ACCOUNTING FOR TEACHER EFFECTIVENESS
IN READING INSTRUCTION: DEMONSTRATING
CLEAR DEFINITE BELIEF

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Accounting For Teacher Effectiveness in Reading Instruction:

Demonstrating Clear Definite Belief.

by

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Abstract

The purpose of the study was to determine the effects of a hypothesized causal chain whereby certain antecedents affect mediating variables with subsequent consequences. In particular, it was hypothesized that reading teachers who demonstrated the presence of a clear definite belief system on an instructional approach would have significantly higher classroom reading achievement than others who didn't. Clear belief or clear goals ought to lead to corresponding behavior in the classroom and clarity, efficiency and persuasiveness in instruction. The linking of these chains of events would be crucial in determining teacher effectiveness. Reading research has been characterized by inconclusive results in determining effectiveness of various methods and programs. This study attempted to link the "professional" teacher with these methods with the intention of proving that the combination makes a significant difference.

The sample consisted of 36 randomly selected Grade 2 classrooms. The teachers were interviewed and questioned on their strategies of instruction and were observed in the classrooms for approximately 20 sessions over a period of one school year. Students were tested in reading at the beginning and end of that school year.

Analysis of interview responses revealed that teachers varied in their beliefs on an instructional approach to reading. Further analysis of their consistency in belief and behavior

i

and their performance ratings revealed that their beliefs also varied in strength and credibility. The majority of teachers did not have clear definite beliefs on an instructional approach to reading. However, tests of significant difference between the reading achievement means of consistent teachers and inconsistent teachers proved positive. Similarly did tests between "clear definite belief" teachers and those outside that group prove highly significant differences. ANOVA's revealed no differences in reading achievement could be accounted for by the instructional method or by the belief held when each of these factors operates independently.

Multiple regression analysis was conducted on reading gain for the effects of the linear combination of variables hypothesized. Twenty-five to thirty-four percent of the variance in residualized reading gain was accounted for by each of the paths operating singly.

Some problems existed in the analysis due to the inaccuracies arising from the use of forced choice interview questions. This prevented the establishment of positive causal connections between belief, behavior, performance rating and subsequent reading achievement. However, using consistency and positive performance ratings as conditions of clear definite belief enabled this study to overcome the initial problems.

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Table of Contents

vii

List of Tables

List of Figures

CHAPTER I

Introduction to the Study

Many of the theoretical concepts involved in the act of teaching and discussed in this study, as well as the sample and raw data used, came from a much larger study, hereinafter referred to as the "Project", in which this investigator was involved. This project was conducted at Memorial University of Newfoundland by the Institute of Educational Research and Development and began in 1977 as a three-year neutralistic study of elementary classroom teaching. It was based on a model of classroom instruction in which the teacher is seen as constructing a repertoire of strategies, generalized patterns of behavior, from the interpretation of antecedent conditions and from immediate and long-term feedback from classroom experience. Under this model, effective teachers are seen as those who construct appropriate strategies for the circumstances at hand while ineffective teachers are those who have failed to construct such strategies.

This study attempts to apply a similarly constructed model to the act of teaching classroom reading and, thus define effective and non-effective teachers of reading.

Statement of the Problem

The teaching of reading has a considerable history of research and controversy over methods of instruction that are most effective in enabling students to read (Mathews,

1966). The great debate still continues (Chall, 1967;
Samuels, 1978) and while it does, research on teaching is
examining the instructional process from another perspective.
This relatively new approach to the study of teaching assumes
that what teachers do is affected by what they think (Clark,
Yinger 1979). It assumes that there may be antecedents of
instructional behavior significant in their effect. It
broadens the questions of which instructional behaviors
contribute to increased pupil performance to why this should
be so. In this context, then, McDonald (1976) found evidence
to suggest that teacher belief and attitudes are antecedents
more positively related to teacher behaviors than others.
Researchers further speculate that more specific content
oriented beliefs will lead to an increased teaching emphasis
in the corresponding content within the subject curriculum.
Within the framework of the reading class, then, it may be
possible that teacher belief in a particular content
orientation, that is, word identification or comprehension,
will lead to an increased instructional emphasis in that
content. Furthermore, clear goals in the mind of the teacher
would decrease the likelihood of her being distracted by aims
other than those directly related to the content at hand and
increase the likelihood of her devoting more direct attention
and more time to that goal and content.

The present study was concerned with these issues.
It sought to investigate the presence of clear goals and
identify a belief system that exists, in the minds of teachers,

on a reading instructional emphasis. It further sought to examine teacher behaviors for correspondences between the belief and observed behavior.

A definite goal may be indicated by various teacher behaviors in the classroom. Crocker (1977) suggested that clear goals should lead to improved "efficiency" - defined in terms of increased time on task and direct instruction. Clarity and persuasiveness should also be a result of clear goals (MacKay, 1979). The combination, then, of efficiency, clarity, and persuasiveness should prove meaningful as a measure of assurance that a teacher's stated goal or belief is actually that which is stated and not something else.

The "beliefs" investigated in this study concern those internalized strategies the teacher deems most important as an instructional emphasis in the reading class. The study also allows that no such "beliefs" may exist in the minds of some teachers. Leithwood, Ross and Montgomery (1978) suggested teachers tend not to involve themselves in global decisions on curriculum content. However, of the clear beliefs that do exist, most recent reading research indicated teachers focusing around a "code" emphasis, a "meaning" emphasis (Goldbecker, 1975; Duffy and Bawden, 1975) or a combination of these two. Kamil (1978) concluded that teachers tend to be eclectic in their orientation to reading instruction.

It is expected that teacher behaviors surrounding specific methods of reading instruction are as varied as

the beliefs that precede those behaviors. Mathews (1966) documented the 2,500 year evolution of different instructional techniques used in reading and categorized them as holistic, subskill and mixed. Deverell (1974) stated there are only two distinctive methods for teaching reading - the "synthetic" and the "analytic", or, as Chall (1967) found, "code-emphasis" and "meaning-emphasis". Most basal reading programs used in schools today combine these approaches (Chall, 1967).

The degree to which teachers' beliefs correspond with their instructional behavior has not been well researched (MacKay, 1979). However, the correspondences or inconsistencies that are established between perceived belief and subsequent classroom behavior are suspect of being crucial in determining differences between teachers and their effectiveness in the classroom. Teacher variables have been strong predictors of classroom achievement in recent research on teaching (McDonald, 1976). In reading instruction, Dykstra's (1968) research suggests it is neither the method nor the program that accounts for differences in effectiveness, but rather the teacher.

This study isolates teacher belief as a critical antecedent to instructional behavior in the reading class. The relationship between the two is seen as the essential characteristic that determines effectiveness. Furthermore, performance measures of clarity, efficiency and persuasiveness should be a direct result of a clear definite belief

and characteristic of it. A model of these relationships
would look like the following:

Teacher Belief in Reading Strategy	Teacher Behavior		Classroom Reading Achievement
	Predominant Activity	Clarity Efficiency Persuasiveness	

Purposes of the Study

The major purposes of this study included an
investigation into the following:

1. What are teacher beliefs regarding the primary
    instructional strategy for reaching? Is there a
    range of differences that distinguish teachers?

2. Does the congruence between teacher belief and
    behavior observed in the classroom make a
    difference in student reading achievement?

3. Do teachers who demonstrate consistency in
    thought and action also demonstrate clarity,
    efficiency, and persuasiveness in the
    instruction?

4. Do teachers who are both consistent and clear,
    efficient and persuasive in instruction achieve
    more positive reading gains for their classes
    than teachers who are not?

There are several other possibilities for investigation pertinent to this study. They include:

i) Is teacher belief more powerful as predictor of reading achievement than the teacher's predominant activity?

ii) Is clear belief in one strategy of reading instruction more predictive of reading achievement than clear belief in another?

iii) Is one method of reading instruction more predictive of reading achievement than another?

iv) Is any one belief or combination predictive of success in either of the two subskills in reading—vocabulary (word identification) or comprehension?

Significance of the Study

Research in reading instruction has yet to arrive at conclusive evidence to say that one method of teaching reading is more effective for reading achievement than another. Aside from variables of sex, ability, age and the socioeconomic group of the students the teacher himself is an elusive quantity to deal with. Probably the first significant study in reading to recognize this fact was the Bond and Dykstra report (1967). In the seventies, numerous large scale national studies incorporated teacher variables into hypothesized models of the instructional process and found "personality", "beliefs" and "attitudes" accounting

for up to ten percent of the variance in reading achievement (McDonald, 1976). Duffy and Bawden (1979) attempted to study the existence of teachers' theories of instruction in reading but did not follow up with any further hypotheses once these beliefs or "conceptions" of reading were identified. This investigator was unable to find any research following up teacher's beliefs in an instructional approach to reading with their subsequent behavior in the teaching of reading. The question of whether teachers behave in a manner consistent with their stated beliefs is an issue to be dealt with in the research. Teacher behavior in terms of methods and programs has received wide attention in the past. The antecedents of that behavior could prove significant in identifying differences between teachers. If indeed clear definite beliefs can be identified on the part of teachers as opposed to no specific beliefs (whereby for example, a teacher perceives himself as having no influence and does routinely what the basal or curriculum guide says), then it is quite possible, according to the literature, that such a distinction between teachers can account for effectiveness in instruction.

The study of teacher beliefs regarding an instructional emphasis in reading is relatively new and needs replication. This study attempts to do that. The notion that consistency or inconsistency between belief and action or that clear definite belief or no clear belief can make a difference in student reading achievement is even newer and

basically still at the theoretical stage. As yet the present investigator has not located any study which has attempted to establish the relationship between consistency or clear definite belief and reading achievement. It is for this reason that this study may have theoretical and practical significance. If such a relationship can be established it will lend further proof to the importance of the teacher in determining effectiveness of a reading "method" or "emphasis". A positive relationship would also speak to reading educators, teachers and researchers on the significance of "professionalism" and "goal setting" in the teaching process.

Limitations of the Study

There were three main limitations considered. They are: (1) theoretical limitations, (2) data gathering limitations, and (3) measurement limitations.

It was this investigator's observation that there was, in fact, very little well grounded theory in the research literature for the hypotheses put forth in this study. What was uncovered were relatively very new ideas in the field of research that were untested and hypothesized or suggested as possibilities arising from previous studies. Much of the theory formulated as a basis for hypotheses was done so by this investigator by fitting together more generalized theories about the act of teaching and applying them to the reading situation.

In gathering data several limitations have to be considered. The "Interview Schedule", used to determine teacher belief in a particular emphasis in reading, created some problems in analysis. Because no one question was asked by the interviewer regarding a philosophy of reading instruction or belief in a particular approach, this investigator was forced to subjectively deduce from several questions on reading instruction just what beliefs or convictions the teacher had, if any. To avoid bias as much as possible, criteria for analysis of responses were established based on the kind of questions asked and the type of answers expected. Furthermore, there was very little room for the interviewee to indicate the presence of "no-specific belief" or indifference. The very nature of the interview itself was forced response. Within the questions themselves there were also many problems. The terminology was cumbersome and often unclear leaving much room for misunderstanding of meaning and error in analysis.

In gathering observation data during classroom visits the trained observers were randomly assigned to teachers. However, instead of rotating, the observers tended to stay with the same teachers during the year. Although this may not have affected any recordings of time spent on activities, it is suspected that it may have adversely affected observer ratings of teachers where a certain amount of subjectivity is involved. Ratings may have tended to remain constant during the year.

The random sample of 36 Grade 2 classrooms, while large enough for some generalizability on total group outcomes creates some problems when put into a grid system of cells. As expected some of the cell memberships are too small for any statement or conclusion. In addition, any conclusions drawn will be limited to Grade 2 reading classes only. This is especially important in view of the suspected sensitivity of reading instructional emphases to student age and maturation levels (Harris, Sipay, 1971).

The statistical tests chosen for analysis of the data, t-tests and ANOVAS to determine significant differences between the means of selected groups, are adequate for the purposes of this study. However, they do not quantify the relationships suggested or give predicting values for them. Multiple regression analysis was used for this purpose but was greatly encumbered by the nominal characteristics of many of the independent variables. These two sets of nominal variables were not collapsed to form a single predicting equation for the dependent variable reading gain. Thus the study would not be determining the total variance accounted for by all the variables.

CHAPTER II

Review of the Literature

The question of whether teachers have certain
conceptions of instructional practices in reading that
influence what they do in reading may have practical
significance in an investigation studying this relationship
with student reading achievement. The question as stated
implies a model of instruction that needs further elabor-
ation. It assumes that it is important to answer the
question of why teachers engage in particular forms of
behavior and it outlines the dimensions of the field of
investigation suggesting broad relationships between
antecedent, consequent and mediating conditions. The
implied model, in its simplest linear form, sees teacher
behaviors regarded as the means or tactics by which the
teacher attempts to implement a teaching strategy. It
poses an interesting question of congruence in this context
between expressed strategies and the manner in which these
strategies are manifested in the classroom (e.g., a teacher
may, in describing objectives in reading, express a position
which is incongruent with that teacher's classroom behavior).
It also poses an interesting question on the degree of
influence perceived by the teacher in the decision-making
process (e.g., a teacher may perceive a certain reading
curriculum--a basal program--imposed on her with no

flexibility of instructional mode) and this in turn may bear directly on her teaching behavior in the classroom.

The Model

A wide variety of theoretical formulations have been used to identify variables that might warrant investigation into classroom processes and to derive process-product relationships (Crocker, 1976). Perhaps the closest theory to the classroom setting model as perceived in this study comes from the social psychological, and sociolinguistic views of teaching that see the classroom representing a collection of individuals in a setting which requires interpersonal interaction (Barker, 1963; Barker & Gump, 1964; Barker, 1968; Bernstein, 1971). Barker's work on "behavior settings" and the "behavior stream" represents an attempt to incorporate all elements of a setting (such as classroom) into a single framework for investigating all possible relationships which might exist between components of the setting. Bernstein proposes that teaching be considered in two ways: organization of subject matter, "classification", and the structure of the pedagogy used, "framing", both of which can serve as a basis for unifying a variety of specific teacher behaviors in the classroom.

A general model of teaching that serves to link the classroom process itself to broad classes of antecedent and consequent variables was proposed by Dunkin and Biddle (1974) and modified by Crocker (1976). The model expressed, in a

broad sense, the possible forms of interactions between
variables in the setting and how these interactions may be
influenced by various constraints. It also illustrated the
goal-directed nature of classroom processes. Variables
which constitute the boundary conditions, defined as those
beyond the control of the teacher in planning and carrying
out classroom activities, are found to resemble Lundgren's
concept of "frame factors" (Lundgren, 1972) and are
considered antecedent to teaching strategies. However, the
distinction between such boundary conditions and teacher
perceptions dissolves when one considers that a boundary
condition must be interpreted and acted upon by the teacher
before it can influence teacher decision-making (Crocker,
1976). The crucial variables, therefore, may be those the
teacher perceives as having the greatest influence.
Differences between teachers then, would be a manifestation
of differences in perceptions and in strategies derived from
these perceptions. These differences may ultimately be
reflected in classroom behavior and pupil outcomes. This
investigator derived the following theoretical models as
suggestions of instructional processes applied to the
classroom and to the reading lesson.

Teacher as Decision-Maker

Leithwood, Ross, and Montgomery (1978) summarized
a broad body of research on teacher decision-making and
influence variables thereof. They suggested that teacher
decision-making is characterized by relatively few external
influences and by relative isolation especially in decisions
on classroom interaction and types of classroom activities.
However, teachers, they concluded, tend not to be involved
in decisions about global concepts and curriculum content.
The research of Leithwood, Ross and Montgomery (1978)
themselves suggested that teachers have abdicated respons-
ibility for decision-making on global concepts even to the
extent that they are unable to articulate such concepts.
Doyle and Ponder (1978) argued that teacher decision-making
is dominated by a "practicality ethic" and any innovation
must be assessed as to its instrumental content (practical
classroom use), its congruence with the teacher's perceptions,
and its cost (potential return on time and effort invested).

MacKay's (1979) exploration into the relationship
between teacher thought processes and behavior used pre- and
post-lesson interviews and high inference measures of teacher
behavior including clarity and persuasiveness. He found a
clear relationship between teacher thoughts and classroom
behavior, the thoughts and comments being, in general,
congruent with the observed behavioral data. However, he
also suggested that the conclusion of congruence may be an

inevitable result of the forced-choice quality of the interview questions. Crocker (1977) suggested that teachers who have clear goals should also demonstrate "efficiency" in instruction - efficiency being defined in terms of increased time on task and direct instruction.

Classroom Processes

Overriding the classroom process model are notions of structure and control that are thought to identify the general domains in which teacher planning and decision making would take place (e.g., structure--lesson sequencing, use of materials, objectives planned, etc.; control--group management, classroom climate, grouping) (Dunkin & Biddle, 1974). The concepts of structure and control have been proposed by Crocker (1976) as dimensions along which the general mode of operation of the teacher can be investigated. For the purposes of this study structure will be the primary dimension in the investigation.

In the attempt to examine a teacher's plan on the one hand and her classroom behaviors on the other Smith and Meux (1962) recognized the fundamental distinction between strategies, as large scale moves, and tactics, as small units of discourse. Smith et al. (1967) introduced a single unit of analysis, a venture, defined as a set of verbal utterances dealing with a single topic or oriented towards a specific goal. Nuthall (1976) subsequently reported that relation-ships did exist between occurrences of specific types of ventures and pupil concept learning.

Teacher Behaviors and Student Achievement

Aside from what teachers think, the relationship between what teachers do and its effects on student achievement has been studied for decades primarily from a theoretical perspective or "commitment" on the part of the investigator (Dunkin & Biddle, 1974). Schwab's (1969) "practical" anti-theoretical position, not unlike Barker's (1968) behavior setting concept is consistent with the model on classroom processes; that is, an investigation into possible relationships starts with the system as it currently exists.

Brunswik (1952, 1955) and Snow (1968) postulated that experience with the event and objects in an environment produces knowledge about the cue value of recurring stimuli. Brunswik's model focuses attention on the processes involved in learning to utilize classroom cues that have ecological validity in the sense of signalling performance expectations.

Tamir (1975) in a study of the comparative effects of different curricula provided some evidence for the development of cue preferences. He found, for instance, that students who had long-term experience with a BSCS Mathematics curriculum exhibited a preference for inquiry tasks in contrast to recall tasks. Walker and Schaffarzick (1974) presented a strong argument for "content inclusion" and "emphasis" as molar variables which influence student learning to a greater extent than more molecular units of classroom processes. The studies they reviewed showed that

different curricula are associated with different patterns
of achievement. From a similar perspective, then, it might
be possible to interpret process-product evidence concerning
the effects of such variables as clarity and task orientation.
They would function to reduce the complexity of students'
identifying performance expectations. Such teacher behaviors
would therefore increase the total number of students who are
able to locate performance expectations and, in turn, would
raise class mean achievement.

Teacher behaviors, as conventionally measured, seldom
account for more than ten percent of the variance in learning
outcomes (Anderson & Kaplan, 1974; Walberg, 1971; Heath &
Nielson, 1974). However, teacher influence does operate
indirectly through the manner in which a teacher defines and
manages the performance-grade exchange. Gump (1964) argued
similarly that teacher effects occur primarily through the
activity structures teachers establish in classrooms. By
creating classroom tasks, in other words, a teacher activates
a particular set of student responses which result in
achievement.

The strength of the academic orientation of instruc-
tion is positively related to student learning (Marliave,
1976). The findings from the Beginning Teachers' Evaluation
Study, Phases II and IIIA (McDonald, 1976; Joyce, 1975)
consistently indicated that instruction, clearly and
explicitly structured to attain specified academic goals,
supported by the teacher's management of the physical

environment of the classroom, is conducive to higher student achievement. Goal-directed, highly structured instruction was also positively related with student learning as represented in the data of BTES III A (1975), Gage (1963) and Stallings (1975). Brophy and Evertson (1974) found that less successful teachers were more concerned with emotional than with academic needs.

Sheer quantity of academic instruction received by the student is consistently related to positive student learning outcomes (includes both the amount of instructional time and the amount of content covered) (Stallings & Kaskowitz, 1974; McDonald, 1976). McDonald noted "If students have not been taught . . . some . . . content or procedure, they simply do not do well on those portions of the test relevant to that topic" (p. 27). Teachers who maintain a strong academic focus as in the Stallings' study (1974), were "task oriented" (Bennett, 1976) or "determined that their students learn" (Brophy & Evertson, 1974) were found to yield positive, consistent results in achievement in reading and mathematics.

Some significant recommendations emerged for this study from the Phase II and III A BTES findings. Both the Joyce report (1975) and the Shavelson and Dempsey report (1975) recommended that research on instruction examine the particular areas of reading and mathematics content covered in relationship to the particular reading and mathematics skills for which students' learning is demonstrated. It

was suggested that instruction in a particular content area
should show a stronger and more generalizable relationship
to learning in the same content area than it would to
learning in other academic content areas.

Research in Reading Instruction

More and more research suggests that effective
teachers are decision-makers who engage in information
processing (Shulman, 1975; Shulman & Elstein, 1975). Such
research on teaching is of particular interest because of
increasing evidence that instructional effectiveness in
reading is tied to teachers rather than to programs (Bond
& Dykstra, 1967; Early, 1976). Combs, Blume and Newman
(1975) stated that "the teacher's private world of
perceptions" determine effectiveness and Brophy and Good
(1974) emphasized that it is the "teacher's belief system
or conceptual base" which is especially important. Reading
educators point to conceptions of reading in particular.
Carroll and Chall (1975) concluded that the teacher's
systems of beliefs about how different children learn to
read is crucial. Goodman and Watson (1977) argued that
teachers should be able to articulate the . . . (reading)
. . . program's theoretical base . . . ." Kamil and
Pearson (1979) stated it this way -- "different models of
reading suggest different instructional practices" and that
teachers theoretically make different instructional decisions
depending upon their particular "model" or conception.

The Reading Process

Kamil (1978) described four models of reading, out
of a large number that existed, to represent differences in
emphasis. In the initiation of the reading process there
are the "top-down" models (Goodman, 1968) in which a reader
generates hypotheses to be verified by the printed material,
and the "bottom-up" model (Gough, 1972; LaBerge & Samuels,
1974) in which the act of reading is initiated by the visual
(printed) stimuli and terminated by semantic interpretation.
These are not necessarily mutually exclusive processes as in
the case of the Rumelhart model (1976) which described the
interactive nature of the processing. Both the Gough model
and the LaBerge and Samuels model assumed that reading is
composed of subskills. Goodman's emphasized the holistic
nature of the reading process in which at the highest
proficiency level no subskills are discernable. Rumelhart's
position is that reading can be either a component skill or
holistic process. Barr (1974) has evidence to suggest that
training in component skills (code emphasis) does not
automatically transfer to holistic processing (meaning
emphasis). She indicated that transfer skills needed to be
taught specifically.

The dichotomy between decoding and comprehension is
clear in most of the models described. "Bottom-up" models
assume word recognition skills (decoding) most important
before comprehension (comprehension only becomes important

when decoding skills are automatic). "Top-down" models stress comprehension as most important, with more emphasis on context and verifying "guesses" and very little on "pure" word recognition (Kamil, 1978).

These models assign comprehension to relatively undifferentiated processes labeled "meaning" and do not address the issue of whether comprehension is specifically composed of subskills. Kamil further concludes that research, due to inappropriate models of cognitive processes and/poor methodology, provides insufficient answers to the issue in question. For instructional purposes, he stated, teachers must proceed, as do authors of basal texts, as if there were subskills and that they can be taught. Teachers do see comprehension as the single most important outcome in rating students' reading ability (Beebe & Bulcock, 1978; Conners, 1980). The differences among teachers, however, lies in the method of instruction or area of emphasis used to arrive at the same general outcome (Ruddell, 1978; Shands, 1974; Kamil, 1978).

Word recognition is differentiated in the models outlined by Gough and LaBerge-Samuels as being a visual serializing process (phonetic decoding) and a visual feature analysis process (whole word, look-say) respectively. This difference is often not referred to in other models of reading.

Teacher Conception of Reading

Do teachers conceptualize reading in terms of the emphasis described by Chall? Do they have a theory of

instruction in reading? Duffy and Bowden (1979) found that teachers did have conceptions of reading but they were not ones identifiable in the literature. Instead, they focused around "content centered" and "pupil centered" with the former encompassing conceptions such as basal texts and linear skills and the latter encompassing natural language, interest, and integrated curriculum models. In cases where teachers do have multiple conceptions of reading, the tendency is to select similar conceptions. For instance, a "basal" conception is likely to go with a "phonetic skills" or "sight words" conception and less likely to go with "self-selection of trade books" or a "language experience" conception. Goldbecker (1975) in a review of research in reading for instructional purposes found these same conceptions but concluded that they belonged under only two headings; code-emphasis programs and meaning-emphasis programs. Code-emphasis incorporated phonics, various linguistics approaches and the initial teaching alphabet. Meaning-emphasis programs included the basal approach, individualized reading and concept development (as a prerequisite to vocabulary development).

Deverell (1974) examined the terminology used when authors described "methods" of reading instruction. Rather than methods or strategies they tended to be "tactics" by which the main strategies were put into action. "Strategy is overall plan of action; tactics are the details." (p. 35) The two main strategies have been known for several hundred

years as the "synthetic" method and the "analytic" method
- these two being the only strategies in reading instruction.
Furthermore, he expressed the following opinion:

> "We shall assume that children who learn to
> synthesize must almost immediately learn to
> analyze, and vice versa. That is, regardless
> of the approach used initially, unless learners
> ultimately master the total process, they will
> be deficient in reading and in other closely
> related skills." (p. 35)

Chall (1967) earlier had reclassified teaching methods
into "meaning emphasis" and "code emphasis" approaches because
she had found that teachers and authors of reading texts
placed more importance either on teaching children the
meaningful communication aspects of the written language or
on the technical linguistic elements of the printed code for
the spoken language.

Reading Achievement

There are no clear definitive results in the research
which demonstrate that either of the two emphasis programs
is superior (Goldbecker, 1975; Karlin, 1973). Chall (1967)
concluded that code-emphasis programs were superior, at least
in the beginning stages, to meaning emphasis programs as far
as overall reading achievement is concerned over a few years.
Dykstra (1968) found no clear evidence that the early
emphasis on code per se was the only or even the primary
reason for the relative effectiveness of the code-emphasis
programs. He suggested the possibility of a particular
combination of factors accounting for differences in

effectiveness over programs and he hypothesized that it was not the method, nor the program, but the <u>teacher</u> who made the difference in reading achievement.

Summary

In reviewing the research as presented here, a model of classroom processes emerges that is somewhat linear in form. Strategies have antecedents that most often merge into perceptions of strategies (Crocker, 1976). Leithwood et al. (1978) argued that teachers do not think in global concepts while Buike and Duffy (1979) found that they do have conceptions of reading. Maybe teachers see reading conceptions as "practical", as suggested by Doyle and Ponder (1978), and therefore worth retrieving into their conceptual framework. Teachers do think in terms of "ventures" (Smith et al., 1967) and "moves" (Bellack, 1966) as their level of discourse with subsequent relationships to pupil concept learning (Nuthall, 1968). It is the teacher that makes the difference over methods and materials (Bond & Dykstra, 1967; Early, 1976) in student reading achievement and it is their belief system in particular that is of significance (Brophy & Good, 1974; Kamil & Pearson, 1979). In this context then, the issue of congruence arises. Will the "strength" and "clarity" of the task orientation make a difference as suggested by Brophy and Evertson (1974), Bennett (1976) and Walker and Schaffarzick (1974)? Will time spent on the tasks involved in the area of emphasis make a difference as

suggested by McDonald (1976) and Stallings (1975)? Will
teachers who indicate a definite belief in a particular
emphasis program in reading and demonstrate it in the
instructional setting, conveying it as a preference to the
students (Gump, 1964), make a real difference in the reading
outcomes of the classroom? While there is strong indication
from the research that this congruence would make a dif-
ference, there has been no research specifically addressed
to the question of congruency.

Both the theoretical models of reading and a history
of research suggest differences in terms of emphasis in
reading programs (Kamil, 1978). Teacher belief in either
meaning-emphasis, code-emphasis, or an eclectic emphasis
should make a difference in the predominant activities of the
reading class. The strength of the area of emphasis (consistent
belief and behavior plus clarity, efficiency and enthusiasm)
should make a difference in final student reading achievement
outcomes.

CHAPTER III

Design of the Study

The description of the research instruments, the sample, and the methods used in the collection of the data will be taken directly from the "Project" reports as they pertain to the study at hand.

The Sample

During the school year 1977-78 all schools from the Avalon, Bonavista, and the Burin Peninsula in Newfoundland were randomly ranked and requested to participate in the study. Schools were then approached until 40 grade two classrooms agreed to participate. During the school year 1978-79 when the data was collected, four of the grade two classrooms dropped out of the study leaving a total of 36 grade two classrooms. The average grade two class size was 28.0 and ranged from 14 to 46 students. The largest class, 46 students, was a special organization for reading only - the other subjects were taught to a class of 30 students. The distribution of class sizes in the sample showed class sizes tending to be close to the average. Most classrooms were heterogeneous with students assigned without regard to ability or past achievement.

Hypotheses

The hypotheses for the study flow directly from the purposes as itemized previously and are supported in many instances by related research presented previously.

Hypothesis 1: Teachers have no one ("single")
belief regarding strategies for
teaching reading.

Hypothesis 2: Teachers who are consistent in belief
and instructional behavior regarding
a reading instructional strategy will
have a significantly higher classroom
mean reading gain than teachers who
are inconsistent.

Hypothesis 3: Teachers who are consistent in belief
and instructional behavior will be
above average in clarity, efficiency
and persuasiveness.

Hypothesis 4: Teachers who demonstrate clear definite
belief in a reading instructional
strategy will have significantly higher
classroom reading gain than teachers
who do not.

Hypothesis 5: No single belief in a particular reading
instruction strategy is significantly
more predictive of classroom reading
achievement than another.

Hypothesis 6: No one observed reading instructional
emphasis in the classroom is signif-
icantly more predictive of classroom
reading achievement than another.

Hypothesis 7: No single belief, reading instructional emphasis or combination thereof can predict higher achievement in either word identification or comprehension.

Instrumentation

The Interview. An Interview Schedule was devised as part of the Teaching Strategies Project in order to measure variables perceived as influencing the teaching learning process. It has been assumed that in decision situations, teachers will refer to a set of beliefs, or perceptions which govern the decisions made and actions taken. If asked, teachers would refer to these factors when accounting for their decisions. It is hypothesized then, that within the set of factors which could be considered by a teacher, the importance of a specific factor relative to the other factors determines its influence in a decision situation. Teachers can perhaps be classified in terms of the relative importance they assign to various factors in decision situations. Their perception of the importance of each factor should be reflected in the strategies adopted by the teacher and in the teacher's classroom behavior.

From this interview, several questions were identified for the purposes of this study that pertained to teacher decisions regarding the importance of several factors related to reading instruction. They include the following:

1. Rank in order of importance (1 is high) the topics you consider most important in each subject area.

	Reading	Language Arts
Basic Skills		
Concepts		
Comprehension		
Vocabulary		
Interpretation		

2. What are the main outcomes toward which you teach in each subject?

   READING:

   LANGUAGE ARTS:

3. Describe the various instructional techniques used.

   READING:

   LANGUAGE ARTS:

Observation System (See Appendix IV)

The observation system used in the Teaching Strategies Project consisted of separate sets of categories for teacher, pupil, and lesson structure. Categories were derived from

existing coding systems and were organized to capture substantive, structural, and control (discipline and group management) aspects of lessons. Teacher categories included subject being taught, cognitive content of subject, communications groups, response selection patterns, treatment of disruptive behavior, and feedback. In the case of pupils, the observer recorded on-and-off-task behavior, task choice, communications groups, nature of activity, and again, response selection and disruptive behavior patterns. Lesson categories were designed to record structural features of the lessons that were manifested only over a time span of 10-15 minutes and that could not be detected by teacher and pupil categories. In addition, the lesson coding scheme included rating scales for affective aspects of teacher-pupil relationships.

Observations were recorded at approximately 30 second intervals. An observation cycle consisted of a teacher observation followed by two pupil observations, with this pattern being repeated until each target pupil had been observed twice. At the end of the cycle, the lesson structure coding was carried out. This process was repeated for a session of 1-2 hours in length, beginning and ending at natural breaks (such as recess or lunch) in the school day. All observations were recorded on optically scorable data sheets and processed to yield an initial data set consisting of frequencies of occurrence of the various categories, at the level of a single lesson.

A group of six observers were trained, and engaged
in full-time field work during the year 1978-79. Each
teacher was observed on an average of twenty occasions of
one to two hours each in duration for a full year. For
Language Arts, each teacher was observed an average of
nineteen times for the year. Observers were assigned
teachers at random and tended to stay with the same ones
- twelve to fifteen in all.

Observer Reliability

Three weeks were taken to train the observers to code
reliably. Once they were familiar with the categories on the
coding sheets from the three observation systems, they were
shown videotapes of over twenty classrooms and teachers and
asked to code a 30 second observation period. Twice during
the year, observers observed classrooms in pairs after which
the level of agreement was checked and significant departures
from agreement were examined. A simple statistical evaluation
of coder agreement was done for each coding category, using
the index of observer agreement suggested by Emmer and Millet
(1970). It was found that for behaviors where the observed
frequency for each observer was greater than ten for the
single observation session, observer agreement was generally
in excess of .90.

Selected Categories

For the purposes of this study several categories were
selected as being appropriate. Two in particular, "Word

Identification" and "Comprehension", were chosen from the
Interactive Teacher Focus Coding System under the heading
"Predominant Activity". Reading was not separated as a
lesson apart from "Language Arts" in the observation system.
However, of all the activities possible under a language
arts period, the two variables chosen were the only related
activities to reading other than "reading time". Scores
are given in mean time over all lessons observed during the
year. By looking at each teacher's mean time score as a
percentage of the combined total of the two variable mean
time scores, one can have some indication of the strategy
in reading most predominantly observed in instruction. A
seventy percent (70%) time allotment was decided on an
apriori basis as indicating a behavioral emphasis on one
strategy over another. Those teachers then that were observed
spending 31-69% of their combined time on either of the
categories would be classified as "eclectic" in observed
strategy.

Three categories "enthusiasm, "clarity", and
"efficiency", were selected from the Lesson Coding System to
represent a further indication of clear belief (Crocker, 1977;
MacKay, 1979). In the major project, these variables were
intended to obtain a rating of the teacher's involvement and
interest in the lesson, her efficiency in communication, and
her organization and time usage. It is expected that teachers
who indicate clear belief would also be above average in

clarity, efficiency and enthusiasm. The mean of each variable of the total rating scores for the sample group may be considered the criterion level for membership in the group that is clear, efficient and enthusiastic in instruction.

Reading Test

The 1978 edition of the Gates-MacGinitie Reading Tests was used in this investigation. Level B, forms 1 and 2, were used for the Grade II classrooms in the sample. Each form consists of two subtests, vocabulary and comprehension, two components of reading that, according to research findings, actually measure somewhat different abilities (MacGinitie, 1978).

The Vocabulary Test primarily measures decoding skills. It contains 45 items, each of which consists of four printed words and a picture illustrating one of the words. The child's task is to "sound out" (or recognize) the words, and to choose the one that corresponds to the picture. Most items require the child to know the sound that corresponds to a specific letter or letter sequence in order to select the right word.

The Comprehension Test involves the understanding, the relationship of words and ideas within a passage. The first passages are simple sentences. The later passages involve longer sentences and more complex verbal relationships. Each passage is accompanied by four pictures. The child's task is to choose the picture that illustrates the passage or that answers a question about the passage.

Overall reading achievement for each student is computed by adding the vocabulary and comprehension raw scores together.

Test Validity

The validity of a test has to do with what the test
measures. The Gates-MacGinitie Reading Tests measure
important knowledge and skills that are common to most school
reading curricula. It is valid for a school to the extent
that the knowledge and skills that are being measured match
the schools' goals in teaching reading. The general popularity
and acceptance of this test over other tests in the province
of Newfoundland as a measure of reading achievement appeared
to be an indication of its apparent validity. The authors
describe the subtests as follows:

> The Vocabulary Test included words characteristic of
> words likely to be read by students in that grade
> range covered by the test level. These words were
> selected from such lists compiled by Dolch, Dale,
> Gates-MacGinitie, and Harris Jacobson, as well as
> from lists such as the Revised Core Vocabulary
> (Research and Information Bulletin No. 5, Educational
> Development Laboratories, 1969) and the American
> Heritage Word Frequency Book by Carroll, Davies, and
> Richman (American Heritage Publishing Company, 1971).
> Because the primary purpose of the Vocabulary items
> is to test skill in recognizing and decoding words,
> and not skill in spelling, the use of homonyms as
> distractors for correct answers was avoided.

The Comprehension Test includes sentences and passages
written specifically for the test. The aim was to
maintain a high level of children's interests while
providing a range of difficulty in vocabulary and
structure particularly appropriate to children in
the early grades. The content includes approximately
80% literal type questions and 20% inferential
(MacGinitie, 1978, p. 10).

Test Reliability

The reliability of a test is a matter of how accurately,
how consistently, the test measures whatever it does measure.
MacGinitie (1978) reports Kuder-Richardson Formula 20 reliability
coefficients of .90 and .92 for both the vocabulary and com-
prehension subscores for grade two.

Definitions

This section contains a brief description of each of
the variables used in this study.

Teacher Belief or Teacher Conception of Reading

A review of the literature suggests that teacher
belief regarding various emphases in reading instruction
varies in a general sense from no definite belief to clear
definite belief and more particularly is split between a
"code" emphasis, a "meaning" emphasis and an "eclectic"
approach (Chall, 1967; Kamil, 1978).

"Code" Emphasis. This emphasis tends to be associated with word identification skills such as phonics and structural analysis; teachers tend to be content-centered rather than pupil-centered (Goldbecker, 1975; Duffy and Bawden, 1979).

"Meaning" Emphasis. This emphasis tends to be associated with comprehension, use of trade books, concept-development, or language experience; teachers tend to be pupil-centered rather than content-centered (Goldbecker, 1975; Duffy and Bawden, 1979).

"Eclectic" Approach. This approach is indicated when both "code" and "meaning" are mentioned with relatively equal emphasis (Kamil, 1978).

"No Belief" Group. Some teachers are expected to make ambiguous or unclear statements regarding the various emphasis in reading instruction (Leithwood et al., 1978).

Observation Variables

Word Identification. This variable is coded by a classroom observer to represent the predominant activity which is taking place in a 30 second observation. The activity refers to sight words, phonics, structural analysis and use of context. See Appendix I for a fuller description of these activities. Seventy percent or over the total time (combining W.I. with Comp.) would constitute an observed emphasis in this activity.

Comprehension. This variable is coded by a classroom observer to represent the predominant activity which is taking

place in a 30 second observation. The activity refers to literal, inferential, and listening comprehension, making judgements and word meaning. See Appendix I for a fuller description of these activities. Seventy percent or over of the total time (combining W.I. with Comp.) would constitute an observed emphasis in the activity.

Word Identification and Comprehension. This activity refers to a relatively equal amount of time spent on word identification and comprehension as defined above. Thirty-one to sixty-nine percent of the combined time on either activity would constitute an observed eclectic approach.

Enthusiasm. This dimension refers to the enthusiasm or interest level expressed by the teacher and students during class activities. (See Appendix II.) It is used as a substitute variable for "persuasiveness".

Clarity. This dimension refers to the clarity of communication, instructions, and expectations conveyed to the students. (See Appendix III.)

Efficiency. This dimension refers to the teacher's efficient use of time in fulfilling her responsibilities. (See Appendix IV.)

Independent Variables

Teachers Demonstrating Clear Definite Belief. These teachers are characterized by belonging to equivalent groups in the belief and observed predominant activity variables and score above the total sample mean rank scores in enthusiasm, clarity and efficiency.

Teachers Demonstrating No Clear Definite Belief.
These teachers are characterized by not belonging to
equivalent groups in the belief and observed predominant
activity variables or do not score above the total sample
mean in enthusiasm, clarity and efficiency.   This group
also includes those teachers who describe no particular
belief in the initial description.

Dependent Variables

Reading Achievement refers to residualized total
reading gain scores obtained by a class using the 1978
edition of Gates-MacGinitie's Reading Tests (MacGinitie,
1978).   Scores have been residualized for the effects of
the pre-test.

Vocabulary and Comprehension subtest residualized
mean gain scores are also included as dependent variables.

Vocabulary Test is primarily a test of decoding
skills.

Comprehension Test involves the total reading task
- understanding the relationships of words and ideas within
a passage.

Analysis of the Data

Interviews. Within the "Interview Schedule" devised
by the "Project" several questions were asked that were
specific to decisions that apply to reading instruction.
They include the following:

1. Rank in order of importance (1 is high) the topics you consider most important in each subject area.

	Reading	Language Arts
Basic Skills		
Concepts		
Comprehension		
Vocabulary		
Interpretation		

Criteria for analysis:

1) If teachers check basic skills as number 1 and do not contradict themselves in other questions, then it is supposed they mean "Word Identification" skills as most important.

2) If teachers check comprehension as number 1 and do not contradict themselves in other questions, then it is supposed they mean comprehension as most important.

3) If teachers check vocabulary as number 1 it remains unclear as to whether they mean word meaning or word identification. Therefore, the 2nd choice or further interview questions may lend clarification to the issue.

4) <u>Interpretation</u> generally refers to a comprehension activity.

5) <u>Concepts</u> generally refer to concept development for meaning vocabulary - also considered a comprehension activity.

6) The <u>Language Arts</u> category was only considered in cases where other interview questions indicated that teachers placed word identification as a language arts activity rather than a reading one. In such cases, rankings would be considered with as much weight as rankings for reading.

2. What are the main student outcomes toward which you teach in each subject?

   READING:

   LANGUAGE ARTS:

This is an open-ended question - the responses to which may be considered a duplication (and thus verification) of the responses on the previous question or the responses may contradict them. If the latter is the case, then further interview questions may be explored. It is possible here that an "outcome" may be different from a strategy to achieve it.

<u>NOTE</u>: Content-centered outcomes may be indicative of a word identification emphasis while pupil-centered outcomes may indicate a comprehension emphasis (Buike and Duffy, 1979).

3. Describe the various instructional techniques
    used?

    READING:

    LANGUAGE ARTS:

    This question may indicate an emphasis if one

    has not already been established.

It is expected that teachers will differ in their

approach to reading instruction despite the fact that the

curriculum requires the use of basal readers. Basal reader

manuals in more recent years tend to take an eclectic

approach and provide more than enough material in word

identification, concept and vocabulary development and

comprehension activities for teachers to make choices.

These choices are expected to focus around "code" or "word

identification", "meaning" or "comprehension" or a relatively

equal or "eclectic" emphasis (Chall, 1967; Kamil 1978). It

is further expected that some teachers will have no convictions

one way or the other (Leithwood, Rose and Montgomery, 1978) on

the best strategy in reading instruction.

Determination of Teacher Clear Belief

The method of grouping teachers by their stated belief

and by their observed classroom behavior has already been

described. A regrouping of teachers is necessary at this

point. Teachers who are consistent in stated belief and

observed behavior belong in one group while teachers who are

not consistent belong in another. Using these two groups

then as independent variables, it is expected that they would operate independently on the dependent variables - clarity, enthusiasm and efficiency as well as on the dependent variables of vocabulary, comprehension and total reading gains. Independent t-tests would determine significant differences between the means.

Teachers who are both consistent and clear, enthusiastic and efficient are expected to achieve even higher reading gains for their classes than other teachers. These teachers have demonstrated most definitely that they have clear beliefs on reading instructional strategies. Independent t-tests would determine significant differences between the means of these two groups on reading achievement.

Multiple Linear Regression

This study is based on a linear structural model for which a rationale into causal relationships has been developed. There would still remain many unanswered questions after independent t-tests were performed, therefore path analysis or multi-factor multi-variate analysis appears called for. This type of analysis would tease out the relations among factors. It begins with a model showing the variables considered to be involved in producing variance in a given outcome (see Figure 3). The variables are arranged on apriori grounds - a causal sequence (the former variable is posited as a cause of the latter) or deduced from previous research. Partial correlations are used to hold other variables constant

thus giving a better basis for hypothesizing a causal
connection between two variables. Mathematical techniques
are applied to the correlations among all the variables to
yield "path coefficients" showing the strength of the
hypothesized causal connections.

Such an analysis should produce some indication of
the strengths of the various emphasis groups in combination
with clarity, efficiency and enthusiasm in predicting
reading achievement. It should also indicate the amount of
variance in reading achievement accounted for by the variables
in the study.

CHAPTER IV

Findings and Discussion

The purpose of this chapter is to describe the
various techniques applied to the data collected in the
study with the object of testing the hypotheses enumerated
in Chapter 3. Tables of results will be included and
discussed. A summary of the chapter is provided.

Hypothesis 1: Teachers have varying beliefs regarding
strategies for teaching reading.

Despite the lack of any single question in the
teacher interview schedule directed at isolating a teacher's
philosophy on emphasis strategies for teaching reading in
the classroom, various beliefs did emerge from an analysis
of several questions (see the criteria for analyses in
Chapter 3). Responses appeared to fall into four categories:
1) word identification (often referred to as word analysis,
phonics, or word recognition); 2) comprehension (referred to
also as meaning, interpretation, concept development);
3) both word identification and comprehension considered
essentially of equal importance; 4) ambiguous or no response.

The responses in the interview were given to a fellow
research assistant for a reliability check. Twenty percent
of teachers' interviews were randomly selected. Appropriate
questions were analysed to determine, according to the
criteria established and described in Chapter 3, what, if any,

were the beliefs held on the primary strategy in reading
instruction. A reliability coefficient was determined to be
.99 thus confirming the results of the investigator.

Numbers of teachers in each group were distributed
as follows:

Word Identification	14	(39%)
Comprehension	8	(22%)
Eclectic	10	(28%)
No Clear Stated Belief	4	(11%)

Despite the current surge toward reading as a holistic
process requiring a meaning emphasis in reading instruction
(Goodman, 1971; Smith, 1978) teachers chose in the interview
primarily word identification or eclectic strategies. However,
Grade two has generally always constitued a period of rapid
skills development following the beginning reading stage in
Grade one (Harris and Sipay, 1971). Furthermore, at least 11%
of the teachers were ambiguous, unclear or gave no response
with regard to any statement of belief. This finding supports
the research of Leithwood, Ross and Montgomery (1978)
suggesting teachers tend not to be involved in decisions
about global concepts and curriculum content and in fact are
often unable to articulate such concepts.

Hypothesis 2: Teachers who are consistent in belief and
performance regarding a reading instructional strategy will
have a significantly higher classroom reading gain than
teachers who are inconsistent.

MacKay (1979) has already found a clear relationship between teacher thought and classroom behavior. His conclusion of general congruence, however, was guarded in consideration of the forced-choice quality of the interview questions. Hypothesis 2 assumes no such conclusion of general congruence due to a suspected inadequate instrument to determine the presence of a clear definite belief but states that congruence will make a difference - and in a positive way. Congruence, in this case, is the first step in determining the presence of a clear definite belief.

Table 1 provides a visual reference to the findings resulting from the investigation of hypothesis 2. Teachers were placed in cells determined by cross referencing their stated beliefs with their observed predominant activity. Included in each cell were the mean residualized reading gains for that group of teachers' respective classrooms. Also included were Vocabulary and Comprehension gains and column and row totals. Results show only 16 cases or 42% in the consistent group cells; in other words, teachers tend not to demonstrate a congruence between stated beliefs and observed behavior. There are several limitations to this finding. Like MacKay's (1979) study the interview instrument forced the teachers to make a decision or choice on questions for which they may have had no definite convictions one way or the other. It may be that the basal reader teacher guides provide the activities for the reading class without making

Table 1

Grid, Describing Findings on Teacher Beliefs, Observed Predominant Activity and Reading Gain Scores

TEACHER STATED BELIEF GROUPS

	Description	Word Ident.	Comprehension	Eclectic	No Clear Stated Belief	Totals
OBSERVED TEACHER PREDOMINANT ACTIVITY GROUPS	Word Ident. — No. of Teachers	8(22%)	4(11%)	1(3%)	3(8%)	16(44%)
	$\bar{x}$ Reading Gain	.28*	−.12	.07	−.18	.08
	Voc. Comp.	.20 .26	.04 −.14	.27 −.21	−.21 −.10	.09 .06
	Comprehension — No. of Teachers	1(3%)	1(3%)	2(6%)	0	4(12%)
	$\bar{x}$ Reading Gain	−.37	.07*	−.07	—	−.11
	Voc. Comp.	−.22 −.41	.18 .23	.03 −.12		.01 −.10
	Relatively Equal Combination — Eclectic — No. of Teachers	5(14%)	3(8%)	7(17%)	1(3%)	16(44%)
	$\bar{x}$ Reading Gain	−.24	−.49	.32*	−.50	−.06
	Voc. Comp.	−.36 −.11	−.37 −.51	.39 .17	−.76 −.22	−.06 −.07
	TOTALS	14(39%)	8(22%)	10(28%)	4(11%)	36(100%)
		.05	−.24	.22	−.26	
		−.03 .08	−.10 −.23	.31 .08	−.35 −.13	

* Consistent groups = 16 cases (42%)

any demands on the teachers to make decisions on an instruc-
tional approach. A perusal of the guides provided by the two
reading series, Ginn and Company "720 series" and Thomas
Nelson's "Language Development for Reading" has indicated a
generally eclectic approach taken providing both word analysis
exercises as well as comprehension activities. However, the
activity suggestions provided are numerous and it would appear
that the teacher would be forced to decide on which activities
are to be a priority, within the allotted time, either for
instructional purposes or to keep the students busy and on
task.

From the results observed in Table 1 it appears that
teachers did make choices in their predominant activities.

Word Identification	16	(44%)
Comprehension	4	(12%)
Eclectic	16	(44%)

To compare the reading gain scores of those teachers
whose stated belief matched their observed predominant
activity with those whose stated belief didn't, t-tests were
applied to compare the means of the two groups for significant
difference.

The results showed a wide spread between the means
significant at the .01 level. The consistent group scored
well above the redisualized mean of approximately 0.0 while
the inconsistent group scored well below it. A comparison
of the vocabulary and comprehension mean gains for each group
showed similar results with the vocabulary and comprehension

mean gain scores not differing substantially from the total reading ones.

It was conceived that consistency in belief and behavior, belief being based on what teachers say to an interviewer, left much room for error and that other factors of teacher behavior would seek out those who really did demonstrate clear definite belief. This led to hypothesis 3.

Hypothesis 3: Teachers who are consistent in belief and instructional behavior will be clear, efficient and persuasive in the instructional setting.

It is expected that teachers who demonstrate consistency in belief and behavior have clear goals, that is, they will match their instructional behavior with what they believe to be important. It is also expected that teachers who have clear goals will be more efficient, clear, and persuasive in the classroom (Crocker, 1977; MacKay, 1979). In the observation system developed by the "Project" several variables were included for which the observers had to rate the performance of the teacher. For the purposes of this study rating scores in clarity, efficiency and enthusiasm were selected as significant variables. "Persuasiveness" was not a category. However, "enthusiasm" - a rating of the teacher's involvement and interest in the lesson - was considered a reasonable substitute. See Appendix II, III, and IV for expanded descriptions of these variables.

Table 2

A Comparison of the Consistent and Inconsistent
Teachers on Reading Residualized Gain Scores

Total Reading Gain

Variable	No. of cases	Mean	s.d.	d.f.	t-value	p(2-tail)
Consistent Group	16	0.29	.68	23.	2.70	.013
Inconsistent Group	20	-.23	.40			

Vocabulary Gain

Variable	No. of cases	Mean	s.d.	d.f.	t-value	p(2-tail)
Consistent Group	16	0.28	.68	23	2.52	0.019
Inconsistent Group	20	-0.20	.39			

Comprehension Gain

Variable	No. of cases	Mean	s.d.	d.f.	t-value	p(2-tail)
Consistent Group	16	0.22	.55	34	2.63	0.13
Inconsistent Group	20	-0.20	.41			

Consistent teachers are considered to demonstrate congruence between stated and observed strategy.

Inconsistent teachers are considered to demonstrate incongruence.

A t-test was applied to compare the mean ratings on each of the variables of the two groups of teachers. Table 3 shows the overall mean rating of all teachers on each variable and the group mean ratings for the consistent and inconsistent groups. On all three variables, the consistent group scored above the overall mean rating while the inconsistent group scored below it. Statistically however, the means were not significantly different at the critical .05 level of significance. This may be a function of the nature of rating scores. It may be, in fact, that error exists within the consistent group. It is possible that some teachers in this group do not have clear goals or beliefs and that, because of the forced nature of the interviews, they accidently ended up in this group. As an example, in the interview situation some teachers may have recalled what they do the most in the reading situation and then stated it as a goal without being clearly conscious of it as such.

Assuming that error exists in the numbers of the consistent group and assuming still that teachers with clear definite goals also are efficient, clear and enthusiastic/ persuasive in the classroom, this investigator decided to isolate those teachers who were both consistent and above average in clarity, efficiency, and enthuasiam scores. Results revealed only seven in this group, the members of which became part of Hypothesis 4.

Table 3

A Comparison of the Consistent and Inconsistent Teachers on
Enthusiasm, Clarity and Efficiency Rating Scores

Enthusiasm: overall $\bar{X}$ rating = 3.81

Variable	No. of Cases	Mean	s.d.	d.f.	t-value	p(2-tail)
Consistent Group	16	3.93	.43	34	1.32	.19
Inconsistent Group	20	3.72	.54			

Clarity: overall $\bar{X}$ rating = 4.18

Variable	No. of Cases	Mean	s.d.	d.f.	t-value	p(2-tail)
Consistent Group	16	4.34	.40	34	1.97	.06
Inconsistent Group	20	4.05	.48			

Efficiency: overall $\bar{X}$ rating = 4.07

Variable	No. of Cases	Mean	s.d.	d.f.	t-value	p(2-tail)
Consistent Group	16	4.20	.47	34	1.42	.17
Inconsistent Group	20	3.97	.51			

<u>Hypothesis 4</u>: Teachers who demonstrate clear definite belief in a reading instructional strategy will have significantly higher mean reading gain than teachers who do not.

Here, of course, "clear definite belief" teachers are being defined as those whose belief is tested for consistency in what they say, what they do, and how they behave in the classroom. Maybe with such stringent criteria for membership in such a group it is not surprising that so few teachers (just under 20%) could be categorized as being clear and definite in their instructional strategy for reading (see Table 4). The resulting small numbers certainly lend more credence to the position of Leithwood, Ross and Montgomery (1978) regarding teachers' general uninvolvement in global decisions and Doyle and Ponder's (1978) argument that teacher decision making is only related to the more "practical".

Table 4 illustrates an extremely wide spread between the means of the two groups and a very high level of significance. The "clear, definite" group were checked for any unusual characteristics that would interfere with the hypothesis. Table 5 illustrates the selected factors for investigation.

It was noted that all teachers scored above the mean reading gain for Grade two with teacher 5 scoring well above the others - thus accounting for the rather high standard deviation in this group as shown on Table 4. This teacher had an average size class, no grouping, a word identification strategy and spent much more time in all activities pertaining to reading and the language arts.

Table 4

A Comparison of "Clear definite belief" and "No clear

definite belief" Teachers on Total Reading Gain Scores

Total Reading Gain

Variable	No. of Cases	Mean	s.d.	d.f.	t-value	p(2-tail)
Group 1 (clear, definite belief)	7	.71	.77	34	4.36	○ 0.00
Group 2	29	−.18	.40			

Table 5

A Description of "Clear Definite" Group on Selected Factors

Particulars	Teacher						
	1	2	3	4	5	6	7
Total Reading Gain Grade 2 $\bar{X}$ gains	.12	.77	.87	.07	2.27	.73	.15
Strategy Group	Word Ident.	Eclectic	Eclectic	Comp.	Word Ident.	Eclectic	Eclectic
Class Size	26	33	13	30	21	29	34
Class Type	No Grouping	Average Students	No Grouping	Bright Students	No Grouping	No Grouping	No Grouping
Lang. Arts Lesson Time Grade 2 $\bar{X}$ per day = 47.2 min.	50.3	38.0	49.2	48.1	54.7	45.4	44.2
Student Reading Time $\bar{X}$ per day = 7.1 min.	1.6	7.3	8.6	3.4	14.6	4.0	5.7

Though these teachers demonstrated clear, definite belief in a reading strategy, Table 5 has shown them to vary on strategies. Teachers tended to be more eclectic in emphasis; that is, they treated word identification and comprehension with relatively equal importance. Teacher 4, alone with a comprehension strategy, was noted to have a class grouped for "bright" students.

Class sizes varied as did lesson time and student reading time. Major studies in the research on teaching have linked class size and total lesson time to student achievement (Berliner, Fisher 1978). Some reading experts, following a psycholinguistic approach, consider student immersion in the act of reading as being effective in reading achievement (Goodman, 1971). This investigator's study did not bear evidence that total lesson time or student reading time made an overall significant contribution to reading achievement. Table 6 shows the results of a regression analysis studying the effects of engaged time in the predominant activity on overall reading gains. There was no significant effect. This investigator also had teachers' time scores on the predominant activity categories residualized for the effects of total time. Grouping teachers based on residualized word identification and comprehension activity scores resulted in comparable group memberships arrived at in Table 1. Therefore, it was concluded that time was not an intervening variable in this study.

Table 6

Results of Regression Analysis: The Effects of Engaged Time on Reading Gains

Independent Variables (Time)	Dependent Variable - Total Reading Gain				
	1 Unstandardized Beta Coefficient (B)	2 Standardized Beta (B)	3 Standard Error Beta	4 F	5 T
Word Identification	0.0235	0.1946	0.0214	1.206	17.5
Comprehension	-0.0068	0.0326	0.0371	0.034	17.5
(Constant)	0.1364				
R^2	0.0356				

Hypothesis 5: No one belief in a particular reading instructional strategy is significantly more predictive of classroom reading achievement than another.

Table 7 illustrates the results of the analysis of variance performed on gain scores from the four different "belief" groups of teachers.

There was no evidence of significant difference between any of the groups on either of the subskills of reading or on total reading gain.

Hypothesis 6: No one observed reading instructional emphasis in the classroom is significantly more predictive of classroom reading achievement than another.

Table 8 illustrates the results of an analysis of variance performed on reading gains from the three observed predominant activity groups. The results indicate no significant difference between the groups on either of the subskills of reading or on total reading. They correspond with the results found in earlier reading research concluding that it is not the method nor the program that makes the difference in reading achievement (Dykstra, 1968; Karlin, 1973; Goldbecker, 1975).

Hypothesis 7: No one belief or reading instructional emphasis or combination thereof can predict higher achievement in either word identification or comprehension.

Table 7

Summaries of the ANOVAS Performed on the Results

of Four Teacher Belief Groups

Variable: Total Reading Gain

Source of Variation	df	MS	F	P
Between Groups	3	1.25	1.19	>.33
Within Groups	32	.35		

Variable: Vocabulary Gain

Source of Variation	df	MS	F	P
Between Groups	3	.50	1.53	>.22
Within Groups	32	.33		

Variable: Comprehension Gain

Source of Variation	df	MS	F	P
Between Groups	3	.21	.80	>.51
Within Groups	32	.27		

Table 8

Summaries of the ANOVAS Performed on the Results of

Three Observed Teacher "Reading Emphasis" Groups

Variable: Total Reading Gain

Source of Variation	df	MS	F	P
Between Groups	2	.10	.27	>.76
Within Groups	33	.37		

Variable: Vocabulary Gain

Source of Variation	df	MS	F	P
Between Groups	2	.08	.23	>.79
Within Groups	33	.36		

Variable: Comprehension Gain

Source of Variation	df	MS	F	P
Between Groups	2	.09	.33	>.72
Within Groups	33	.27		

Tables 7 and 8 have already illustrated that no particular stated belief or observed emphasis made a significant difference in either the vocabulary (word identification) or comprehension scores. Table 1 further demonstrated this. For example, teachers who believed in or spent appreciably more time on word identification in their classrooms did not tend to have higher gain scores on word identification over comprehension. Similarly, teachers who believed in or spent more time on comprehension did not tend to have higher gain scores in comprehension over word identification.

When teachers demonstrated consistency in belief and emphasis in the classroom there was still no evidence that one strategy was any more effective than another for higher gains in either word identification or comprehension. Teachers believing in and emphasizing word identification tended to have equally as high comprehension gain scores as they did word identification. Teachers (only one in sample) consistent in comprehension had relatively equal scores in comprehension and word identification achievement outcomes. A consistent eclectic approach tended to have better results in both categories, but not significantly so. These results appear to reflect Deverell's position (1974) which assumes that children who learn to synthesize almost immediately learn to analyze and vice versa. It refutes Barr's (1974) evidence that transfer skills have to be taught. Chall (1967)

takes the well corroborated position that no one approach is
devoid of components of the other. Bloomfield (1942), on
the other hand, argues that meaning comes naturally as the
code is broken since the words in the first readers are
already part of the child's listening and speaking vocabulary.
Whichever argument is considered the most valid, the evidence
in this study is clear. A word identification strategy
appeared to be equally as successful in predicting gains for
comprehension as it was for that subskill itself. Unfortunately,
with only one teacher having a comprehension strategy and
knowing that class, to be grouped for "above average" it was
unfair to say anything about that strategy except that the
membership factor itself may be significant. An eclectic
strategy also appeared to be successful in predicting success
in both subskills with slightly higher results in word
identification skills. Therefore, hypothesis 7 was proved
but with some reservations regarding any results on the
comprehension strategy.

Pearson Product Moment Correlation Coefficients

An examination of the degree to which the independent
variables in the observation category were related to each
other revealed significantly strong positive relationships
among the rating categories of enthusiasm, clarity, and
efficiency but expectedly no correlation between the time
variables of word identification and comprehension (see
Table 9). It appeared that teachers who received one kind

of rating on either enthusiasm, clarity or efficiency tended to receive similar ratings on all three. This may be a function of teachers' performances in that teachers who tend to be clear also tend to be efficient and to a lesser degree enthusiastic. However, it is also possible that observers' bias may be operating profoundly in such a rating system.

Table 10 includes the results of the correlations between the dependent variables or reading achievement outcomes. Again, the variation in one was highly correlated with the variation in the other two. In other words, a high total reading gain is almost synonymous with a high vocabulary gain and high comprehension gain respectively. Any further analysis, therefore, would require just one of the scores as the dependent variable.

Correlations between independent variables and dependent variables in Table 11 showed non-significant relationships between the time variables and reading outcomes but strong relationships between the teacher performance ratings and reading outcomes. Again it was not surprising that the latter existed in light of evidence presented in Chapter 2 concluding that it is the teacher that makes the difference in reading achievement and not the method (Dykstra, 1968).

Table 9

Pearson Product Correlation Coefficients

Among Observation Variables

	Word Ident. (Time)	Comp. (Time)	Enthusiasm	Clarity	Efficiency
Word Ident. (Time)	1.00	-0.26	-.01	-.12	-.11
Comp. (Time)		1.00	-.08	-.04	-.07
Enthusiasm			1.00	.73*	.68*
Clarity				1.00	.94*
Efficiency					1.00

*With Significant Correlations

Table 10

Pearson Product Correlation Coefficients

Among All Reading Outcomes

	Comprehension Gain	Total Reading Gain
Vocabulary Gain	.82*	.96*
Comprehension Gain		.94*

Table 11

Pearson Product Moment Correlations Between

Observation Variables and Reading Gains

Observation Variables	Vocabulary	Comprehension	Total Reading
Word Identification-time	.18	.17	.19
Comprehension-time	-.01	.01	-.02
Clarity	* .45 p >.003	* .38 p >.01	* .42 p >.006
Efficiency	* .39 p >.009	* .42 p >.005	* .41 p >.007
Enthusiasm	* .54 p >.000	* .42 p >.005	* .49 p >.001

*Significant Correlations

Multiple Linear Regression

As has been discovered above, teacher performance alone can account for much of the variation in reading achievement. Studies indicate approximately ten percent accounted for (Heath & Nielson, 1974). However, this study chose to hypothesize certain antecedents of such performance in the reading classroom situation and then examined the combined effects of antecedent and behavior on reading achievement. (See Figure 2.) The statistical tests applied indicated strong reason to believe in significant effects from the groupings of the independent variables. The statistical tests applied indicated that there was strong reason to believe in significant effects from the groupings of the independent variables. What the tests did not indicate was some quantification of these linear relationships in order to arrive at some predicting values and amounts of variation explained by the variables and their hypothesized combinations. This was done by setting up a structural model in which specific paths were hypothesized and measured for direct influence (see Figure 3). The technique amounted to a sequence of conventional regression analyses. The path coefficients were standardized partial regression coefficients or Beta weights. Many of the assumptions necessary of this type of analysis have been met: that is, the relationships have been argued for and characterized by one-way causation and a linear structural model, and the measuring instruments used to obtain the data

Figure 2

The General Linear Model

TEACHER BELIEF IN PARTICULAR READING STRATEGY	→	CORRESPONDING PREDOMINANT INSTRUCTIONAL ACTIVITY	→	CLARITY EFFICIENCY PERSUASIVENESS	→	CLASSROOM READING ACHIEVEMENT

have high reliability (Nie et. al., 1975). A further
assumption, that only interval type data be used (Boyle, 1969)
presented some problems but was overcome by the use of "dummy
variables" of 0's and 1's to represent the nominal classifi-
cations on many of the independent variables, that is, the
belief groups and major emphasis groups. This technique was
outlined in the Statistical Package of the Social Sciences
(SPSS) (Nie et.al., 1975) and was also suggested by Boyle
(Boyle, 1969, p. 461). The variables were given letter
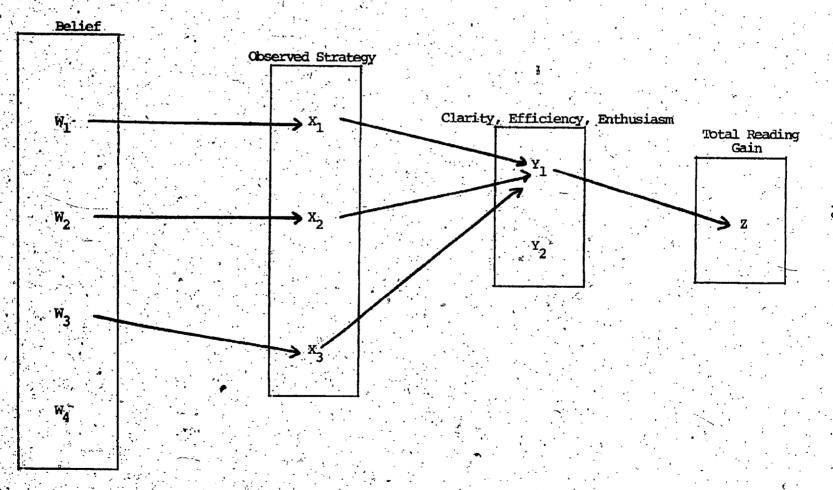values and described as follows:

Z, the degree to which the class gained in total reading
achievement

Y_1, the degree to which the teacher rates high in clarity,
efficiency and enthusiasm

Y_2, the degree to which the teacher rates low in clarity,
efficiency and enthusiasm

X_1, indicates an observed time emphasis on word identification

X_2, indicates an observed time emphasis on comprehension

X_3, indicates an observed relatively equal time emphasis on
both word identification and comprehension

W_1, indicates a stated belief in word identification as a
reading instructional strategy

W_2, indicates a stated belief in comprehension as a reading
instructional strategy

W_3, indicates a stated belief in equal emphasis on word
identification and comprehension as a reading
instructional strategy

W_4, indicates an unclear, ambiguous, or unstated belief in
any particular reading instructional strategy.

The paths indicated by the arrows were examined for
their effects ultimately on the dependent variable Z, overall

Figure 3

The Linear Model – Specific Paths Outlined *

Belief

Observed Strategy

Clarity, Efficiency, Enthusiasm

Total Reading Gain

W_1 W_2 W_3 W_4

X_1 X_2 X_3

Y_1 Y_2

Z

* The grouping of variables in this model corresponds to the structure of the general linear model presented on page 68.

reading gain. Table 12 indicates the standardized regression coefficients for each of the independent variables in the path as well as the amount of variance accounted for. It was evident that the Y variable, clarity, efficiency and enthusiasm was accounting for most of the total variance in each of the paths and was so strong as to practically eliminate any further predictors. However, it was also evident that the total single paths were stronger than any single variable within them and each accounted for 25 to 34 percent of the variance in residualized reading gain (residualized for the effects of the pre-tests). The comprehension strategy was characterized by negative predictors; that is, a teacher's statement of belief in "comprehension" as the single most important emphasis in reading was a negative indication of classroom reading achievement. Belief in a word identification or an eclectic approach had equal but low positive weights in predicting reading achievement. Significant was the fact that no one method, of the three observed, carried any weight in predicting reading achievement.

Summary

The results described in this chapter lend general support for the hypotheses as outlined and the theory that preceded them. It was established that teachers did have varying beliefs when asked to identify a reading instructional strategy but that those beliefs also varied in strength and credibility in much the same way as suggested by Leithwood,

Table 12

Multiple Regression Results for Independent Variables Operating

Jointly on Dependent Variable "Total Reading Gain" *

Independent Variables	Beta Weights ** (change predicted)	R^2 (Amount of variance explained)
W_1	.20	.03
X_1	.10	.01
Y_1	.50	.22
$X_1 X_1 Y_1$ operating jointly	.80	.26
W_2	-.30	.10
X_2	-.10	.02
Y_1	.50	.22
$W_2 X_2 Y_1$ operating jointly	.10	.34
W_3	.20	.02
X_3	-.10	.01
Y_1	.40	.22
$W_3 X_3 Y_1$ operating jointly	.50	.25

** For every 1 unit of change in standard deviation, there will be the following standard deviation unit changes predicted in total reading gain.

* A Beta Weight of $\mp$ .20 or greater will be considered a significant predicting value.

Ross and Montgomery (1978). It was this variation that separated teachers into consistent and inconsistent groups once their classroom instructional activities were observed and coded. The hypothesis that teachers consistent in belief and behavior ought to have higher achievement was proved. There was a significant difference between the means at the .013 probability level for overall residualized gains.

This investigator accepted the interview responses only as an initial indicator of a teacher's position vis a vis her conception of an instructional approach to reading. The value of the consistent/inconsistent results was put to question for hypothesis 2 on page 48 here.

Consistency, if it were to be linked with teachers having a clear definite belief, ought to result in teacher performances that were clear, efficient and persuasive. Hypothesis 3 was not proved in this case, for there was no significant difference between the consistent and inconsistent groups on scores of clarity, efficiency and persuasiveness/ enthusiasm. It was suggested, however, that many teachers are not clear or definite in their responses in an interview situation and indeed, that the very nature of the forced response would invalidate many of the responses (MacKay, 1979). Therefore, scores on clarity, efficiency, and enthusiasm variables were checked individually for teachers in the two groups. Above the mean rating scores were taken to mean that those teachers were clear, efficient and enthusiastic in the

reading instructional setting. A new group was formed that satisfied all the theoretical criteria for a clear, definite belief group. Hypothesis 4 was then tested for a substantial gain in the reading mean for this group over the remaining teachers. The difference between the means was significant at the .000 level. Membership in the newly formed definite belief group was small (just under 20%) and examined for various characteristics common or different within the group. The group tended to be eclectic in instructional emphasis, have whole class instruction to heterogeneous classes, and have varied class sizes, instructional times and student reading time. The effects of engaged time on reading gains were found to be non-significant with an R^2 of .03.

Hypotheses 5 and 6 stated that no one belief or observed emphasis in reading instruction respectively will be significantly more predictive of classroom reading achievement than another. Analyses of variances performed on the various group reading results arrived at no signif-icant differences between the groups. It was the investigator's intention to prove that the interaction between the belief and the behavior was the critical variable and to do that it was necessary to prove that on their own these variables remain non-significant for any effect on the criterion reading achievement.

Hypothesis 7 considered the effects of different beliefs and instructional approaches on the subskills of reading, vocabulary (in this case, word identification)

and comprehension. The investigator hypothesized no significant effects from either belief or instructional behavior or their combinations. The Anova Tables 7 and 8 verified that no significant differences existed in sub-skill results when grouped for either belief or observed emphasis. Without doing further tests it was clear from Table 1 that even the combinations of belief and performance did not affect one subskill significantly greater than the other. A word identification strategy (combined belief and instructional behavior) for example, whereby 70-100% of instructional time is spent on the activity resulted in a slightly higher gain in comprehension. An eclectic strategy (relative emphasis on both) resulted in the highest gain in word identification and a substantial gain in comprehension, suggesting perhaps that this strategy is the most consistent and positive in its effects - but not significantly more so than the other strategies. The results from a comprehension strategy were almost as high but because of the single membership factor and the grouping of the class as a whole for above average students it was unfair to generalize.

Correlation coefficients among the variables revealed strong positive relationships between the teacher performance categories of clarity, efficiency and enthusiasm and student reading achievement and non-significant relationship between the time variables of word identification and comprehension. High positive correlations existed for relationships among the two sets of dependent variables - clarity, efficiency

and enthusiasm, and vocabulary, comprehension and total
reading gains.

Multiple regression techniques confirmed many of the
relationships indicated by previous statistics but assigned
predicting weights and variance accountability for the
independent variables. No one method or instructional
emphasis had any relationship to reading achievement. The
total paths of consistent belief-behavior plus clarity,
efficiency and enthusiasm when analyzed for single path
effects had strong predicting values and accounted for 25
to 34% of the total variance in residualized overall reading
gain.

CHAPTER V

Implications and Conclusions

The findings in the previous chapter suggest various implications for the reading researcher and the classroom teacher of reading as well as make possible certain conclusions stemming from those implications. Several extensions to the study as presented here are also indicated.

Certain implications of the findings in this study apply to several areas of research and education, the headings for which are delineated below.

Research on Teaching. The model which defines reading instructional processes in terms of antecedents preceding them appears to be a valid one. Teaching behavior, once linked with teachers' belief systems, becomes a critical variable in determining classroom reading achievement. The model is similar to the one proposed by Dunkin & Biddle (1974) and to the one used by McDonald (1976) but incorporates only the "Structural" aspects of teaching and not the "control" ones. The general model was applied to reading instruction and found to be highly significant in the relationships accounted for. Considering that all the independent variables are teacher focused - belief, behavior and performance ratings - it is of significance that each of three paths hypothesized was found to be accounting for 25 to 34% of the total variance in overall residualized reading gain. As Gump (1964) suggested, teacher influence does appear to operate indirectly

thus accounting for much more of the variance in learning outcomes than has been measured in conventional studies of teacher behavior such as those described by Anderson & Kaplan (1974).

Gump's suggestion, however, that the effects come from a set of activity structures established by the teachers appears true only to the point that these activity structures were preconceived by the teacher as part of a "belief" or "goal" system. The same appears true for Walker and Schaffarzick's (1974) argument for "content inclusion" and "emphasis" as influence variables on student learning. Without the conscious awareness and intent of the teacher, these "structural" aspects of the teaching process appear meaningless in effect. Some recent studies have picked up some of this "indirectness" of teacher influence, the findings of which this study corroborates. Both the Beginning Teachers Evaluation Study - Phase II and III A (Marliave, 1976) - and the Stallings (1975) study found that maintaining academic goals, and clear, explicit instruction are some of those indirect ways teachers influence achievement.

"Emphasis" or "content inclusion" when linked with corresponding belief were not found to affect greater gains in that content as reported in achievement tests in reading. The BTES (Joyce, 1975; Shavelson & Dempsey, 1975) suggested the possibility of a strong generalizable relationship but this study did not bear this out. There are several possible explanations of why this may be so, including the very nature

of the reading process itself. Rummelhart (1976) suggested reading is interactive where neither coding nor semantic interpretation are mutually exclusive processes. On the practical level, Chall (1967) confirmed that no one approach or emphasis is devoid of contents of the other. Therefore, it may be fair to assume that despite an instructional emphasis, students will, perhaps of necessity, learn both subskills necessary to the total reading process with relatively equal success.

The Reading Process. Of the various theories on reading, the findings in this study probably speak best to Rummelhart's (1976) position where the reading process can be either holistic or subskill in nature. They are not mutually exclusive processes but tend to be interactive. A teacher taking this theoretical position would perhaps proceed with instruction incorporating both word identification and "hypothesize-testing" (Goodman, 1971) simultaneously. Such instruction would provide maximum mutual facilitation of the two processes.

Reading Instruction and Achievement. There appears to be no evidence to support the fears of some reading educators that a word identification strategy (teacher belief plus emphasis) will lead to diminished achievement in comprehension. In fact, in this study, with such a strategy the results in comprehension were slightly stronger. Unfortunately no such generalizations can be made about a comprehension strategy due to the single membership of such

a strategy group and the "above average" nature of the classroom involved.

Taking reading instructional emphases for their own merits it appears that no one method makes significantly more difference in reading achievement than another. These findings are consistent with those of earlier studies (Karlin, 1973; Goldbecker, 1975).

Teacher Belief - Conceptions of Reading. This investigator found that over one-half of the teachers in the sample did not have follow-up instructional activities to match their conceptualized beliefs as stated. It was felt that perhaps teachers tended to be more functionally rather than philosophically motivated as has been indicated by the research of Doyle and Ponder (1978) and Leithwood, Ross and Montgomery (1978).

Teachers appear to vary not only in strength and credibility but also in ideas. Conceptions of reading focused around theories found in the literature - word identification, comprehension, and eclectic - were found to be synonymous with "subskill, holistic and mixed" (Samuels and Echechter, 1978). Of these beliefs, word identification and eclectic theories appear to have the strongest convictions and ultimate success. The eclectic strategy - with due emphasis on both subskills - produced the best results overall, with a substantial gain in word identification.

Demonstrated Clear Definite Belief and Reading

Achievement. Teachers of reading who demonstrate clear
definite belief, that is, their stated belief corresponds
to their instructional behavior in consistency and clear,
efficient, enthusiastic instruction, have significantly
higher classroom reading achievement than teachers who don't
demonstrate such beliefs. The relationship was a strong one
being indicated, in this case, by a difference of almost a
full standard deviation between the means of the two groups.
Such a hypothesized relationship also accounted for over 25
percent of the variance in overall residualized reading gain.

Future Research

Some difficulty exists in determining accurately the
presence of clear definite beliefs on reading. It is
suspected that in this study the forced response type of
interview conducted gave teachers little choice over stating
a position of belief. This situation led to a number of
inaccuracies in grouping teachers and difficulty in analysis
of the data. If, for example, it were possible to truly
identify the presence of a clear definite belief that was
neither forced nor prompted by an interviewer, this
investigator believes that a corresponding instructional
approach would be a consequence of such a definite belief.
Furthermore, the teachers of such clear beliefs would be
clear, efficient and persuasive in instruction. The causal
chain described is grounded in research but unfortunately

was not able to be proved in the present study. It is hoped that other studies take advantage of the model used here but find other means of determining the presence of a clear definite belief. The fact that the linear combination of variables in the model have a strong relationship with reading achievement is clear. A larger sample of teachers would provide a larger clear definite belief group from which to study antecedent, mediating and consequent conditions in the teaching process. An improved method of determining the existence of clear definite belief would eliminate the necessity of making "consistency" and "clarity, efficiency, persuasiveness" a condition of clear definite belief rather than a consequence of it.

Future research may also want to look at teacher perception of influence as it may affect teachers' determination of instructional approaches in reading. It is conceivable, for example, that those teachers who perceive themselves as having influence over the curriculum structure of the classroom, or more particularly the instructional approach, readily develop a belief system and a set of goals.
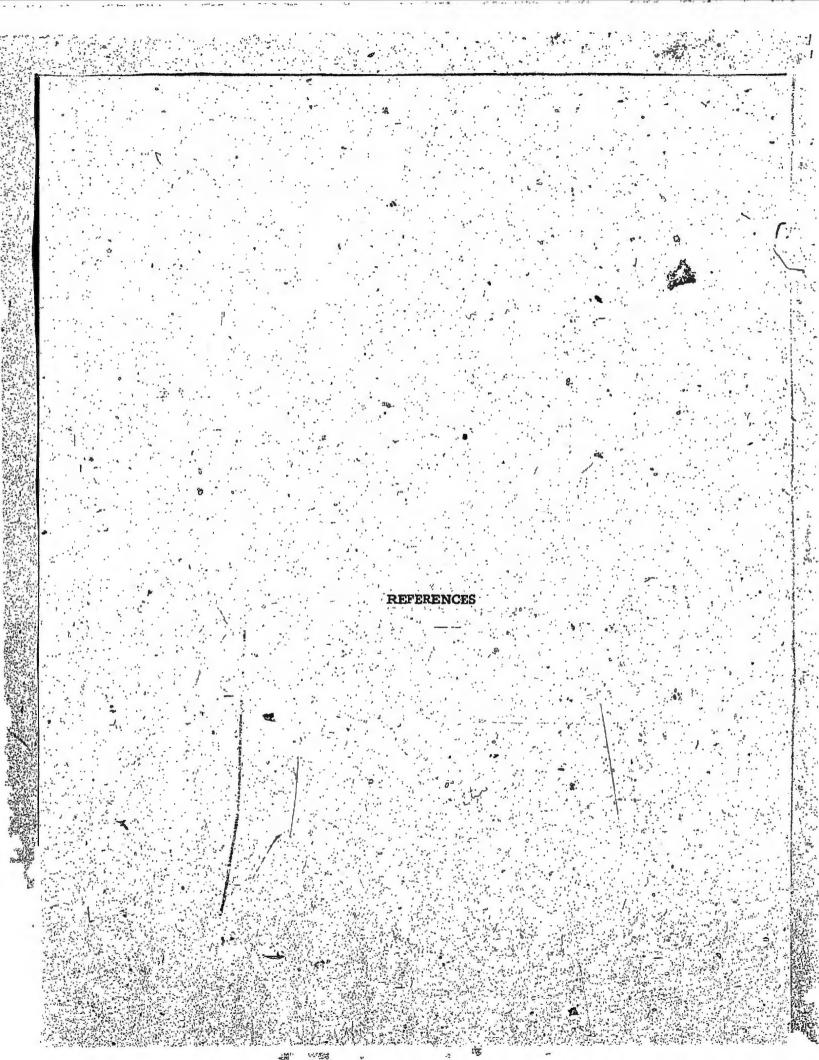
A larger sample of teachers is needed to increase the membership size of some of the cells in a grid describing teachers on belief, observed instructional behavior and reading gains. It may help the researcher to look at the "comprehension-strategy", for example, and draw conclusions based on it. Just as this study found that students learn comprehension skills as readily as word-identification skills

when teachers use a word identification strategy, it may be
possible that they also learn both readily when teachers use
a comprehension strategy. However, Bloomfield (1942) argues
to the contrary. Meaning, he says, comes naturally as the
code is broken. The words in the child's early readers are
already part of his listening and speaking vocabulary.
Instruction, rather, is needed in the printed equivalents
for his oral vocabulary (pp. 125-130). In relation to the
results of the word identification strategy observed in this
study Bloomfield's point is well taken. It remains to be
seen whether the average classroom can "pick up" word
identification principles without due emphasis by the teacher
as readily as they can "pick up" comprehension. It is
expected, certainly, that above average classes will, as has
been indicated by this study as well as by others.

Practical Limitations of the Conclusions

It should be concluded then that the findings con-
tained herein apply to a random sample of Grade Two classrooms
from within a radius of two hundred miles of St. John's,
Newfoundland. Any generalizations made must consider its
application only to Grade Two reading. Because of the
changing nature of children and the reading act itself it
is suspected that these generalizations may change for
different grades. These suspected differences might be a
topic for further study.

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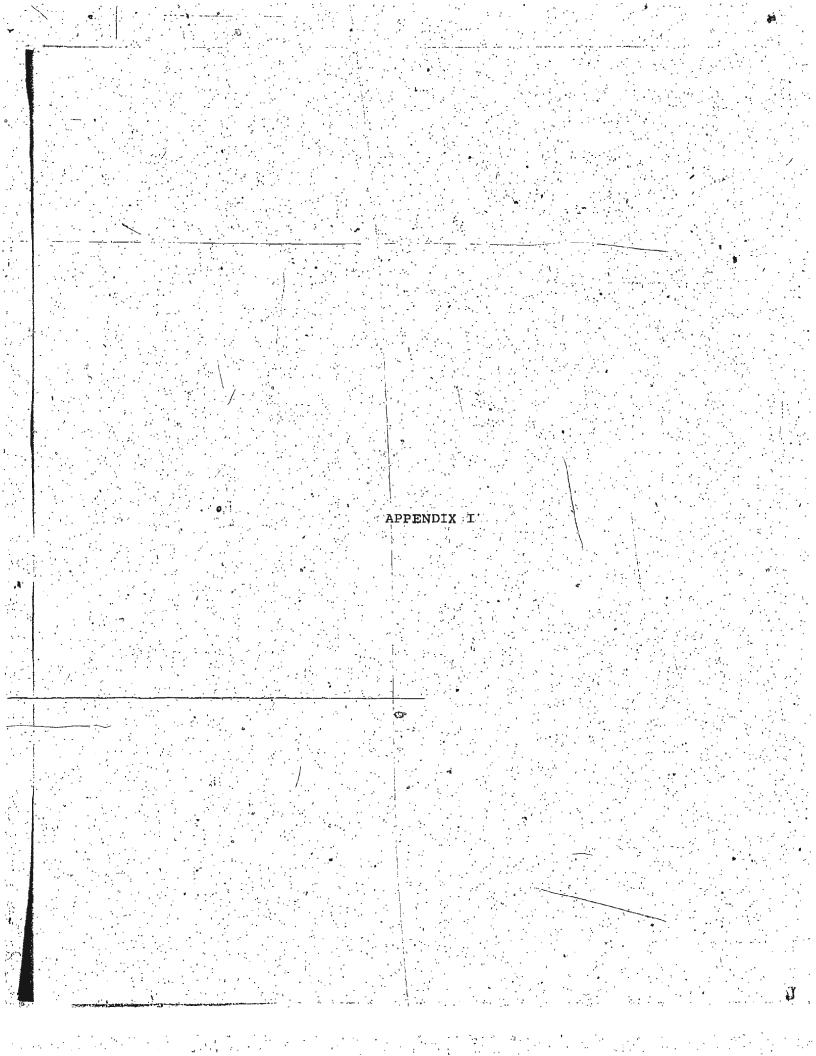   Educational Research, 1974, 44, 463-484.

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APPENDIX I

C. **LANG. ART.** In Language Arts, the predominant activity which is taking place in a 30 second observation is coded.

6. **WORD-I**

WORD Identification is coded when the activity refers to any of the following:

Sight words - This method is sometimes called the whole-word method because the reader is able to identify the word by sight without giving attention to letter-sound relationships.

Phonics - In the phonic method the student has to associate letters and clusters of letters with the appropriate sounds. Syllabication and accent, which are concerned with sound units, are essential to phonics instruction (e.g. an i mal).

Structural analysis - Readers analyze the structure of words to identify root words, prefixes, and suffixes, all of which are meaning units.

Use of Context - Use of context clues often enables a reader to identify an unknown word in a sentence in which all the other words are familiar. It is also a way of checking the accuracy of a word identified by other means in that he can ask the question, "Does it make sense?".

7. **COMPR**

This category is concerned with the pupil's comprehension of written discourse. Since listening comprehension can provide a basis for reading comprehension, attention must be given to the means whereby listening comprehension is fostered.

COMPRehension is coded when the activity refers to any of the following:

Literal comprehension - Includes the recognition of main ideas, sequence, cause-effect relationships, and character traits.

Inferential comprehension - Includes, as well
as reading between the lines (e.g., reference
to author's intent), predicting outcomes and
inter-preting figurative language.

Making judgements - Comprehension is also
concerned with judging whether the selection
is factual or fictional, realistic or fanciful.

Listening comprehension - This is being
developed when purposes have been set for the
student to listen to the teacher or a tape.

Word meaning - Comprehension is concerned with
more than associating meaning with individual
words. It is, however, necessary that readers
be familiar with exact and multiple meanings of
words. Thus, word meaning forms part of the
definition of comprehension and is coded as
comprehension.

8. READ

READing practice is coded for all reading except
that done in the development of word identification
and comprehension. It includes silent reading of
both textbooks and library books, oral reading,
choral reading, and dramatic reading.

9. SPELL

SPELLing is coded for all exercises in the prescribed
spelling program with the exception of the section
called creative writing. This is coded in category
#11 COMPO.

10. GRAM

GRAMmar is coded for instruction in such topics as
sentence structure, usage, capitalization and
punctuation.

APPENDIX II

APPENDIX II

H. ENThUSIASM. This dimension refers to the enthusiasm, or interest level expressed by the teacher and students during class activities.

The enthusiastic teacher conveys a great sense of commitment, excitement, and involvement in the subject matter. The students seem responsive and appear to enjoy the activity. The teacher seems to expect students to do their best. The teacher's tone of voice varies, and this is evidenced by the teacher's motivation and desire to help students do their work.

The dull teacher does not show any sense of commitment, excitement or involvement in the subject matter. The dull teacher does not appear interested in the subject matter. The pupils seem non-responsive and do not appear to be involved in the class activities. The teacher doesn't seem to care whether or not pupils do their best.

Rate the class on an enthusiasm continuum.

39. 1.

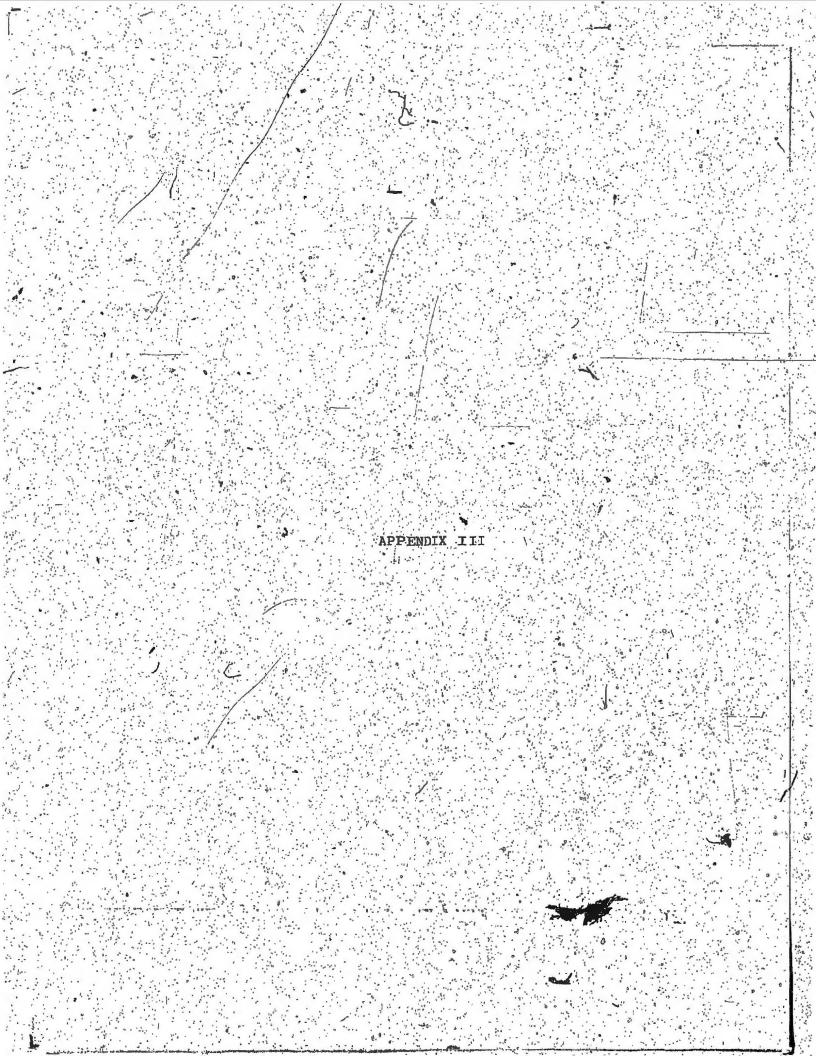   Very unenthusiastic (dull).

40. 2.

   Unenthusiastic.

41. 3.

   Neither dull nor enthusiastic.

42. 4.

   Enthusiastic.

43. 5.

   Very enthusiastic (interesting)

APPENDIX III

APPENDIX III

I. CLARITY. This dimension refers to the clarity of communication, instructions and expectations conveyed to the students.

The teacher who is clear states or implies goals and objectives of lessons in such a way that students can understand them. The teacher's vocabulary is appropriate. The students know what they are supposed to do and why. Students can follow the teacher's explanations. Ample examples are offered, relating new information to past experiences. Instructions and explanations are completed. Presentations and activities are well organized. Students can carry projects to completion without confusion.

The teacher who is vague or who demonstrates a lack of clarity rarely states the goals or objectives of a lesson. If he does, the students do not understand what they are to do and why they are doing it. Lessons and activities are not well organized and students rarely complete tasks without confusion. Students ask questions that suggest confusion or lack of understanding of something that was discussed or directions that have been given.

Rate the teacher on a clarity continuum.
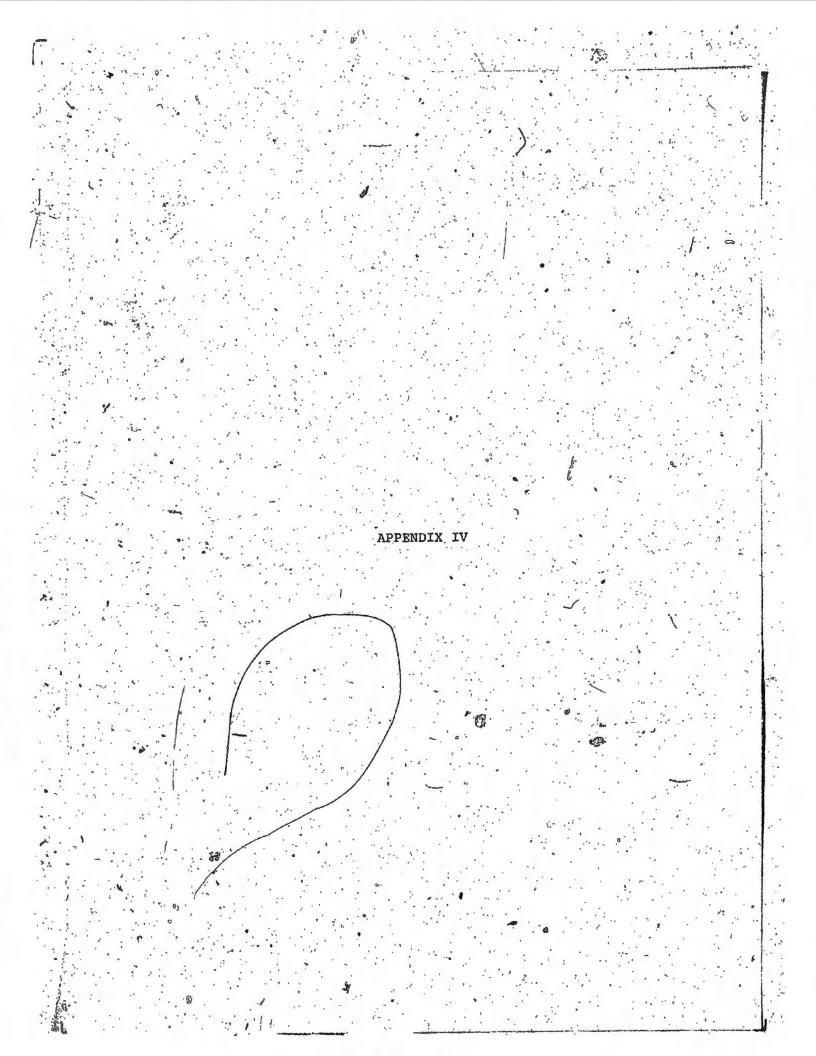
44. 1.

    Very vague.

45. 2.

    Vague.

46. 3.

    Neither vague
    nor clear.

47. 4.

    Clear.

48. 5.

    Very clear.

APPENDIX IV

APPENDIX IV

J.   EFFICIENCY. This dimension refers to the teacher's
     efficient use of time in fulfilling his/her
     responsibilities.

     A teacher who makes efficient use of classroom time
     accomplishes what was intended. The teacher uses the
     time available to the maximum benefit of each student.
     Activities or work is available for students to do
     when they have completed assigned tasks.

     A teacher who is inefficient does not accomplish what
     was intended in the time available. The teacher does
     not have activities or work available for students and
     productive use of time is not evident.

     Rate the teacher on an efficiency continuum.

     49. 1.   50. 2.

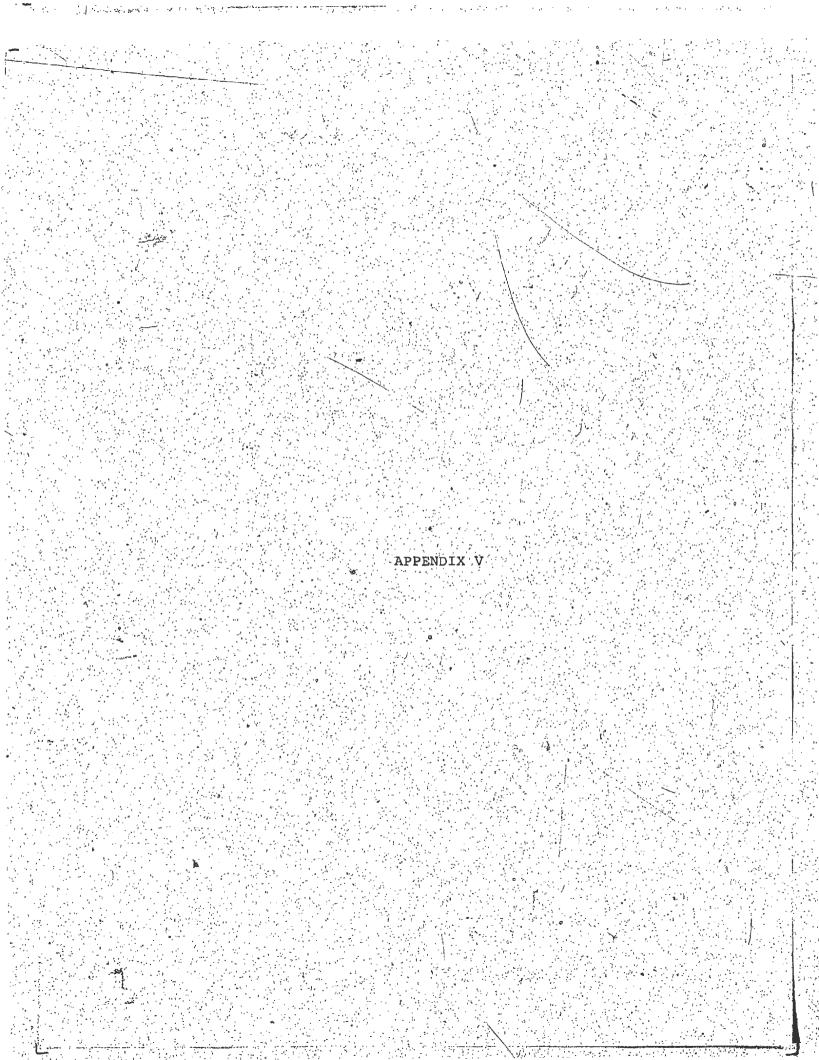   Very inefficient.   Inefficient.

     51. 3.   52. 4.

          Neither inefficient   Efficient.
          nor efficient.

     53. 5.

          Very efficient.

APPENDIX V

Take care in filling in identification numbers
as they will be read by machine. Each numeral
must be formed as follows:

Print your numerals like this

1234567890

IMPORTANT: PLEASE USE LEAD PENCIL. THE MACHINE WILL NOT READ ANYTHING ELSE.

TEACHING STRATEGIES PROJECT

INTERACTIVE CODING FORM

TEACHER FOCUS T

SESS	TEACHER	OBS	DATE		PAGE NO.
				└─ 01	

FOCUS	MATH	LANG. ART	OTHER SUB	COG.	COMM. G	MOOD	RESP. SEL.	RE	RATING	DIS. BEH.	ACTION ON D B.	FEEDBACK	ACTION ON F B

ACAD. / PRO. / BEHAV. / COMPU. / CON-PRO. B / WORD I. / COMPR. / READ. / SPELL. / GRAM. / COMPO. / OTHER / REL-FL. / SOC. STU. / SCI. / ART / FRENCH / OTHER / KNOW / C. E. / N-COG. / CLASS / GROUP / INDIV. / IMPER. / INTER. / INDIC. / NAME(IN) / NAME / VOLUN. / CALL / REJECT / TERM / POS. / QUAL. / NEG. / PRIV. / PUB. / GROUP / M. REP / S. REP. / THREAT / PUNISH / OTHER / CONC. / PROC. / BEHAV. / STU. / EXT. / INATT. / OTHER / PACE / MAT. / TOPIC / MODE

TEACHING STRATEGIES PROJECT
INTERACTIVE CODING FORM

1234567890

LESSON CODING FORM L

SESS	TEACHER	OBS	DATE		T. ST	T. END

02

APPENDIX V (continued)

METHOD	MATERIAL	ACTIVITY	RESP. SEL.	TASK COMP.	CLOSURE	WARMTH	ENTHUSIASM	CLARITY	EFFICIENCY

NEW | DRILL | REV. | RE. T | TEXT | SHEET | PRINT | DEMO | AV. | CHALK | APP | OTHER | T-PRES | DIS | CORR | S-PRES | SEAT | MON | PILOT | ORGA | BEHAV | NON-C | OTHER | RAND | TURNS | DIFF | INDEP. | T-DIR. | T-APR | WAIT | CONT | PRESS | INTER | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5

APPENDIX V.I

APPENDIX VI

Booklet of Gates-MacGinitie Reading Tests

2nd Edition

Level B

Form 2