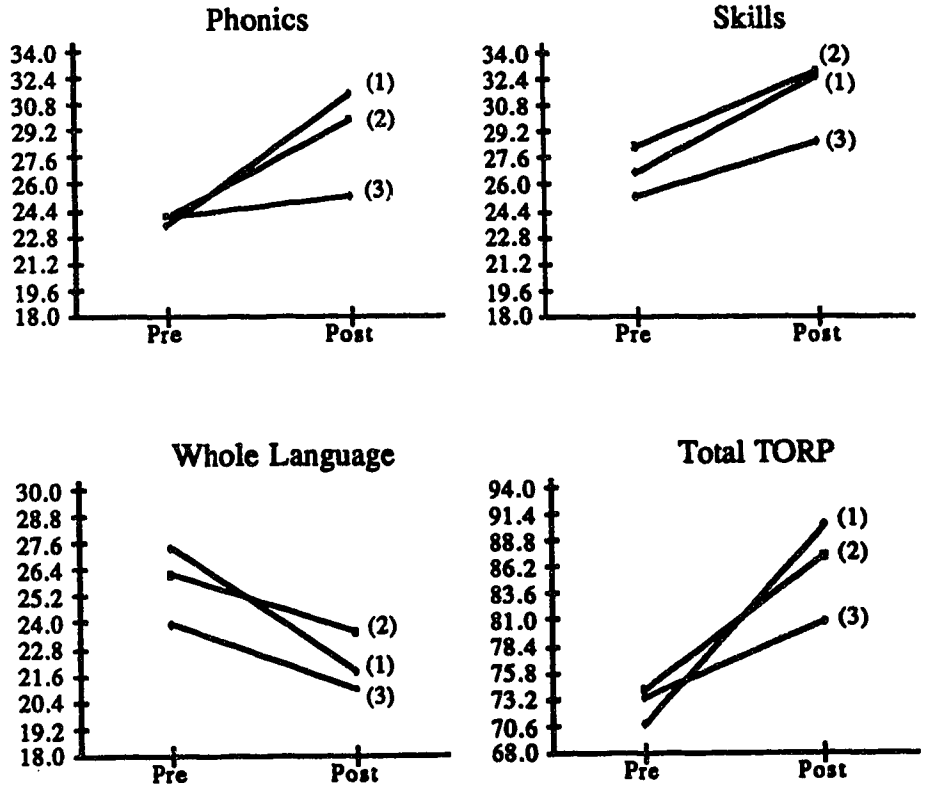
SOURCE	MEANS		INTERACTIONS
Phonics Pre-test			
Groups (1) and (2)	23.500	24.000	NS
Groups (1) and (3)	23.500	24.000	NS
Groups (2) and (3)	24.000	24.000	NS
Phonics Post-test			
Groups (1) and (2)	31.400	29.889	NS
Groups (1) and (3)	31.400	25.250	NS
Groups (2) and (3)	29.889	25.250	NS
Phonics Pre-test / Post-test			
Group (1)	23.500	31.400	S*
Group (2)	24.000	29.889	NS
Group (3)	24.000	25.250	NS

* ($p < 0.05$) (1) = Lo - 34 years (n= 10) (2) = 35 - 42 years (n= 9)
(3) = 43 - Hi (n= 8)

The data analysis revealed no significant interactions between different age groupings of teachers at either the pre-test or the post-test. A significant interaction was noted between the youngest group of teachers' pre-test and post-test means for the Phonics item sub-group. The profiles of pre-test / post-test means for each age group in Figure 8 suggest that the youngest teachers (Group (1)) indicated more theoretical change for Phonics, Skills, Whole Language and the total TORP than did the median (Group 2) or oldest teachers (Group 3). The profiles also suggest that the oldest teachers made the least change over 33 months in their beliefs about reading programs. These apparent differences in theoretical change were not significant.

Figure 8

Pre-test, post-test item sub-groups and total means interactions on the TORP for teacher characteristics of age



KEY

(1) Lo - 34 years (n= 10)
(2) 35 - 42 years (n= 9)
(3) 43 - Hi years (n= 8)

Teacher Characteristics of Professional Training

The teachers (n= 27) were categorized into two groups consisting of those who specified Early Childhood Education (ECE) as a major focus in their professional training and those who did not. The resulting groups of teachers' professional training, codes ( ) and numbers within each group were ECE (1) (n= 7) and Other (2) (n= 20). Two way anovas with repeated measures on one factor were used to compare change in the two groups of teachers' theoretical orientations in terms of pre-test / post-test item sub-group and total mean differences on the TORP. The results of the anovas relating to the teacher characteristic of professional training are shown in Table 17 and Figure 9.

No significant differences and no interactions were noted in change in theoretical orientations, as measured by the TORP, among teachers having ECE or other areas of focus in their professional training. However, the data in Figure 9 does suggest that teachers with ECE professional training were less in agreement with Phonics and Skills beliefs and less in disagreement with Whole Language beliefs at the pre-test than were teachers with other interests in professional training. Interestingly, the ECE teachers indicated slightly less change in their Whole Language beliefs at the post-test than did teachers with other professional training. However, none of these apparent differences reached levels of statistical significance in the data analysis.

Table 17

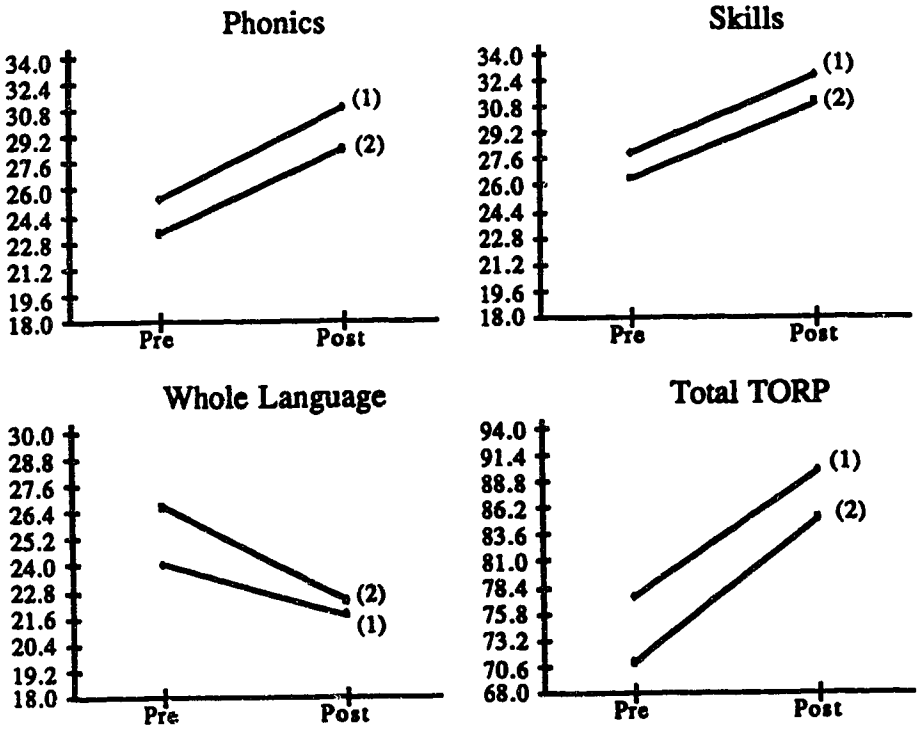
Anova table of pre-test and post-test Phonics, Skills and Whole Language item sub-groups and total TORP means for teacher characteristics of professional training

SOURCE	DF	MS	F	PROB	
Phonics					
Training(a) (b)	1, 25	59.199	1.064	0.312	NS
Time	1, 25	298.014	15.814	0.001	S*
Training x Time	1, 25	0.463	0.025	0.877	NS
Skills					
Training	1, 25	26.784	0.502	0.485	NS
Time	1, 25	229.77	30.424	0.001	S*
Training x Time	1, 25	0.000	0.000	0.999	NS
Whole Language					
Training	1, 25	27.144	0.612	0.441	NS
Time	1, 25	114.160	15.597	0.001	S*
Training x Time	1, 25	11.046	1.509	0.231	NS
Total TORP					
Training	1, 25	326.910	1.036	0.318	NS
Time	1, 25	1858.160	24.533	0.001	S*
Training x Time	1, 25	6.846	0.090	0.766	NS

*(p = 0.05) (a) = ECE (n= 7) (b) = Other (n= 20)

Figure 9

Pre-test, post-test item sub-group and total means interactions on the TORP for teacher characteristics of professional training



KEY

(1) E C E (n= 7)
(2) Other (n= 20)

Teacher Characteristics of Years of Teaching Experience

The teachers were categorized into three groups according to their years of teaching experience. The experience categories, codes ( ), and numbers of teachers within each category were Lo - 9 (1) (n= 11), 10 - 19 (2) (n= 9), and 20 - Hi (3) (n= 7). A comparison of change in the three groups of teachers' pre-test and post-test TORP item sub-groups and total mean differences was done using two way anovas with repeated measures on one factor. The results are shown in Table 18 and Figure 10.

Table 18

Anova table of pre-test and post-test Phonics, Skills and Whole Language item sub-groups and total TORP means for teacher characteristics of years of teaching experience.

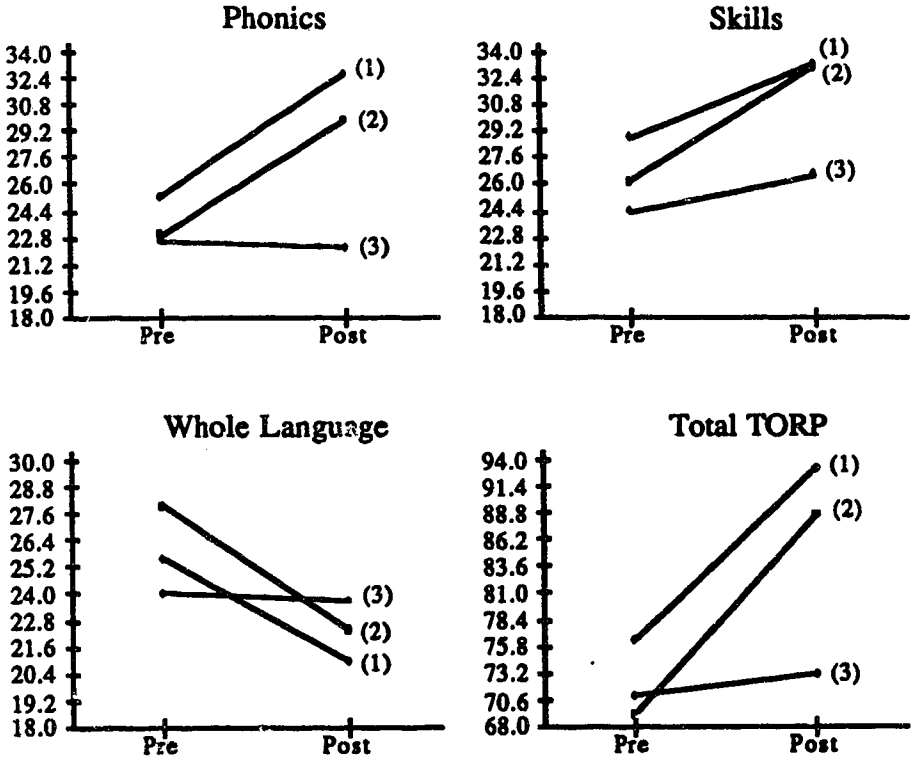
SOURCE	DF	MS	F	PROB	
Phonics					
Experience (a) (b) (c)		2, 24	190.914	4.239	
0.027	S*				
Time	1, 24	286.509	21.123	0.001	S*
Experience x Time	2, 24	80.961	5.969	0.008	S*
Skills					
Experience	2, 24	145.942	3.218	0.058	NS
Time	1, 24	268.064	45.373	0.001	S*
Experience x Time	2, 24	25.654	4.342	0.025	S*
Whole Language					
Experience	2, 24	16.363	0.357	0.703	NS
Time	1, 24	158.546	28.414	0.001	S*
Experience x Time	2, 24	33.965	6.087	0.007	S*
Total TORP					
Experience	2, 24	703.596	2.475	0.105	NS
Time	1, 24	2105.946	40.672	0.001	S*
Experience x Time	2, 24	371.752	7.180	0.004	S*

*(p = 0.05)

(a) = Lo - 9 years (n= 11) (b) = 10 - 19 years (n= 9) (c) = 20 - Hi (n= 7)

Figure 10

Pre-test, post-test item sub-group and total means interactions on the TORP for teacher characteristics of years of teaching experience



KEY

(1) Lo - 9 years (n= 11)
(2) 10 - 19 years (n= 9)
(3) 20 - Hi years (n= 7)

As noted in Table 18, all interactions reached levels of statistical significance. A series of Scheffé post-hoc comparisons were done to determine the nature of the significant interactions. The results of the Scheffé post hoc comparison tests are given in Tables 19, 20, 21 and 22. Those tables confirmed that a number of interactions were significant at the 0.05 level.

Table 19

Scheffé post hoc comparison of pre-test and post-test interactions between TORP Phonics item sub-group and years of teaching experience

SOURCE	MEANS		INTERACTIONS
Phonics Pre-test			
Groups (1) and (2)	25.2730	23.0000	NS
Groups (1) and (3)	25.2730	22.5710	NS
Groups (2) and (3)	23.000	22.5710	NS
Phonics Post-test			
Groups (1) and (2)	32.7270	29.8890	NS
Groups (1) and (3)	32.7270	22.2860	S*
Groups (2) and (3)	29.8890	22.2860	S*
Phonics Pre-test / Post-test			
Group (1)	25.2730	33.7270	S*
Group (2)	23.0000	29.8890	S*
Group (3)	22.5710	22.2860	NS

* ($p < 0.05$) (1) Lo - 9 years (n= 11) (2) 10 - 19 years (n= 9)
(3) 20 - Hi years (n= 7)

Table 20

Scheffé post hoc comparison of pre-test and post-test interactions between TORP Skills item sub-group and years of teaching experience

SOURCE	MEANS		INTERACTIONS
Skills Pre-test			
Groups (1) and (2)	25.2730	23.0000	NS
Groups (1) and (2)	28.8180	26.2220	NS
Groups (1) and (3)	28.8180	24.4290	S*
Groups (2) and (3)	26.2220	24.4290	NS
Skills Post-test			
Groups (1) and (2)	33.2730	33.2220	NS
Groups (1) and (3)	33.2730	26.5710	S*
Groups (2) and (3)	33.2220	26.5710	S*
Skills Pre-test / Post-test			
Group (1)	28.8180	33.2730	S*
Group (2)	26.2220	33.2220	S*
Group (3)	24.4290	26.5710	NS

* ($p < 0.05$) (1) Lo - 9 years (n= 11) (2) 10 - 19 years (n= 9)
(3) 20 - Hi years (n= 7)

Table 21

Scheffé post hoc comparison of pre-test and post-test interactions between TORP Whole Language item sub-group and years of teaching experience

SOURCE	MEANS		INTERACTIONS
Whole Language Pre-test			
Groups (1) and (2)	25.6360	27.8890	NS
Groups (1) and (3)	25.6360	24.0000	NS
Groups (2) and (3)	27.8890	24.0000	NS
Whole Language Post-test			
Groups (1) and (2)	20.9090	22.4440	NS
Groups (1) and (3)	20.9090	23.7140	NS
Groups (2) and (3)	22.4440	23.7140	NS
Whole Language Pre-test / Post-test			
Group (1)	25.6360	20.9090	S*
Group (2)	27.8890	22.4440	S*
Group (3)	24.0000	23.7140	NS

* ($p < 0.05$) (1) Lo - 9 years (n= 11) (2) 10 - 19 years (n= 9)
(3) 20 - Hi years (n= 7)

Table 22

Scheffé post hoc comparison of pre-test and post-test interactions between total TORP and years of teaching experience

SOURCE	MEANS		INTERACTIONS
Total TORP Pre-test			
Groups (1) and (2)	76.4550	69.3330	NS
Groups (1) and (3)	76.4550	71.0000	NS
Groups (2) and (3)	69.3330	71.0000	NS
Total TORP Post-test			
Groups (1) and (2)	93.0910	88.6670	NS
Groups (1) and (3)	93.0910	73.1430	S*
Groups (2) and (3)	88.6670	73.1430	S*
Total TORP Pre-test / Post-test			
Group (1)	76.4550	93.0910	S*
Group (2)	69.3330	88.6670	S*
Group (3)	71.0000	73.1430	NS

* ($p < 0.05$) (1) Lo - 9 years (n= 11) (2) 10 - 19 years (n= 9)
(3) 20 - Hi years (n= 7)

The Scheffé revealed significant interactions in all areas of the TORP. A consistent pattern of significant interactions involved differences in theoretical change between teachers having less than 20 years of teaching experience and teachers having more than 20 years. Teachers having less than 20 years (Groups (1) and (2)) consistently registered significant pre-test / post-test interactions whereas the teachers in Group (3) registered no significant interactions between their pre-test and post-test means. Also, significant interactions at the post-test were confirmed between teachers in Groups (1,) or (2) and teachers in Group (3) in terms of Phonics

and Skills item sub-groups and the total TORP. Interestingly, the three groups of teachers did not indicate significant interactions in theoretical change relating to Whole Language beliefs but did indicate a relatively unified position toward such beliefs.

Teacher Characteristic of Grade Level Designation

Over the course of 33 months, some teachers in the study sample group changed their grade level designations. A review of information provided by the teachers in the correlate data collection instrument (see Appendix B) revealed that designated grade one teachers indicated a tendency for less movement between grade levels and more experience in the grade one program whereas teachers designated as grade two or three appeared less entrenched in their grade level preference. Therefore, the three grade levels were collapsed into two categories of grade one and grades 2-3. The resulting categories, codes ( ), and numbers within each group were Grade One (1) (n= 13) and Grades 2-3 (2) (n= 14). As before, two way anovas with repeated measures on one factor were done to determine whether significant differences might be found in change in the theoretical orientations of teachers having different characteristics of grade level designation. The results of the anovas are reported in Table 23 and Figure 11.

Table 23

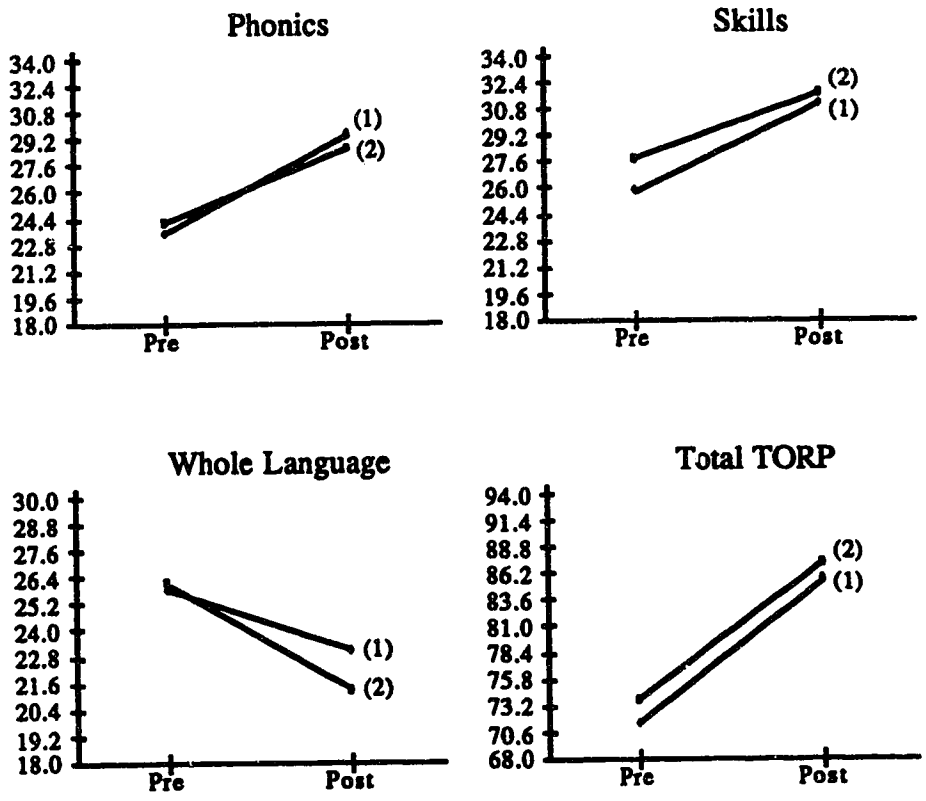
Anova table of pre-test and post-test Phonics, Skills and Whole Language item sub-groups and total TORP means for teacher characteristics of grade level designation.

SOURCE	DF	MS	F	PROB	
Phonics					
Grade (a) (b)	1, 25	0.016	0.000	0.987	NS
Time	1, 25	376.659	20.263	0.001	S*
Grade x Time	1, 25	6.876	0.370	0.549	NS
Skills					
Grade	1, 25	22.286	0.416	0.525	NS
Time	1, 25	301.717	41.532	0.001	S*
Grade x Time	1, 25	7.202	0.991	0.329	NS
Whole Language					
Grade	1, 25	8.265	0.183	0.672	NS
Time	1, 25	192.371	26.669	0.001	S*
Grade x Time	1, 25	13.705	1.900	0.180	NS
Total TORP					
Grade	1, 25	55.874	0.171	0.683	NS
Time	1, 25	2565.168	33.792	0.001	S*
Grade x Time	1, 25	2.580	0.034	0.855	NS

*(p = 0.05) (a) = Grade one (n= 13) (b) = Grades 2 - 3 (n= 14)

Figure 11

Pre-test, post-test item sub-group and total means interactions on the TORP for teacher characteristics of grade level designation



KEY

(1) Grade One (n= 13)
(2) Grades 2 - 3 (n= 14)

No significant differences or interactions were found in pre-test / post-test theoretical change, as measured by the TORP, among teachers having different grade level designations. It was noted in the data in Figure 11 that designated grade one teachers tended to maintain slightly stronger disagreement with Whole Language beliefs but the apparent differences in means between the two groups were not significant.

Summary of Findings Relating to Teacher Characteristics

Two way anovas with repeated measures on one factor were used to determine whether teachers having different characteristics of age, professional training, years of teaching experience, or grade level designations also differed significantly in change in theoretical orientations to reading programs, as measured by the TORP, over 33 months. The preliminary statistical analysis for the Phonics, Skills, Whole Language item sub-groups and total TORP revealed significant interactions in relation to years of teaching experience. Scheffé post-hoc comparisons confirmed that teachers having different years of teaching experience do differ significantly in theoretical change. More specifically, teachers having more than 20 years of teaching experience registered significantly less change in their theoretical orientations to reading programs, as measured by the TORP,than did two groups of teachers having less than 20 years of teaching experience. The most experienced group of teachers tended to sustain pre-test beliefs associated with the importance of Phonics and Skills in reading programs whereas the less experienced teachers changed their beliefs significantly. Surprisingly, the three groups of teachers were more unified in their changing beliefs associated with Whole Language orientations.

No significant differences in theoretical change were revealed between three groups of teachers having different characteristics of age. However, the oldest group of teachers indicated less disagreement at the post-test with Phonics, Skills and Whole Language item sub-groups and less change in their theoretical orientations overall. A check on group membership for the oldest teachers and the most experienced teachers revealed that six teachers shared the same characteristics of age (n= 8) and years of teaching experience (n= 7). Also, three of the six teachers were noted as becoming more entrenched in their pre-test theoretical tendencies on the continuum in Figure 7. No significant differences or interactions were found in theoretical change between two groups of teachers having Early Childhood Education or other emphases in their professional training although ECE teachers did indicate more disagreement with Phonics and Skills and less disagreement with Whole Language beliefs at the pre-test. No significant differences in theoretical change or significant interactions were evident among teachers having different grade level characteristics.

Discussion

The findings provided information concerning theoretical change over an extended period of time for teachers carrying different personal and professional characteristics into their classroom reading programs. The general findings of almost no significant difference in theoretical change among the teachers in terms of age, professional training and grade level designation suggest some support for Waugh and Punch's (1987) point that teacher characteristics might be interesting but tend to introduce a 'So what?' factor due to their non-manipulable nature. However, the findings relating to years of teaching experience also lend support to Mathis' (1987) contention that some teachers may be less willing to change their teaching styles and

beliefs, may seek to maintain rather than acquire competencies, at more mature ages and career stages. The present findings suggest support for the idea that theoretical change involves both ability to change and willingness to change. The primary teachers in the study sample indicated varying degrees of change in their theoretical orientations as measured by the TORP. A question of whether such change as was measured actually reflected teachers' personal willingness or individual ability to change is beyond the scope of the present study but raises interesting lines of thought in terms of conceptual developmental theory, educational change, theoretical change and an aging teaching profession. Finally, perhaps the most important finding in Question 4 was a non-finding in that no group of teachers, regardless of teacher characteristics, crossed the dividing point (20) between agreement and disagreement with Whole Language orientations to reading programs. The teachers' means were indicating less agreement or more disagreement with Phonics and Skills orientations but only less disagreement with Whole Language beliefs after 33 months

Question 5: Do teachers having different organized inservice experiences relating to progressive learning theories and practices also differ significantly in change in theoretical orientations to reading programs?

Over the course of 33 months, different inservice experiences evolved for different groups of primary teachers within the school district. One group of teachers (n=12) were categorized as 'regular' inservice teachers in that their largely instructional inservice opportunities were those regularly available to all teachers in the school district according to professional development policies and guidelines. The other group of teachers initiated two different models (practice and instruction-practice) of more intensive inservice experiences at the school level and were initially categorized as one group of 'intensive' inservice teachers. The 'regular' and both 'intensive' inservice models are described in Chapter 3.

The analysis of data regarding change in theoretical orientations in relation to inservice experiences was done in two parts. Firstly, comparisons were made between 'regular' and 'intensive' inservice groups in terms of change in pre-test / post-test Phonics, Skills and Whole Language item sub-group and total TORP means. Secondly, a similar comparison was made between the two 'intensive' inservice groups in order to determine whether significant differences might be found relating to theoretical change and the different 'practice' and 'instruction-practice' models. Both sets of data analyses used two way anovas with repeated measures on one factor. The data analysis procedures and findings for each comparison between groups are presented separately, summarized and discussed jointly. As was pointed out in the previous question, significant differences relating to Time in the anova tables are not discussed in this context.

Regular and Intensive Inservice Experience

The initial SPSS-X input data included coding for 'regular' and 'intensive' organized inservice experience. The two groups of teachers were coded as Regular (1) (n=12) and Intensive (2) (n=15). A series of two way anovas with repeated measures on one factor (Time) was done to determine whether significant differences in change in the teachers' theoretical orientations, as measured by the item sub-groups and total TORP, would be revealed between groups of teachers having different inservice experiences relating to progressive, whole language-like educational theories and practices. The findings of the data analysis are shown in Table 24 and Figure 12.

Table 24

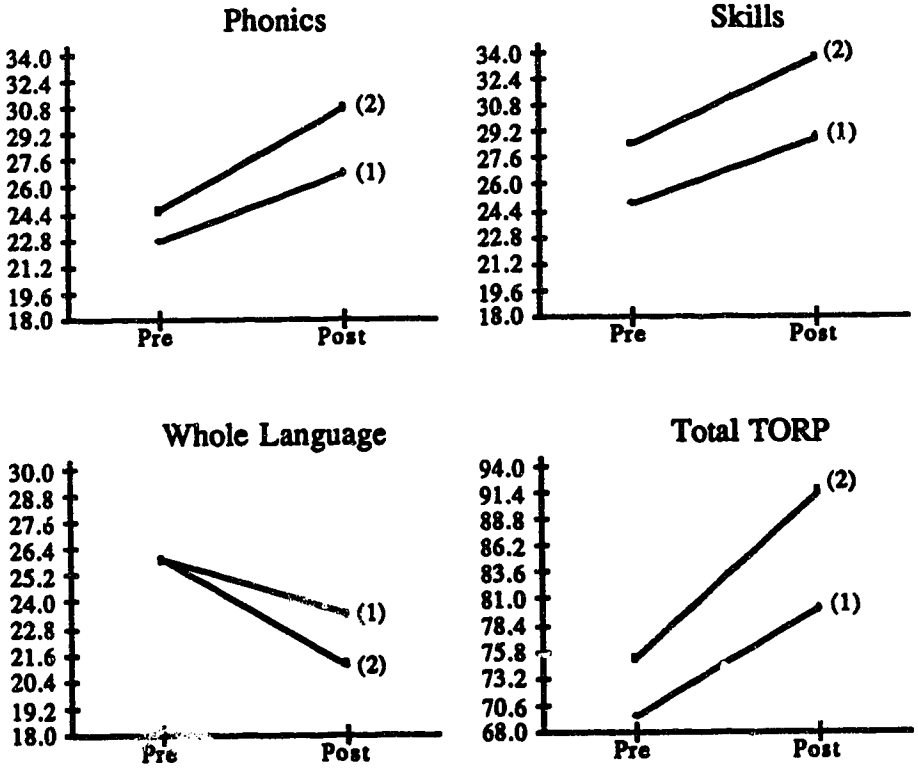
Anova table of pre-test and post-test Phonics, Skills and Whole Language item sub-groups and total TORP means for regular and intensive teacher inservice experience

SOURCE	DF	MS	F	PROB	
Phonics					
Inservice (a) (b)	1, 25	106.406	1.979	0.172	NS
Time	1, 25	352.487	19.297	0.001	S*
Inservice x Time	1, 25	14.938	0.818	0.374	NS
Skills					
Inservice	1, 25	252.301	5.694	0.025	S*
Time	1, 25	286.237	39.004	0.001	S*
Inservice x Time	1, 25	5.348	0.729	0.401	NS
Whole Language					
Inservice	1, 25	20.833	0.467	0.501	NS
Time	1, 25	180.895	25.788	0.001	S*
Inservice x Time	1, 25	18.669	2.661	0.115	NS
Total TORP					
Inservice	1, 25	946.406	3.256	0.083	NS
Time	1, 25	2415.052	33.729	0.001	S*
Inservice x Time	1, 25	110.208	1.539	0.226	NS

*(p = 0.05) (a) = regular inservice (n= 12) (b) = intensive inservice (n= 15)

Figure 12

Pre-test, post-test item sub-group and total means interactions on the TORP for teachers having regular and intensive inservice experience



KEY

(1) Regular inservice (n= 12)
(2) Intensive inservice (n= 15)

A significant difference in theoretical change was revealed in the Skills item sub-group where teachers having regular inservice experiences indicated significantly less disagreement with teaching isolated skills and word recognition than teachers having intensive inservice experiences. The regular inservice group consistently indicated less change in their beliefs on all item sub-groups and the total TORP but the difference in theoretical change between the inservice groups did not reach statistically significant levels. In spite of the lack of significant interaction some apparent differences emerged from the data. At the post-test, the intensive inservice teachers registered more disagreement with Phonics and Skills beliefs, less disagreement with Whole Language beliefs and substantially higher total TORP means. Interestingly, the intensive inservice group did not indicate their highest degree of theoretical change in the Whole Language item sub-group in spite of the teachers' interest in initiating and participating in intensive inservice about whole language programs. The possibility that one of the two different intensive inservice groups may have depressed the intensive inservice means in this data analysis was explored in the second series of anovas.

Practice and Instruction-Practice Intensive Inservice Experiences

The literature on teacher inservice offered general support for the idea that personalized developmental models of intensive inservice experience might be more beneficial to teachers than formal group instructional models. Some educators contended that a middle ground of both theoretical instruction and personal consultancy are necessary for effective inservice experience. Both models evolved in the 'intensive' inservice group's self-initiated professional development projects within the school district during the course of the study. In order to explore the possibility that significant differences might be found in theoretical change between the 'practice'

and 'instruction-practice' inservice models, the intensive inservice teachers (n=15) were recategorized as the instruction-practice (1) (n=10) and practice (2) (n=5) groups according to the nature of their inservice experience. Two way anovas with repeated measures on one factor were used on the TORP item sub-groups and total means to determine whether significant differences in pre-test / post-test change between the two groups of teachers' theoretical orientations, as measured by the TORP, might be found to exist. The findings are presented in Table 25 and Figure 13.

Table 25

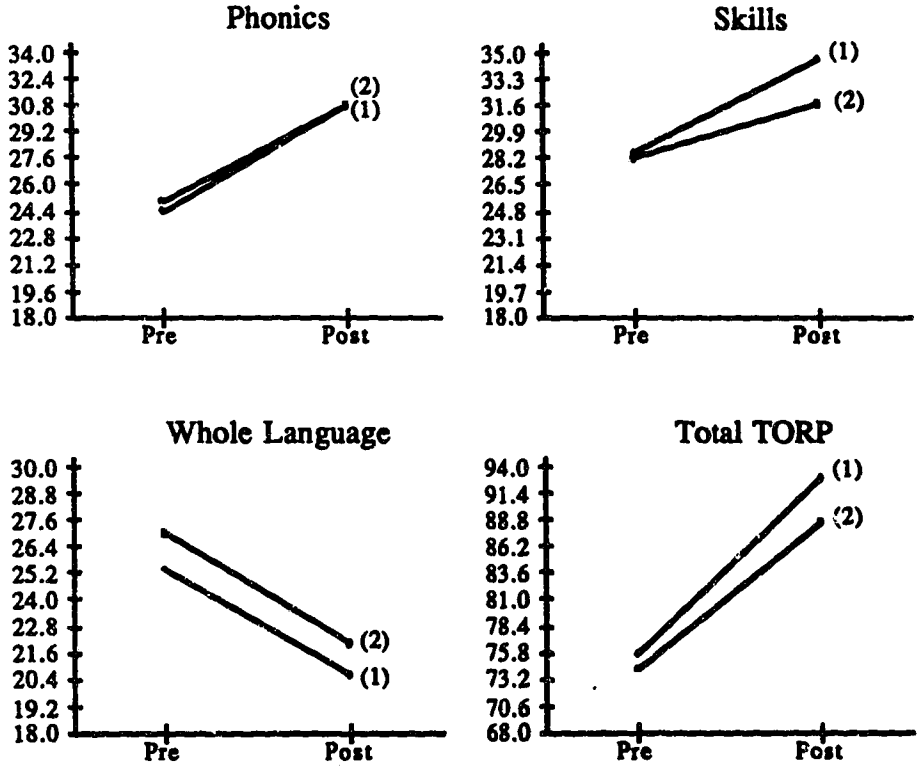
Anova table of pre-test and post-test Phonics, Skills and Whole Language item sub-groups and total TORP means for two intensive inservice models

SOURCE	DF	MS	F	PROB	
Phonics					
Inservice (a) (b)	1, 13	0.601	0.009	0.926	NS
Time	1, 13	248.068	13.925	0.003	S*
Inservice x Time	1, 13	0.599	0.034	0.857	NS
Skills					
Inservice	1, 13	18.149	0.404	0.536	NS
Time	1, 13	156.816	23.153	0.001	S*
Inservice x Time	1, 13	10.417	1.538	0.237	NS
Whole Language					
Inservice	1, 13	15.000	0.215	0.650	NS
Time	1, 13	160.067	15.909	0.002	S*
Inservice x Time	1, 13	0.067	0.007	0.936	NS
Total TORP					
Inservice	1, 13	54.141	0.139	0.715	NS
Time	1, 13	1674.818	19.765	0.001	S*
Inservice x Time	1, 13	14.010	0.165	0.691	NS

*(p = 0.05) (a) = instruction-practice inservice (n= 10) (b) = practice inservice (n= 5)

Figure 13

Pre-test, post-test item sub-group and total means interactions on the TORP for teachers having different intensive inservice experiences



KEY

(1) Instruction - practice group (n= 10)
(2) Practice group (n= 5)

No significant interactions were revealed in theoretical change, as measured by the TORP, between the practice and instruction-practice inservice models. In fact, the consistency noted in the two groups of teachers' means suggest that both models might be considered as being equally effective or ineffective.

Summary of Findings

Differences in theoretical change between groups of teachers having regular or intensive inservice experiences were not found to be significant in terms of Phonics and Whole Language item sub-groups and total TORP means. A significant difference ($p<0.05$) was revealed in the Skills item sub-group where regular inservice teachers indicated significantly less disagreement with isolating skill practices and emphasizing word recognition in reading programs than was indicated by intensive inservice teachers. Generally, the teachers having intensive inservice experiences registered more disagreement with Phonics beliefs which emphasize decoding, more disagreement with Skills beliefs and less disagreement with Whole Language beliefs. No significant interactions were indicated in the data analysis.

A further comparison of change in theoretical orientations to reading programs, as measured by the TORP, revealed no significant differences or interactions between two groups of teachers having different models of intensive inservice experience. However, the comparison of group pre-test / post-test means did suggest that the instruction-practice group shared more disagreement with Skills beliefs, less disagreement with Whole Language beliefs and a higher total TORP mean at the post-test.

Discussion

The findings relating to organized inservice experience as a vehicle for change in teachers' theoretical orientations to reading programs raised more questions than were answered. In light of the different inservice models, different amounts of inservice exposure, and different levels of teacher commitment to learning about whole language programs, theories and strategies, the findings of so little significant difference in theoretical change between the groups of teachers is puzzling. However, the findings do raise some interesting possibilities in terms of change in the teachers' theoretical orientations to reading programs.

Firstly, it is possible that the intensive inservice experiences promoted more impressive theoretical change in language arts areas other than reading, a program area which is commonly perceived by primary teachers as their most crucially important teaching responsibility. For example, the numbers of teachers who mentioned personal and creative writing in their program descriptions might indicate a greater theoretical flexibility towards writing programs than was reflected in the teaching of reading programs. It is possible, also, that the intensive inservice experiences offered a more comprehensive understanding of the theories and practices involved in whole language reading programs but understanding does not necessarily equate with acceptance of those theories and practices on the part of teachers.

A further possibility lies in the notion that theoretical change and practical change are two separate processes for classroom teachers. The practice intensive inservice experiences involved teachers who were openly committed to implementing whole language strategies in the classroom. However, the focus on practical strategies may not have exerted a considerable influence on those teachers' theoretical orientations. In other words, while one inservice experience might

emphasize the practical in so far as what to do, how to do it, when it should be done, what happened, how it worked, how it could be improved, and what happens next, another inservice program might emphasize the why's and focus on developing different ways of perceiving school, learning and children's intentionality.. Finally, another possibility touches more sensitive areas. The literature suggests that there may be an integral link between teachers' conceptual development and their ability to conceptualize progressive, process-oriented educational programs such as whole language reading programs. Of course, advocates of whole language programs reject such predeterminism on philosophical grounds but the possibility that all teachers may not readily acquire whole language-like theoretical orientations, regardless of their inservice experiences, may be better explored than ignored, given the current and predicted climates of accelerating educational change.

Overview

This section of the report sought to describe the analysis of data procedures and relevant findings specific to each of the five research questions which guided the longitudinal exploration of change in primary teachers' theoretical orientations to reading programs. Discussion for each question attempted to relate the findings of the study to current fields of educational thought as presented in the review of research and literature.

Chapter 5

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This chapter provides a summary of the research followed by the findings, conclusions and implications for educational change relating to the five research questions which guided the study. The chapter concludes with implications for further research into change in teachers' theoretical orientations to reading programs.

Summary of the research study

This longitudinal research study sought to explore change over a period of 33 months in primary teachers' theoretical orientations to reading programs. The impetus for the study lay in the researcher's genuine curiosity to explore how experienced classroom teachers were meeting expectations implicit in language arts curricula for theoretical change towards progressive, whole language-like orientations to literacy acquisition in Alberta's elementary school programs. An unbiased sample group of 27 experienced classroom teachers of regular reading programs at the grades one, two and three levels was drawn from one mid-sized rural school district in northern Alberta.

The study sought to determine whether or not primary teachers' theoretical orientations to reading programs were changing, to describe the nature of such change and to indicate the compatibility of the teachers' theoretical orientations with whole language-like reading programs. The longitudinal study allowed opportunities to explore relationships between theoretical change and teacher characteristics of age, professional training, years of teaching experience and grade level designation.

Additionally, evolvement of three different teacher inservice models differing in intensity and purpose promoted exploration of relationships between theoretical change and organized inservice experience.

The Theoretical Orientations to Reading Profile (TORP) (DeFord, 1985) was used as the primary instrument for data collection in the study supplemented by teachers' written descriptions of their classroom reading programs. The teachers' theoretical orientations to reading programs and change in theoretical orientations were surveyed, measured and classified by the TORP. Statistical comparative analysis of data generated by the classroom teachers' pre-test and post-test responses to the TORP survey instrument comprised the predominant forms of data analysis which included t-tests, two way anovas with repeated measures on one factor and Scheffé post-hoc comparisons. Pre-test and post-test data were also analyzed through comparative profiles of Phonics, Skills and Whole Language item sub-groups within the TORP. Change in teachers' pre-test and post-test theoretical tendencies was described in terms of compatibility with whole language - like reading programs through a descriptive and numerical continuum derived from the TORP.

Findings, Conclusions and Implications

Question 1: Will comparative analysis of the teachers' pre-test and post-test total scores on the TORP reveal that the teachers' theoretical orientations to reading programs have changed significantly over 33 months?

Findings. Differences in teachers' individual pre-test and post-test TORP scores reflected both higher and lower scores at the post-test. A paired t-test of total pre-test / post-test TORP means revealed significant difference at the .000 level.

Conclusions. The findings supported inferences and conclusions that:

i) teachers' theoretical orientations to reading programs changed significantly over 33 months,

ii) teachers' beliefs about reading programs are dynamic rather than static, and

iii) change in teachers' beliefs about reading programs is an idiosyncratic process which cannot be predetermined.

Implications. These findings and conclusions imply that theoretical change relating to reading programs is possible for experienced classroom teachers over an extended period of time and within the context of classroom teaching. However, predetermination of the nature of such change may be less possible than is implicitly expected in official curricular and policy..

Question 2: Will comparative analysis of the teachers' pre-test and post-test mean scores for TORP item sub-groups classified as Phonics, Skills and Whole Language reveal significant differences and trends of change within those item sub-groups?

Findings. The teachers indicated stronger and weaker individual orientations towards each of the Phonics, Skills and Whole Language item subgroups. Paired t-tests of pre-test and post-test item sub-group means indicated significant differences at the .000 and .001 levels. Comparative pre-test / post-test profiles of group means for individual sub-group items revealed trends of change in the teachers' theoretical orientations to reading programs. At the post-test:

i) teachers agreed less and disagreed more with beliefs associated with Phonics and Skills theoretical orientations to reading programs.

ii) teachers agreed more and disagreed less with belief statements associated with Whole language theoretical orientations to reading programs,

iii) for the majority of TORP items, teachers sustained and modified rather than changed their beliefs from agreement to disagreement, or vice versa,

iv) teachers sustained firm beliefs in the importance of formal reading instruction in phonics and skills and in the repetition of sight words in reading programs, but indicated a growing belief that early reading experiences should initially focus on meaning rather than decoding, and

v) teachers indicated greater flexibility in modifying their disagreement beliefs than agreement beliefs.

Conclusions. Despite significant differences between the teachers' pre-test and post-test TORP item sub-group scores, examination of the comparative profiles suggested:

i) that the teachers' theoretical orientations to reading programs did not really change substantially over 33 months,

ii) that theoretical change as measured reflected more a growing eclecticism in beliefs than actual change in beliefs about reading programs, and

iii) that theoretical change for classroom teachers is a slow and gradual process over extended periods of time.

Implications These findings and conclusions may hold important implications for stakeholders and agents of educational change and professional development at the school, system,tertiary and provincial levels. Primarily, the evidence suggests that any notions of classroom teachers' psychological preparedness to simply adopt and implement philosophically variant educational programs might be misplaced. Noted trends of change in teachers' theoretical orientations suggest that such preparedness might only be predicted over considerably longer periods of time than 33 months. Of course, the findings relate only to classroom teachers for whom theoretical change might be influenced by student response to existing beliefs and daily practices. Theoretical change might be quite different for university students in professional training courses who lack such experience and influence. A second implication for educational change agents relates to the indications of relative inflexibility in teachers' agreement beliefs and suggests a critical examination of positive beliefs in the introductory phase of coursework or inservice directed towards theoretical change.

Question 3 Will comparison of the teachers' pre-test and post-test TORP scores with DeFord's Phonics-Skills-Whole Language continuum reveal trends of change in theoretical tendencies towards reading programs and compatibility with Whole Language theoretical orientations to reading as classified and measured by the TORP?

In order to plot teachers' pre-test / post-test theoretical tendencies, DeFord's continuum was modified to include her overlapping ranges for Phonics - Skills and Skills - Whole Language which resulted in a five range continuum with numerical equivalency to the TORP scoring range.

Findings. Comparison of individual teachers' pre-test to post-test movement against the continuum revealed:

i) highly individual differences in degree, or rate, of change,

ii) a general, but not universal, trend of movement towards Whole Language and away from Phonics,

iii) that predisposition towards Phonics or Whole Language theoretical alignments did not influence degrees, or rates, of theoretical change,

iv) that teachers generally moved within a continuum range or into an adjoining range but few teachers moved beyond an adjoining range,

v) that no teacher moved from the Phonics or Phonics-Skills ranges into the Skills-Whole Language or Whole Language ranges over 33 months.

vi) that, at the post-test, a clear majority of teachers indicated theoretical tendencies that could not be described as being compatible with Whole Language theoretical orientations, as measured by the TORP.

Conclusions. These findings suggest:

i) that theoretical change cannot be programmed, hurried or coerced,

ii) that change in theoretical orientations may not be a random process. The teachers' highly individual yet surprisingly universal patterns of change on the TORP continuum might reflect only the influence of the particular instrument or they might indicate the possibility of developmental stages in theoretical change,

iii) that it may not be possible for 'traditional' classroom teachers to make the transition from their theoretical position to whole language - like orientations within the presently recommended timeframes for educational change

Implications Findings such as these surround educational change agents and administrators with proverbial rocks and hard places. They raise important questions about the shaping of educational change that might be considered sufficient although theoretical compatibility or changes in teacher beliefs are assumed to be necessary prerequisites to the successful and enduring implementation of change at the classroom level. They raise questions about the nature of theoretical change which go far beyond the scope of the present study. Finally, these findings and conclusions emphasize that time to change, time to learn and time to grow into a new theoretical position with new theoretical perspectives is essential for teachers as adult learners in a climate of educational change.

Question 4: Does change in the teachers' theoretical orientations to reading programs, as measured by the TORP, differ significantly among teachers having different characteristics of age, professional training, years of teaching experience and grade level designation?

Findings. Two way anovas with repeated measures on one factor and Scheffé post-hoc comparisons revealed:

i) no significant interactions between three groups of teachers having different age characteristics although a significant interaction was found in the pre-test / post-test TORP scores of the youngest teachers (Lo - 34 years) in terms of Phonics belief statements. Profiles of change trends indicated that, at the post-test, two groups of teachers younger than 43 years registered similar change patterns of much less agreement with Phonics and Skills beliefs while the teachers older than 43 years indicated the least change and least disagreement with Phonics and Skills beliefs.,

ii) no significant interactions or differences in theoretical change between two groups of teachers having either Early Childhood Education or other major emphases in their professional training,

iii) significant differences and interactions between three groups of teachers having less than 10, less than 20, and more than 20 years of teaching experience. The two groups of teachers having less than 20 years of experience registered significant interactions within their pre-test / post-test means for all TORP areas, except Whole Language, and significant interactions between the group of teachers having more than 20 years of classroom experience.

These most experienced teachers shared a high degree of group membership with the oldest group of teachers. At the post-test the most experienced group of teachers slightly increased their agreement with Phonics items and slightly decreased their disagreement with Whole Language items.,

iv) no significant interactions or differences between two groups of teachers having either grade one or grades two and three designations, and

v) that regardless of teacher characteristics, no pre-test or post-test group mean indicated any level of agreement with beliefs associated with Whole Language theoretical orientations to reading programs.

Conclusions. These findings suggest that:

i) some classroom teachers having up to median years of age and teaching experience may be more flexible and less entrenched in their beliefs about reading programs than are some of the oldest and most experienced teachers. However, Michael Fullan's (1982) point that changers and resisters are found within all groups of teachers is true of the teachers within these groups.,

ii) some older teachers having extensive years of classroom teaching experience may be less willing or less able to change their theoretical orientations to reading programs at this stage of their teaching careers, and

iii) no specified teacher characteristic appeared to accelerate theoretical change toward whole language -like beliefs about primary classroom reading programs.

Implications. These findings and conclusions appear to superficially support a pessimistic forecast for universal acceptance of whole language - like reading approaches and beliefs in primary schools. The finding of no significant differences in Whole Language beliefs between groups of teachers noted as changers and resisters might imply that Whole Language beliefs are more difficult to acquire and may not be an appropriate goal for all teachers. This may be true in that Phonics and Skills orientations are commonly associated with methodology while Whole Language orientations relate more closely to conceptualizing a philosophy.

Question 5: Do teachers having different organized inservice experiences relating to progressive learning theories and practices also differ significantly in change in theoretical orientations to reading programs?

Findings. Two way anovas with repeated measures on one factor revealed:

i) no significant interactions between 'regular' and 'intensive' inservice teachers' Phonics or Whole Language beliefs about reading and total TORP means,

ii) that 'intensive' inservice teachers registered significantly more change in post-test disagreement with Skills beliefs,

iii) that 'intensive' inservice teachers indicated more disagreement with Phonics and Skills beliefs, less disagreement with Whole Language beliefs and higher total TORP means at the post-test,

iv) no significant differences or interactions between teachers having 'intensive' practical inservice or 'intensive' instruction - practice inservice.

Conclusions Such findings lead to conclusions that:

i) comprehensive inservice and knowledge do not abrogate teachers' psychological autonomy to choose, accept or reject proposed theoretical alternatives,

ii) if theoretical change and practical change are separate processes for classroom teachers, the influences exerted by theoretical change on practical change may be stronger than influences exerted by practical change on theoretical change.

Implications. These findings and conclusions imply that new inservice goals relating to theoretical change may not be achievable through old inservice assumptions relating to teacher training. New theoretical change inservice models for groups of teachers in conventional inservice settings might emphasize marketing over instruction and promote rather than discount the intelligent decision-making of classroom teachers. In other words, rational approaches to teacher inservice about holistic educational programs might be overlooking the potential influence of the psychology of human change.

Implications for Further Research

Change in teachers' theoretical orientations appears to be a relatively untapped field of inquiry in education. The longitudinal and exploratory nature of the present study evoked few answers and many questions which subsumed but transcended the

study's focus on change in primary teachers' theoretical orientations to reading programs. further research into the broader field of theoretical change might involve:

i) exploration of theoretical change in reading and other program areas,

ii) documentation of the processes of theoretical change and practical change and the influences exerted by one process on another,

iii) exploration of possible links between theoretical orientation, theoretical change and conceptual developmental theory,

iv) comparative studies relating different professional inservice models to change in teachers' theoretical orientations.

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APPENDIX A

THE DEFORD "TORP"

DIRECTIONS: Read the following 28 statements and circle one of the responses. The response you circle will indicate the relationship of the statement to your feelings (beliefs) about reading and reading instruction. Select only ONE best response that will reflect how strongly you agree or disagree with the statement.

e.g. 1____2____3____4____5

SA (strongly agree) SD (strongly disagree)

1. A child needs to be able to verbalize the rules of phonics in order to assure proficiency in processing new words. 1___2___3___4___5 SA SD

2. An increase in reading errors is usually related to a decrease in comprehension. 1___2___3___4___5 SA SD

3. Dividing words into syllables according to rules is a helpful instructional practice for reading new words. 1___2___3___4___5 SA SD

4. Fluency and expression are necessary components of reading that indicate good comprehension. 1___2___3___4___5 SA SD

5. Materials for early reading should be written in natural language without concern for short, simple words and sentences. 1___2___3___4___5
SA SD

6. When children do not know a word, they should be instructed to sound out its parts. 1___2___3___4___5
SA SD

7. It is good practice to allow children to edit what is written into their own way of speaking when learning to read. 1___2___3___4___5
SA SD

8. The use of a glossary or dictionary is necessary in determining the meaning and pronunciation of new words. 1___2___3___4___5
SA SD

9. Reversals (e.g. saying "saw" for "was") are significant problems in the teaching of reading. 1___2___3___4___5
SA SD

10. It is a good practice to correct a child as soon as an oral reading mistake is made. 1___2___3___4___5
SA SD

11. It is important for a word to be repeated a number of times after it has been introduced to insure that it will become a part of sight vocabulary. 1___2___3___4___5
SA SD

12. Paying close attention to punctuation marks is necessary to understanding story content. 1___2___3___4___5
SA SD

13. It is a sign of an ineffective reader when words and phrases are repeated. 1___2___3___4___5
SA SD

14. Being able to label words according to grammatical function (noun, etc.) is useful in proficient reading. 1___2___3___4___5
SA SD

15. When coming to a word that's unknown, the reader should be encouraged to guess upon meaning and go on. 1___2___3___4___5
SA SD

16. Young readers need to be introduced to the root form of words (run, long) before they are asked to read inflected forms (running, longest). 1___2___3___4___5
SA SD

17. It is not necessary for a child to know the letters of the alphabet in order to learn to read. 1___2___3___4___5
SA SD

18. Flashcard drills with sightwords is an unnecessary form of practice in reading instruction. 1___2___3___4___5
SA SD

19. Ability to use accent patterns in multisyllable words (pho` to graph; pho to` gra phy; and pho to gra` phic) should be developed as part of reading instruction. 1___2___3___4___5
SA SD

20. Controlling text through consistent spelling patterns (The fat cat ran back. The fat cat sat on a hat.) is a means by which children best learn to read. 1___2___3___4___5
SA SD

21. Formal instruction in reading is necessary to insure the adequate development of all the skills used in reading. 1___2___3___4___5
SA SD

22. Phonic analysis is the most important form of analysis used when meeting new words. 1___2___3___4___5
SA SD

23. Children's initial encounters with print should focus on meaning, not upon exact graphic representation (decoding). 1___2___3___4___5
SA SD

24. Word shapes (word configurations e.g. but) should be taught in reading to aid in word recognition. 1___2___3___4___5
SA SD

25. It is important to teach skills in relation to other skills. 1___2___3___4___5
SA SD

26. If the child says "house" for the written word "home" the response should be left uncorrected. 1___2___3___4___5
SA SD

27. It is not necessary to introduce new words before they appear in the reading text. 1___2___3___4___5
SA SD

28. Some problems in reading are caused by readers dropping the inflectional endings from words (e.g. jumps, jumped). 1___2___3___4___5
SA SD

THANK YOU !!!

APPENDIX B

BACKGROUND DATA

Code Name:_____ Date of Birth_____
(e.g. April/ 1943)

UNIVERSITY TRAINING

How many years of teacher training do you have?_____

Certificate or Degree	Year Received	Major Area of Study

Do you believe that your teacher training prepared you for teaching in whole language reading programs? (circle one best response)

absolutely not	not really	can't remember	in some ways	absolutely

What are your perceptions of your teacher training for reading programs?

_____

_____

_____

Have you attended university reading courses in summer school or evening classes since June, 1982? _____

TEACHING EXPERIENCE

BEFORE 1985-86

How many years of teaching experience before 1985-86?_____

Before 1985-86 my teaching experience was mainly in the area of:
(comment if special subjects only, specify grade level)

Kindergarten

_____

Primary (grade 1, 2, 3)

_____

Elementary (grade 4, 5, 6)

_____

Jr. or Sr. High School

_____

Special Education

_____

Not Teaching

_____

SINCE 1985-86

In 1985-86 I was teaching reading to grade(s)____.with
approximately_____students in the program.

In 1986-87 I was teaching reading to grade(s)____ with
approximately_____students in the program.

In 1987-88 I was teaching reading to grade(s)____ with
approximately_____students in the program.

In 1988-89 I am teaching reading to grade(s)_____with
approximately_____students in the program.

GENERAL INFORMATION

Briefly, how would you describe your school to a stranger? (e.g. size etc.)

Please major changes in the school in the past three years.

****

Briefly, how would you describe your community to a stranger (e.g. size, economic base, growing?,etc.)

Please list any major changes in the community in the past three years.

****

Briefly, how would you describe the students in your school to a stranger?

Please list any major changes in your student population in the past three years.

THE 1985-86 READING PROGRAM

Please list the important parts of your 1985-86 reading program and the teaching strategies you used in that program. (a full page provided)

THE 1988-89 READING PROGRAM

Please list the important parts of your 1988-89 reading program and the teaching strategies you are using in your program. (a full page provided)

APPENDIX C

TEACHERS' WRITTEN DESCRIPTIONS OF READING PROGRAMS IN 1985-86 AND 1988-89 SCHOOL YEARS

The teachers' written descriptions of their reading programs are presented here. The letter codes for the teachers are the new recodes used in data analysis.

Teacher A

1985-86. - Mr. Mugs basal reading series - structured reading program - comprehension and phonics programs - experience charts - lots of drama, choral speech, art, report and story writing, journal writing.

1988-89. - Somewhat different in the area of 1) experience charts have freer language or vocabulary, 2) class activity is slightly less structured in that I don't have an eye to everything going on all the time, 3) I have loosened up in phonics in that if children have a concept, I do not require them to do as much repetition as I did five years ago, 4) life in class is more fun some days but more frustrating in terms of 1) evaluation 2) organization 3) mess 4) writing plans.

Teacher B

1985-86. - Starting Points in Reading (Mr. Mugs series) - mastery tests - self help workbook - reading workbook - teacher made worksheets. Strategies tended to follow the pattern set in the teacher guide - guided reading, comprehension questions - questions followed Bloom's Taxonomy - knowledge, analysis, synthesis, evaluation, etc. I was confident that the kids could read, had reasonable to good comprehension skills & vocabulary & spelling. Things were cut and dried moreso than now.

1988-89. - I use the readers SPIR occasionally when I feel they fit with what else we are doing. I have done more writing - poetry, stories, charts, etc. this year. We use mostly teacher made units - Themes - some of which include prepared units. However, those don't include enough reading material. They also are so simple. With students doing USSR everyday I have less time for other things. I am spending more time on comprehension type discussion and questioning as I have found that they are poor at answering in sentences, especially if a thought provoking question is used. They prefer to fill in the blank things, which is frustrating. They resent having to think. Spelling is an enigma - Whole language & Spelling - I don't agree with the ways I've heard it's supposed to work. Maybe the kids need to read up on whole language so they know how they should learn. Stories - Creative Writing, first, second, third draft. I see an improvement in some students while others don't take any initiative to improve. Listening - while others talk, or read, or present information - students present their stories, reports, or speak on a topic. Viewing and listening - groups present poems, skits. Reading - silent reading almost every day, reading with partners, asking questions (we need to work more on expression, some stop at ends of lines.). Writing - necessary to do some worksheets or skill building on specific problem areas i.e. plot development, character, description, grammar and spelling. Some of the grammar problem is socio- or cultural - they speak poorly and have poor speech models and write the way they speak. Some children have a tough time with that. Now - I'm not sure how much they're learning. I see more weaknesses by reading their writing, especially in spelling and comprehension.

Teacher C

1985-86. - Phonics, sightwords, writing stories and poems and sharing them, flashcard drill - I used Mr. Mugs series - strictly following guide, Mr. Mugs workbook, Mr. Mugs Self Helps, practice sheets if need be. "My diary", reading to the class,

listening to story records, memorizing poems, making dictionaries, decoding, used library for research.

1988-89. - I am using Mr. Mugs series with a lot of adaptations, Mr. Mugs workbooks, Mr. Mugs Self Activities - journals - I have tried several seasonal units in whole language - I still use phonics - I tried to stay away from it but I found that some children still needed the sounds to even attempt words - children listen to each other read - children read to class - listening to story records and stories I tape - making words using playdough (special students) - sight words - decoding - children write stories and read them to each other - flashcard drill for certain students - Story time - I read to them every day. When children are ready they will read to us - I use dictionaries that children make early in the fall and then we use them all year - we use the library for enjoyment and research.

NOTE: I have noticed that a teacher needs almost as many different strategies as there are students. Right now I have a student who is very bright but is having GREAT difficulty reading. I have him from resource and I teach phonics any available way. The resource room teaches him whole language as well and we all decided to put him on a computer in resource. Hopefully between us all we will teach him to read. This is a real test for me in how to teach reading!

Teacher D

1985-86. - I am teaching French so the teaching strategies and programs are very different. Since I have experience in both languages I can make use of both methods for reading. For me, it is very important to hear the words, to see the words, to read the words and to write them so as to remember them, not only orally.

1988-89. - the same.

Teacher E

1985-86. - I used the Nelson reading program. - each child had a text, a "study book" and a "reading activities" workbook - each child had a spelling text (also Nelson). Spelling tests were given each Friday - journal writing was used - handwriting practice three times a week - library period once a week - I read to the students as often as possible. Computer assisted learning was used - writing assignments were given on a regular basis. I was trying to get the students to develop a love for reading.

1988-89. - I'm trying to start implementing whole language - thematic units have been bought - more emphasis now on use of the library for materials to complement thematic units - journal writing on a regular basis - "News-News" every other day - much more group work, sharing of ideas and helping each other out - reading books and stories to students and getting students to share books and stories - still trying to get students to develop a love for reading. The old basal series is still on hand but a new reading series is supposed to be ordered for 1989-90. Samples of the students' poems and stories are being published in a newsletter to parents and there is more sharing with other classes of completed stories and poems.

Teacher F

1985-86. - We were using the Ginn program "Starting Points in Language Arts". We used the full program as it was prescribed in the teachers' guide.

1988-89. - We use the Ginn program as a base now but at present I have added several theme units e.g. Dragons, Whales, Hot Air Balloons, and Mice to the program.

Teacher G

1985-86. - Mr. Mugs reader and two workbooks, regular and self-help - also other phonics books - anthology of stories - big books - classroom libraries for both levels - the Metropolitan Readiness Test - mastery tests with Mr. Mugs - a home reading program.

1988-89. - The Impressions series - anthologies - tapes and books for the children to listen and follow in book - big books - home reading program - books of poems - journals - children writing their own books - paired reading - sentence patterns - chanting - Metropolitan Readiness test - checklists.

Teacher H

1985-86. - The Mr. Mugs series, i.e. 6 readers and 12 workbooks. I used my own phonics sheets developed by the ____ school district which have always proven successful. I also used books on colours, number and number word recognition and rebus charts - sight word recognition - experience charts. I taught dictionary skills and creative writing.

1988-89. - Reading is done in units, e.g. dinosaurs, spiders, snakes to name a few. Activities for same are provided in the teachers' guides SPIR and SPIL. Also, oral and silent reading - reading with expression - observation of punctuation signs - creating stories - limericks - poems - riddles - comprehension - spelling - sentence structure - parts of speech.

Teacher I

1985-86. - Mr. Mugs basal readers, workbooks, worksheets - poetry - big books - reading books and stories the children wrote - library books - sight/phonics program, Blended Sight Sound - "passwords".

1988-89. - Chanting- reading patterns - poetry - Big Books - reading materials created by the children, books, poems, stories. I would continue to use some phonics because I believe phonics are an important part of the reading program. But after more exposure to whole language I have found that I don't place as much emphasis or importance in the phonics approach. I also have a young daughter. Watching her progress through language reading readiness skills etc., I can see that children learn to read in a more natural way than I once believed.

Teacher J

1985-86. - Basal readers - Mr. Mugs series - workbooks - wordlists - flashcards - a lot of oral reading practice - journal writing - formal printing exercises - phonics - a lot of structure.

1988-89. - Same as 1985-86.

Teacher K

1985-86. - Basal reader - workbooks - worksheets - phonics drills and exercises - flashcards - oral reading.

1988-89. - Basal reader - workbooks - worksheets - writing scribblers - phonics exercises (oral) - oral reading.

Teacher L

1985-86. - Ginn readers - Mr. Mugs - teaching writing by ECRI methods - teaching spelling words chosen from readers by ECRI methods - using workbooks belonging to readers - journal used regularly - creative writing with ideas mainly taken from readers.

1988-89. - Mr. Mugs - teaching writing by ECRI methods - spelling words chosen from readers with ECRI methods - also a few words each week to emphasize phonics principles - some exercises from teachers' guidebook, from reading series workbooks and from DISTAR language. Journal used occasionally - Creative Writing ideas mainly chosen from readers including poetry, making new endings for a story, writing a new story about the character - vocabulary review for the words on the chart stand - oral reading once a week with the aide and occasionally with the teacher - most stories are introduced, read orally to self, discussed, read silently, read orally with a partner.

Teacher M

1985-86. - Mr. Mugs series and two workbooks (Self - Help and Mr. Mugs) - phonics workbook - used readers and workbooks as the main components of the program - followed program in order - grammar units taught separately and tested separately - very little time for extra activities (i.e. plays or teacher read stories, etc.) - major frustration was workbooks!! and getting the corrections done! - used Nelson spelling program, gave weekly spelling tests on which students scored highly but words not spelled correctly in stories! - used daily journals - not much time for other written activities - did not respond to journals! - Evaluation: used review and test pages provided by Ginn - no evaluation scheme for written stories or oral reading - alternative L. A. programs were available for lowest students, there were many such

that year, the alternates were full - had to keep some very low students in class and these students were very frustrated.

1988-89. - Program very flexible and geared to the theme we are studying at the time - most themes are developed around students' brainstorming and ideas - no text and no workbooks. Instead we use materials from the library, old readers, films, students' homes, the libraries we have developed in our theme areas, published theme units, etc. - no spelling or grammar programs as separate. These lessons are taught in conjunction with oral sharing of news and oral discussion of sentences and sentence structures. - Lots of reading every day - silent, oral and teacher read. - Lots of writing, either journals or other writing strategies, publishing usually one selection per term. - No alternate programs are available at the teachers' request, it was our decision not to use them. - All teachers at our grade level work together and share everything! We often meet after school hours. - Evaluation: Still required by the school district to give percentages and letter grades - it's difficult to find testing time. I'm using the Alberta Diagnostic Reading program and a writing checklist. I also test listening skills and oral and written comprehension. As well, I give performance key marks for viewing, handwriting, speaking - use grade equivalency tests for spelling. - There IS extra time available drama and extra fun-oriented activities now. The children are very proud of their work. - There's a <u>huge</u> increase in level of reading between the first and second reports! - No set structure of classes - every day is different! - lower ability students compensate by working with other students - it really helps! - All students fit in now! - I really enjoy the fact that materials and themes change from year to year. I feel this helps eliminate "burn-out" and boredom on the part of the teachers - I feel like I've just <u>started</u> learning about teaching after all these years - That's really refreshing! - We are able to integrate L. A. with Science and Social Studies and that makes the units more meaningful to the kids, too.

Teacher N

1985-86. - Workbooks - basal reading series - phonics worksheets - spelling series - teacher directed - used a tactile approach and worked with sand for one student with auditory-linguistic disability - sight vocabulary drills - all skills taught in isolation - USSR - teacher read weekly.

1988-89. - USSR daily - teacher read daily - "News- News" - publishing the students' writing - journals - daily oral language - show and tell - editing written work - more student directed now.

Teacher O

1985-86. - Used Mr. Mugs series - read story (silent, together or both) - discuss and answer questions in a workbook - Nelson spelling series - series of 60 one-page (typed 15 inch) stories, read silently then answer 14 basic questions to take the story apart - phonics workbook - basic English worksheets - read short stories to students - creative writing of all sorts.

1988-89. - Chose a theme - USSR - 2 x 2 reading (change students around often) - reading by one student to others - reading by teacher (more than before) - vocabulary chart for given theme - brainstorm for ideas - assign writing of stories etc. on theme - students edit each others' work - discussion of stories is about the same as before - three major themes a year - minor seasonal themes are injected in program.

Teacher P

1985-86. - Used basal Mr. Mugs as base for program - implemented "reading centres" in daily reading program - children rotated at own pace through series of

centres such as Vocabulary, Beginning Sounds, Comprehension, Writing, Listening, Viewing, Alphabet, etc., where the activities at each centre varied from hands-on games and activities to workbook pages to creative writing - concentration on developing auditory memory skills - daily reading to the kids - some "spelling" activities using Dolch word list.

1988-89. - did not use a basal - reading program based on themes - used "picture-word" association extensively - reading based mainly upon poems, words, stories, pictures,etc., about themes - used dramatic arts, role playing, etc., to a greater extent - introduced journals (daily) - encouraged creative writing - daily use of chart stories - phonics component included as mainly a centre activity - used centre approach for majority of time period - some small group activities - daily reading to children - daily period of "book-loving", a time devoted to exposure to and exploration of a wide variety of books based on the theme.

Teacher Q

1985-86. - Mr. Mugs as prescribed - workbooks - worksheets - manipulatives - repetition - basic reader - flashcards - very structured - phonics (every page) - testing with pencil and paper - some centres.

1988-89. - A variety of books to read - poems - more centres - themes now - not necessarily one basic reader - some flashcards - less structure - some pages of phonics - constant one-on-one evaluation.

Teacher R

1985-86. - Mr. Mugs readers and two workbooks - phonics workbooks - Mr. Mugs reading tests - spelling tests (teacher made) - sight word vocabulary lists

(Dolch) - phonics worksheets (teacher made) - comprehension worksheets (teacher made) - story writing - oral and silent reading - unit tests for readers.

1988-89. - daily news - journals - weekly poem reading - oral and silent reading (individual) - comprehension worksheets (teacher made) - story writing - research and writing - spelling tests (teacher made) - spelling tests (Schonell) - word lists (Schonell) - phonics worksheets (teacher made) - listening centres - activity centres - shared reading - partner reading - Mr. Mugs readers - old school readers.

Teacher S

1985-86. - Mr. Mugs - old readers - some workbooks - journals - "library" reading program (class library, share books with another student, student record of books read) - skills work done independently by students, individualized to some extent - skill centres using teacher-made games - phonics emphasis with some context / predicting strategies - some round robin reading.

1988-89. - Big books - shared reading - read-along with various types of books - group writing - writing stories and books - daily dialogue journals - Mr. Mugs shared reading only - phonics taught in context and often - illustrating books - rewriting stories in own ways from Mr. Mugs - fewer skill centres now - stressing context and predicting now rather than word attack skills like phonics.

Teacher T

1985-86. - Readers - workbooks - skills worksheets - films and filmstrips - records - charts - stories - spelling - phonics. During these years the lessons were done with the teacher giving explanations and directions, then the students were to complete pages in the workbooks. The majority of the pages were "fill-in-the-blank" exercises. Each area of the Language Arts program was separated into its own time

slot. For example, spelling would be from 10 - 10:30, phonics from 10:45 -11:15, etc.. Therefore, each area was taught as an individual subject. It was generally very negative for certain students as everyone knew how many answers they got wrong on a workbook page.

1988-89. - Films and filmstrips - lots of story books - songs - chants - charts - lots of writing. The new language program puts a lot of emphasis on the child doing the writing and the reading. The children have many experiences and opportunities for doing reading and writing now. It is very positive for all students as they are rated against themselves. No other student can compare marks because the child is rated only as an individual and pieces of work which are displayed are all unique.

Teacher U

1985-86. - I used word lists - instruction - vocabulary - spelling - listening - viewing - word hunts - phonics - oral reading - comprehension work - play acting - writing stories - and reading units to involve all of the above.

1988-89. - I used the five strands (reading, writing, listening, speaking, viewing) incorporated into the reading units. I taught the decoding skills pertaining to the unit at the time. There was no special set time except for news and show and tell.

Teacher V

1985-86. - Used basal reader (Mr. Mugs) - very structured - major emphasis on writing - major emphasis on workbooks both for phonics and reading skills such as comprehension and language skills - very teacher directed - reading taught using stories from basal reader - all class reading the same story at the same time followed by workbook pages - concentrated on spelling, etc. being right or wrong in the written work - everything was marked by the teacher with no input from the students -

language skills including phonics were all taught in isolation (it was assumed that the students would apply them to their reading and writing) - It was obvious to all students just who was weak / average / top students because of the teaching strategies used.

1988-89. - More individualized or small group approach now - basal readers only used on odd occasions - enjoyment of reading is stressed more - a thematic approach is used - a more unified approach to writing, reading and language all integrated - much stronger emphasis on writing for meaning - workbooks are not used now - more activities are centred around the children - the children read at their own levels and progress individually from there - more sharing and interaction between the students now - the children are taught to accept responsibility for their own writing and are learning to proofread - they don't have to be scared of making mistakes now - language skills are not taught in isolation any more but are taught to individual students who need them - weaker students work at their own level and there's less awareness by all of who is weak / average / top.

Teacher W

1985-86. - Basal readers, Mr. Mugs - mostly oral reading and comprehension worksheets - used some workbook pages - used some phonics book pages - blackboard copying and exercises (e.g. fill in the blanks, match beginning and ending of sentences, answer easy "who" questions in sentences) - each child had own tape for oral reading - teacher made tapes to read along with stories - language master for vocabulary - writing stories - some experience charts - reading to children.

1988-89. - Reading to children - read-along familiar rhymes and rhythms, new verses, stories with repetitive and cumulative patterns for predicting - writing

experience charts, daily dialogue journals, poems, group writing - listening to read-along stories (individual and class) - teacher read a lot.

Teacher X

1985-86. - basal readers (Mr. Mugs) - workbooks - phonics - weekly spelling tests - lots of books in room for story time or children's own reading - group work (four children per table) - group writing - creative writing.

1988-89. - Dialogue journals daily - News News (also used to teach phonics) - group writing (also teaches penmanship) - charts, chants, poems - brainstorming - centres for themes - Books! Books! Books! - encourage children to choose favourite book to share with the class (shared reading) - listening centre - language arts games available to the students - writing stories, poems and publishing them.

Teacher Y

1985-86. - Mr. Mugs basal readers and workbooks program - flashcard drill - worksheets to fill in the blanks - phonics blending and sounding - drama - learning wordlists - group reading - high / low / middle groups for reading.

1988-89. - Whole group reading now with no more grouping on ability - phonics blending and sounding - working from the whole story now then looking at the words, letters and sounds - working less with the basal and more with other stories the children are familiar with.

Teacher Z

1985-86. - Mr. Mugs basal reader - workbooks - phonics workbooks - lots of flashcard drill - taught vocabulary first, then the story (so the kids were familiar with the words first - terrible theory!) - tested word lists in isolation - A lot of ECRI

remained in my teaching at that time - I've always read a lot to the kids - a lot of story writing - used journals but not until after Easter - class divided into three groups but not named! - lots of seatwork (I was the champion of worksheets) - We did have a happy time and the kids did learn to read. They'll learn under all sorts of methods. I must admit I did find it hard to get enthused over the stories though. - very structured - definitely teacher centred - always a lot of discussion.

1988-89. - I'm not totally whole language but definitely that way inclined (I've come far away from ECRI) - I use a wide range of literature - lots of predictable books - I choose the stories I want to use from Impressions - When I start to panic and want to know if they can read, I throw a Mr. Mugs at them. When I see that they can handle it fine I continue on my way. - Lots of poems and songs around the room all the time. We read them, clap them, sing them, etc.. When we know them they are taken home to share. The kids have an extensive "I Can Read" collection at home. I have a whole "I Can Read" table in the room and the kids read from it all day long. Now I have a shelf of new books for them to tackle on their own and those that are confident enough will do this. Actually, one of my "poorer" readers went to the shelf the other day and we were both delighted as he talked his way through the book. We do a lot of patterning - they love it and so do I. I still teach a lot of phonics and I always will. - Group writing is the best thing since sliced bread! - We also do daily journal writing, story writing - We talk a lot! - I use centres to reinforce skills. I have eight centres going at a time and the kids love it. I never teach vocabulary in isolation now. It's ing how little kids can figure out all sorts of words through context. The morning sage is a good idea and I start it on day one. By now they read it as a class and I won't tell them words - they just figure it out. I don't put the stress on perfect penmanship that I used to - I teach them the proper forms but the NB thing is for them to be able to communicate their ideas.

Teacher A2

1985-86. - Used Mr. Mugs series - workbooks for series and phonics books - group spelling with individual component - story time daily - flashcard drill - sounding words out! - individual reading to class (round robin type).

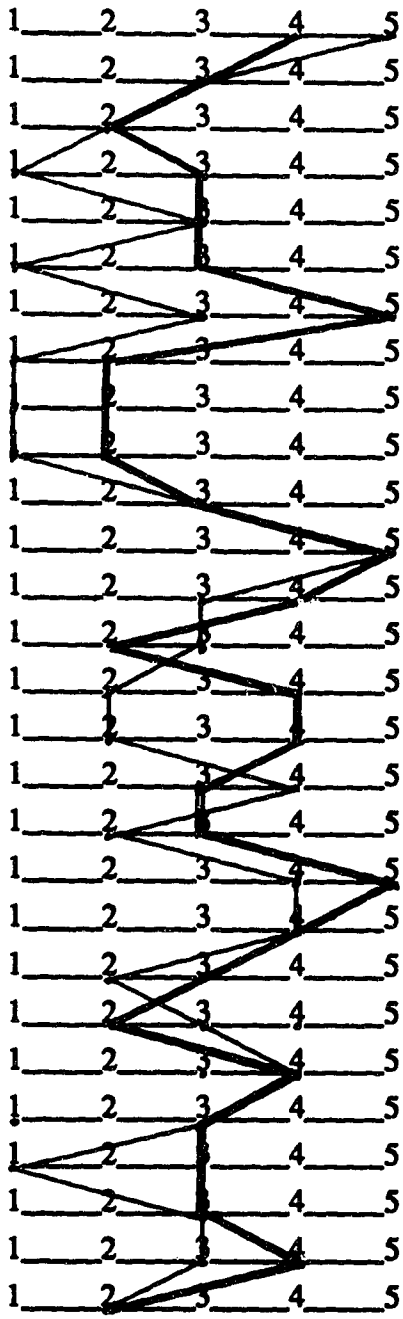
1988-89. - Parts of Mr. Mugs (some stories from the readers) - stories from all sources - themes - group reading (lots!) - group writing - news time (writing down, use it to teach other parts of reading like phonics) - daily journals - worksheets (teacher made relating to stories read) - lots of individual writing - games and centres story time daily - identifying unknown words using context clues rather than phonics first - individual reading to the teacher only or among students in very small groups every day.

APPENDIX D

TEACHERS' INDIVIDUAL PRE-TEST AND POST-TEST TORP PROFILES

TEACHER PROFILES A

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



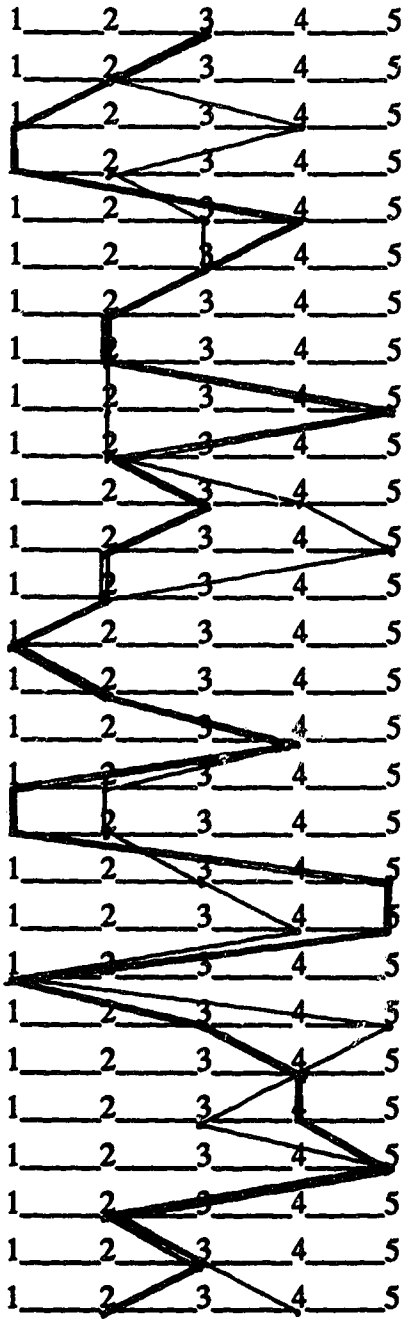
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES B

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



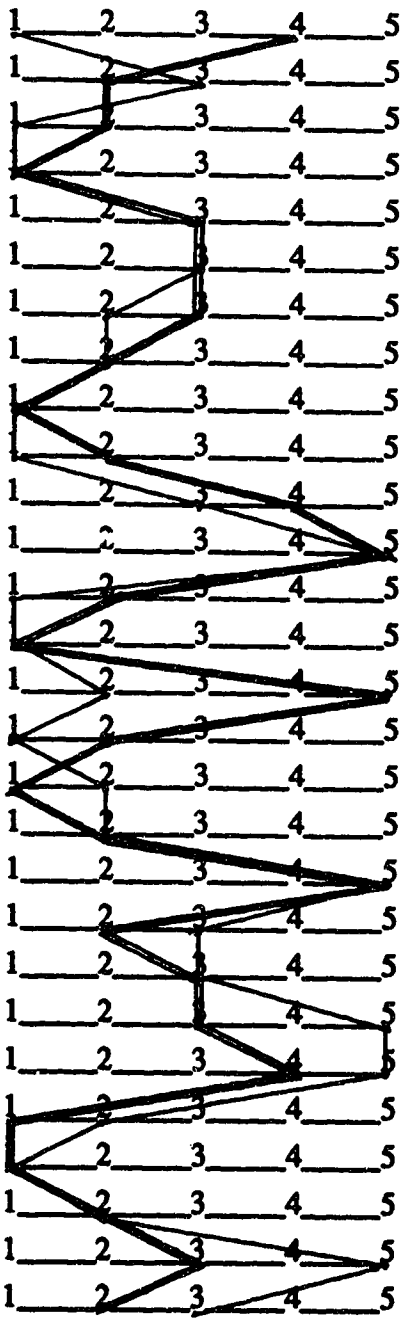
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES C

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



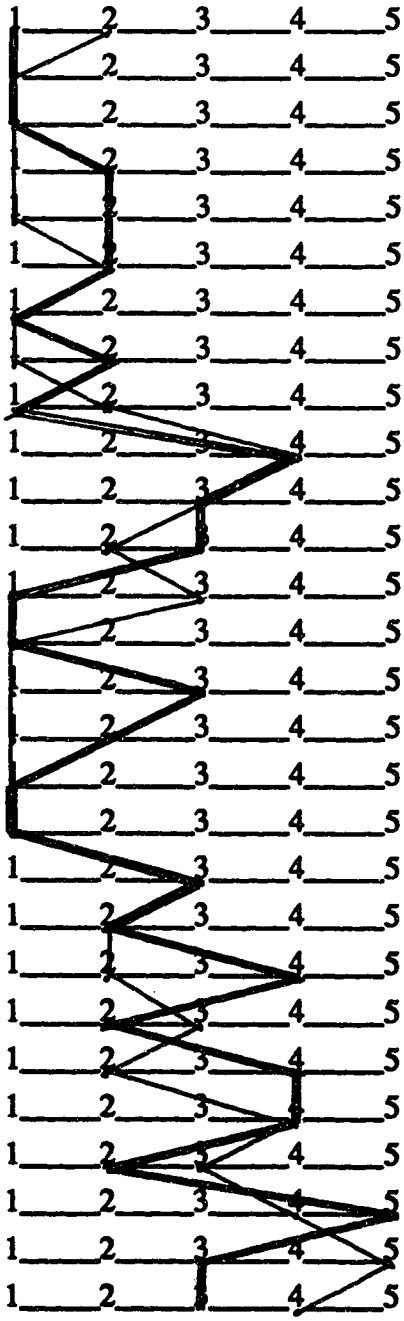
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES D

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



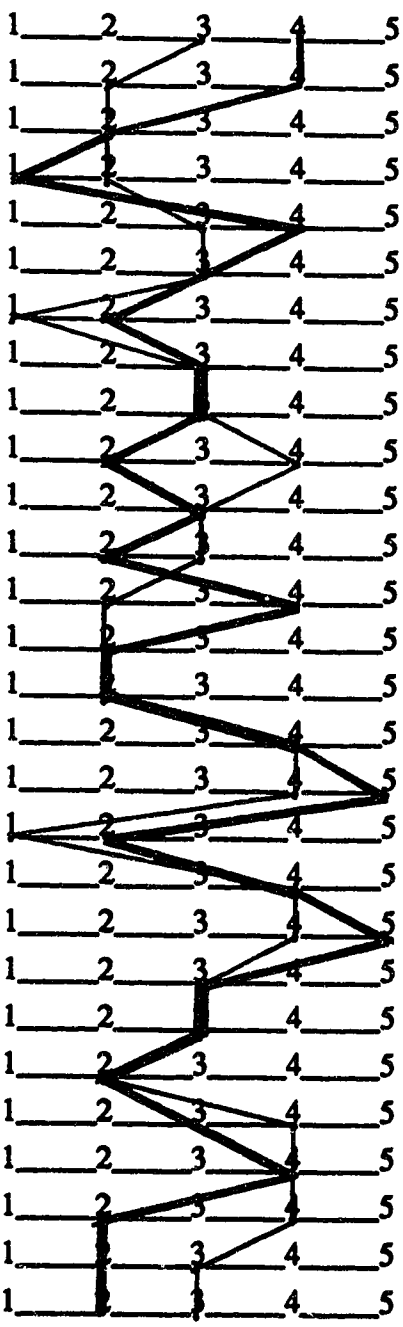
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES E

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



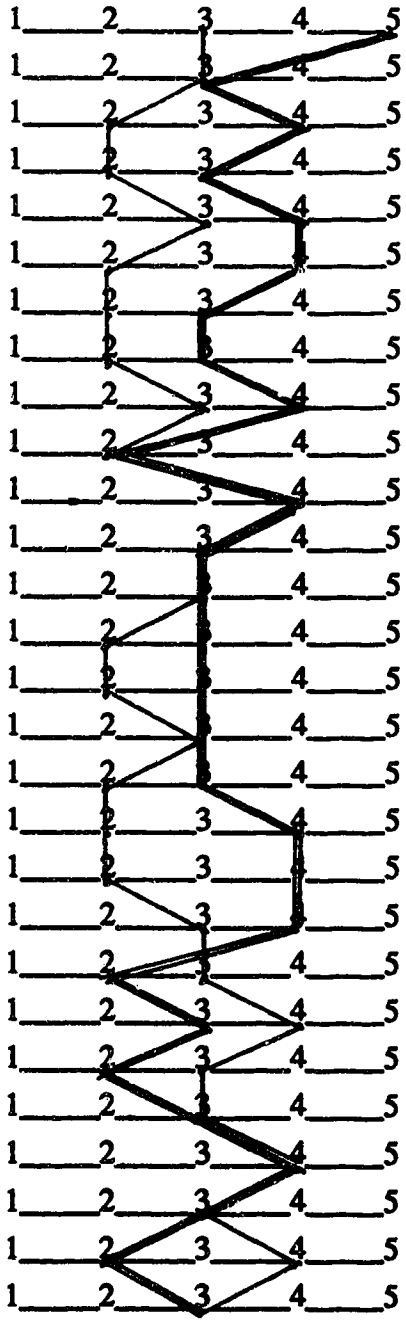
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES E

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



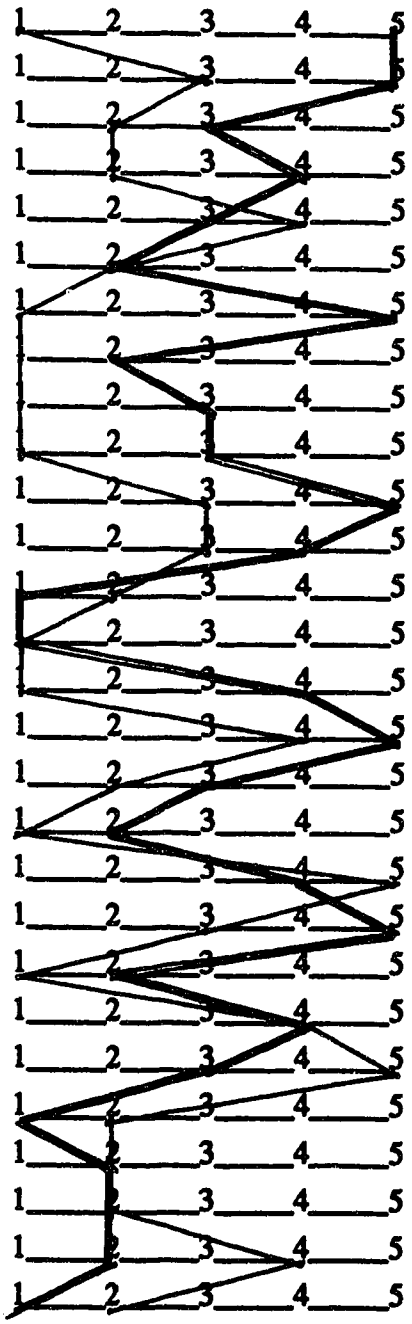
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES G

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



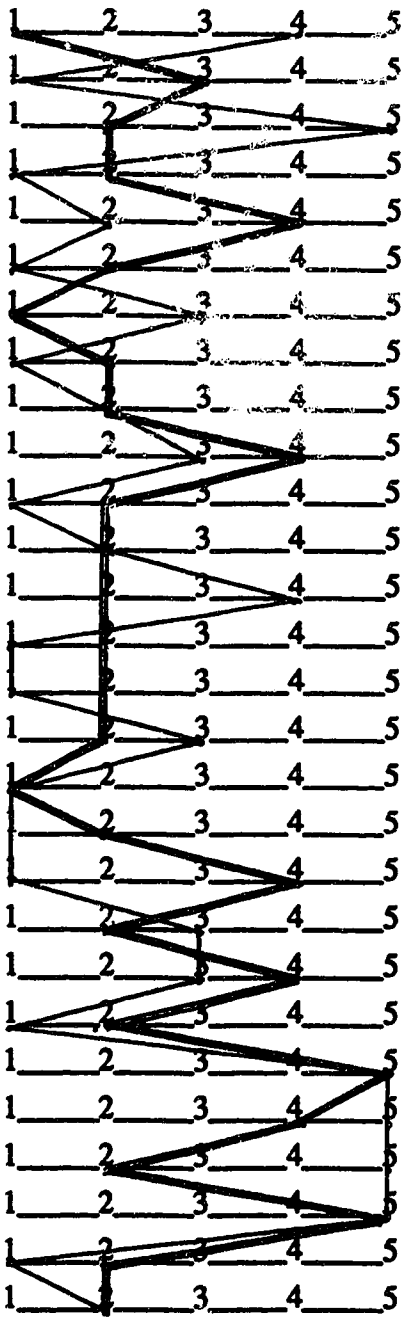
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES H

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



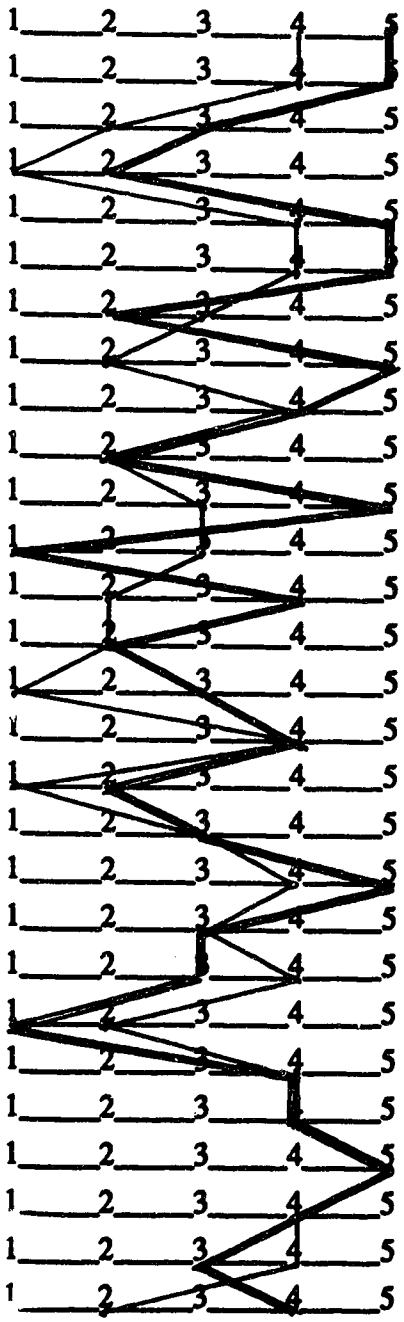
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES I

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**

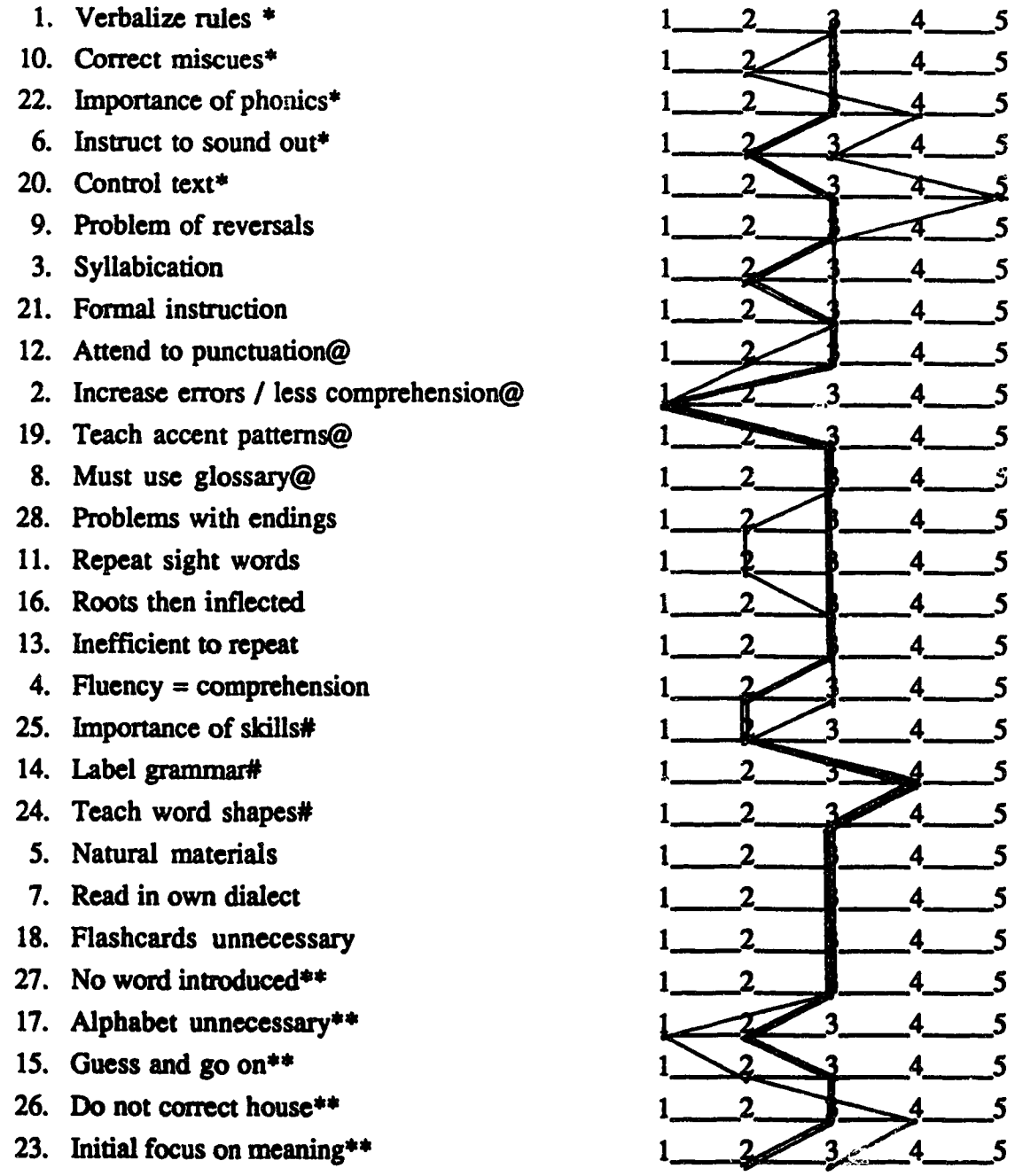


KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES I



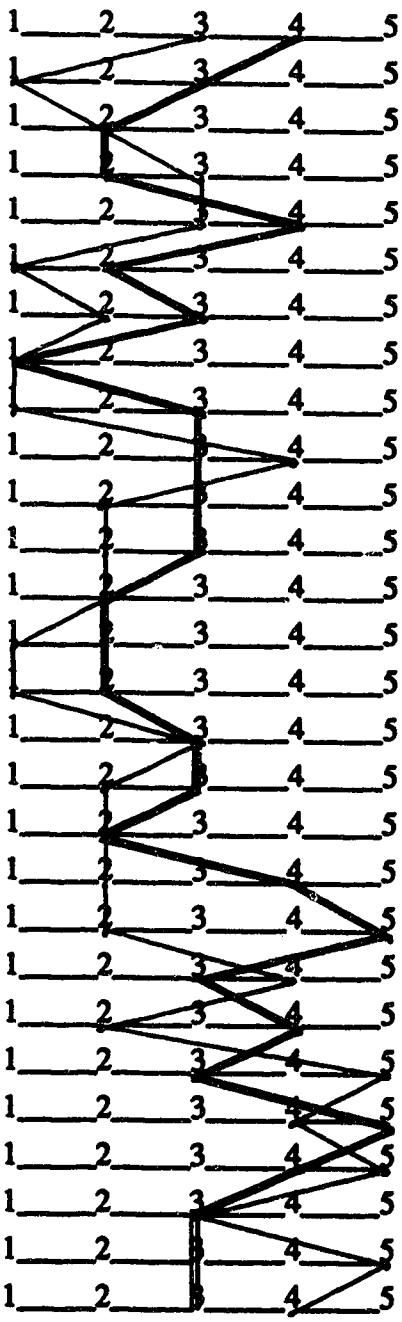
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES K

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**

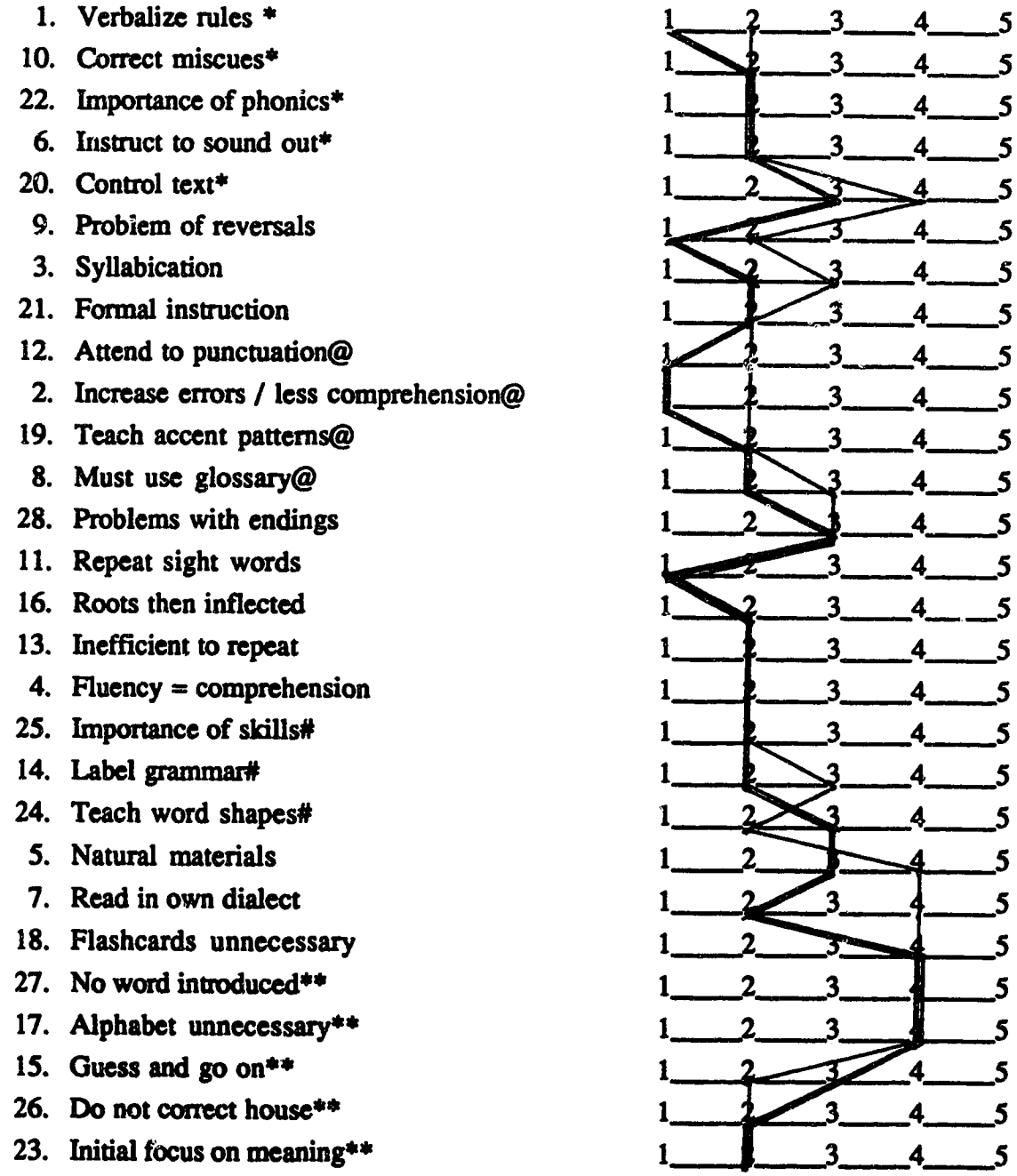


KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES L



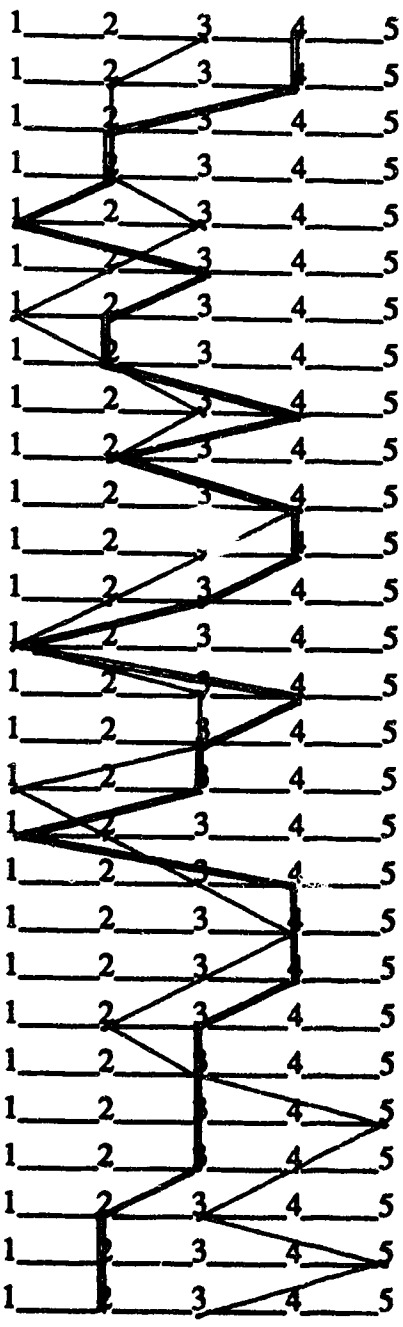
KEY Pre-test Response = _____ Post-test Response ═══

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES M

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



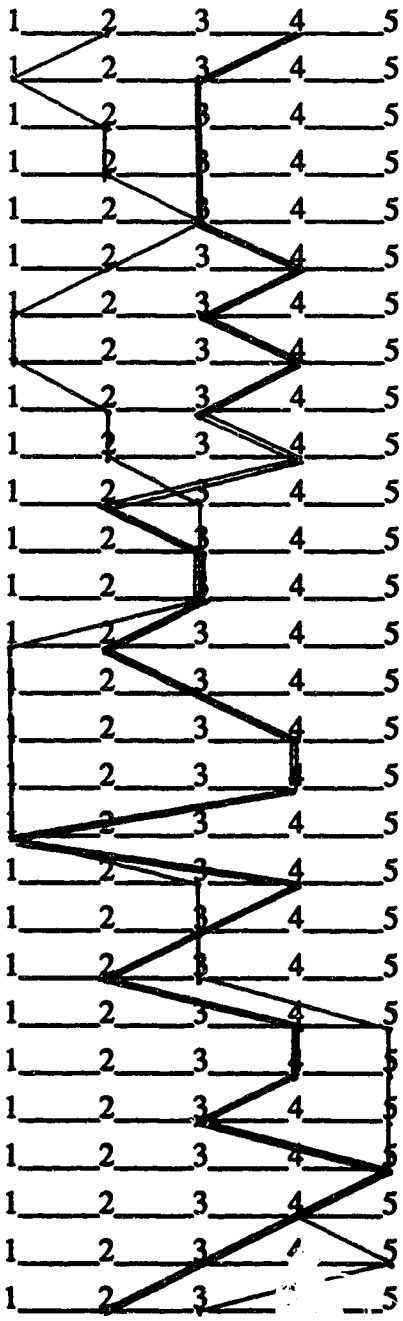
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES N

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



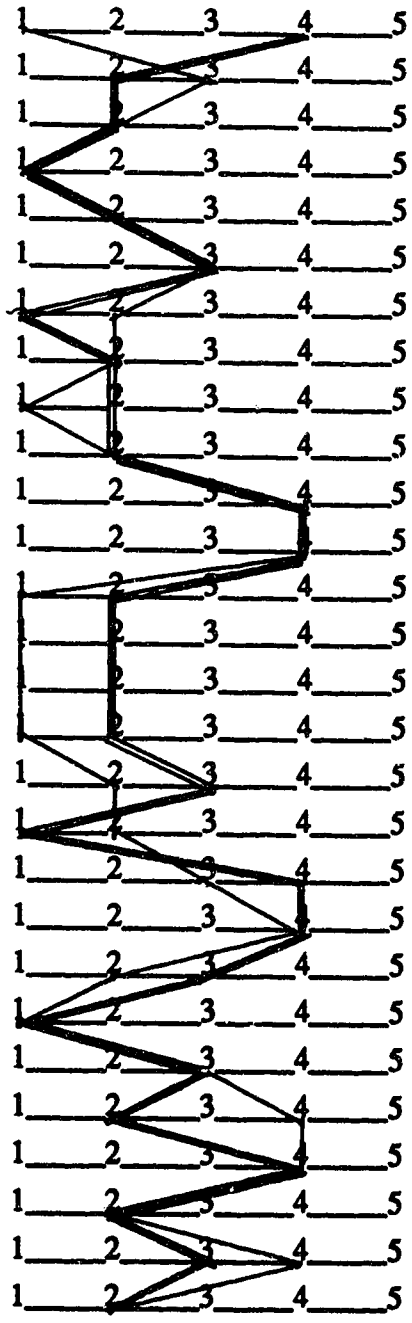
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES Q

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**

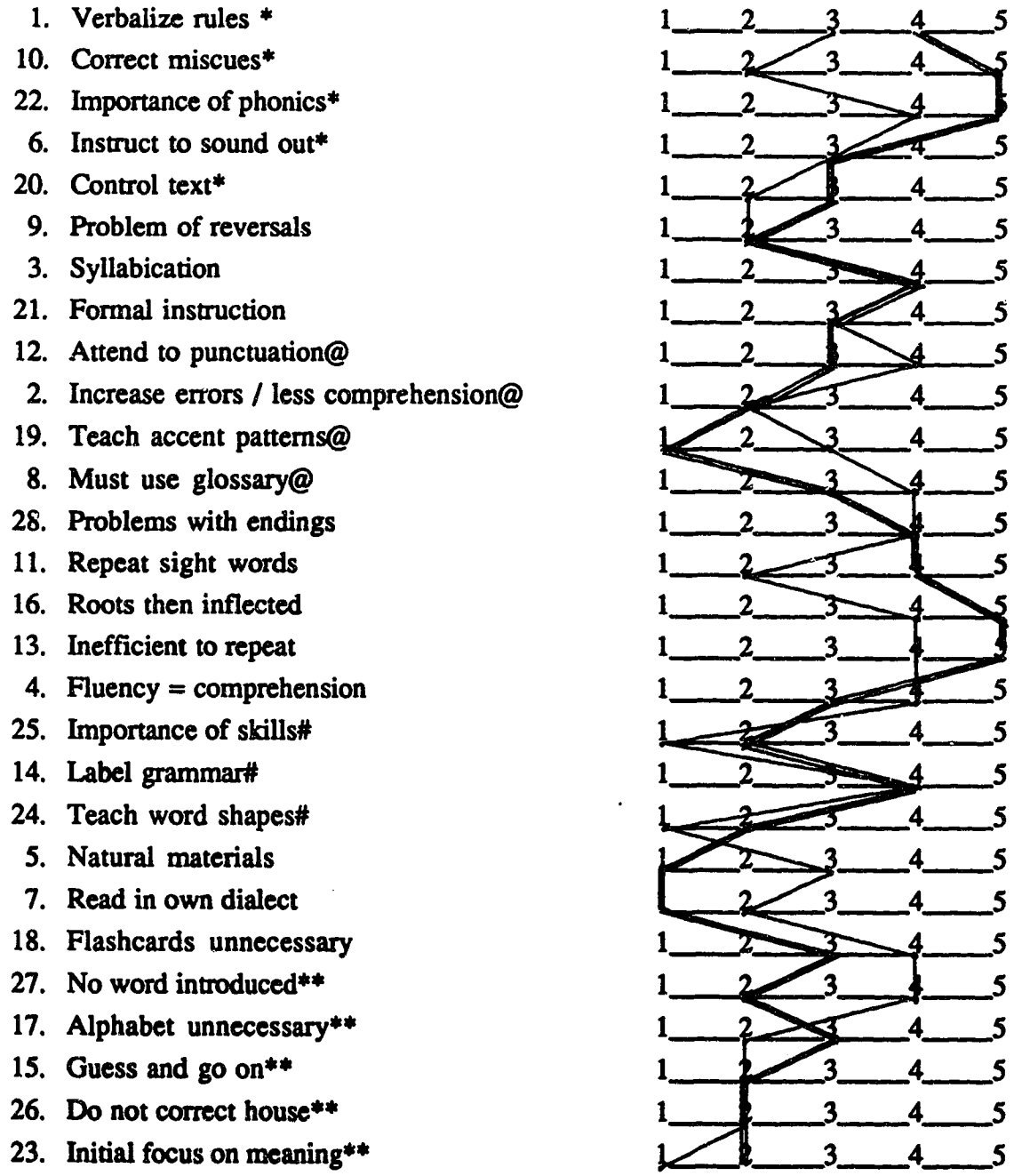


KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES P



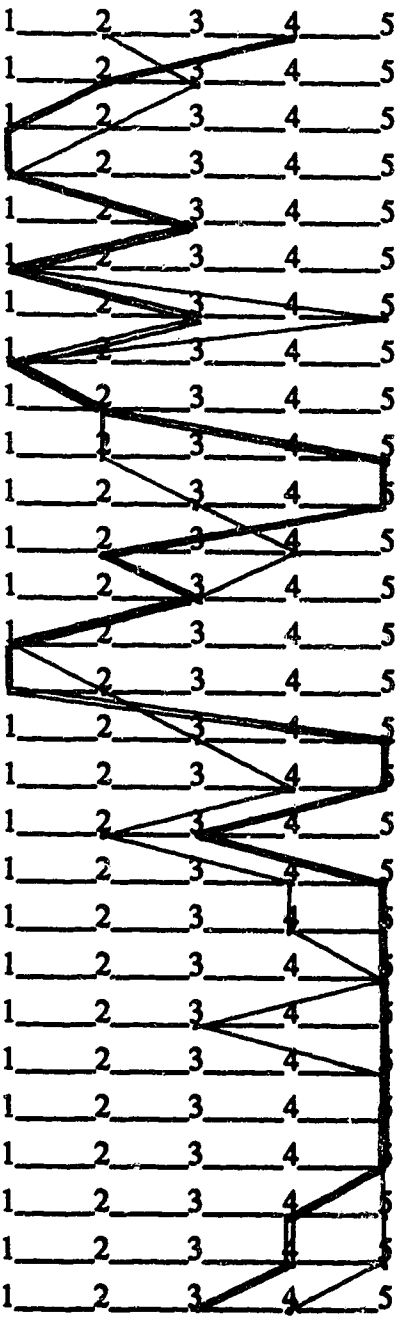
KEY Pre-test Response = _____ Post-test Response ═══

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES Q

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**

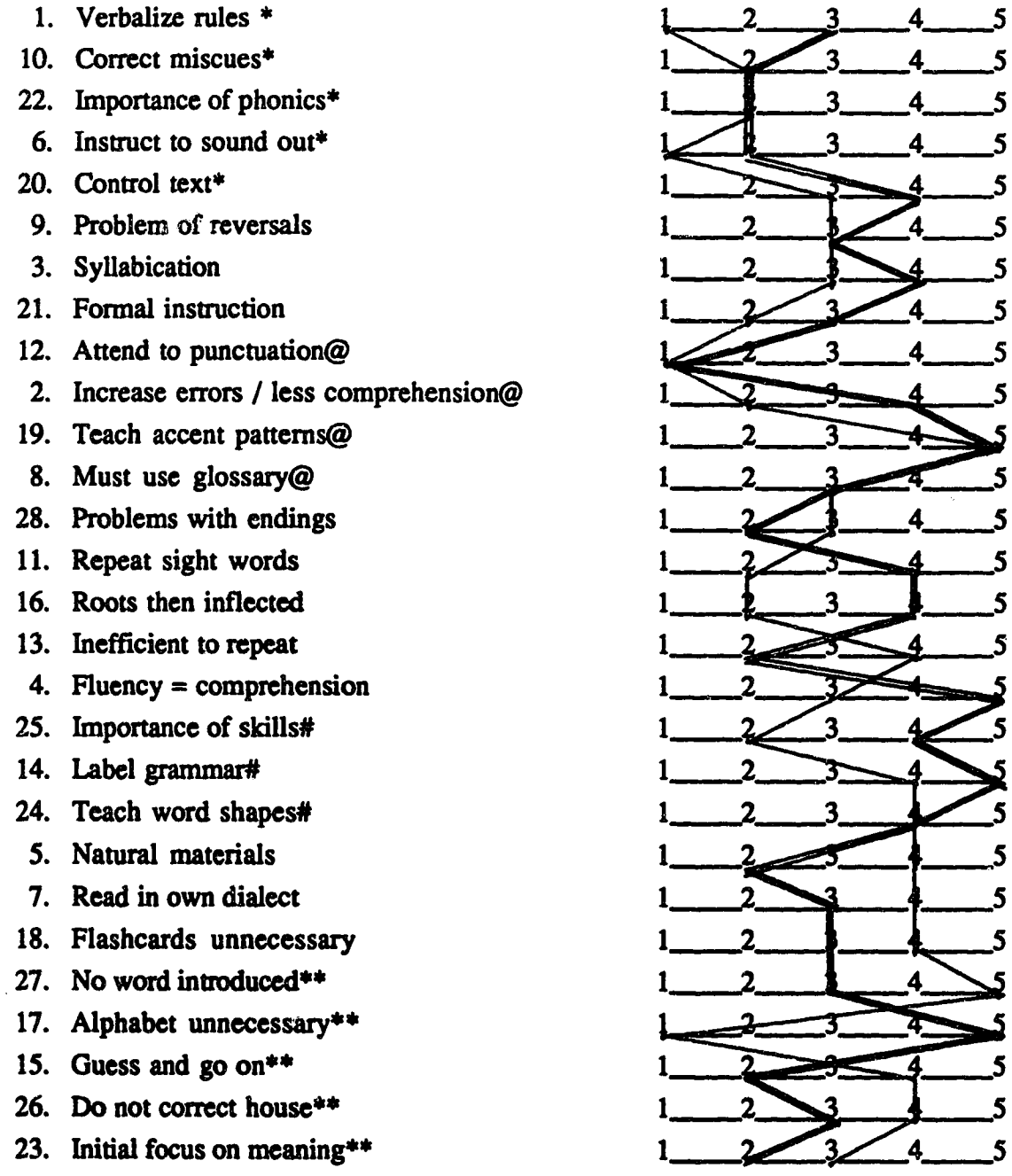


KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES R



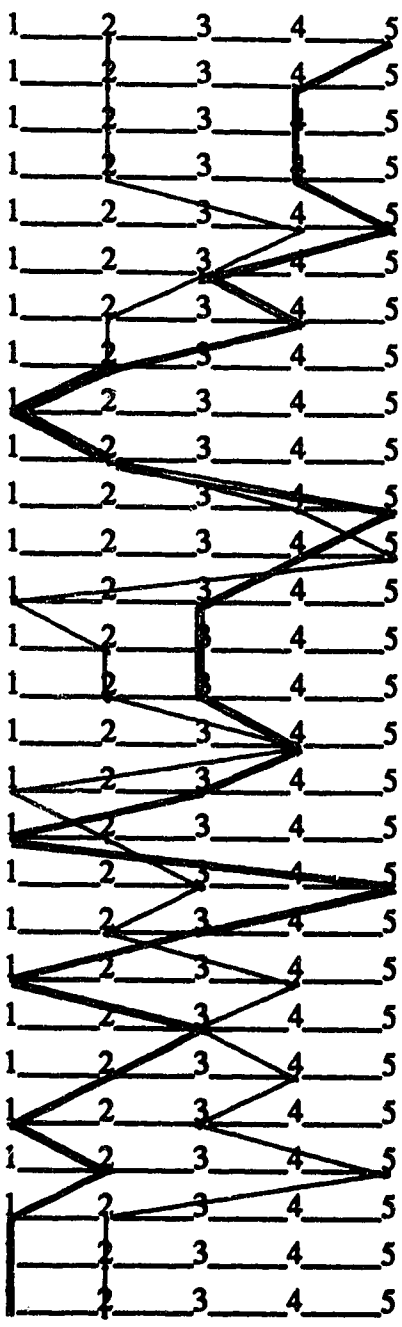
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES S

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



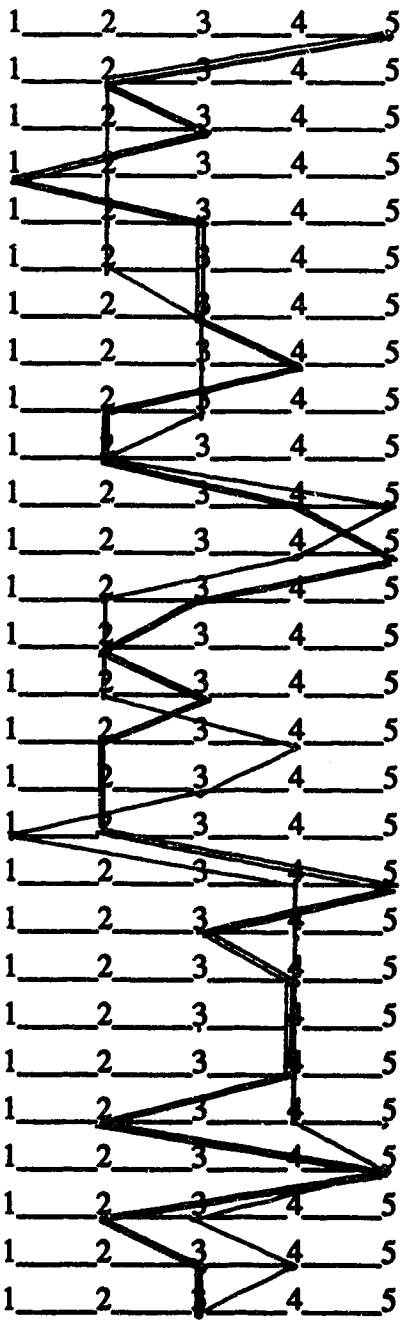
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES T

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



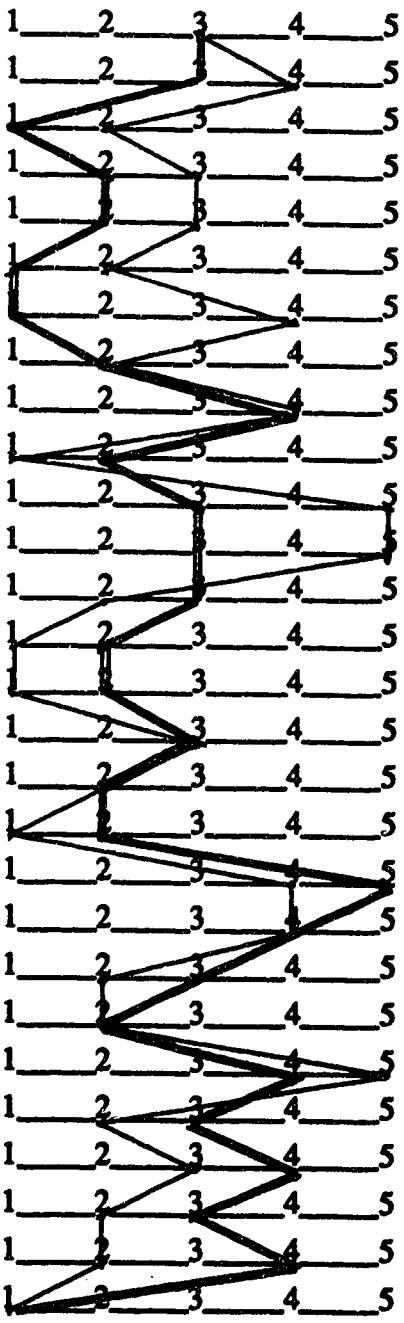
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES U

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



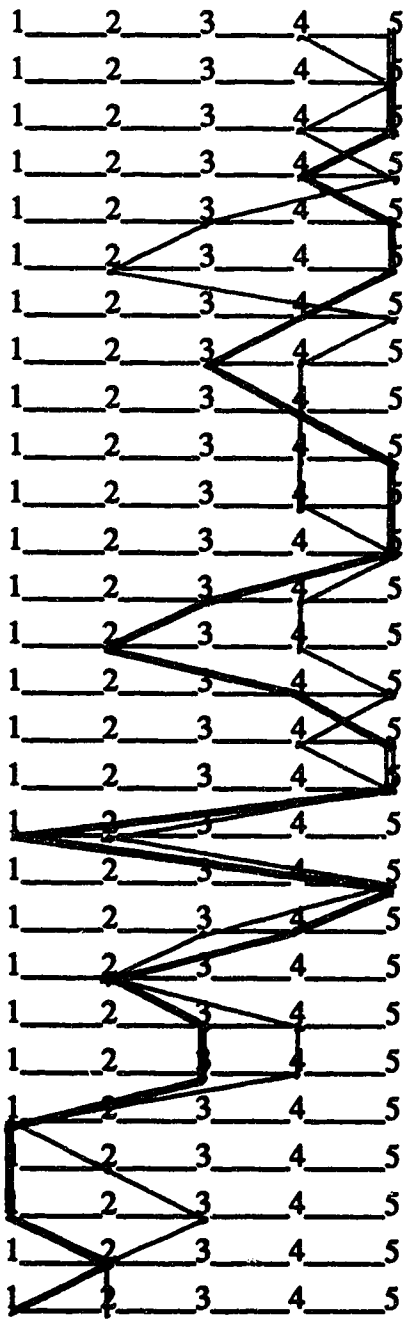
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES V

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



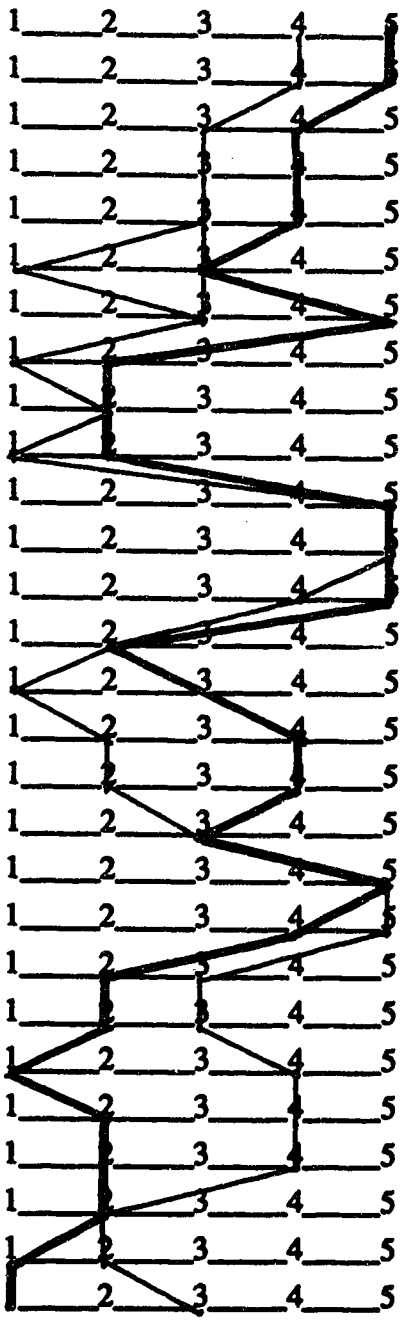
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES W

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



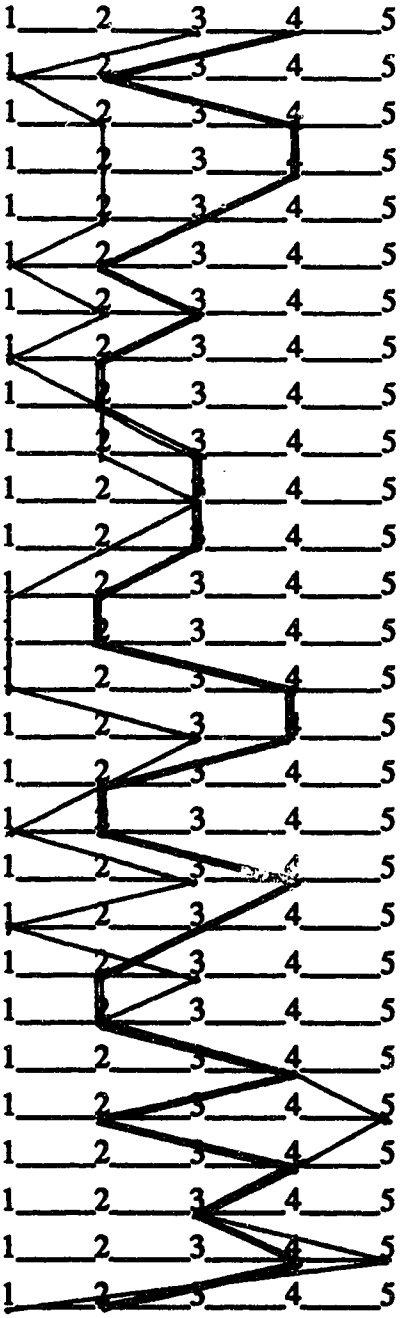
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES X

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



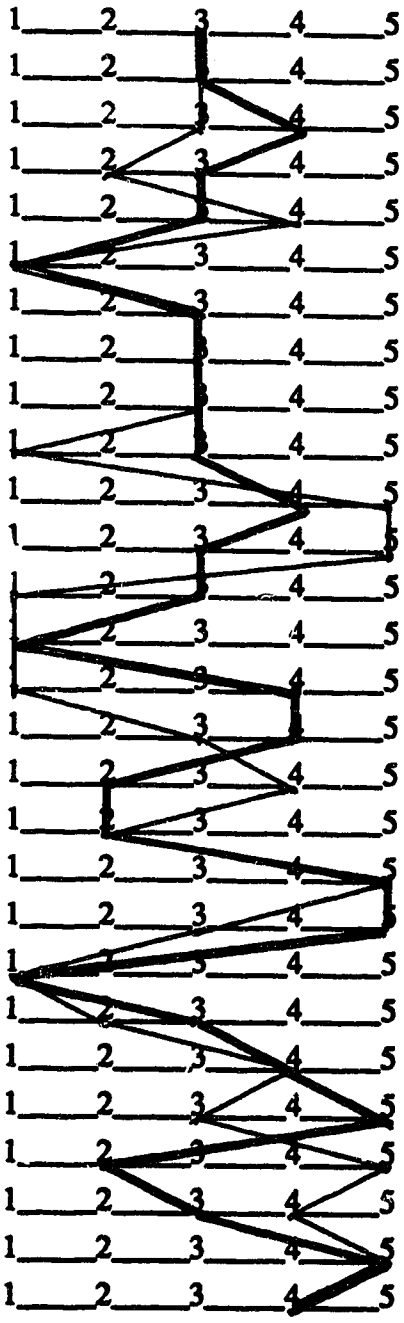
KEY Pre-test Response = _____ Post-test Response =====

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES Y

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**

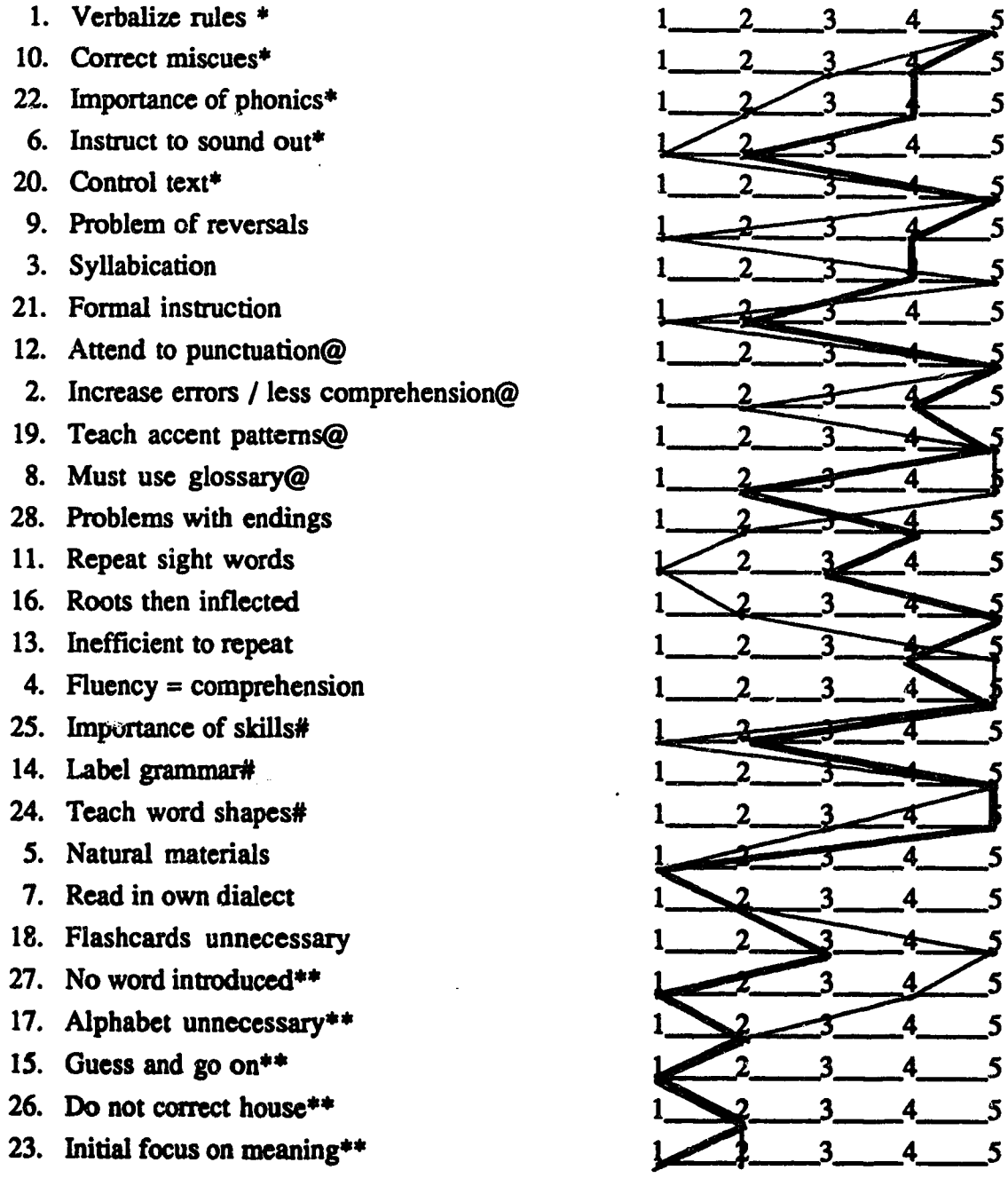


KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES Z



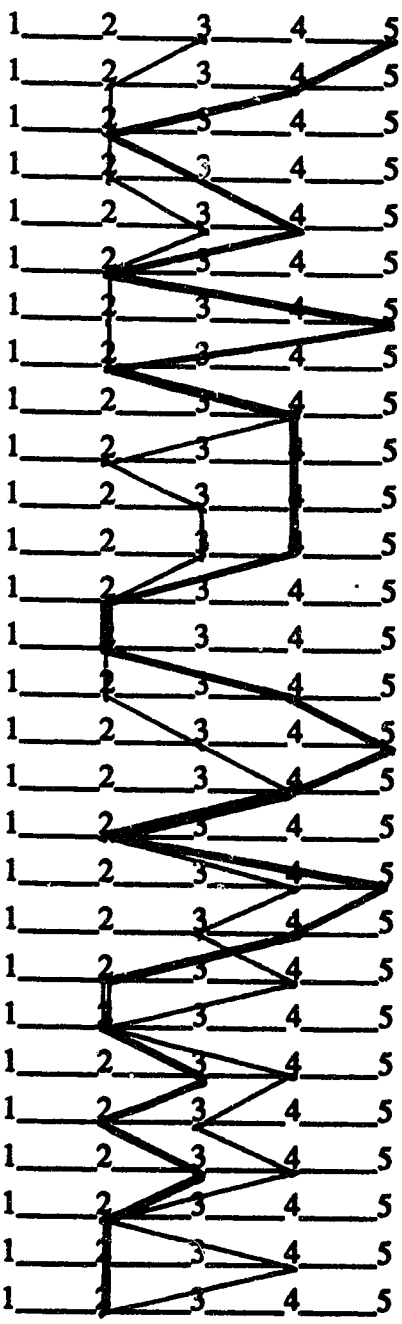
KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

\# Shared Skills - Whole Language ** Strong Whole Language

TEACHER PROFILES A2

1. Verbalize rules *
10. Correct miscues*
22. Importance of phonics*
6. Instruct to sound out*
20. Control text*
9. Problem of reversals
3. Syllabication
21. Formal instruction
12. Attend to punctuation@
2. Increase errors / less comprehension@
19. Teach accent patterns@
8. Must use glossary@
28. Problems with endings
11. Repeat sight words
16. Roots then inflected
13. Inefficient to repeat
4. Fluency = comprehension
25. Importance of skills#
14. Label grammar#
24. Teach word shapes#
5. Natural materials
7. Read in own dialect
18. Flashcards unnecessary
27. No word introduced**
17. Alphabet unnecessary**
15. Guess and go on**
26. Do not correct house**
23. Initial focus on meaning**



KEY Pre-test Response = _____ Post-test Response _____

* Strong Phonics @ Shared Phonics - Skills

Shared Skills - Whole Language ** Strong Whole Language