

THE UNIVERSITY OF MANITOBA

Interactive Inquiry: Resource Teacher Planning and
Instructional Decision Making for a Child's
Reading Assessment

by
Jane Marie MacKenzie

A Thesis
Submitted to the Faculty of Graduate Studies
In Partial Fulfillment of the Requirements for the Degree

MASTER'S OF EDUCATION

Department of Educational Psychology

Winnipeg, Manitoba

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Abstract

An exploratory, naturalistic study using the theory of bounded rationality investigated resource teacher decision making. Volunteer resource teachers were interviewed about their planning and instruction for a primary-grade child's initial reading assessment. The session was observed by the researcher, field notes were taken and both the session and interviews were audiotaped. A stimulated recall procedure was used after the planning and instructional interviews. Transcripts were made of the interviews and the method of constant comparison was used to analyze data. Resource teachers made planning decisions which defined the parameters of the assessment and were based on information obtained from the classroom teacher as well as their own philosophy. Resource teachers made instructional decisions which refined planning decisions, interpreted the child's behaviours, modified the child's behaviours, executed the assessment plan, and planned for further assessment, instruction and collaboration with the classroom teacher. Interpretations about the child's behaviour were the most frequent decisions made by resource teachers and influenced most other instructional decisions. Decision making occurred as an integral part of the process of interactive inquiry as resource teachers focused on and made decisions about the child's interaction with the context of the reading assessment. Interactive inquiry resembles theories of action research in both its purpose and its format. More research is needed to support this exploratory study on resource teacher decision making.

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Table of Contents

<u>Chapter I</u>	
Introduction	1
Rationale	2
Purpose of the Study	6
Nature of the Study.....	7
Research Questions.....	8
Definition of Terms	10
Limitations.....	12
Organization of the Thesis	13
 <u>Chapter II</u>	
Review of the Literature.....	16
Decision Making Models.....	16
Teacher Decision Making.....	18
Teacher Decision Making and Reading.....	27
Diagnostic-Prescriptive Decision Making.....	34
 <u>CHAPTER III</u>	
Methodology.....	42
Introduction.....	42
Design of the Study.....	42
Subjects.....	42
Data Collection Devices.....	46
Interviews.....	47
Audiotapes.....	50
Observations/Field Notes.....	53
Stimulated Recall.....	55
Personal Documents.....	56
Data Collection Procedures.....	56
Interviews.....	57
Audiotape and Observation.....	58
Stimulated Recall.....	59
Data Analysis.....	60
Steps in the Analysis.....	60
Reliability.....	65
Validity.....	66
 <u>Chapter IV</u>	
Findings.....	69
The Referral.....	69
Collaboration With the Classroom Teacher.....	69
Classroom Teacher's Interpretations.....	70
Cognitive.....	71
Affective.....	71
Comparative.....	72
Relational.....	73

Classroom Teacher's Focus.....	73
The Classroom Reading Program.....	75
Influence of the Classroom Teacher	75
The Planning Phase.....	76
Written and Mental Plans.....	77
Resource Teacher Philosophy.....	78
Planning Decisions: Formulations.....	80
Routines.....	80
Assessment Instruments.....	81
Resource Teacher Activities.....	84
Child Activities.....	85
Planning Decisions: Manipulations.....	86
Levels.....	86
Assessment Instruments.....	87
Resource Teacher Focus for the Assessment.....	88
Summary of Planning Decisions.....	90
The Instructional Phase.....	90
Formulations.....	91
Routines.....	91
Questions.....	93
Directions.....	94
Manipulations.....	95
Repetitions.....	97
Examples.....	98
Rewording.....	98
The Child's Behaviours.....	99
Resource Teacher Interpretations.....	102
Cognitive.....	103
Affective.....	104
Comparative.....	105
Relational.....	106
Modifications.....	113
Encouragement.....	113
Touching.....	114
Rewards.....	115
Conversation.....	115
Joking.....	116
Giving Control.....	117
Breaks.....	118
Setting Limits.....	118
Executions.....	121
Completions.....	121
Assists.....	122
Reductions.....	123
Deletions.....	124
Extensions.....	125
Terminations.....	125
Summary of Instructional Decisions.....	129
Post-Instructional Decisions.....	132
Tutorial Decisions.....	132
Collaborative Decisions and the Classroom Teacher...	134
Collaborative Decisions and the Parents.....	135

Instructional Decisions.....	137
Decisions About Further Assessment.....	140
Decisions About Focus.....	141
Theory of Resource Teacher Decision Making.....	144
The Dynamic Nature of Assessment.....	144
Interactive Inquiry.....	147
Summary of Findings.....	149

CHAPTER V

Discussion.....	155
Implications.....	160
Resource Theoretical Models.....	160
Special Needs Programming.....	164
Resource Teacher Methodology.....	165
Resource Teacher Training.....	169
Conclusions.....	171

<u>REFERENCES</u>	172
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APPENDICES

Appendix A	Letter to the School Division.....	176
Appendix B	Open Letter to Teachers.....	178
Appendix C	Initial Contact With Teachers.....	179
Appendix D	Letter of Consent Teachers.....	181
Appendix E	Letter of Consent Parents.....	182
Appendix F	Instructions for Lesson.....	183
Appendix G	Interview on Planning.....	185
Appendix H	Interview on Instruction.....	187
Appendix I	Pilot Study.....	189
Appendix J	Interview on Stimulated Recall.....	190
Appendix K	Coding Categories.....	192

Tables

1 - Summary of Formulations..... 96
2 - Summary of Manipulations..... 100
3 - Summary of Interpretations..... 108
4 - Summary of Modifications..... 120
5 - Summary of Executions..... 128
6 - Summary of Instructional Decisions..... 131
7 - Summary of Post-Instructional Decisions..... 143

Figures

1 - Assessment Instruments..... 82

CHAPTER I

Introduction

Decision making is regarded by some as so important to classroom life that it is said to be the basic skill in teaching (Bowles, 1973; Shavelson, 1973). It has even been suggested that the decision making model be established as a new paradigm for research in education (Whitfield, 1977), replacing such current research models as "teaching process" and "teacher effectiveness" which have proved themselves unsatisfactory in terms of their benefits to teaching theory or practice (Borko, Shavelson & Stern, 1981). Given the stated importance of decision making, one would expect an abundance of supportive research.

However, studies related to decision making have concluded that teachers make few, if any, decisions related to instruction (Durkin, 1979; 1981). Other studies have been limited in their scope so as to restrict the decision making process to "planning" decisions or to unrealistic settings. As well, the general paucity of research pertaining to educational decision making has not helped lend credence to its claims of importance.

Although commonsense dictates that teachers are constantly involved in making decisions, research has not been able to clearly define the nature of this process.

Perhaps it is as Duffy & Ball (1983) stated, "Researchers may not yet be methodologically sophisticated enough to uncover all facets of teacher decision making" (p.14). It is from this perspective that further research on decision making should proceed. What is needed is a new model from which to investigate the decision making process of teachers in order to yield greater information than has yet been possible.

Rationale

The current model which has long held a place in the arena of educational decision making is the objectives-based approach. It is a rational model which proposes that teachers select the best alternative from a variety of options available (Shavelson, 1976). Educational research has failed to support this model either theoretically (Macdonald, 1965; Eisner, 1967) or practically (Eisner, 1967). This lack of support may be due to the inability of teachers to select the best alternative or having to select from a limited number of options.

It has been suggested that a major problem with the objectives-based approach lies in its failure to deal effectively with the issue of complex, interactive processes found in such social situations as the school environment (Whitfield, 1977). Constraints operating within such

complex, social situations, serve to influence the decision making behaviours of individuals within its structure. The reality of these constraints and their effects on the decision making process has been termed "bounded rationality" by March & Simon (1958).

At the general school level constraints such as school policies, principal's expectations, general availability of materials, and mandated programs serve to initially define the general parameters within which teachers are able to make decisions for the classroom. Constraints such as class size, ability level of the group, prescribed textbooks, and time allocation serve to define classroom parameters within which teachers are able to make decisions about learners. So within the organization of the school, a teacher may be faced with making satisfactory rather than optimal choices regarding instruction due to constraints which limit alternatives. The theory of "bounded rationality" challenges the assumptions of the "objectives-based", rational model as it applies to teacher decision-making, and is worth considering as a framework for research on the nature of teachers' decision making.

An obvious problem surrounding the identification of decision making behaviours is the dynamic and multifarious nature of the classroom environment. It is precisely this

complexity which has led researchers to investigate from within the "empty classroom" and to generate more research on the planning or preactive aspects of instruction given that teachers have more time to reflect on their decisions (Borko, Shavelson & Stern, 1981). Such reflection is not possible during classroom teaching where interactive decisions occur. However, limiting research to the "empty classroom" or to planning decisions is not enough if we are to arrive at a deeper understanding of teacher decision making and how those decisions affect the learner during instruction.

If investigations into the decision making process are to include interaction with the learner and are to occur within the regular school environment, then the constraints imposed by the management of classroom interaction need to be controlled. One way to control for these constraints, which make it more difficult to determine the nature of the interaction during instruction and the teacher's ability to reflect on the learner, would be to examine the decision making processes of resource teachers.

Resource teachers typically do not have to contend with classroom dynamics during direct instruction as they generally work with individual students or small groups. Therefore, both planning and instructional decisions could

be explored. An examination of how resource teachers make decisions for one child should yield valuable information to the present knowledge on teacher decision making.

Another difficulty in examining the decision making process of teachers is the constraint imposed by prescribed textbooks, guides and syllabuses which reflect the programmed, objectives-based theory of instruction. A suitable context from which to define the decision making capabilities of teachers for the individual learner without interference from the constraints imposed by programmed, objectives-based instruction is reading.

Reading is regarded as a process and therefore has the potential of being less susceptible to predetermined content objectives and goals which tend to relinquish the teacher's role from one of decision maker to technician. Although basal readers may place constraints on the decision making process (Duffy, Roehler & Putnam, 1987), resource teachers are generally exempt from their use and are more likely to use alternative methods of instruction. An investigation of the decisions of resource teachers for one child's reading should provide the appropriate context from which to explore in depth the decision making process of teachers.

Research exploring decision making abilities of

specialists has been basically conducted in laboratory-type settings which resemble the "empty classroom" (Vinsonhaler, Weinshank, Wagner & Polin, 1983). Laboratory settings are limited for the reason that they can only examine planning or preactive decisions, the instructional or interactive component being absent. As these settings do not mirror the reality of the classroom, they preclude consideration of the constraints which occur both at the general level of school organization and at the level of teacher-child interaction. A more satisfactory setting would be the resource room, so that both preactive and interactive decisions can be examined.

As highly skilled professionals, one may assume that experience and training would be highly correlated to accuracy of performance in diagnosis and remediation of reading difficulties. However research using the objectives-based, diagnostic-prescriptive model of decision making has not borne this out (Banks & Nolen, 1985). Exploration of the decision making skills of resource teachers needs to be examined from a different perspective. The model of "bounded rationality" is an alternative approach to examining this area of education.

Purpose of the Study

The purpose of this study is to explore the decision making processes of resource teachers for one child's

reading instruction. Studies have investigated the diagnostic-prescriptive skills of reading specialists but have not found evidence of decision making abilities. An exploration of resource teacher decision making using a model of "bounded rationality" should add to theoretical knowledge and understanding about how teachers make important decisions concerning a child's reading. Once the nature of resource teacher decision making is better understood, the quality of education for special needs children should improve as a result.

Nature of the Study

This study is a naturalistic, qualitative, in-depth exploration of the decisions made by a small sample of resource teachers within the area of reading.

The topic concerning the decision making abilities of resource teachers requires a natural setting in order for data to be generated which will uncover the nature of this process. Decision making processes are not well understood and can best be investigated through qualitative techniques of questioning and probing for information as opposed to verifying a hypothesis. As well, the study is exploratory, research not yet being sufficient to allow for the formulation of hypotheses.

Research Questions

This study specifically explores how a resource teacher defines the problem space for one child's reading instruction. The research is guided by five major questions:

1. What are the planning or preactive decisions of resource teachers, both written and mental?
2. How do learner characteristics influence planning?
3. What decisions are made during instruction?
4. How do learner characteristics influence instruction?
5. How do instructional decisions differ from planning decisions?

Question 1 concerns preactive decision making or planning. It is important to ask what kinds of decisions are made prior to instruction to get a comprehensive view of the decision making process. Resource teachers typically make plans, both written and mental. Areas considered in planning are: content, materials, activities, tasks, methods, strategies, time allocation, management systems, routines, objectives and goals. These variables serve as indicators for identifying written and mental planning decisions of resource teachers.

Question 2 is concerned with learner characteristics

during planning. It seems reasonable to assume that learner characteristics influence planning decisions, as one of the main purposes of the resource program is to adapt instruction for the individual learner. Therefore it is important to explore those characteristics of the learner that may influence resource teacher decision making. Characteristics of the learner considered in this study include: reading ability, reading performance, rate of learning, learning style, background knowledge, personality, attitude and motivation. These variables serve as indicators for identifying how planning decisions are influenced by learner characteristics.

Question 3 concerns decisions that take place during instruction. An in-depth exploration of the decision making process must include instructional decisions. It is important to ask what kinds of decisions are made during instruction whether those decisions are influenced by the same variables as planning decisions.

Question 4 is concerned with the influence of learner characteristics on the instructional decisions of resource teachers. It is important to determine what learner characteristics influence instructional decisions, how they influence those decisions and whether they are influenced by the same variables as planning decisions.

Question 5 concerns the interface between planning and instructional decisions. It is important to ask how, if at all, decisions differ at these two levels, and what, if any, variables are prioritized, valued or considered above all others.

Definition of Terms

For the purposes of this study it is necessary to define the terms used in the research questions.

A problem space is defined as the parameters within which planning and instructional decisions on a child's reading instruction occur. Potential parameters likely include those constraints which occur at the school level such as availability of special services, special education policies and promotion procedures. At the level of the resource room such constraints as time, materials and parental expectations define the parameters within which decisions will be made at the level of the learner. Constraints operating at the level of the learner include considerations such as ability, attitude and motivation.

Instruction is defined as an activity in which knowledge, information, directions or requirements are imparted to another.

Planning decisions, also termed preactive decisions are defined as those decisions made prior to instruction. These decisions comprise both written and mental plans.

Written planning decisions refer to those decisions made prior to instruction and which are recorded in a plan book, log book, anecdotal reports, or notes. Mental planning decisions refer to those decisions made prior to instruction that are formulated and remain in the mind of the teacher, but which can be articulated in response to questions and probes.

Instructional decisions are defined as those decisions that are made while the resource teacher is actively involved with the child.

Resource teacher is defined as a person occupying a resource teacher position in a school and who is hired to work with individual children or small groups of children experiencing difficulty in reading, as well as other academic and behavioural areas. Generally, resource teachers are hired for their educational experience and/or graduate studies in special education.

Limitations

The limitations of the study are primarily concerned with small sample size. As the decision making processes of five resource teachers were explored, the resource teachers chosen for this study may not be representative of all practicing resource teachers. As well, the resource teachers were selected on a volunteer basis so that a tendency for well-planned, reflective resource teachers to volunteer might be greater than would be found in a random sample. Although this approach tends to limit generalizability of the study, by applying more specifically to resource teachers who value or already possess these qualities, the expectation is that more data will be generated using subjects who are already aware of the nature of their decision making.

As the instruction of one child for each resource teacher will be studied, it may be that the child chosen for instruction is not representative of the population seen by resource teachers, or may demonstrate behaviours that will bias the results, such as being highly co-operative or highly inattentive. However, it may also be said that no children are representative of the population seen by resource teachers as children referred for special service are generally atypical. One way to control for bias was to have the resource teacher use their most recent reading

referral, thereby eliminating to some extent selection based on preferred child characteristics or preferred methods.

Another limitation of the study relates to the reaction of the resource teacher as a subject of research, where the instruction under observation may not reflect the way the resource teacher normally teaches. Because the resource teacher was a subject of research, the observed lessons might have contained decisions not normally made in day to day instruction. However, as this study was concerned with the decision making process of resource teachers, the results should contribute valuable information to research, leaving generalizability to future studies.

The same limitation that applies to resource teachers might also apply to the child as a subject of research. The child may not react normally under observer conditions and therefore affect the decisions of the resource teachers. This possible effect was addressed by having the observer remain as inobtrusive as possible so that equipment, as well as the observer, were relatively inconspicuous.

Organization of the Thesis

In Chapter one, the need to explore the decision making

of teachers, the conflicting views concerning the nature of this process and the insufficient research investigating this topic were discussed. The deficiencies of rational, objectives-based models from which to explore the topic of decision making were outlined, as well as the proposed use of a new model termed bounded rationality as an alternative approach. The two phases of decision making were discussed, as well as the difficulty in identifying all aspects of this process in the regular classroom. Justification for the use of resource teachers and the context of reading were presented as a means of exploring this area of education more thoroughly.

In Chapter two, the literature pertaining to the decision making processes of teachers is reviewed. Decision making models are discussed and the use of a new model to explore this vital area is argued. Literature pertaining to teacher decision making in general is reviewed and is followed by a discussion of teacher decision making and reading. The review of the literature concludes with an examination of diagnostic-prescriptive decision making practices of teachers and specialists and how decisions are made for individual learners in the area of reading.

In Chapter three, the methodology of the study is described, the method of selecting subjects is specified,

the related limitations of the methods of selection, and the justification for the method of selection is presented. As well, methods of data collection are discussed and the limitations and strengths of each method is reviewed. A description of the method of data analysis is outlined.

In Chapter four, the findings of the study and a theory of resource teacher decision making are discussed.

In Chapter five, implications of the study are presented.

CHAPTER II

Review of the Literature

Decision Making Models

Although there are several approaches to the study of decision making in education, such as information processing, Inquiry Theory (Shulman, Elstein & Sprafka, 1978) and mastery or programmed learning (Block & Anderson, 1975), these may all be considered variations of the objectives-based model. The objectives-based model is founded on the assumption that the basic unit of instruction is the goal or objective, that a variety of alternatives are available for reaching each goal or objective, and that the consequences of each alternative are generally known. This model also presupposes a predetermined sequence or order to the consequences of each alternative. It is assumed that an individual will choose the optimal alternative when making a decision related to instruction.

The difficulty with the objectives-based model is that educational decisions are assumed to be based on rational behaviour. Whether this model can be applied successfully to the classroom is questionable. The reason is because classroom events are generally complex, social situations (Whitfield, 1977) containing unstable and unpredictable elements which put constraints on the selection of optimal alternatives. As well, the content of some subjects require

novel or creative rather than particular responses (Eisner, 1967).

This rational, objectives-based theory as a practical approach to decision making has been criticized by March and Simon (1958). They argued that this model implies an objective reality from which decisions are made. They proposed that what is only possible is a subjective reality which is first determined by the organization or social situation in which the decision maker finds himself. Limits or bounds are placed on the choice of alternatives by the organization so that decisions come to be made within a simplified and subjective version of that reality. The decision maker tends to choose a satisfactory alternative as opposed to an optimal one. The phenomenon has been termed bounded rationality (Simon and March, 1958) and is a viable alternative from which to examine the decision making processes within the school milieu.

The concept of bounded rationality was used in this study as a model from which to examine the literature pertaining to two identified phases of decision making in education: preactive or planning decisions and interactive decisions which occur during teaching or instruction. The use of this model may lead to a deeper understanding of the decision making processes of teachers than has presently

been reached by objectives-based inquiries.

The model of bounded rationality served as a lens from which to examine the nature of resource teachers decisions and how these decisions were influenced by constraints imposed on the the decision maker at the level of the school, the resource room and the learner.

Teacher Decision making

McCutcheon (1980) investigated planning decisions across a number of curriculum areas. Questions asked were: what is known about teacher planning, what is its nature, when do teachers plan, what do they consider, and what influences their planning?

The sample used in this study consisted of twelve teachers from grades one to six in three school systems in Virginia. The sample was derived by flipping through personnel lists while controlling for grade level.

Information was collected from anecdotal records of observation in the classroom, notes from informal interviews, transcripts with meeting of teachers and administrators, teacher's planbooks, teacher's guides to textbooks, administrative memos and children's daily work.

Researchers worked in the classrooms several hours a week to study the planning process, the nature of the curriculum emerging from the plans and various conditions influencing plans. The planning process revealed that the notes in planbooks are only a shorthand description of a lesson. Rather, it was mental planning that held a more pervasive role in the decisions of these teachers. Mental planning involved complex mental dialogue, reflective thinking, rehearsals of lessons, and envisioning what might happen or go wrong. Written plans were seen as a means to refresh one's memory.

Long-range planning was barely evident in McCutcheon's (1980) study. The reason was a heavy reliance on mandated textbooks with prescribed goals and objectives. Short-range plans were based on availability of materials, teacher interest, what worked in the past, and knowledge of class characteristics. These short-range plans were still subject to mandated materials.

McCutcheon (1980) stated that although objectives-based planning was encouraged by the administration, and set out in the prescribed classroom textbooks, it was limited by a number of constraints which operated in such a way as to interfere with its implementation in the classroom. These constraints, operating at the organizational level of the

school, included teachers' isolation, availability of shared school materials, textbook errors, unpredictable events such as interruptions, scheduling practices such as class size, mandated materials, and promotion/retention policies.

Planning decisions at the classroom level were concerned with such variables as time, materials, and the relationship between lessons. Planning decisions at the level of the learner were concerned with student interest and student ability.

This study did not support the objectives-based theory of decision making for three reasons: (a) objectives were one of the constraints which operated to form limits or bounds on the planning decisions of teachers at the level of the classroom, (b) the implementation of objectives were limited by other variables such as unpredictable events and scheduling practices found within the organization of the school and (c) the original objectives prescribed by mandated school textbooks were modified by additional constraints that impinged on the decision making process of these teachers (McCutcheon, 1980).

A study by Zahorik (1975) investigated the kinds of planning or preactive decisions that teachers made. The sample consisted of 194 teachers from a large metropolitan city and surrounding suburbs. A variety of grade levels,

subject areas and years of experience comprised the group.

Teachers were required to write down the decisions they made prior to teaching and the order in which they made them. Eight categories were used to classify decisions: (a) objectives, (b) content, (c) activities, (d) materials, (e) evaluation, (f) instruction, g) diagnosis, and (h) organization. The data was analyzed according to the frequencies and percentage of decisions made first, as well as the frequencies and percentages of decisions made most often.

The most frequent decisions made by teachers in this study (Zahorik, 1975) were activities followed by content, objectives and materials. The most popular first decisions were content followed by objectives. As objectives were neither the most frequent nor the most important first choice by the teachers in this study, the objectives-based paradigm of decision making by teachers was not supported.

Content and objectives are generally derived from prescribed curriculums, textbooks and mandated programs. It is reasonable to assume that they are the first decisions made by teachers as they tend to form the bounds or parameters imposed at the level of the school by such administrative bodies as the department of education, the

school division and the principal. Therefore, once these organizational decisions at the school level are made the teacher is free to make decisions occurring at the level of the classroom.

According to Zahorik's (1975) study, decisions were related to diagnosis or students' ability, activities and materials. Although decisions concerning activities were not important first decisions, they were the most frequent decision cited by teachers. Why activities were such important decisions was not explored by this study.

Another study in planning decisions was conducted by Yinger (1979). This was a descriptive case study of one elementary teacher's planning for a five-month period. The teacher taught a combined grade one/grade two class. She was in her sixth year of teaching having had experience with special education classes. This teacher was noted for her organization skills, creativity and time spent in planning.

Methods used in this study were appropriate for qualitative research and included participant observation, process tracing, interviews and think aloud techniques. The study involved observations of planning and instruction over a twelve week period as well as teacher participation in simulated tasks.

Conclusions indicated two central aspects of this teacher's decision making: planning for instructional activities and the use of teaching routines. In Yinger's (1979) study, content and materials were the most frequent decisions made by the teacher and related to the category "activities". Results indicated that planning appeared to be focused on decisions which served to formulate an activity that would later be used as a vehicle for instruction. Routines served to assist in driving the activity forward to completion.

Yinger (1975) proposed that activities were the basic structural unit of planning and action in the classroom and formed the basis for all classroom interaction. Activities took the form of behaviour settings in which the teacher controlled the setting before the activity by planning, then once the activity began, the teacher was controlled by the setting.

Yinger (1975) identified seven features of instructional activities: location, structure and sequence, duration, participants, acceptable student behaviour, instructional moves and content/materials. These findings suggest that participants in the activity, as well as participant behaviours, are a feature of preactive decisions. However,

the variables relating to participants and their behaviours, and their specific influence on the decision making process were not elaborated in the study.

Using the model of bounded rationality, the activity can be said to define the bounds or parameters within which instruction takes place in the classroom. Routines serve to move the activity forward. Although learner characteristics are a consideration in preactive decisions, their impact on the decision making process has not been clearly defined.

A study by Parker and Gehrke (1986) investigated the instructional decision making of twelve elementary teachers randomly selected from a white, middle-class, suburban western school district. There was a range of grade levels and years of experience.

A grounded theory procedure was used so that before hypotheses were defined, data was collected, coded, analyzed, and arranged into theoretical categories. The authors used stimulated recall by audiotape rather than video and teachers stopped the lesson when a decision was remembered. Teachers were asked to differentiate thoughts during and after the lesson. Questions such as "What do you mean by?" or "Do you remember anything else?" were asked.

Categories were derived from the data and included: (a) content of interactive decisions relating to student comprehension and motivation, (b) teacher's concerns at decision points including student attitudes, disruptions, classroom climate, and resources, (c) organization of the class session pertaining to activity, task and lesson, (d) teacher's guiding abstractions relating to image, objective, intention, and disposition, and (e) supporting cognition for particular decisions including decision rules, routines and practical principles (Parker & Gehrke, 1986).

The hypotheses of this study stated that (a) teachers' instructional decision making is embedded in classroom learning activities and is a property of learning activities situated in and shaped by them not by learning objectives, (b) moving learning activities forward to completion ie. to the fulfillment of a teacher image of an activity is a primary intention during interactive teaching, with time being a major consideration and (c) decision rules and routines help move learning activities forward to completion.

Parker and Gehrke (1986) concluded that learning activities were the basic units of classroom instruction, not objectives, and it is a teacher's mental image or mental plan that guided the activity during instruction. Although

instructional decision making was stated by the authors to occur throughout instruction, they were said to be most noticeable when the mental image of the activity was broken.

This study supports the contention that teachers' decisions operate within bounds or parameters at the level of the classroom. Planning decisions, in the form of mental plans, are made by teachers prior to instruction and serve to form the parameters within which an activity takes place. The activity in turn serves to form the bounds or parameters within which instruction takes place.

The literature on classroom decision making indicates that teachers make a variety of planning decisions which occur at the organizational level of the school as well as the organizational level of the classroom and that learner characteristics are considered in making those decisions. However the influence of learner characteristics on instructional decisions are not clear.

The research on teacher decision making does not support the objectives-based model. It appears that decisions are not made in a rational, sequential way by selecting from a number of given alternatives, but rather decisions are made within parameters or constraints which operate at different levels within the school setting and from a limited number

of options.

Teacher Decision Making and Reading

Hoover (1985) investigated the decisions made by teachers in reading. The sample used 24 volunteer classroom teachers from grade K-1 from different schools within one school division in the American South. The sample of teachers used a basal management system and mastery tests which were policy controlled and heavily influenced by the principal.

Procedures involved asking teachers to write down what decisions they made in order to teach reading effectively in their class. Teachers were then asked to rank order their three most critical decisions.

In Hoover's (1985) study, teachers ranked first those decisions related to: (a) grouping, (b) needs of the individual and (c) instruction. Critical decisions made by these teachers were concerned with: (a) reading placement, (b) individualizing instruction and (c) motivation. Critical decisions were related to mastery of skills and the performance of activities within the basal program.

In this study it appeared that the bounds or limits imposed by the constraints of a mandated reading program at

the divisional and school levels, clearly defined the parameters within which these teachers taught reading. The objectives of this basal program required teachers to make decisions at the level of the classroom which accommodated those objectives. The objectives then operated as parameters within which teachers made decisions about their students. Decisions made about students were then related to their ability to meet the objectives of the curriculum.

A case study by Putnam (1984) examined whether a sample teacher used systematic decision making models and whether the teacher made planning and instructional decisions. The study also asked what governed this teacher's decisions and what was the interaction between decision making and the need to maintain activity flow.

The teacher chosen for the study on the basis that she had already been observed making planning and instructional decisions, she was aware of her decisions, her instruction emphasized basic skills, individuality and social development, and her teaching resulted in above average gains in reading. Putnam's (1984) study was ethnographic and used appropriate methods of data collection for this design: (a) participant observation, (b) debriefing and verification sessions, (c) interviews, and (d) document collection. Data was collected for a six month period.

Putnam's (1984) findings indicated that the teacher used long-term outcomes to guide her planning and instructional decision making. They consisted of data collection, data synthesis and data decision making. Planning decisions were based on data on each child, the group, anticipated outcomes, and knowledge and skills. Classroom routines were used to maintain activity flow and keep the children on task in this study.

This study supports the suggestion that learner characteristics influence planning decisions. It also suggests that long-term goals are a part of a teacher's planning decisions. It may be that long-term goals function as a parameter within which short-term planning and instructional decisions are made.

As part of a large project called the South Bay Study, Morine-Dershimer (1978-1979) looked at the relationships between teacher plans for reading instruction and classroom reality. The study was described as a microcosmic examination. Three primary teachers took part in this study. All teachers had at least three years experience.

The method of the study was a planning interview with the teacher before a reading lesson and follow-up stimulated

recall interviews. The questions for the interviews were concerned with pupils, material selected, objectives, seating arrangements, differences from other lessons, strategies or instructional processes, and differences from other planning. The most often mentioned decisions were about content, materials and activities, although the teacher's mental plan of the lesson did include other areas when probing occurred.

In Morine-Dersheimer's (1978-1979) study "teacher plan" became synonymous with "mental plan". Stimulated recall protocols included four types of categories: type of decision point, instructional concerns, sources of information, and teacher awareness. At any decision point teachers could mention several types of instructional concerns, sources of information or awareness. The number of decision points were noted in percentages which later served to indicate major and minor discrepancies between the mental plan and the actual lesson. Depending on the degree of discrepancy (based on quantitative percentages), decision points were either handled by established routines, inflight decisions, problem orientations or postponed.

This study attempted to connect teacher planning and instructional decision making. The author stated that a teacher's mental plan of instruction was instrumental in

guiding instruction in the classroom and was the basis on which teachers made decisions. Instructional decisions were directly influenced by the discrepancy aroused between mental plan and classroom performance (Morine-Dershimer, 1978-1979). How learner characteristics create this discrepancy and whether some characteristics are more effective in creating this discrepancy needs further research.

A study by McNair (1978-1979), also part of the South Bay Study, investigated teachers' natural, instructional decision making behaviour. The sample consisted of ten teachers from grades one to five in a single elementary school in a metropolitan area. The study focused on learning the variety of indicators to which teachers chose to react. Common indicators used by teachers and their strength in relation to variation in teaching style were identified.

A stimulated recall interview was used and consisted of a videotape of a reading lesson, both morning and afternoon sessions. Less advanced students read in the morning, while more advanced students read in the afternoon. Lessons were taped three times during the year - in the fall, winter and spring. Specific instructions were given to teachers and then the videotape was stopped at points of the lesson by

the teacher. The teacher was asked specific questions by the investigator. The tape was stopped at four points in each lesson: (a) the first time the child gave an incorrect answer, (b) at the time of an activity shift, (c and d) randomly selected points.

McNair (1978-1979) coded data according to five teacher concern categories: pupil concerns such as learning, attitudes and behaviour; content concerns such as tasks, objectives, facts and ideas; procedures; time; and materials. Teachers were most affected by concern of the pupil categories and then content. Different concerns were indicated for the two ability levels. Order of concerns for the low group were: behaviour, directions, concepts, attitudes. Concerns for the high group were task and learning.

McNair (1978-1979) concluded that there was a movement from decision making to fine tuning of activities during instruction. The author stated that teachers appeared to have some sort of reference model against which they checked progress of the ongoing activity. Previous studies have indicated this reference model to be the mental image or mental plan of the activity.

Different concerns were stated as important for

different reading levels which indicated that at the interactive level, learner characteristics appeared to influence interactive decision making although the reasons for this are not understood. As well, the fine tuning of activities appeared to be based on cues occurring at the level of the learner which operate as a parameter within which short-term planning and instructional decisions are made. How these cues affect the decision making process needs further investigation.

Research on teacher decision making in the area of reading concluded that planning and instructional decisions were influenced by a number of variables, including learner characteristics. Planning decisions took the form of a mental plan which served to guide instruction within the context of an activity. Objectives as the major unit of instruction were not supported in these studies. Instructional decisions were concerned with fine tuning within the activity in accordance with a mental plan. Variables influenced decision making during instruction by appearing as discrepancies. The nature of this influence is yet to be determined. The variables affecting planning and instruction were numerous and differ between studies.

Not only is further research required to continue to identify those variables that influence decision making, but

research is also required to explain how those variables influence decision making. What is needed is an in-depth look at one child's reading instruction. This could best be accomplished by exploring the decision making processes of resource teachers. However, studies investigating the decisions of resource teachers are not available. It is therefore necessary to examine the related studies of teachers and reading specialists concerning a child's reading assessment and instruction.

Diagnostic-Prescriptive Decision Making

Decision making for a child experiencing reading difficulties can be viewed within the context of diagnosis and subsequent remediation or prescription. Generally, the teacher or specialist attempts to assist a child by making decisions based on data collection. This approach assumes a number of alternatives and a systematic method of selecting the best alternative for the problem. It is a rational, objectives-based model and when applied to an individual learner is known as the diagnostic-prescriptive method. Only a few studies have explored the decisions of teachers and specialists as they relate to reading difficulty and those studies are based on this method.

A study by Gil (1980) investigated the decision making process of classroom teachers as they diagnosed reading

difficulties in a laboratory setting and in their classrooms. The sample consisted of ten teachers who had at least two university reading courses.

In the first phase of the study, teachers interacted in a laboratory setting with two individual, simulated cases of reading problems. In the second phase teachers were observed and interviewed concerning their diagnostic and remedial practices as they related to reading in their classroom. Verbal comments of teachers were collected.

Gil (1980) analyzed the data using product-process measures. Product measures were: (a) diagnostic agreement, (b) diagnostic commonality scores (c) cue agreement and 4) cue commonality scores. Process measures were: (a) length of interaction, (b) number of diagnoses, (c) number of collected cues, and (d) relationship between cues and comments. Findings indicated that teachers differed from one another on their final stated diagnoses and lacked comprehensive, systematic strategies in gathering and evaluating information.

The author concluded that teachers were not effective in performing diagnosis and remediation. They suggested more training to develop the clinical problem-solving behaviour of teachers. It is therefore reasonable to look at teachers

with training to examine decision making processes for one child in reading.

Banks & Nolen (1985) examined the diagnosis and planning skills of teachers and related specialists in reading. The subjects were 94 education students in university. Subjects were grouped according to coursework background: a) those having taken developmental and diagnostic reading courses, b) those having taken only diagnostic reading courses and c) those having taken developmental reading courses.

The procedure involved developing diagnostic and prescriptive plans for four individual case studies of reading problems. There were five categories of information related to the learner: family/community, developmental, psychological, educational, and performance. Subjects had 20 minutes to choose information and form diagnoses and, 10 minutes to write a prescription. Responses were analyzed by three experts in reading.

Results of the study indicated no difference between teacher groups. There was little relationship between academic background and performance. Performance by all teacher groups was judged inadequate based on criteria provided by experienced, doctoral-level experts. Results did not support the conclusions drawn from the previous

study (Gil, 1980) that training is needed for effective decision making in diagnosis and prescription.

Banks and Nolen (1985) concluded that it was the nature of the training that resulted in poor performance by all groups. They suggested that teachers' programs should focus on a competency-based model and that behavioural objectives be the prime focus for developing success in remedial instruction. As competency-based implied a certain amount of expertise, two studies were examined to determine the performance of highly qualified, experienced specialists in the field.

The first study by Vinsonhaler (1979) examined diagnostic decisions of specialists. The subjects were eight, reputable, practicing reading clinicians with at least five years experience. The design of the study consisted of four individual cases of reading difficulty. Each case had an equivalent form by making minor changes in the data base. For each case an inventory was provided describing the data available. No limits were placed on number of cues collected, time or length in preparing reports.

A four step procedure was used: (a) instructions and practice with a sample case, (b) observational session to

collect data using the inventory, (c) preparation of a written diagnostic and remedial report, (d) debriefing session in which the subjects underwent stimulated recall where each data item was presented along with controlled questions concerning the cues selected. Data analysis involved translating raw data into a standard vocabulary for diagnostic description. Reliability ranged from 75-81% on the categories selected (Vinsonhaler, 1979).

The major findings of the study indicated that in diagnosing cases, clinicians did not agree very well with themselves or with other clinicians. A better understanding of the causes of this low agreement is needed.

A similar study was conducted by Weinshank (1980) to determine whether reading specialists' diagnoses led directly to remedial recommendations. Eight experienced reading specialists were observed during 24 sessions as they performed a series of tasks using three simulated cases of reading difficulty, two of which were thinly disguised versions of the same reading problem.

A cue inventory was provided listing the information available for each particular case. These included achievement tests, family and academic background, cognitive ability, diagnostic reading measures, classroom information

and work samples. A variety of formats were used to present the information. Subjects were asked to diagnose the simulated case, propose a remedial plan, and associate diagnostic and remedial statements.

Both diagnostic and remedial statements were described by Weinshank (1980) as idiosyncratic, and therefore unreliable predictors in effecting positive change in a child's reading difficulty. The study suggested possible reasons for these findings: (a) the task did not resemble the types of tasks specialists encounter on the job, (b) there was no means by which the specialist could get feedback on diagnosis and prescription, and (c) the supposed wide range of alternatives are in fact limited.

Instruction, whether it is concerned with diagnosis, assessment or subsequent remediation, involves both the specialist and the learner. It therefore seems reasonable to assume that learner characteristics influence decisions at this level and provide feedback required by the specialist in order to make subsequent decisions. Studies exploring a reading specialist or resource teacher's interaction with the learner in a school-based, resource room setting are needed in order to add to the understanding of how learner characteristics influence the decision making process of specialists.

Learner characteristics are considered to be important to classroom teachers. The characteristic deemed most important by teachers to a successful activity was motivation (Zahorik, 1982). Characteristics considered important to reading group placements were ability and attitude to tasks (Haller & Waterman, 1985). The ideal student was identified by teachers as friendly, co-operative, sweet, sensitive, open, self-confident, self-motivated, a good listener, and a task completer (Prawat, 1985). Academic attributes of the ideal student were identified as above average in reading, articulate, expressive, intelligent, and creative (Prawat, 1985). It can be assumed that these characteristics are also important to resource teachers and may affect decisions concerning a child's reading difficulty.

Studies using the diagnostic-prescriptive model to examine the decision making process for a child's reading difficulty by experts supposedly skilled in the competency-based model, have not indicated this model to be an effective way to describe teacher decisions. Procedures using examination of documentation and testing information advocated by the diagnostic-prescriptive, objectives-based, rational model have not proven to be effective in describing decision making behaviours concerning a child's reading

difficulty.

An alternative model, which addresses the complexities occurring within the school milieu, while it examines instructional decisions for a child's reading difficulty is needed. The model of bounded rationality seems suited to the task of exploring how resource teachers make instructional decisions for a child's reading difficulty in the school setting.

CHAPTER III

Methodology

Introduction

Research into decision making has been primarily qualitative. The exposure of teacher judgement, as well as the difficulty of identifying those decisions occurring instantaneously or at a subconscious level, have necessitated a naturalistic approach. Use of a naturalistic approach will enable the respondents to disclose a somewhat secret and private part of their thoughts, actions and feelings prior to, during and after instruction. Such information should be obtained in an unthreatening, relaxed and sharing kind of way (McCall & Simmons, 1969) and yet make use of appropriate subjects, acceptable devices and procedures so that the resulting descriptive data will add to the theory and understanding of decision making.

Design of the Study

Subjects

The subjects used in this study were five resource teachers, one male and four females, employed in elementary schools in three school divisions in the city of Winnipeg. The subjects' teaching experience ranged from 12 to 25 years with at least 3 to 14 years as resource or remedial reading teachers. Three teachers with the least experience in resource had an additional 1 to 6 years of teaching in a

special education setting. The subjects' training in reading ranged from no courses in reading to a pre-master's in reading. The sample consisted of resource teachers who volunteered to talk about their planning and instruction.

Selection of the subjects began by contacting the superintendents of school divisions by letter in which the nature of the study was outlined, the procedures involved in the research were described, and permission to conduct the study in the school divisions was requested (Appendix A). Once the study had been approved, the superintendent was asked to send a letter of request for volunteers to all elementary resource teachers working in the school division with at least three or more years experience as a resource teacher. The request was in the form of an open letter (Appendix B).

Although the use of volunteers limited the generalizability of the study because they would likely be resource teachers who did think about their planning and instruction, the volunteers were assumed to have expertise, knowledge or interest in the area of decision making which enabled the purpose of the study to be addressed more expeditiously. Although volunteers may not have been representative of all resource teachers, it was hoped that the study would attract teachers who were able to articulate

the nature of their decision making processes.

Six resource teachers volunteered. The nature of the study was briefly explained to them. A meeting was arranged to further clarify the study and to gather information about their years of experience, educational qualifications, philosophy, and the resource model used in their school. Procedures for the study were outlined, pertinent background information was collected and concerns such as confidentiality, ethics, time lines, specific tasks, selection of the child, data collecting methods, and questions were clarified (Appendix C). In one case, the meeting occurred just prior to the observation and interview sessions.

Each resource teacher was asked to select a child with whom they were not familiar, who was recently referred for reading difficulty, who was in the primary grades, and who was a typical referral. In each case, the resource teacher did not have previous contact with the child either for purposes of assessment or instruction. This method of selection eliminated to some degree resource teacher bias in selecting a child whom they thought would be the most suitable candidate for the study. It also eliminated children who were under resource guidance for some time and for whom many important decisions may have occurred at a much

earlier date. One resource teacher was unable to obtain a referral, and therefore only five out of six volunteers were used for this study.

The children, one girl and four boys, ranged in age from 6 to 8 years old. One child was in grade one and four were in grade two. The study required that the child need special instruction or assessment in reading and that he have no serious physical handicap such as hearing, speech or visual impairment. Once selection of the subjects had taken place, the required procedures were followed to obtain permission from the resource teachers and the parents of the children (Appendix D and Appendix E).

Although the study initially requested resource teachers to teach a lesson, resource teachers were observed and interviewed during a reading assessment session. Four resource teachers explained that they first started with assessment sessions which may or may not be followed by a lesson. In each case the assessment was considered to be an instructional activity which gave the resource teacher information about the child's response to similar instruction in the classroom. The fifth resource teacher had planned a lesson, but the child was not available for instruction due to illness. This resource teacher proceeded with an assessment session for another child who had

recently been referred for reading difficulty. For sake of clarity consistency, the word session was used instead of the word lesson to describe the assessment activity chosen by the resource teachers for the study. As well, the assessment session was considered an instructional activity.

For ease in description, resource teachers are referred to in the feminine gender and the children were referred to in the masculine gender.

Data Collection Devices

Data collection devices consisted of those commonly used in naturalistic research. The devices for data collection in this study included: interviews consisting of unstructured, open-ended questions, audiotapes of the session and interviews, observation and notes of the session, and stimulated recall. These devices, used in conjunction with each other, provided data on the area of instructional decision making and described the resource teachers' perceptions and understandings of their own behaviour.

The resource teachers were instructed to plan and execute a reading session for a child (Appendix F). They were asked to plan and conduct their session in the usual manner, but to pay close attention to what they were

thinking during their planning and instruction. Data were collected from interviews, observations, transcriptions of audiotapes, personal documents such as plans and memos, and stimulated recall discussions.

Interviews.

The interview was the dominant strategy for exploring the decision making processes of resource teachers with the expectation of developing insights on how subjects interpreted their experience of planning and instruction for one child's reading session.

As the area of resource teacher decision making was new, this method of data collection generated general information on the decision making process and still allowed for probing areas of specific concern, for explaining areas of interest and for determining reasons behind particular responses. Use of the interview gave an opportunity for developing rapport with the teachers in the short period of time allowed by the study, an aspect that is particularly important when examining sensitive areas such as teacher judgement.

An open-ended, unstructured question format was used in the interview in order to give teachers the opportunity to talk freely about their thoughts and feelings concerning the

topic of decision making with which they were intimately involved (Appendix G and Appendix H). This format also gave the researcher the opportunity to probe for further details those specific areas of interest to the study. Questions which demanded a descriptive response were used in order to gather sufficient information in the time available for the study. They followed a funnel approach (Kerlinger, 1977) beginning generally and becoming more specific in order to collect comprehensive data pertinent to the questions directing the study.

Although interviews are a popular method for data collection in naturalistic studies, they have some limitations. The ability to develop rapport with subjects through the close contact and mutual exchange provided by the interview can be intimidating to people who are not comfortable with one-on-one contact, and therefore they may not feel comfortable expressing their thoughts, observations and feelings openly. This study used volunteers who had been previously informed of the interview format and who were comfortable enough with the method to proceed with the study.

Another limitation of the interview as a method of data collection is the problem of interviewer bias. Pertinent data may be missed by the interviewer due to failure to

probe for further information or failure to ask relevant questions. Although this limitation can be modified to some extent by having the researcher formulate the questions and conduct the interview, the experiential perspective with which the researcher enters the study affects both the development of the questions as well as subsequent probes for information. The effects of this limitation were addressed by formulating open-ended questions that allowed the subject a considerable amount of freedom in their response.

Another problem related to interviewer bias is the verbal and non-verbal cues that may direct the response of the subject. Such cues may be a nod of the head indicating approval or a frown that may discourage further discussion of a point. The subject becomes responsive to cues from the interviewer and what the interviewer might want rather than responding freely to the question from her own perspective. It has been suggested that cues from the interviewer can add to the collection of data by showing support for the subject and the information they are sharing (Bogdan & Biklin, 1982).

A final limitation of the interview relates to the ability to record information accurately, particularly when open-ended questions are used. One way that the effects of

this limitation were minimized was to tape record the interview. In this way the interviewer was able to focus on the content of the discussion and still had an accurate record of the responses.

Although the main concern of the interview format involves the problem of interviewer bias, it is one of the best methods for examining in-depth those areas of thought which may not be consciously or readily accessible (Bogdan & Biklin, 1982; Kerlinger, 1973). It was used in this study to explore the thoughts, feelings and actions of teachers as they interpreted the nature of their instructional decisions for a child's reading session. A pilot study was conducted with a resource teacher outside of the study to pretest the instrument (Appendix I).

Audiotapes.

Audiotapes are a device often used in conjunction with other methods of data collection such as interviews, observations or stimulated recall. The audiotape is particularly effective when used to record small group interaction or conversations and it was used in this study to record verbal interaction.

Audiotapes are relatively inexpensive and require a minimum of expertise to operate. They require little time

to set-up and are less obtrusive than such devices as video equipment. For these reasons they were used in this study to record the session and the interviews with the teachers.

Perhaps the major benefit of audiotapes is that they accurately record verbal exchange. For this reason they are an invaluable tool for collecting data in a situation where responses to questions are the primary method of data collection. In such situations, it would be difficult for the interviewer to record all of the verbal exchange that might occur.

The audiotape releases the interviewer from the immediate burden of extensive note-taking. As this study will involve situations where extensive discussions will occur in order to examine the decision making process of teachers, the use of the audiotape will be necessary both as a tool to assist in data collection as well as a means with which to verify information collected from notes and observations.

A limitation of audiotapes may arise if some subjects feel uncomfortable speaking with the recorder present. This effect may be reflected in the data, particularly in a lesson both the teacher and child are inhibited from performing naturally. Also, there may be certain topics

about which the subject is particularly apprehensive and will either not respond or will respond selectively. One way this study attempted to minimize the inhibitory effects of the audiotape was to make the presence of the recording instruments inconspicuous. A small, compact tape recorder was positioned under the table, and a miniature microphone attached to the researcher or some object on the table which was of the same colour.

Another limitation of the audiotape is that it does not capture non-verbal cues such as gestures, facial expressions and behaviours. As non-verbal cues were considered an important part of the data to be collected for the study, the audiotape was supplemented with observer notations of those incidents that contained non-verbal behaviours, and body expressions. The notations included any behaviours observed by the researcher which described body position and body movement of both the resource teacher and the child.

Aside from the limitations of the audiotape as a method of data collection, it was effectively used in this study to verify and assist in data collection by taping the session, interviews and stimulated recall of the session. This not only relieved the researcher of some of the burden of immediate data recording, it also served to verify notes and provided a comprehensive record of the verbal exchange in

the lesson and during the interviews.

Observations/ Field Notes.

Observation is another major device for data collection in qualitative research (Bogdan & Biklin, 1982). Although observation is often coupled with participation in naturalistic research, this study of one reading session was concerned with observation by the researcher as detached from the interaction of teacher and pupil.

The major benefit of direct observation for naturalistic study is that the researcher is able to observe within the natural setting as opposed to contrived or laboratory settings. This study observed the resource teacher and the pupil in their natural environment within the school. The data collected under this circumstance should reflect the nature of instructional decisions made everyday in the same setting.

Another benefit of observation is that the researcher can gather data that is not accessible through other means. In this study a tape recorder was used to render an audiotape of the session but was incapable of registering those non-verbal behaviours that are important pieces of information to the study. The observer noted those non-verbal responses and cues that would otherwise be lost

to the study by using field notes which contained descriptions of the resource teacher's or child's behaviours which occurred during the session. The behaviours were identified as quantifiable body movements and gestures, such as smiling, nodding, tapping a foot, and touching an object.

One limitation of this device for data collection is the effect of the observer on the behaviour of the subjects involved in the study, if in no other way than by being part of the observational situation. Both the resource teacher and the pupil may be affected by the presence of the observer during the session and may not behave naturally. However, effects of the observer can be nullified in this study, if the observer is careful not to be obtrusive and not to give the impression that judgements are being made (Kerlinger, 1973).

Another difficulty with observer bias arises when observations may have resulted specifically from observer judgement. As this study is primarily concerned with recording data to generate theory and further understanding, rather than with judging observations, the difficulties surrounding observer interference in data collection should be minimized. This study further attempted to control for observer interference by recording observable behaviours as

opposed to interpretive or speculative opinions.

Although there are some limitations to the observation of subjects, the data collected using this device will be invaluable for examining how resource teachers make decisions for the instruction of a child's reading.

Stimulated Recall.

Stimulated recall is a device used to collect data after an event has occurred. The purpose of stimulated recall is to help teachers trace the thought processes that occurred to them during their experience of teaching the session (Tuckwell, 1977). Data is first collected either by videotape or audiotape and then is played back to the teacher in the effort to recall information that could not be collected at the time of its occurrence.

During stimulated recall the tape is stopped by the subject and/or the researcher at points of interest or concern and discussed in the efforts of uncovering information of which the subject was unaware or about which the subject did not have time to reflect. This device allows for the discussion of incidents during the session that may have been forgotten. It also allows in-depth questioning of the session that was not possible while the session was in progress particularly during interaction with

the child.

Stimulated recall in this study was comprised of audiotape and interview format (Appendix J). The strengths and limitations of those devices also apply apply to this technique.

Personal Documents.

Although personal documents cover a wide range of written materials, this study limited data collection to memos, notes or plans. Examinations of written material, when confined to the notations made by the resource teachers within the normal course of instruction, should provide data on the nature of decision making while adhering to a naturalistic approach to data collection. However, due to restrictions placed on the researcher by two of the three school divisions, personal documents were not used in this study.

Data Collection Procedures

Resource teachers were asked to plan and conduct a reading session for the selected child (Appendix F). These sessions averaged 30 minutes in length. The resource teachers were asked to use their regular decision making practices. Although regular practices were requested, it was expected that the resource teacher would perform her

best due to the presence of the researcher and the expectations set forth by the study. Even if this limitation was present during data collection, it still reflected what the resource teacher was capable of doing as well as what they felt was her best effort. If present, this limitation should not discredit the data, as the study was intended to be exploratory and concerned with generating data for theory development.

Interviews.

Interview questions covered both planning and instruction. Questions about planning were asked before the session began, except for one resource teacher where the planning questions were asked after the session due to a change in the child selected for the study. The child originally selected for the study was absent and the resource teacher returned with another child who was scheduled for an assessment. The planning questions were open-ended and concerned with how teachers go about planning their reading session (Appendix G). The planning interviews averaged 20 minutes in length. Questions about instruction were asked after the session. The instructional questions were open-ended and concerned with the teacher's thoughts during the session and the decisions related to those thoughts (Appendix H). The instructional interviews averaged 35 minutes in length.

A funnel approach was used in formulation of the interview questions so that general open-ended questions are followed by more specific open-ended questions in order to probe for information that is related to the coding categories selected for data analysis (Appendix K). The interviews with the resource teacher were audiotaped. These audiotapes were later transcribed for data analysis.

Audiotape and Observations.

Observation of the session was as unobtrusive as possible. Before the session began and prior to the first interview, recording equipment was checked and positioned in an unobtrusive spot in the room reserved for instruction. The researcher was positioned near the teacher during the interviews. However, during the session, the researcher was positioned so that the faces of both the teacher and the child could be observed. The teacher introduced the researcher to the child and explained briefly the purpose of the observation.

The tape recorder was started at the beginning of the session. The researcher recorded facial expressions, gestures and behaviours not picked up by the tape recorder. A brief description of the context in which the non-verbal cues occurred was also recorded.

Stimulated Recall.

Three resource teachers participated in stimulated recall of the audiotaped session immediately after the interview for instruction. Resource teachers were asked to stop the tape whenever they were conscious of having made a specific decision about what to do next in the session. They were asked to give a complete description of what they recalled each time the tape was stopped. They were asked to indicate when they did not recall anything or when the thought occurred to them after the session was over.

The tape was also stopped at points during the playing of the session by the researcher. These points were identified as markers of potential decision points (Appendix J). Open-ended questions were asked to allow the teacher to describe what they recalled at each point. The stimulated recall sessions were audiotaped and later transcribed for data analysis.

Stimulated recall was also used in this study to review points in the session that were of particular interest or concern either to the resource teacher or to the researcher. These sessions averaged 20 minutes in length.

A modified form of stimulated recall was used for two of

the subjects due to time constraints. In these cases the researcher read field notes from the observation of the session and asked questions concerning decision points, rather than stopping the tape at specific points of interest. As well, the resource teachers were asked to recall decision points or specific points of interest or concern. This modification may have affected recall in one instance where the resource teacher was unable to recall why she decided to smile at the child at a particular point in the session. As the stimulated recall occurred immediately after the session, resource teachers were able to recall their thoughts except for the one instance mentioned.

Data Analysis

Steps in the Analysis

Data was analyzed using a method of constant comparison. This method uses a combination of two approaches: coding procedure and style of theory development wherein data is analyzed using joint coding and analysis to generate theory more systematically (Glaser, 1969). Four basic steps were involved: 1) examining the data while using the original categories of constraints and comparing data applicable to each, 2) redefining and integrating the categories and their related properties, 3) delimiting the data for the theory and 4) writing the theory. The steps overlapped and were repeated numerous times, but followed the basic procedure

outlined.

The first step involved examining the five planning interviews. Data from the first planning interview was compared to the initial categories of constraints defined at the outset of the study. Data from the other resource teacher planning interviews was then compared to the data in the first planning interview, as well as to each preceding planning interview. This data was colour-coded according to category. Some categories were minimally grounded in the data while other categories became saturated. Data was then coded into separate files by computer.

Coding procedures used in this study are described in Bogdan & Biklin (1982). Once data was collected and material transcribed, the transcriptions were assigned codes to identify each resource teacher and type of interview. A procedure followed wherein each bit of data in the transcript or written document was read and relegated to one of the predetermined categories. The predetermined categories were derived from the research on decision making as well as research on variables considered important to teachers. Potential coding categories were tested using data from the pilot study (Appendix K).

Step one proceeded into step two as data within each

category were examined, compared and regrouped. In this step some of the categories merged and were regrouped until three major categories were identified: 1) the classroom teacher, 2) the child and 3) the resource teacher.

Once the data was compared and applied to each category, the process of validation occurred. Two techniques are generally used for this process: saturation and triangulation. This study concerned itself specifically with saturation.

According to Hopkins (1985), saturation involves repeatedly testing the category against the data in an attempt to modify or falsify it. At this point categories and their properties are intergrated or generated to a situation where no additional data are found.

Becker (1958) refers to the check on frequency and distribution of the phenomena in order to determine saturation. Although it is difficult to predetermine the criteria for frequency distribution, as this will vary from study to study, there may be categories which lack data and can be discarded or categories which need to be refined, elaborated or modified. When a category reaches a point where neither refutation or alteration are necessary, where no additional data is found to develop properties of this

category then saturation is said to occur and the hypothesis has been validated (Hopkins, 1985).

This study used frequencies in describing categories of decisions which occurred during the instructional and stimulated recall interviews.

Step two flowed into step three as the category of "child" was assimilated into the categories of "classroom teacher" and "resource teacher" and formed the basis of the relationship between them.

Step three involved delimiting the data so as to define the the relationships between the classroom teacher and the resource teacher. This step occurred automatically as the categories became more clearly defined and grounded in the data.

During step three resource teacher decision making emerged as a problem-solving activity. The relationship between the classroom teacher and the resource teacher was established on the basis of the classroom teacher's perception of the child's reading problem and the resource teacher's attempts to investigate the problem further.

Once data was delimited, steps one, two and three were

repeated for the instructional interviews. Data from the instructional interviews was informally examined and compared as the transcripts were being typed and while the planning data was being analyzed.

In analyzing the instructional interviews, new categories were formed. These categories related to the decisions and focus of resource teachers during instruction. Data within those categories was examined and compared, and the relationships between them defined.

During the analysis of the instructional interviews, data from the stimulated recall interviews was informally examined and compared as those transcripts were being typed. The framework for the theory, which developed during analysis of the planning and instructional interviews, evolved as data from the stimulated recall interviews was analyzed, compared and applied to the appropriate categories from the instructional interviews.

The categories and relationships which emerged in step three of the planning, instructional and stimulated recall interviews were examined and compared and the relationships between them defined. The categories and relationships were then developed into theoretical constructs and were again examined and compared against the data to determine their

generalizability.

Stage four involved writing the theory. The constructs were presented in two parts: 1) planning phase and the instructional phase. Theoretical constructs were detailed and the data was described as it occurred within a process which explained the decision making of resource teachers in this study.

Reliability

Reliability is concerned with whether or not the same results will emerge if two or more researchers conduct the same study and whether or not the results of measurement are true measures (Kerlinger, 1973). The concept of reliability can also be termed stability, dependability or predictability in the first instance and stability or accuracy in the second (Kerlinger, 1973). The concept of reliability which is so important to quantitative research needs to be regarded from a different perspective if it is to be applied to qualitative studies.

Qualitative studies are forced to acknowledge the differences that researchers bring to any study concerned with description of phenomena. It is rather expected that different sorts of data will be collected by different researchers in the same settings, and that different

conclusions will be reached from the data collected (Bogdan & Biklin, 1982).

The settings under study in qualitative research tend to be naturalistic and therefore complex, dynamic and interactive. Consistency across observations would be unlikely under these circumstances due to the everchanging nature of the situation under observation. This study was conducted in the natural setting used by the resource teacher and therefore consistency across settings would be difficult to obtain.

"Qualitative researchers tend to view reliability as a fit between what they record as data and what actually occurs in the setting under study rather than the literal consistency across different observations" (Bogdan & Biklin, 1982, p.44). This study was concerned with reliability as it pertains to accuracy of data collection and utilized devices such as audiotapes to verify the information obtained during observations, interviews and discussions. As well, data from observations was recorded descriptively, without judgements or evaluation on the part of the researcher.

Validity

The concept of validity is concerned with the nature of

reality and whether the study measures what it purports to measure (Kerlinger, 1973). As well it is concerned with the generalizability of the study. The concept of validity as it pertains to qualitative research needs to be approached from a different perspective than has been done with quantitative studies.

The nature of reality and its relation to research findings are difficult to answer for qualitative studies as these studies generally attempt to describe some aspect of reality as they exist in the mind of the subjects under study. One can question whether there is any other reality. Guba (1982) has suggested a more appropriate word in "credibility" with respect to the subjects and to the related findings of the research.

This study attempted to describe in-depth the nature of instructional decision making of resource teachers. The proximity of the research findings to reality depended on the skill of the researcher in evoking those thoughts that converge on the topic as well as the ability of the subject to describe those thoughts. As this area of research is relatively new, it will be the responsibility of future studies on this topic to determine the credibility of this description.

Generalizability as it relates to qualitative research is not always applicable and is dependent on the nature of the study and its intent. Studies may be concerned not with whether a study is generalizable but rather to which situations they are generalizable (Bogdan & Biklin, 1982).

This study is exploratory and therefore not concerned with representativeness in other situations nor in commonality between similar settings. Rather this study is concerned with understanding the decision making process of resource teachers in a general way, with the expectation of generating theory.

CHAPTER IV

Findings

Resource teacher decision making was explored using the model of "bounded rationality" (March & Simon, 1958) as a guide. The rationale for using this model was the researcher's perception that resource teacher decision making operated within bounds or constraints inherent in the school milieu. Five resource teachers were interviewed using pre-conceived categories of constraints as a guideline. Each interview consisted of three parts: (a) planning, (b) instruction and (c) stimulated recall. Data from the interviews were transcribed and analyzed to form a preliminary theory of resource teacher decision making.

An overview of resource teacher decision making is presented. This outline initially describes the referral process and is followed by a theory of resource teacher decision making, called interactive inquiry. Interview and observational data were included to illustrate, provide examples for and support the theory.

The Referral

Collaboration with the Classroom Teacher

Planning interviews, although differing in content, were comparable in structure. Each resource teacher had contact with the classroom teacher about a child and his reading

problem. This contact was facilitated by a routine.

The routine involved the classroom teacher contacting the resource teacher and describing her concerns about a child's reading behaviours within the context of the classroom reading program. This contact is known as a referral. The purpose of the referral is to collaborate with the resource teacher in the investigation of a child's reading problem.

During the referral, the resource teacher gathered information about the classroom teacher's interpretations of the child's actions or behaviours within the reading context of the classroom and her focus for the assessment. This information formed the basis of the resource teacher's initial focus for her plans for the assessment.

Classroom Teacher's Interpretations

At the time of referral, the classroom teacher discussed her interpretations of the child's behaviours within the context of the classroom reading program with the resource teacher. Interpretations were defined as making up one's mind or making decisions about the meaning of a child's behaviours. The classroom teacher's interpretations were restated by the resource teachers during the planning interviews and were considered to be close approximations to

the classroom teacher's original statements.

Although the quantity of interpretations varied for classroom teachers, they fell into one of the following categories: (a) cognitive, (b) affective, (c) comparative or (d) relational.

Cognitive.

Cognitive interpretations referred to the classroom teacher's decisions about the child's knowledge of reading. Examples of statements reflecting cognitive interpretations were:

he had limited decoding skills

he didn't know his long or short vowels

the comprehension just wasn't quite there

he's overusing phonics

other kinds he had great difficulty with, whether it was listening or writing

Affective.

Affective interpretations referred to the classroom

teacher's decisions about the child's emotional or motivational state regarding reading. Examples of statements reflecting affective interpretations were:

his attention span was limited

he was cooperative and helpful

he was eager

he wanted to do what she wanted

he is really trying hard

Comparative.

Comparative interpretations referred to the classroom teacher's decisions about the child's reading behaviours in comparison to some reading standard. Examples of statements which reflected these interpretations were:

he's slightly behind the others in approaching words

task completion is good

he was very hesitant and disfluent when reading

he seemed to be able to read very well

he's slightly behind the others

Relational.

Relational interpretations referred to the classroom teacher's decisions about the child's reading behaviours in relation to some other reading behaviour. Examples of statements which reflected these interpretations were:

there may be a vision concern because of the way he focuses right down very close to his book

he was a good reader but the comprehension did not match that

he didn't have much difficulty until it came to questions that had to do with inferential thinking

The classroom teacher's interpretations of the child's reading behaviours within the classroom provided the resource teachers with background information about a child's behaviours with which they were not yet familiar.

Classroom Teacher's Focus

At the time of referral the classroom teacher made

statements about seeing, looking, wondering or questioning which was seen as reflecting their concerns and which provided a focus for the resource teacher's investigation of the child's reading problem. Statements which identified the classroom teacher's focus as they referred a child for reading were:

So could I please delve into the mind and see what I thought.

They want me to have a look where I think he's at with his reading.

She kind of wondered how does this child and his abilities relate to what other children should be doing at this time.

She didn't think her reading was where it should be.

Basically, it's where is he at.

The classroom teacher's focus served as a lens from which the resource teacher made initial planning decisions about the formulation of the context of the assessment. As such, the classroom teacher's focus or concern may be seen as a constraint on the decision making of resource teachers.

The Classroom Reading Program

Resource teachers outlined the classroom reading program from knowledge they already possessed or knowledge they gained at the referral interview. Statements which described the classroom reading program were:

The beginning reading program in this school is heavily phonetic.

It's pretty open-ended in the classroom. They do a lot of writer's workshop and their reading's open-ended.

They're working on a whole language program but it's a basal whole language program.

Knowledge of the classroom reading program informed the resource teacher about the classroom situation in which a child was reacting with difficulty. The classroom reading program provided a framework from which the resource teacher began the assessment, and could be viewed as a constraint on the decision making process of resource teachers.

Influence of the Classroom Teacher

Resource teachers expressed a focus for observation of the child within the assessment based on information they

obtained about the child's reading problem during the process of referral. Statements which described this focus were:

So basically how I'll start with him is when the teacher said he tries really hard, I'm not looking at I don't feel that I'm looking at a student who ... perceives himself as a non-learner because I would go at things differently, I think I can get right into some tasks.

There may be a vision concern because of the way he focuses right down very close to his book, so I'll be concerned about observing and watching for this type of behaviour.

He looks like a beginning reader writer now which is kind of late in the year and I can see why the teacher was concerned.

Information from the classroom teacher provided the resource teacher with the initial focus from which to make plans for the observation of the child's reading behaviours.

The Planning Phase

Two overriding constraints emerged in discussions of planning decisions for the assessment: resource teacher

planning tended to be mental rather than written, and the particular philosophy espoused by the resource teacher influenced planning decisions.

Written and Mental Plans

Resource teachers made very few written notations and these were basically notes concerning the referral interview. Resource teachers stated that their plans were primarily mental plans. Mental plans of resource teachers were revealed through their talk about their actions as they related to the assessment. Analysis of the planning phase consisted of constantly comparing each resource teacher's mental plans for a child's reading assessment.

Mental plans were described as providing guidelines or direction for the assessment and, as such, functioned as a constraint on resource teacher decision making. Statements which described the purpose of mental plans were:

They help me decide what I want to find out, they help me decide what kinds of things I'm going to do with a child and they always leave me an out.

It keeps me on track.

I go with what's happening so I don't really have

anything written down or a roadmap, if I have any roadmap, it's what I've done before and how I gather up my information.

They help me organize myself, if I didn't have any plan at all I would be a mess.

Resource Teacher Philosophy

Resource teachers revealed their philosophy in statements about seeing or looking at potential behaviours of the child from a particular belief or field of knowledge. Statements reflecting resource teachers' philosophy were:

I just really believe between the connection between language and reading. I would always have a look at what's happening with the language.

There are things that I would, phonics, comprehension, a lot of things in the reading area that I would see about plugging in, but I'm more concerned about identifying the areas of need ... and we'll look at what can help as opposed to perhaps having things in place and looking for a place to use them.

I believe that there is not one special way that you teach children. I believe that children learn in a

variety of different ways. My philosophy of education is the child is the centre. Look at the child and decide what is best for the child based on learning style, teaching, teaching style of the teacher, the ecology of the classroom, all those things I consider. I use a variety of instruments, formal and informal, to get a really global picture because I don't believe there is only one way.

I believe that children do have to be able to use context clues. They do have to have an adequate sight vocabulary because without that automaticity they will never become fluent. They also have to have the phonic skills and structural analysis, all those things equally not to the exclusion of one more important than the other.

I think I guess the whole language philosophy really comes into play when I'm testing a little kid. I want to make it as much in context as possible, as comfortable as possible. I don't like to have a whole lot of stuff that looks like a test for little ones, I like it to look like something they're familiar with, something they already know.

Resource teacher philosophy revealed a system of

knowledge or beliefs held by the resource teacher which served as a focus for planning decisions. Philosophical beliefs were varied for resource teachers in this study and affected their decisions about the content of the assessment.

Planning Decisions: Formulations

Formulations were defined as the resource teacher's decisions about the content of the assessment. These decisions were concerned with systematic selection of testing instruments, activities, tasks, questions, and procedures for the assessment; formulations defined the initial parameters of the assessment. Formulations set the stage for gathering information on a child's reading behaviours.

Routines.

Routines were used to assist the resource teachers in making formulations about testing instruments, subtests, sequence and activities. Statements which expressed the use of routines in formulations were:

Ya, it would basically be that there's testing first, and observation along with teaching and consultation that would go on. It's just sort of done automatically, I don't really give much thought to the procedure.

I go to my box of stuff all my papers that I use when I assess kids.

Before I start in getting to know the kid I will look at some language things ... that's where I'll start.

But I always start with spelling.

Assessment Instruments.

Resource teachers used one preferred assessment instrument for reading at a particular grade level. In four cases they supplemented this instrument with additional tasks and activities which corresponded to the classroom teacher's concern, as well as their own philosophical bias. The explanation for the selection of a favoured instrument varied between resource teachers: (a) it approximated the classroom reading program, (b) it rendered useful information and (c) it was a familiar instrument which gave an opportunity to observe the child.

Decisions about the assessment instruments were identified by the statements resource teachers made about interviews, tests, books, lists and activities they would use for the child's reading assessment. Decisions concerning assessment instruments are presented in Figure 1.

Figure 1.

Assessment Instruments

Resource Teacher 1

1. a classroom reader at the end of grade one
2. a beginning grade two reader
3. a list of sight words
4. a written dictation

Resource Teacher 2

1. a commercial, reading mastery test
2. an informal interview

Resource Teacher 3

1. a commercial, diagnostic reading test

Resource Teacher 4

1. an informal interview
2. a standardized cognitive test
3. a wordless book

Resource Teacher 5

1. an interview
2. a commercial, concepts about print test
3. a library book that the child has already read
4. a miscue on something he hasn't read
5. a written dictation
6. words that the child knows how to spell
7. a sight word list

Resource teachers made decisions as to which subtests they would use within the commercially produced testing instruments they selected. Resource Teacher 2 planned to use subtests related to phonics and comprehension. Resource Teacher 3 planned to use the subtests for spelling, sight words, listening, oral reading and reading comprehension. Resource Teacher 4 planned to use the subtests related to language and visual tasks. Resource Teacher 5 planned to use subtests related to alphabetizing and print concepts.

Decisions about the sequence of testing instruments were concerned with procedures, testing techniques or subtests which began the assessment. Formulations which described the initial sequence for a child's reading were:

This basically is gathering material and then the first interview and then the testing.

I guess that's basically it ... how are you doing, how's your father kind of stuff to do before I really settle into the test.

I use the classroom reading program as the initial informal reading inventory and then go up or down from there.

I always start with spelling and then I go into sight words.

Resource teacher decisions about sequence were made for a variety of purposes. In some cases it was a formality, in some cases its purpose was to make the child comfortable and in others it was used as a starting point for other decisions.

Resource Teacher Activities.

Resource teachers also made decisions about their own activities within and adjunct to the assessment. Examples of formulations which described resource teacher activities were:

I will dictate a few sentences

we'll test his vision

I may ask about if he's ever worn glasses

I'm going to do a miscue with him

I won't do a check of the Dolch Words

Decisions about resource teacher activity were made most frequently by the resource teacher who used only informal assessment instruments.

Child Activities.

Resource teachers made decisions about the child's activity within and adjunct to the assessment. Examples of formulations which described the child's activity were:

I'll have him read in that as well

I'll have him write some sentences for me

I'll get him to do all the words he thinks he knows how to spell

I'll get him to ... read a little word list at the end

I'll have him do some sight words and some comprehension

One resource teacher described the importance of the child's activity in the following way:

The test itself isn't as important as the response and the errors the child is making.

It was the child's response to the act of reading that provided the rationale for adaptations to the planning decisions of resource teachers in this study.

Planning Decisions: Manipulations

Decisions by the resource teacher to adapt a particular assessment instrument in order to maximize the gathering of information on the child's reading behaviours are referred to as manipulations.

Manipulations were concerned with variations to the assessment and were based on the classroom teacher's interpretations of the child's behaviour. These decisions were about levels and assessment instruments.

Levels.

Resource teachers made decisions about what level in a subtest to begin a child based on the classroom teacher's interpretations of the child's reading. Statements concerning manipulations of subtests were:

So I started with his reading and the words also much lower than I knew he was probably capable of doing where for another child I may not have done that. I may have started pretty, maybe a year below where I thought they were. With this child because of the difficulty she

said, I started that much lower.

Decisions about the level at which to begin a child's reading within a subtest were concerned with finding a suitable starting point from which to begin gathering information about a child's reading behaviours.

Assessment Instruments.

During the planning interview resource teachers indicated that they made decisions about assessment instruments which would affect the behaviours of the child. These decisions were based on their knowledge of appropriate reading materials or situations as well as anticipated responses of the child's to reading. Statements concerning manipulations of assessment instruments were:

And I went to the teacher and got a book that he has apparently read with his mom so that he will feel comfortable about that, feel that he can do it and then maybe he'll be nice and open about what he can do.

And then I thought about this child and him being in this situation, with you being here too and he doesn't know me very well. I thought we should start with a comfort zone for him, and I thought maybe we would go back to the alphabet and see what he knows.

It's building trust and that I often find that a nice place to start, so often our first session would be drawing pictures and talking just about how they are feeling about school and that. I'll probably put a little bit of that in today.

Resource teacher planning decisions were primarily concerned with formulations which defined the general parameters of the assessment and manipulations which defined the personal parameters of the assessment. Both formulations and manipulations defined the context in which the investigation into a child's reading problem would take place.

Resource Teacher Focus for the Assessment

Resource teachers expressed plans for observing, questioning, looking, and seeing a child's specific behaviours during instruction. Statements of focus varied between resource teachers. Examples of resource teacher focus were:

I also like to check out their language.

I will look at how he's using whatever decoding skills he has: sight, structure, phonics.

Can you put syllables back together?

What he does when he comes to a word he doesn't know?

I like to see the comparison between what they're doing visually and where their language is.

Focus gave direction to the assessment which was described as flexible and dynamic. Focus operated as a lens from which resource teachers observed the child within the assessment in order to gather specific information on the child's reading behaviours.

The planning phase described resource teachers' plans as they prepared to investigate a child's reading problem. One resource teacher described her investigation in the following way:

I do my planning in such a way that I start with two or three things and as it develops, as I'm observing the child, as I see how the child is learning I think ahh, he's making this kind, he's having this kind of difficulty, I need more information on that. Now I'm going to do this, and then as I do this, whatever it happens to be, I say to myself O.K. now I see how he

learns.

Summary of Planning Decisions

During the planning phase, decisions consisted of formulations about the general assessment and manipulations about specific aspects of the assessment, as resource teachers planned in order to gather information about the child's behaviours during the instructional phase.

Resource teachers' focus for the assessment consisted of specific areas of interest or concerns which guided their observations. It was based both on information from the classroom teacher as well as the resource teacher's philosophy. Focus facilitated the investigation of the child's reading difficulty while at the same time it placed bounds or constraints on the resource teacher's observations and subsequent decisions pertaining to those observations.

The Instructional Phase

Resource teachers continued to focus on and make decisions about the interaction of the child with the context of the assessment, as they investigated the child's reading problem and gathered information about the child during instruction.

Resource teacher decisions during the instructional and stimulated recall interviews were concerned with four areas: (a) the assessment, (b) the child's behaviours within the assessment, (c) implementing the assessment, and (d) post-instructional decisions.

Formulations

During instruction resource teachers continued to make decisions about the assessment which further defined planning decisions. Formulations during instruction were concerned with specific aspects of the assessment such as routines, questions (both specific and optional) and directions.

Routines.

Decisions about routines within the assessment involved following a standard routine established by the resource teacher within the assessment. Statements which described formulations about routines were:

After two, after reading two reading passages, I didn't want him to read anymore, I wanted him to have a break from reading so I had him do the writing. I just always do that. I like to keep the interest up, I like there to be variety when they're doing it.

I'd forgotten to ask the comprehension questions when she read the first story ... so there was an extra reading in this lesson that normally wouldn't have been there.

(The resource teacher asked the child to read the selection silently before reading it orally)

I just believe in giving a kid a fair shake when I test them and I wouldn't want to be asked to read something out loud without having practiced it ... I think it's important that they get a fair advantage.

Formulations about routines were specifically used with informal assessment instruments. Without a predetermined context to follow, routines would not be automatically formulated as they are in standardized testing instruments, and so would be a procedural concern for resource teachers.

Decisions based on routines were not stated frequently by resource teachers, either in the instructional or the stimulated recall interviews. The assessment basically followed the formulations of the planning interviews. Mental plans, which consisted of a general focus for the assessment and decisions about the general context, remained relatively intact for resource teachers in this study.

Questions.

Formulations of specific questions pertained to the resource teacher's selection of lists and sentences which were read or dictated as part of the reading assessment and were based on the resource teacher's knowledge of children. Statements which described decisions about specific questions were:

I chose the first sentence because crazy and puppy are not ... are kind of ... are not regular kinds of words.

The word Snoopy is a word they see a lot that's why I chose that sentence.

Decisions about specific questions were made by one resource teacher who used informal assessment instruments. These decisions defined the informal writing inventory and also limited the resource teacher's observations of the child's reading behaviours to those specific sight words.

Formulations concerning optional questions were decisions similar to those concerning subtests wherein the resource teacher selected options within the standardized test based on her knowledge of the test and her focus for the problem. Statements which described decisions about

alternate questions were:

(Resource teacher asks the child a question which is not on the list)

They're listed in optional questions ... I generally ask those because I think I get more information out of that.

Formulations about optional questions were part of this resource teacher's assessment procedures and were revealed by direct questioning by the researcher concerning their use. The resource teacher's decision to include optional questions extended the parameters of the subtest in order for her to further her investigation towards a particular area of reading.

Directions.

Formulations of testing directions were concerned with rules generally followed in the presentation of a test and the resource teacher's focus during the test. Statements which described decisions about testing directions were:

(Resource changes procedure and does not cue the child)
That was in the silent reading section ... and I'm not supposed to know what errors he should be making and I'm

not supposed to help him with that ... there are a lot of classroom situations where there are going to be words that they don't know.

Decisions to follow testing directions occurred within the specified parameters of the standardized test and influenced the resource teacher's observations and decisions about the child's reading behaviours.

A summary of formulations during instruction is presented in Table 1.

These formulations further defined the parameters of the assessment which began in the planning phase. The assessment served to restrict the resource teacher's observations to those instruments, activities, routines, and questions with which the child would then interact.

Manipulations

Manipulations were decisions about adaptations within the assessment in order to facilitate gathering cognitive information on the child's reading. These decisions were based on the resource teacher's knowledge of children or the child. Manipulations identified are repetitions, examples and rewording.

Table 1

Summary of Formulations

	Resource Teachers					Total
	1	2	3	4	5	
Formulations	Number of Decisions					
Routine Change	2	0	0	0	1	3
Specific Questions	2	0	0	0	0	2
Optional Questions	0	0	1	0	0	1
Testing Directions	0	0	1	0	0	1
Total	4	0	2	0	1	7

Repetitions.

Decisions about repetitions pertained to questions within the assessment instrument and were based on the resource teacher's knowledge or feelings about the child

Statements which described repetitions were:

(Resource teacher repeats a question at a later time)

I don't know why I kept going back to M but I just felt he would have mom for M.

(Resource teacher talks about a comprehension question and later asks the question again)

The listening comprehension sections don't give the child any idea of what they should be listening for ... if I tell him what he should be listening for can he still remember it?

He's done the examples well and we come into the actual test and he's doing it all wrong ... I went back to see if he would change his answers, but he didn't, he gave the same answers.

(Resource teacher repeats a question and gives examples of responses)

It's not a question that children that age are normally asked in that form that's why I repeated it.

Repetitions appeared to be a means to gather cognitive information on the child's reading by giving the child another chance to respond to the question.

Examples.

Examples were used by the resource teacher based on her knowledge of the child's experience in the classroom and were attempts to provide the child with a familiar context in order to increase the probability of the child's response. For example, one resource teacher referred to something in the classroom and explained:

I know it's on a picture on a chart with the letters on top so I figured he might have a visual memory of that.

Examples attempted to gather further information on a child's reading which were not forthcoming in the original text selected by the teacher.

Rewording.

Rewording was concerned with assisting the child in order to increase the probability of an appropriate cognitive response. For example, one resource teacher asks for a "guh" word after pointing to the letter "g" and explained:

I guess I have a feeling that after you test kids whether they have a habit or not and I just felt that he knew it and he looked for one in here.

Decisions about rewording attempted to gather accurate information about the child which the resource teacher felt the child possessed but did not reveal in the original context.

A summary of manipulations made by resource teachers is presented in Table 2.

Manipulations were decisions which occurred within the parameters of a particular reading task, activity or test and were attempts by the resource teacher to obtain specific information about the child's reading by adjusting the format within the assessment instrument. They were attempts to broaden the resource teacher's observations of the child's interaction with a particular aspect of the assessment and within the limitations already established by formulations for the assessment.

The Child's Behaviours

The resource teacher's focus on the child's behaviours within the assessment and her subsequent decisions about

Table 2

Summary of Manipulations

	Resource Teachers					
	1	2	3	4	5	
Manipulations	Number of Decisions					Total
Repetitions	0	1	2	0	1	4
Examples	0	0	0	0	1	1
Rewording	0	0	0	0	1	1
Total	0	1	2	0	3	6

those behaviours can be described as an interactive process. Statements which illustrate this interaction were:

I chose the next sentence because I wanted to see if he was able to put the medial vowel, the two vowels together.

(The resource teacher directed the child to read the story out loud)

After the silent reading I wanted to see if ... there's a difference of how you understand what you read orally, I wanted to see if oral reading the second time helped him recall more detail.

I was checking out that word finding stuff to see whether he knew the concept but didn't have the label for it and that's why I was asking some of those questions.

I always ask about the feelings, I want to see if kids have a sense of the emotions that the characters in the stories portray as well as the details ... I'm looking to see if he can infer.

Ya, in the comprehension but it was the whole question of do I give instruction so that he will we can build

his score up or do I just leave it, and it's basically well I had left it because I just want to see how he's going to handle things cold.

The focus on specific aspects of a child's behaviour within the assessment served as a lens for gathering information about a child's reading problem.

One resource teacher expressed the importance of focus in the following way:

I'm basically limiting myself to as few tests as possible which I'm very familiar with, the test is secondary, the child is primary ... he's my focus, he's what I'm concerned about.

Resource Teacher Interpretations

Interpretations were defined as decisions about the meaning of a child's behaviours within the assessment. Interpretations were based on a child's response to the context of the assessment and provided the resource teacher with information concerning the child's reading problem.

Interpretations consisted of four categories:
(a) cognitive, (b) affective, (c) comparative, and
(d) relational. They were qualitative statements or

conceptualizations about a child and were distinguished from the child's behaviours which were identified as quantitative statements or measures of behaviour. Interpretations were identified, categorized and counted for frequency even if the same word or phrase was used more than once by the resource teacher.

Cognitive.

Cognitive interpretations were decisions about a child's knowledge or perceptions. Statements which identified the resource teacher's interpretations about a child's knowledge of the context, a child's perception of the task, a child's ability to do the task as it pertained to knowledge of the task were defined as cognitive. Resource teachers made a total of 98 cognitive interpretations during the instructional interviews. Examples from the resource teachers were:

his major strategy was phonics

he knows his vowels in isolation

he doesn't have much in terms of word attack

but to do the kind of independent thinking, he couldn't do

he just recognized them as getting hard

those words are not in his spelling vocabulary

he's got concepts but not all the words for them

Affective.

Affective interpretations were decisions about a child's mental disposition or outward appearance. Statements which identified the child's feelings, emotions, motivations, and personality were defined as affective. Resource teachers made a total of 146 affective interpretations during the instructional interviews. Examples from the resource teachers were:

he was very tense

he was becoming quite anxious

he was insecure about it

he did persevere

he was careful

he likes attention

he's not really eager

Comparative.

Comparative interpretations were decisions about a child's performance of a task or quality of the child's activity in comparison to some other standard either implicit or explicit. Statements which identified the child's performance in comparison to peers, standard test scores, the child's previous performance, the resource teacher's personal standard or in evaluative terms were defined as comparative. Resource teachers made 98 comparative interpretations during the instructional interviews. Examples from the resource teachers were:

he handled it in my estimation fairly well

this boy is needier than the other one

and yet comprehension, I wouldn't put him past second grade

he stopped understanding a lot of the inferential kinds of things that he should have been understanding at the grade level

that's a very appropriate way of dealing with anxiety

when it actually came to reading the words he was quite
O.K. here

he's adult in the way that he speaks

Relational.

Relational interpretations were decisions about the resource teacher's cognitive or affective interpretation of a child and its relation, association or connection to some other context or behaviour. Statements which identified if/then, when/then, because, and other combinations of phrases, clauses or sentences that associated an interpretation with another idea about the child or context. Resource teachers made 36 relational interpretations during the instructional interviews. Examples from resource teachers were:

he's going to be fine in the classroom because he's reading the material that the teacher is giving him

and again when he had pictures to go by he would use the clues

by this time if he's that good a reader he should have had that

where he's just breaking down a little bit is when he has to deal with a lot of symbols

I sensed a little anxiety when he started making mistakes

if I gave him the first part of a word, if he could make sense, and he could

he's developing out of the difficulty knowing which direction the letters go because that was inconsistent

A summary of resource teacher interpretations of a child's behaviours are presented in Table 3.

Resource teachers made interpretations during the stimulated recall interviews which reiterated the interpretations that were made during the instructional interviews and also added to those interpretations as specific points in the session were discussed. Resource teacher interpretations during stimulated recall were not counted for frequency as categories were already saturated in data.

Table 3

Summary of Interpretations

	Resource Teachers					
	1	2	3	4	5	
Interpretations	Number of Decisions					Total
Cognitive	19	12	23	19	25	98
Affective	16	41	11	41	37	146
Comparative	18	18	30	19	13	98
Relational	5	13	8	8	2	36
Total	58	84	72	87	77	378

Interpretations were the most frequent decisions made by resource teachers in this study. Affective interpretations were the most numerous interpretations, with cognitive and comparative interpretations fairly equal in number. The frequency of affective interpretations within the context of the assessment suggested that cognitive characteristics were not considered the primary factor in defining a child's reading problem.

Resource teachers made similar numbers of cognitive interpretations. Three resource teachers made similar numbers of affective interpretations which were one and a half times greater than their frequency of cognitive interpretations. Two resource teachers made similar numbers of affective interpretations. Resource Teacher 1 made approximately the same number of cognitive interpretations as affective interpretations. Resource Teacher 3 made half as many affective interpretations as cognitive interpretations.

Both of these resource teachers concluded that the referred child would not need tutoring. Although Resource Teacher 1 intended to see the child again, it was specifically for more information regarding visual problems and parental concerns. Resource Teacher 3 stated that she

did not intend to have a further session with the child as his problems were nowhere close to cases she was involved in tutoring and that the classroom teacher could cope with his needs. In either case it may be that affective interpretations are only significant to resource teachers if they see the need for future work with the child or that future work with the child is directly related to the number of significant affective interpretations that the resource teacher is able to make during an assessment.

Resource Teacher 3 made a greater amount of comparative interpretations than the other resource teachers which may be attributed to the fact that she used a standardized test and related subtests as her only testing instrument. As a result the behaviours on which she focused would be largely restricted to the comparative standards of the formalized instrument.

Resource teachers in this study indicated that their interpretations were based on the child's behaviours upon which they focused. Examples of specific behaviours were:

He was holding the pencil really tightly, he had his two little fingers really pressed down on the paper, he was moving his lips, he was subvocalizing, his little brow was furrowed and he was, he looked very focused and

tense. He looked tense, he looked really tight, he wasn't relaxed.

He uses more the adult approach. He was omitting things without even telling me, and just automatically going by and finally picking up something of when he recognized a word or if he recognized a question he was on. So basically, his approach was basically a lot of confidence to be able to do that and so I say more an adult approach.

If he showed any anxiety it was sort of it wasn't the laid back kind. It was kind of the wiggling of the knees and the moving into humour which is rather a mature way of handling our stresses.

I noticed that when he was reading this though, that he wasn't just sure of this word and then his eyes flipped back to over here and then up to here. His eyes got tired when he got here again. He thought I don't know that word again, it's a hard word and his eyes flipped again.

He looks up, he looks up, right away he looks up and when things got really tight for him, when he didn't know what we were doing with the optional questions,

where it's not written in there, the hands went over the mouth. There was pushing up the glasses and it was very difficult for him to do that.

Although resource teachers did not always give reasons for their interpretations, when questioned, they were able to describe specific, observable behaviours of the child upon which they based those interpretations. This would indicate that resource teachers base their interpretations about a child on their observations of and experience with the child's behaviours.

One resource teacher expressed the reason for interpretations in the following way:

I'm looking at getting whatever I can so I say even just to know the scores of this test is pretty useless because so much of this kid's, he relates in body language, so your test scores are meaningless. You know from the test scores that this child had no idea about phonics ... and his comprehension is down but you wouldn't know that he expresses himself through body language, that he has a lot of skills in coping with new situations and these are all very important in how you'll set up his learning.

Modifications

During instruction resource teachers made decisions about changing the meaning of a particular situation for the child in order to assure the child's continued interaction with the assessment. These decisions were termed modifications and consisted of: (a) encouragement, (b) touching, (c) rewards, (d) conversation, (e) giving control, (f) breaks, and (g) setting limits.

Encouragement.

Verbal comments of encouragement or feedback based on the resource teacher's interpretations about the child during the assessment. These modifications attempted to change the child's perception of the assessment task in a positive way in order to relieve the child of some of the anxiety related to performing in a new situation. Examples of statements indicating encouragement were:

(That's o.k., this is the much harder book, why don't we stop this one.)

He wasn't feeling good, he was looking up at me, he was his head was down and then he'd look up, he was struggling, I didn't want him to feel any worse than he already felt by not being able to read it.

("Right, you got it first shot, hey right on. Hey have

you done this before? O.K. you got them all right.

This is easy, ya, O.K., let's see how you do in the real game now." The resource teacher's voice was animated and rose to a higher pitch)

He did so poorly on the other test ... I wanted him to feel good about himself, feel good about the test.

(Resource teacher says to the child " Wow are you ever good at this".)

Learners have to be encouraged and I think that's a good way to keep them going on and in a testing situation I think that's a stressful situation to be put in, to come into a stranger and have so I like to keep them going and keep them up.

Touching.

Modifications which involved touching were decisions to restore some confidence in the child and were based on the resource teacher's interpretations of the child's affective behaviours during the assessment. The statement indicating this modification was:

(At one point the resource teacher said, you read really well and leaned over and touched the child's arm.)

He looked nervous. Whenever I sense that a child is

feeling nervous or they're unsure I'm a toucher so I will touch them and try to reassure them.

Rewards.

Modifications involving rewards were decisions based on the resource teacher's interpretations that the child had difficulty in the assessment and was an attempt to change the child's perception about assessments in a positive manner. The statement indicating this modification was:

(The resource teacher gives the child a sticker at the end of the assessment)

I think that if a child has come here out of his classroom into a strange situation and worked that hard on a one to one basis doing things that are difficult and frustrating, I should give him something for that.

Although this modification occurred after the completion of the assessment, the resource teacher stated that it was a well known fact throughout the school that she was the "Sticker Lady". Therefore the child may have been fully aware that he would obtain a reward for undergoing the assessment.

Conversation.

Modifications which included discussions of interest

were decisions to change the focus of interest during the assessment from the test to the child. Discussions of interest were based on interpretations of the child's affective or cognitive behaviours and attempted to reduce some of the importance associated with the testing situation. Statements indicating this modification were:

(A discussion about Santa Claus.)

Just to make conversation, put him at ease.

(The resource teacher probes the child on his painting, after the test was terminated)

It not only gives me information but at the same time it gives us a time to say o.k. we've done the test but the test isn't important you are important and we talk about you now.

Joking.

Modifications which involved joking were decisions to relieve some of the tension involved in the assessment situation and were based on the resource teacher's affective interpretations. The statement indicating this modification was:

(The resource teacher gives directions for the writing activity and then says to the child, "Are you going to

live through this? Is this not so bad or so bad? Not so bad, good boy")

He picked up the pencil and looked at me oh, no writing and I just got an intuitive sense that this was a scary thing for him so I wanted to reassure him.

Giving Control.

Resource teachers made decisions to reduce some of the helplessness of the situation for the child by giving them some control within the assessment. Modifications about control were based on interpretations or anticipated behaviours concerning the child's behaviour within a particular part of the assessment. Statements indicating these modifications were:

("O.K. leave out the ones that you don't know and tell me the ones that you do know.")

It's what I usually say when we get to the point where there's they probably won't know most of them ... but there is no point in struggling through words that they don't know but if they've got a sight word or if they know it fine and I think it takes the pressure off of them ... this allows them some dignity, it allows them some control.

(The resource teacher lets the child choose the oral

reading passage)

I think I get a better reading that way. I think they feel they have some control of what they're doing that way that it's not just something I'm telling them to do that they're offering to do this for me.

(The resource teacher asks the child if he wants to press the stopwatch)

I often see the kids anxiety level goes up with the watch. I was just trying again to reduce that...

Breaks.

Resource teachers made decisions about giving breaks from the assessment situation by asking the child to exercise. These modifications were attempts to ensure that the assessment would be completed. The statement indicating this modification was:

(Wiggle your arms for a minute, are you feeling o.k.?

Can you continue on for me? O.K.)

I wanted to be able to keep going with him and finish this today, that I didn't want him to get too tired...

Setting Limits.

Modifications about setting limits were based on affective interpretations of the child's motivational

behaviours and were attempts to get the child to complete the task. The statement indicating the use of this modification was:

I should have given him more breaks near the end because he was looking very wiggly ... and I didn't have time to give him a break so I said, "O.K. you can stop just as soon as you get to the end of the page". That's a motivation to keep going.

A summary of resource teacher modifications is presented in Table 4.

Although 15 decisions pertaining to modifications were recorded, the research methods of this study did not address examples of modifications relating to muscle tension, facial expression, facial colouring, voice tone, and other more subtle forms of body language (Bandler & Grinder, 1979). Therefore decisions related to this category may not be comprehensive in their description.

Modifications were attempts to affect the child's behaviours in order to get the child's "best effort" within the assessment. These decisions were attempts by the resource teacher to get accurate information by maximizing a child's performance within the assessment situation.

Table 4

Summary of Modifications

	Resource Teachers					Total
	1	2	3	4	5	
Modifications	Number of Decisions					
Encouragement	1	3	0	1	0	5
Touching	1	0	0	0	0	1
Rewards	1	0	0	0	0	1
Conversation	1	1	0	0	0	2
Joking	1	0	0	0	0	1
Control	0	1	1	1	0	3
Break	0	0	0	0	1	1
Limits	0	0	0	0	1	1
Totals	5	5	1	2	2	15

Executions

Executions were decisions by resource teachers to carry the assessment forward to completion. Executions were based on resource teacher interpretations of the child within the parameters of the assessment.

Completions.

Resource teachers made decisions to complete some aspect of the assessment without interruption based on interpretations of the child's ability to continue the task or that the task was being performed comparatively well. Statements which described executions to complete a task, activity or assessment technique were:

He was very focused and task oriented so I thought I'll just go through it. Often times if kids are really antsy or they're distracted then we get up and have a little drink of water, we come back, we chat, we do this. He was very focused, I didn't need to do a lot of those things with him.

It just seemed to be going nicely and so I just went with it.

This last part I decided I was going to do the book

first and then I thought to heck with it let's just get this done, I felt he had that pretty well in hand so it was just a quick check.

Assists.

Executions about assisting a child to complete the task or assessment instrument were based on the resource teacher's interpretations and subsequent decisions about whether to give clues, answers and extra directions. Statements which described decisions to assist the child were:

I started a lot earlier than I normally would have giving him the context clue to see whether he could do it doing the syllabic extension to see whether he could put it together again, giving him all the clues I could because I knew he was insecure about it and it didn't take long to find that. That happened sooner than I normally do it with children.

He was resistant to the book, to reading "I'll read you one line" and then I'd turn the page, well then, "I'll give you another one O.K.?" , "one more", he knew the story, he'd been through it at least three times and he said it's boring.

(Teacher began pointing to the words as well and giving him feedback)

I mean he's got enough trouble with real words let alone with nonsense words. This was just too much and his response is basically well I don't see anything here I recognize so forget it, so it was important too. Let's try to get some order into this so I can at least see what he's doing ...

Reductions.

Executions which involved reducing some aspect of the assessment were based on interpretations of the child's motivational behaviours and the resource teacher's need to complete the task by cutting down on the length. Decisions to decrease were:

I do a lot of stuff on reflex action right away if he says "too much" I didn't even think about it I said O.K. we'll just cut it down.

When he said, "Oh the letters do we have to do that?" I felt I better make it fast and not too boring so I switched the order around quite a bit as I went through it. So his reactions changed immediately what I was going to do.

Deletions.

Executions about deleting were based on the resource teacher's interpretations of the child's knowledge of the context. Statements which described decisions to delete were:

(The resource teacher told the child to leave a question)

Because he was sitting like this and he was, it wasn't and he was really digging and he couldn't think of anything. I could just tell by his face that he wasn't going to be able to think of it in five minutes if I left him so just leave it and go on.

Rather than have him encode with the beginning consonants, I know that he knows those, I can tell he knows those from the reading so I didn't have him do that part of the test.

At this level if I had questioned him I don't think he would have known he was reading anyway because he wasn't having enough correct cues. He was making a lot of miscues, he wouldn't have known what it was about so I didn't ask him.

Extensions.

Executions to extend were based on interpretations of a child's behaviour within the context and the resource teacher's need for further information. Statements which described decisions to extend were:

That's why I was asking him, " Now what do you do when you come to a word you don't know?" I don't start with reading and so that was one thing I hadn't really planned on doing ... but his language was so good that I decided to use it for some other things.

This part I don't like giving to kids and I squeezed it in because I thought he was pretty comfortable with N.

Terminations.

Executions about terminating an assessment instrument were based on the resource teacher's affective, and to a lesser extent cognitive, interpretations of the child's behaviours. Statements which described decisions to terminate a specific context were:

The increasing tension I could see with him that I knew that if I pushed it I would lose him not lose him in a sense but I wouldn't get the best effort because he would be so anxious that he would be unable to give me

his best effort and yet I knew he probably knew a couple more words there but just the increasing tension in his body and all the signals and that's why I stopped.

I would like to have done more print, then I could see that he was feeling "that's enough" so it was almost a reward to get to the end of the page

I put this away you know to do something different because he was becoming quite anxious.

I knew it was at his frustration level after he read the first line or two, so I stopped him part way through because I didn't feel there was any point in going on and making him more uncomfortable with it.

I won't do any more cognitive testing unless I get really puzzled with my reading ... just from the way he handles himself I think he's probably got a lot of things in place.

Resource teachers carried out the assessment based on their interpretations or explanations of the meaning of the child's behaviours within the context. Although executions were influenced by the child's behaviours or, more accurately, the resource teacher's interpretations of the

child's behaviours, the child's behaviours were also influenced by the assessment.

A summary of executions of the assessment plans is presented in Table 5.

Executions were made by all resource teachers in this study. Decisions to terminate a context were made most frequently and were made by all resource teachers. Decisions to assist the child to complete a particular part of the assessment were the second most frequent decisions.

The nature of the relationship between the assessment and the child's behaviours were described by one resource teacher in the following way:

It really doesn't matter to me how well they do on the test ... it's what they're doing with what I'm doing that's so important to me and so I view the test that I'm doing is the same as the teacher teaching and so if I'm getting a lot of resistance or disengagement or whatever, I assume that that's what the teacher's getting when she presents a new task so that's what I think I should explore, so that would be what I'm looking at.

Table 5

Summary of Executions

	Resource Teachers					
	1	2	3	4	5	
Executions	Number of Decisions					Total
Completions	1	0	0	1	1	3
Assists	0	2	2	0	3	7
Reductions	0	0	0	0	2	2
Deletions	1	0	0	0	2	3
Extensions	1	0	0	1	1	3
Terminations	1	2	5	1	1	10
Total	4	4	7	3	10	28

It was the resource teacher's understanding of the interaction between the child's behaviours and the context of the assessment that guided the resource teacher's interactive inquiry in order to solve the child's reading problem.

Summary of Instructional Decisions

Resource teachers made the following decisions during the assessment: (a) formulations concerning the content of the reading assessment, (b) manipulations concerning the content of the reading assessment, (c) interpretations of the child's behaviours, (d) modifications of the child's behaviours based on interpretations, and (e) executions of the assessment based on interpretations.

Formulations were decisions about specific content within the more general assessment instruments. Resource teachers in this study made formulations about routines, specific questions, optional questions and directions.

Manipulations were decisions about alterations within the the assessment. Resource teachers in this study demonstrated manipulations which involved repetitions, rewordings and examples.

Interpretations were decisions about the meaning of a

child's behaviour. Resource teachers in this study made interpretations about a child's cognitive, affective, comparative, and relational behaviours within the assessment.

Modifications were decisions which attempted to change the child's behaviours within the assessment. Modifications consisted of encouragement, touching, rewards, discussions of interests, joking, giving control, breaks, and setting limits.

Executions were decisions about carrying out the assessment. Executions in this study were concerned with completing, assisting with, deleting, decreasing, extending, and terminating particular aspects of the assessment.

A summary of instructional decisions are presented in Table 6.

Interpretations outnumbered other decisions made during the assessment by a minimum of 13 to 1. Interpretations, particularly affective interpretations, were also a basis for other decisions, such as executions and modifications. However the quantity of interpretations, as well as the importance placed on focus of the child's behaviours were not proportionately reflected in

Table 6

Summary of Instructional Decisions

	Resource Teacher					
	1	2	3	4	5	
Decisions.	Number of Decisions					Total
Formulations	4	0	2	0	1	7
Manipulations	0	1	2	0	3	6
Interpretations	58	84	72	87	77	378
Modifications	5	5	1	2	2	15
Executions	4	4	7	3	10	28
Total	71	94	84	92	93	434

instructional decisions made during the assessment. If interpretations were not overwhelmingly influential in making instructional decisions, they were influential to a greater degree in making post-instructional decisions.

Post-Instructional Decisions

During the instructional interview, resource teachers made decisions which would affect the child's reading outside of the resource room. They made decisions about whether or not they would tutor the child, about collaborating with classroom teachers and parents, about suggestions for instruction in the classroom, about their next session with the child, and about the behaviours on which they would focus during that session.

Tutorial Decisions.

Tutorial decisions were concerned with whether the resource teacher would continue to see the child on a regular basis for reading instruction aside from further assessment sessions. Tutorial decisions were based on interpretations of a child's behaviours in comparison to some standard. Examples of statements which described tutorial decisions were:

I noticed number 1, he knows how to read the classroom material so I'm not going to give this child extra

reading help, he's reading it efficiently.

I'm not sure he's going to need one ... even though he does have some comprehension difficulties, he certainly isn't close to the cases that I see. The classroom teacher can certainly handle what he needs in the classroom.

There's one boy in the room that I'm seeing as much as I can. I guess at this point right now that this boy is needier than the other one, and but I have to see what the classroom teacher's expectations are for the boy ...

There's another little girl that's similar to him in the classroom does she want me to work with both of them which means a different kind of planning ... I usually don't do that though.

Resource teachers made more than one statement about whether or not they would tutor a child, but each resource teacher's statements were similar. All references to tutorial decisions, which occurred at varying points of the interviews, were counted as separate decisions. Only Resource Teacher 4 was not concerned with tutorial decisions as she planned to conduct four or five sessions as a matter of routine.

Tutorial decisions were concerned with whether or not the resource teacher would continue to see the child for program instruction and depended on how the child compared to other children already being tutored by the resource teacher or how the child's read the classroom material.

Collaborative Decisions and the Classroom Teacher.

Collaborative decisions involving teachers were identified by statements about meeting and talking with the teacher about the child. They indicated some sort of discussion to inform the classroom teacher of something noteworthy that occurred during the session, to solve a dilemma that the resource teacher was facing about further work with the child, to clarify, verify or gather further information and to determine future responsibilities in working with the child. Examples of statements which described collaborative decisions involving classroom teachers were:

We have to think of a plan and come up with some strategies and ... see what she can do, which ones this lady can do and if I'm needed in any way, shape or form, then what I think I can accomplish in, to be realistic, six weeks.

I'm going to touch bases with the teachers again because just to clarify why it is that they're so concerned. To reconnect with them what it is that they they're concerned about so I can make sure that I'm focusing on that.

I would like to talk to her about the kinds of material he's taking home, is it at his word recognition level or is it at his comprehension level?

I have to see what the classroom teacher's expectations are for the boy, where she thinks he's at and what we can do about it ... but I however I know already she's panicking so I think that she'd like some direction, some help.

Collaboration has been cited as an important element of action research (Kemmis, 1983; Watts, 1985) and was evident in the decision making of resource teachers. Collaborative decisions indicated that resource teachers did not work in a vacuum and that interaction with the classroom teacher was a necessary part of responding to a child's reading problem.

Collaborative Decisions and the Parents.

Collaborative decisions involving parents identified as statements about parents assisting the child with some

aspect of instruction at home, providing information about a child's behaviours or seeking professional help to assist the resource teacher with the child's problem. Decisions were primarily but not exclusively based on relational interpretations of the child during the assessment. Examples of statements which described collaborative decisions involving parents were:

And if he reads at home everyday then that's exactly what he should continue doing.

I want to tell Mom to get her vision checked because this kid was nose to paper very close and her whole physical being was very tight and tense while she was printing.

When I asked him about it about his making friends he seemed there seemed to be some gloom there and so I'd like to check with the parents and see why there was a move ...

His resistance and passiveness will affect how I'm going to plan for him and I may not count on the Mom doing so much at home.

Collaborative decisions involving parents also indicated

that interaction with the parents of the referred child was an important component of interactive inquiry as resource teachers attempted to solve a child's reading problem.

Instructional Decisions.

Instructional decisions were identified by statements about information and suggestions that the resource teacher would give the classroom teacher and were related either explicitly or implicitly to the resource teacher's interpretations of the child. Examples of statements which described instructional decisions were:

His major strategy was phonics, he doesn't use the language, so that would be something I'd talk to the teacher about helping him use language in context to decode as opposed to just phonics.

He didn't do a bad job ... he was miscuing on some major important words ... he was missing the details so I would suggest to the teacher that he focus on recall of details to get the main idea of what he is reading.

Or have him, as I did here, connect things to your home life ... so that he begins to raise the level of comprehension to what his word recognition level is.
(the resource teacher referred to her use of this

technique "relating things to his own home made it easier for him to give me an answer but to do the independent kind of thinking, he couldn't do")

Neither Resource Teachers 2, 4 or 5 were certain as to whether they would be tutoring the child or whether there would be further sessions. Their instructional decisions were withheld until they collaborated with the classroom teacher about the child and their findings during the initial assessment.

Resource Teachers 1 and 2 indicated that their instructional decisions were also related to their knowledge of the classroom teacher.

Resource Teacher 1 stated that the classroom teacher, "will take any suggestion I give her and use it" and therefore did not feel too constrained in making her recommendations. However this resource teacher also stated that at the time of referral she gathered information about the classroom teacher's reading program and her approach so that "any kinds of suggestions that I make after I assess are appropriate to what she is doing." Although not stated explicitly, it can be assumed that Resource Teacher 1 based her instructional decisions on her knowledge of the classroom teacher in addition to her interpretations of the

child.

Resource Teacher 3 stated that the classroom teacher "is going to do what I ask her to". She felt that she knew the teachers quite well and that the classroom teacher was already doing some of the suggestions already but now would have a better awareness of the child's listening and comprehension level and would lower her expectations in order to build up his skills. Although not stated explicitly, it can be assumed that Resource Teacher 3 based her instructional decisions on her knowledge of the classroom teacher in addition to her interpretations of the child.

The importance of knowledge of the classroom teacher in instructional decision making was described in this way:

I have to consider what teaching style is there already. There's no point in giving suggestions to a classroom teacher that are totally opposite to what their philosophy of education is ... they're not going to be followed, they're just not.

The resource teachers made instructional decisions concerning suggestions for the classroom. These decisions considered not only the interaction of the child with an

appropriate reading context but also the interaction of the classroom teacher with an appropriate reading context.

Decisions About Further Assessment.

Resource teachers made decisions about plans for further assessment or sessions with the child. In some cases these plans were tentative as they depended on the results of their collaboration with the classroom teacher. These decisions were based on the resource teacher's interpretations of the child's interaction with the context of the assessment. With this information the resource teacher attempted to further define the parameters of the assessment for further investigation or to define the reading context which would best accommodate the child's reading problem. Examples of statements which described planning decisions were:

He has trouble with the longer words, the words that don't have meaning and when there's a lot of words he just doesn't seem to know what to do with those symbols. I'll have to watch him read ... I'll probably move into the achievement side of this and do the sight word and the word attack and the comprehension and then I'll have him move into a reading passage.

I want to do some writing with him because I have a

feeling he breaks down there so I would go back to this book and get him to do some writing with that.

O.K. he's streetwise, he's adult in the way that he speaks so basically I'll have to have something that's reality-based.

He wasn't resistant to anything up to here ... possibly the way to move him into print is through his writing not in having him sit and reread all the time.

Decisions about further assessment led into the next cycle of the investigation, but were based on the resource teacher's first-hand information about the meaning of a child's behaviours during a reading assessment. They were similar to the formulative decisions which were described in the planning phase of this study and continued the investigation into a child's reading problem.

Decisions About Focus.

Resource teachers made decisions about their focus for future sessions which were based on their interpretations of the child during the assessment. The interaction between focus and decisions was evident as resource teachers' interpretations influenced focus and focus influenced decisions about the child's interaction with a reading

context. Examples of statements which described decisions about focus were:

I guess the vision was something that went through my mind that he would come right down to focus so I've got a concern about that, I'm checking that out.

When you have to hook those sounds with symbols and produce them there's something that he's having difficulty there that I'd like to look at further.

I would say I need to check out further in something more structured and more formal to see if he has the ability to infer while he is reading, so I would go further with that.

What I want to do is I'm going to see the difference between his sight word and the word attack and the comprehension and if my guesses are right my comprehension should be the highest.

A summary of post-instructional decisions is presented in Table 7.

Post-instructional decisions were influenced by resource teacher interpretations of the child during the assessment.

Table 7

Summary of Post-Instructional Decisions

	Resource Teachers					
	1	2	3	4	5	

Decisions	Number of Decisions					Total
Tutorial	4	2	3	0	2	11
Collaboration (Teacher)	4	2	1	4	4	15
Collaboration (Parent)	2	2	1	0	1	6
Instructional	7	0	3	0	0	10
Further Sessions	3	8	0	5	11	27
Focus	2	3	0	6	0	11
Total	22	17	8	15	18	80

Decisions about further assessment were based on affective and cognitive interpretations, tutorial decisions were based on comparative interpretations, instructional decisions were based on cognitive and affective interpretations, and parental decisions were based on relational interpretations. The only decisions which were indirectly, not directly, based on interpretations of the child were collaborative decisions involving the classroom teacher.

The assessment was a lens through which the resource teacher focused on a child's behaviours and made decisions based on those behaviours in order to gain a clearer picture of the nature of a child's reading problem.

Theory of Resource Teacher Decision Making

The decisions of resource teachers in this study were concerned with the content of a child's reading assessment and the child's behaviours within the parameters determined by that content. The assessment was regarded as a dynamic process that changed as the resource teacher focused on and made decisions about the child's interaction within its context.

The Dynamic Nature of Assessment.

Decisions concerning the assessment were the concretization of the resource teacher's mental plans.

Although mental plans defined the parameter or framework of a child's assessment, they were still regarded as somewhat tentative by resource teachers in this study.

Resource teachers expressed the tentative nature of their mental plans in the following way:

So I don't at the beginning of the assessment, I don't know where I am necessarily all of where I'm going with the child. It kind of is very dynamic in that it can change as the process changes or as the assessment occurs.

It's ongoing, it's more of a process than a crisis approach.

It's very flexible, it has to be.

That will unfold as I work with him because I'm really flexible with that, I'll have to see what works with him, it's ongoing ... it's very open-ended and kind of really, really relaxed probably not very clinical.

There's things that I've thought of that I haven't even been aware that I'm thinking when I'm doing it.

The spontaneous quality of the assessment was described by one resource teacher as attributable to the child's interaction within the assessment, which the resource teacher obtained from the classroom teacher but initially did not have first-hand experience.

Resource teachers gave some indication of the effect that the child's response to the assessment would have on their plans in the following statements:

If the child is very upset with the testing and becomes very nervous, then the test will immediately become secondary and the focus of our attention will be the interview with the test as a sort of minor to that.

Then depending on how the kid is feeling I might go into a sort of structured reading assessment where I'll have him do some sight words and some comprehension or if he seems to be kind of anxious about the testing situation I'll move into something less structured, and move into an actual reading passage.

Resource teachers anticipated changes to the assessment based on speculations about the child's behaviour. Tentative decisions about changes to the planned sequence revealed how the resource teacher's knowledge of varied

reading contexts and their effects on the child's behaviours influenced their decisions during instruction.

Interactive Inquiry.

Interactive inquiry is the name given to the process used by resource teachers during planning and instruction of a reading assessment, and contains elements similar to those found in theories of action research. Whereas interactive inquiry refers to the process used by resource teachers in the normal course of performing their duties, action research has been proposed as a method for classroom teachers to improve aspects of their teaching apart from their regular duties (Hopkins, 1982).

Action research was described by Hopkins (1985, p.32) in the following way:

Action research combines a substantive act with a research procedure; it is action disciplined by enquiry, a personal attempt at understanding whilst engaged in a process of improvement and reform.

In this study, the process of interactive inquiry was used by resource teachers to investigate the nature of a child's reading problem in order to understand how a child reads with the purpose of improving the child's reading

instruction.

A procedure for implementing action research was outlined by Lewin (1946) which involved planning, executing and fact-finding; the latter step served to plan the next step and repeat the planning cycle. Similarly, in interactive inquiry, the resource teacher and the classroom teacher collaborated on behalf of the child; the classroom teacher supplied the initial information on the problem, while the resource teacher developed plans for the assessment of the problem, executed the plans and gathered information about the child during the act of reading. Future plans were also made by resource teachers which suggested a repeat of the cycle.

Interactive inquiry is comprised of two distinct yet related concepts: focus and decisions. These concepts resemble the concepts of question and affirmation found in inquiry theory (Crowley, 1974). Focus describes the problem under investigation and consists of statements about observing, watching for, looking at, seeing, investigating, wondering about or questioning. Decisions describe the resource teacher's answer to the problem and consist of actions which indicate the resource teacher's making up her mind about the problem. The interaction between focus and decisions describe the process used by resource teachers

while making planning and instructional decisions in this study.

Interactive inquiry is also concerned with the child's interaction with the context of the reading assessment. Resource teacher plans serve to define the bounds or parameters of the reading assessment within which resource teachers focus and make decisions about the the child's interaction. Post-instructional decisions either continue the cycle of interactive inquiry in order that more information can be gathered or the cycle is complete.

Summary of Findings

The findings, as they relate to the five resource teachers selected for this study, are discussed in terms of the research questions presented in Chapter 1, as well as additional findings.

Question 1 is concerned with the planning decisions of resource teachers. In this study, resource teacher plans were primarily mental plans. This finding is consistent with past research (Morine-Dershimer, 1978-1979; Parker & Gehrke, 1986). Routines were established to initiate the referral and to gather information about the child's problem from the classroom teacher. This information consisted of

the classroom teacher's interpretations of the child's behaviours, the classroom teacher's focus for the assessment and the classroom reading program.

Planning decisions consisted of formulations and manipulations. Formulations outlined the content of the assessment and included decisions about tests, subtests, sequence, and activities. These findings are supported by past research which indicates activities, content and materials to be the most frequent planning decisions made by teachers (Zahorik, 1975; Yinger, 1979; Morine-Dershimer, 1978-1979). Manipulations were concerned with adaptations to the assessment and included the level from which to begin a subtest, and the selection of familiar assessment instruments such as materials and activities.

Objectives and goals were not specifically stated by resource teachers in this study. Rather, resource teachers used an investigative approach which pertained to general information gathering about the child. These findings are supported by past research which indicates that objectives were not involved in the most frequent decisions made by classroom teachers (Zahorik, 1975; Yinger, 1979; Morine-Dershimer, 1978-1979).

Question 2 is concerned with learner characteristics

during planning. Classroom teacher interpretations provided the resource teacher with background knowledge about the child's problem and developed an initial focus for the investigation. Classroom teacher interpretations consisted of cognitive, affective, comparative, and relational descriptions of the child's classroom behaviours. These interpretations were used by resource teachers in a general way to formulate the assessment, and more specifically to manipulate the level within which to begin a subtest. The classroom teacher's interpretations assisted the resource teacher in making decisions pertaining to the initial parameters of the assessment without having seen the child.

Question 3 is concerned with the decisions made during the assessment or instructional session with the child. Resource teachers continued to make formulations and manipulations for the assessment during the instructional phase. Formulations during instruction consisted of routine procedures, questions and directions and further defined the activities, tasks and instruments of the assessment formulated during the planning phase. These findings are consistent with past research which indicates that activities are the basic unit of instruction (Parker & Gehrke, 1986). Manipulations were adaptations to the assessment, in order to gather cognitive information on the

child that was not forthcoming. Manipulations consisted of repetitions, examples and rewording.

Resource teachers made decisions about the meaning of a child's behaviours during the assessment, which were defined as interpretations. Interpretations were the most frequent decisions made by resource teachers and consisted of affective, cognitive, comparative, and relational decisions. Affective interpretations were the most frequent decisions made by resource teachers.

Resource teachers made decisions about changing the child's response to the assessment, which were defined as modifications. Modifications consisted of encouragement, touching, rewards, conversation, joking, giving control, breaks, and setting limits.

Resource teachers made decisions which carried the assessment forward to completion. These decisions were defined as executions and consisted of completions, assists, reductions, extensions, and terminations.

Resource teachers made post-instructional decisions during the assessment. Post-instructional decisions consisted of decisions about tutorial, collaboration with the classroom teacher, collaboration with the parents,

instruction for the classroom, further assessment, and focus for further investigation.

Interpretations influenced other instructional decisions. This finding is supported by past research which indicates that behaviour is the primary consideration of teachers for pupils in low reading groups (McNair, 1978-1979).

Question 4 is concerned with the influence of learner characteristics on resource teacher instructional decisions. Interpretations provided the resource teacher with information concerning a child's reading difficulty and formed the basis for other decisions made during instruction. Modifications were based on the resource teacher's affective, and to a lesser extent cognitive, interpretations of the child. Executions were based on the resource teacher's affective, cognitive and comparative interpretations of the child. Post-instructional decisions were based on the resource teachers comparative, relational, affective, and to a lesser extent cognitive interpretations. Post-instructional collaborative decisions with the classroom teacher and decisions about classroom instruction were implicitly related to the resource teacher's interpretations.

Whereas planning decisions were based on the classroom teacher's interpretations about the child, instructional decisions were based on the resource teacher's interpretations about the child.

Question 5 is concerned with the interface between planning and instructional decisions. Planning decisions were primarily concerned with defining the parameters of the assessment, while instructional decisions refined the parameters and personalized the assessment. Instructional decisions were also concerned with defining the child's interaction with the context of the assessment. Interpretations about the child's behaviour influenced both the planning and instructional decisions of resource teachers and formed the basis of other decisions.

The findings of this study generated a theory of resource teacher decision making which was called interactive inquiry and resembles theories of action research (Lewin, 1946; Hopkins, 1982). Interactive inquiry describes the interaction between the resource teacher's focus and decisions, as resource teachers investigated the interaction between the child and the context of the assessment in order to improve the child's reading instruction.

CHAPTER V

Discussion

The decision making process of resource teachers in this study operated within bounds or constraints imposed by: (a) the classroom teacher, (b) the resource teacher's philosophy, (c) the context of the assessment, (d) the child's behaviours, and (e) the resource teacher's interpretations.

Information from the classroom teacher acted as a constraint on the planning decisions of resource teachers. The classroom teacher's interpretations of the child's behaviours, the classroom reading program and the classroom teacher's focus influenced the resource teacher's decisions about assessment instruments, as well as post-instructional decisions. Although this information limited the decision making process by defining the initial parameters of assessment as well as the child's reading problem, it also provided the resource teacher with a focus from which to begin the investigation.

Information about the teacher's expectations of the child's performance in the classroom are necessary to the decision making process if instruction for the child is to

improve. Direct tutorial services are limited, and therefore resource teachers chose to provide the classroom teacher with suggestions for instruction, if they felt that the child could be accommodated within the classroom. Even if the resource teachers did provide direct instruction, that instruction is usually aimed at facilitating the child's eventual return to classroom instruction. Decisions concerning instruction for the classroom were chosen based on constraints imposed by the classroom teacher's teaching style and the classroom program. Therefore decisions about the child's instruction were considered to be satisfactory rather than optimal decisions.

Resource teacher philosophy, knowledge and beliefs also acted as a constraint upon resource teacher decision making. Resource teacher philosophy limited the decision making process by defining more specifically the content of the assessment. At the same time, resource teacher philosophy provided a specific focus for observations of the child, one which was compatible with the resource teacher's accumulated knowledge and beliefs.

The subjectivity that the resource teacher's personal viewpoint brings to bear on the decision making process, contradicts objectives-based models of decision making by limiting the rational selection of optimal choices. Choices

were independent of limits imposed by standardized test results, program objectives or task analysis. Whereas objectives may not reflect the classroom learning situation, therefore decisions pertaining to those objectives may not be relevant to classroom instruction nor to resource teacher instruction. To what extent the resource teacher's philosophy reflected the classroom teacher's philosophy or the school's philosophy needs further investigation.

The assessment acted as a constraint upon resource teacher decision making. The assessment operated as a medium within which the resource teacher focused on the child's behaviour, interpreted the child's interaction with the context and then made further decisions about the assessment based on those interpretations. The assessment served to limit the resource teacher's observations and consequently the child's behaviours, while at the same time it provided the resource teacher with a medium within which to focus on and make decisions about the child's reading difficulty.

The difference between rational-based models and the process of interactive inquiry concerns the way tests are used in order to make decisions concerning a child's instruction. Both approaches are subject to the constraints imposed by the testing format. Rational models use the

results of tests upon which to base decisions about the child's instruction (Weinshank, 1980). The process of interactive inquiry uses observations of the child's interaction with the testing activity upon which to base decisions. These findings resemble the decision making process of classroom teachers (McNair, 1978-1979), and is therefore a more suitable framework from which to investigate a child's classroom reading problem.

The child's behaviours acted as a constraint on resource teacher decision making. The child's behaviours influenced the resource teachers decisions about the child's cognitive ability, emotional and motivational state, situation compared to peers, and relative performance. However, the child's behaviours also provided the resource teacher with first-hand, descriptive information concerning the child's response to the learning context.

Whereas the objectives-based, rational model is concerned with the selection of the best strategy for remediation of a child's reading difficulty (Vinsonhaler, 1979; Gil, 1980; Banks & Nolen, 1985), the process of interactive inquiry is concerned with the information that the child's behaviours offer the resource teacher. How "best strategies" are determined have yet to be explained, and are not supported by research (Vinsonhaler, 1979).

One would expect that the best strategies are those that address the child's needs for instruction. These needs can be determined by observing the child's behaviours within a given instructional context.

A final constraint on the decision making process was the resource teacher's interpretations of the child's behaviours. Interpretations influenced almost all other decisions made during instruction. They affected post-instructional decisions as well as future planning. Although these decisions limited subsequent decisions made by resource teachers, they also provided the resource teacher with a certain degree of flexibility or autonomy. Interpretations of the child's behaviours required a resource teacher to make decisions based on her experience of the learner rather than predetermined assessment criteria.

The method of information gathering used by these professionals was not concerned with test results, but with decisions about a child's interaction with the context of the assessment instrument. This adds a dynamic element to the decision making process and moves the resource teacher from the role of mere technician in charge of scoring tests, developing and implementing objectives, and following competency-based formats, to the role of

researcher whose task is to gather information about the child in order improve a child's learning.

The findings of this study are diametrically opposed to the rational, objectives-based theory of decision making. They suggest that resource teacher decision making is empirically, not rationally based, and that it is the resource teacher's focus on and decisions about a child's behaviours, not the resource teacher's identification of objectives and selection of optimal choices, that guides the decision making process. The findings of this study suggest that the process of interactive inquiry is more suited to describing the decision making of resource teachers than is the rational model.

Implications

This exploratory study on resource teacher decision making has implications for the professional development of resource teachers in the following areas: (a) resource teacher theoretical models, (b) special needs programming, (c) resource teacher methodology, and (d) training. Implications for research are discussed within each area.

Resource Theoretical Models

Resource teacher role functions have been described as

diagnostic-prescriptive, consultative-collaborative and tutorial (Dunn, 1973; Weiderholt, Hammill & Brown, 1978). They are often viewed as separate models for the delivery of special needs services for students in regular classrooms. The findings of this study have implications for the continued use of current resource teacher theoretical models, as they challenge the comprehensiveness of these models in describing resource teacher decision making and subsequently service delivery.

Diagnostic-prescriptive theoretical models investigate a child's academic difficulty and make decisions based on ability training or task analysis (Ysseldyke, 1986). Although these models use an inquiry approach, they are primarily concerned with program and performance objectives. The findings of this study indicate that resource teacher decision making is influenced by a child's behaviours and is concerned with the child's interaction with a given learning context. As diagnostic-prescriptive theoretical models are rationally rather than empirically based, their value as a comprehensive description of resource teacher decision making is questionable.

Consultative-collaborative theoretical models are primarily concerned with the relationship between the resource and classroom teacher during planning and after

instruction, and emphasize decision making as a joint venture in which specialists and classroom teachers work together to find a solution to a child's problem (Rawlyk, 1977). Although collaboration was one of the categories of decisions made by resource teachers, and was part of the referral routine which defined the initial parameters of the assessment, resource teachers in this study were also concerned with the child's behaviour during instruction. As consultative-collaborative theoretical models do not describe in-depth the instructional decision making process their value as a comprehensive description of resource teacher decision making comes under scrutiny.

Tutorial or direct service theoretical models are concerned with resource teacher decision making during instruction. The importance of the relationship between the resource teacher and the classroom teacher during planning and after instruction is not emphasized, since the resource teacher takes responsibility for continued decisions pertaining to a child's instruction outside the classroom (Dunn, 1973). As resource teachers in this study used information from the classroom teacher to guide their plans for the assessment, and made decisions concerning collaboration with the classroom teacher after the assessment, the value of this model as a comprehensive description of resource teacher decision making can also be

questioned.

All three theoretical models can be found operating in schools which provide special service to children. They operate as a single theoretical model or as a combination of the three models, but they are frequently seen as separate functions of the resource teacher's role. The findings of this study suggest that the process of interactive inquiry incorporates aspects of all three models within its framework which become part of the overall decision making function of the resource teacher.

Like diagnostic-prescriptive models, interactive inquiry is concerned with the investigation of a child's difficulty, although, unlike diagnostic-prescriptive models, it is also concerned with the child's interaction within the context of the assessment. Collaboration with the classroom teacher occurs as a part of the resource teachers' referral routine in the planning phase and constitutes one category of post-instructional decisions along with tutorial decisions. As interactive inquiry utilizes aspects of other models within its framework, it is therefore a more comprehensive base from which to describe resource teacher decision making and to develop a comprehensive service model.

As this study was exploratory, more research is needed to support interactive inquiry theory as a model of decision making and as a base from which to develop a model of resource teacher service delivery. The development of a resource model, which includes an accurate description of decision making, is necessary in order that the process used by these specialists is consistent with the framework used to define their activities and outline expectations for other professionals using their services. A comprehensive model should lead to better support services for special needs students in the classroom.

Special Needs Programming

Current programs for special needs students within the regular classroom setting are often developed via individualized education plans (IEPs). These plans emphasize an objectives-based format of program delivery (Reynolds & Birch, 1977). Allowing that appropriate options for instruction are selected, the question arises as to how the child's response to those options is addressed (Blake & Williams, 1986). The findings of this study indicate that a child's behaviours not only influence the planning decisions of resource teachers, but also their instructional decisions. However, the development of IEPs with their requirement of predetermined specific and long term objectives to remediate learning difficulties limit the

importance of the child's response during instruction. Therefore the use of IEPs without inherent consideration of the child's continued response to the remedial plan is not consistent with the findings of this study.

Past research investigating remedial plans for reading (Vinsonhaler, 1979; Gil, 1980; Weinshank, 1980; Banks & Nolen, 1985) concluded that their diagnostic and remedial decision making among teachers and specialists lacked consistency. Subjects were asked to base their decisions on simulated case studies using information such as test results and background history rather than direct observations of the child during instruction. The present study suggests that resource teachers consider data based on observation as a basis for their planning and instructional decisions. More research is needed which investigates decisions related to remedial plans for special needs children, but this research should be empirically based or risk idiosyncratic results.

Resource Teacher Methodology

The similarity between interactive inquiry and action research has practical implications for the teaching profession apart from describing resource teacher decision making. Although recent proponents of action research have encouraged the use of this method to improve teaching and

instruction (Hopkins, 1982), this method of professional development was perceived as an activity set apart from regular duties. This view of action research becomes yet another activity which adds to the duties of teachers who strive to improve their instruction.

The findings of this study suggest that action research occurs as an integral part of the regular duties performed by resource teachers. As well, classroom teachers play an active role in this research by initiating the referral and collaborating with the resource teacher during planning and after instruction. The investigation into a child's reading problem was an investigation conducted by the resource teacher on behalf of the classroom teacher in order to improve a child's reading instruction.

Decisions related to classroom instruction after the assessment were not fully explored by this study but require further research. It was not determined to what extent the resource teacher made decisions which accommodated the classroom situation and how this accommodation affected the child's learning. As comparative decisions were the basis for resource teacher tutorial services, the impact of this decision making for special needs children, classroom teachers and resource teachers warrants further investigation.

One difficulty with investigations conducted by resource teachers for classroom teachers involves the practical application of the findings of interactive inquiry in the classroom. This study did not determine this methodology's effect on the implementation of the resource teacher's instructional decisions within the classroom. It is possible that the suggestions by resource teachers for instruction of the child in the classroom were not, or could not be followed even though the teaching style and classroom program delivery were considered by the resource teachers in making their decisions. There was little indication that a follow-up procedure was used or was possible to implement other than suggesting that a teacher rerefer a child if the problem continued. Research is needed to investigate the practical application of resource teacher decision making in the classroom, the classroom teacher's response to those decisions, and their effects on the children involved.

Another difficulty with the interactive inquiry approach to decision making involves the problem of observer bias and resource teacher interpretations. As most post - instructional decisions were based on these interpretations, potential problems could arise if the resource teacher's decisions about the child were not in accord with those of the classroom teacher. Granted that collaboration is part

of the pre and post-instructional decision making process, discussions about interpretations and the behavioural base from which they derived were not described as information that resource teachers passed on to classroom teachers. Even if the child is tutored by the resource teacher, the classroom teacher is still responsible for a major portion of the child's instruction. It seems reasonable that classroom teachers would benefit from an in-depth description of the findings of the resource teachers interactive inquiry and that resource teachers would benefit from having to substantiate their interpretations or subsequent decisions.

Although this study suggests that the methodology of action research has already been established within the school milieu and is described within the process of interactive inquiry, a practical approach to developing action research with classroom teachers is needed. One way of including classroom teachers in instructional decision making for special needs children would be to provide classroom teachers with an opportunity to participate with resource teachers during the instructional phase of the interactive inquiry. This would have the added benefit of inservicing classroom teachers on assessment methodology, as well as improving decision making practices for resource teachers by providing alternative perspectives to the

gathering of information about the child's difficulty. The result should provide for a more effective service delivery for special needs students both inside the classroom as well as the resource room.

The emphasis of a research methodology for resource teacher decision making has the potential of implementing educational change for children who are experiencing difficulty in the mainstream. As the concept of research implies a certain continuous, diligent effort related to problem solving, it more closely addresses the current issues which surround continuous progress and efforts at individualization in our schools. The use of research methodology in the decision making practices of resource teachers could assist in the growth of this current trend by putting theory into practice: continued observation in the search for accommodation of the child's special needs.

Resource Teacher Training

The findings of this study have direct implications for resource teacher training. Whereas the conclusions of some studies have suggested a more strategic, sequential, objectives-based training program (Banks & Nolen, 1985), the results of this study indicate that resource teachers use a research-based, not an objectives-based approach, to make decisions about a child's reading problem. To improve on

what is already being used by resource teachers in the field seems a more reasonable approach to resource teacher training than imposing outside ideas of what should be done based on theory which may not be related to or be conducive to practice.

Research methods used by resource teachers were naturalistic and resembled action research in format. As both of these areas of research are relatively new in education, training related to these research techniques should provide resource teachers with additional skills with which to carry out research methodology, and thereby improve the quality of their decision making.

The findings of this study indicate that the current decision making process of resource teachers is primarily based on empirical evidence gathered from observations of the child during instruction. Interpretations of the child's behaviour were the most frequent decisions made; affective interpretations being the most numerous. Although the efficacy of interpretations and the issue of observer bias needs to be explored further, training in the subtler aspects of behavioural observation found in current psychological theories such as neurolinguistics (Bandler & Grinder, 1979) would provide resource teachers with additional skills with which to carry out their empirical

research.

Conclusions

This exploratory study has contributed to knowledge and understanding of resource teacher planning and instructional decision making for a child's reading assessment. Important findings of this study were that constraints influenced the decisions of resource teachers, and that decisions were empirically based. A theory of decision making was generated and described as the process of interactive inquiry which resembles theories of action research.

Due to the issue of generalizability related to the small sample size and the issue of observer bias in data collection, more research is needed to support these findings. However, the findings of this study add to the theory and understanding of resource teacher decision making and it is hoped that further research will continue to define the nature of this process.

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Appendix A

123 St.Vital Road
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October 24, 1988

Three Rivers School Division # 3
333 Rivers Avenue
Winnipeg, Manitoba
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Attention: Mr. John Smith

Dear Sirs:

I am a University of Manitoba graduate student and an experienced resource teacher currently working on a Master's Thesis at the Faculty of Education. The topic of my thesis is Instructional Decision Making of Resource Teachers.

My research is an exploratory, naturalistic study which will add to the knowledge and understanding of how teachers make decisions during planning and instruction. Resource teachers have been selected so that teacher decision making for one pupil can be examined in-depth.

The study will look at resource teachers' planning and instruction for one child during one reading lesson. Each teacher will be asked to plan and teach a lesson for a child who is his/her most recent referral for reading difficulty.

The lesson will be observed by me and audiotaped. Each resource teacher will be interviewed before the lesson about his/her planning and after the lesson about his/her instruction. The teacher and I will then go over the tape of the lesson in order to identify and discuss points of specific interest. The interviews and discussion will also be audiotaped. The lesson will be approximately 1/2 hour and the interviews and discussion will take approximately 2 hours.

Six resource teachers will be needed to volunteer for the study. The teachers should work in an elementary school and have three or more years of experience in resource. Volunteers who identify themselves as thinking about their planning and instruction will be requested for the study. If more than six resource teachers volunteer, then six will be selected randomly from the volunteers. The resource teachers will then be contacted in order to obtain background information, to clarify procedures and to arrange

a time for the lesson.

All of the information obtained in the study will be strictly confidential and the resource teachers may decide to withdraw at any time.

This letter is to request that I be permitted to conduct my study in the Seven Oaks School Division. Your favourable response to this request will entail your agreement to distribute the enclosed letter to resource teachers in your division. In addition it will require that I be permitted to observe the volunteer resource teachers as they teach one lesson to a child referred for reading difficulties.

Should you desire further information about the study, please contact me at 257-3497 or 334-4391.

Thank you.

Sincerely,

Jane MacKenzie

Appendix B

Dear Resource Teacher,

I am currently working on a Master's Thesis at the Faculty of Education. The topic of my thesis is Instructional Decision Making of Resource Teachers.

I am interested in finding out how resource teachers make decisions for one child's reading. My study is exploratory and is aimed at gathering information which will add to the theory and understanding of the decision making practices of resource teachers. The superintendent has given me permission to conduct my study in our school division.

I am looking for six volunteers who have three or more years of experience in resource at the elementary level. I am specifically looking for resource teachers who think about their planning and instruction and who are willing to talk about it.

Should you decide to help me in this study of resource teacher decision making, you will be asked to plan and teach one reading lesson/session to a newly referred child. The lesson will be observed by me and audiotaped. I will interview you before the lesson to talk about your planning and after the lesson to talk about your instruction. We will then go over the tape of the lesson/session to discuss points of specific interest. The interviews and discussion will also be audiotaped.

I estimate that we will need 1/2 hour for your lesson/session and a total of 2 hours for the interviews and discussion.

Before the study begins, we will arrange to meet at your convenience so that I can obtain some background information, clarify procedures, answer questions, and set up a time for your lesson.

All information obtained in the study will remain strictly confidential and you may decide to withdraw at any time.

If you would like to volunteer for the study or if you would like more information, please phone me at 257-3497 or 334-4391.

I would very much like to hear from you and would be grateful if you could phone me as soon as possible.

Thank you.

Sincerely,

Appendix C

Initial Contact with Resource Teachers

1. Introduction of the researcher, the general purpose of the study;
2. Brief explanation of what the resource teacher will be required to do: plan a lesson, select a child, conduct a reading lesson;
3. Arrange a date and time for the lesson at the resource teacher's convenience.
4. Brief explanation of data collection procedures - analysis of written materials, questions about their mental plans, audio-tapes of discussions, and the lesson, observation and anecdotal notations of the lesson, questions concerning the lesson;
5. Statement of confidentiality and protection of the subjects involved in the study;
6. Answer questions that may arise;
7. Collect background information from teachers: years of experience teaching, years of experience in resource,

resource model used in the school, resource model used in the division, resource model preferred by the teachers.

Appendix D

Letter of Consent

Teachers

Dear _____ :

I am a University of Manitoba graduate student who is currently working on a Master's Thesis within the Department of Educational Psychology. My advisor, Dr. Janet Webster, can be reached in Room 236 at the Faculty of Education or by telephone at 474-8756.

I would like to observe you teach one lesson to one child in the resource room and I would like to tape the lesson. I would then like to go over the tape with you and talk about your planning and instruction. The discussions will also be taped and will take approximately 2 hours.

All of the information obtained in the study will remain strictly confidential and you may withdraw at any time.

Further information about the proposed study may be obtained from me at 334-4391 or 257-3497. Upon completion of the study, a summary of the results will be made available to you.

Thank you for volunteering for this study.

Sincerely,

Jane MacKenzie

I understand that observation will take place in my classroom, and that the lesson and discussions will be audio-taped. I understand that consent is voluntary and may be withdrawn at any time.

Signature of Consent: _____ Date: _____

I do not consent to having observation take place in my classroom, to discussions nor to audio-taping.

Signature of Refusal: _____ Date: _____

Appendix E

Letter of Consent

Parents

Dear ,

My name is Jane MacKenzie and I am a University of Manitoba graduate student working on a Master's Thesis. My advisor is Janet Webster at the Faculty of Education and she can be reached by telephone at 474-8756.

I am interested in looking at how resource teachers plan and instruct a child during one reading lesson. As you have been already informed by the school, your child has been referred to the resource teacher for help in reading. I will be observing the resource teacher teaching your child and I will be tape recording the lesson. The lesson will take approximately 1/2 hour. After the lesson, I will be talking to the resource teacher about how she went about planning for your child's lesson and what she did during instruction.

My interest is in the resource teacher and how she goes about planning for instruction but because he/she will be planning for and teaching your child, I am asking your permission to observe the lesson taught by the resource teacher.

All of the information obtained from the lesson will remain strictly confidential. If you give your permission, you may still withdraw it at any time.

Further information about the study may be obtained from me at 257-3497 or 334-4391.

Sincerely,

Jane MacKenzie

I give permission for the researcher to tape and observe the reading lesson taught to my son/daughter by the resource teacher. I understand that my consent can be withdrawn at any time.

Signature of Consent: _____ Date: _____

I do not give permission for the researcher to tape and observe one reading lesson taught to my son/daughter by the resource teacher.

Signature of Refusal: _____ Date: _____

Appendix F

Instructions for Planning and Teaching a Lesson

1. I would like you to go about planning a reading lesson for Johnny for the date and time we have arranged.

2. I would like you to plan and teach as you normally would if I were not observing and taping the lesson.

3. I would like you to pay close attention to your thoughts and what you are saying to yourself as you go about planning for and teaching the lesson. Make notes about these thoughts if you like.

4. I am interested in how you go about planning for Johnny's lesson. I am interested in finding out what kinds of things you consider while planning a reading lesson and why you decide to do these things. We will discuss your planning decisions before the lesson.

5. I am also interested in how you go about teaching a lesson to Johnny. I would like to find out what kinds of things you are thinking about during the lesson. I am particularly interested in finding out what you are thinking about Johnny and why you decide to do the things you do with him. We will discuss your instructional decisions after

the lesson.

6. After the interviews we will go over the audiotape of the lesson. We will discuss specific points of interest and what you were thinking at those moments about the lesson and about Johnny.

Appendix G

Interview on Planning the Lesson

I am interested in how you went about planning for this lesson and why you decided to do what you did. I am especially interested in what you thought about while you were planning the lesson, what kinds of things you took into consideration when planning the lesson, how you recorded your plans, and what kinds of things you thought about Johnny as you were planning for his instruction.

How did you go about planning your reading lesson for Johnny?

- a) What kinds of things did you think about or consider as you went about planning for Johnny's instruction? Is there anything about administrative expectations that you needed to consider in making your plans? Were there parental expectations that you needed to take into account? What about management difficulties such as time and caseload? Was there anything about the classroom or the classroom teacher that you needed to consider in making your plans? Was there anything about the way you run your

resource room such as rules and routines that governs your planning?

Was there anything about your philosophy that affects your plans?

Was there anything about the activity that you selected on which you want to comment?

Was there anything about the instructional procedures you chose that you want to comment on?

Was there anything about Johnny that you needed to consider when planning the lesson?

Did you record any of your plans? How? What did you record?

What purpose do these plans serve?

- b) What kinds of things about Johnny did you think about or consider when you were planning your lesson? Was there anything else you needed to find out about Johnny? What was it? How did you go about getting this information? Is there anything else you considered when you were planning your lesson for Johnny?
- c) Was the planning of this lesson typical of the way you go about planning for a reading lesson? Why or why not?

Appendix H

Interview on Instruction of the Lesson

I am interested in what you were thinking or saying to yourself as you were teaching the lesson. I am not going to be judging or evaluating you. I am trying to find out how teachers think and make decisions during instruction. I am interested in what you were thinking as you decided what to do next in the lesson. I am especially interested in what you were thinking about Johnny as you went about teaching the lesson.

What thoughts were going through your head as you taught the lesson?

a) What did you say to yourself as you were teaching the lesson?

What did you notice or hear that made you stop and think?

Was there anything that you decided to say or do during the lesson? What was it?

Was there anything else you thought of saying or doing but decided against it? What was it?

b) Was there anything you planned to do or say but didn't? What was it?

What made you decide to go on with your plans? What made you decide to change your plans?

- c) What did you notice about Johnny that made you stop and think?

Was there anything that you decided to do at that moment? What was it?

What made you decide to do that?

Was there anything you thought of doing but decided against it? What was it?

- d) Was there anything that you planned to do or say but didn't? What was it?

What made you change your plan?

- e) What do you plan to do for the next lesson? What made you decide to do this?

- f) Is there anything you need to do or think about before planning the next lesson?

Appendix I

Pilot Study

A pilot study was conducted in order to test procedures and potential coding categories. As a result of the pilot study, the procedure of recording the time and counter position on the audiotape of each incident that occurred during the observations was eliminated. It was found that this procedure interfered with observation of the lesson.

Appendix J

Interview on Stimulated Recall of the Lesson

I'm interested in what you were thinking while you were teaching the lesson. I'm especially interested in what you were thinking as you decided what to do next at various points in the lesson. As we play the tape back, please stop it whenever we reach a point where you were consciously questioning what was happening in the lesson or how Johnny was responding. I will stop the tape myself at certain points, but you should stop the tape whenever there is a point in the lesson where you know that you made a specific decision about what to do next in the lesson. Try to describe everything that you your decision.

When the teacher or researcher stops the audiotape, the following questions will be asked:

1. What were you thinking at that point?
2. What did you notice or hear that made you stop and think?
3. What did you decide to say or do? Why?

4. Was there anything else that you thought of saying or doing but decided against it? What was it?
5. Was there anything that you planned to do or say but didn't? What was it?
6. What was it that made you decide to change what you'd planned?

The audiotape will be stopped at specific points which indicate to the researcher that some decision may have taken place. These points will be identified by :

1. change in the child - comments, voice modulation, expressions or gestures, questions and answers
2. change in the teacher - comments, voice modulation, expressions or gestures, questions, directions
3. change in activity - content, materials, task length,
4. change in instruction - method, strategy, technique

Appendix K

Potential Coding Categories

1. Administrative Constraints

a) objectives

statements about division, school or principal expectations or goals, prescribed materials, textbooks and curriculum guides, school philosophy

b) role

statements about resource teacher model, retention policy

2. Parental Constraints

a) expectations

statements about grade level performance, program, future

b) involvement

statements about assistance at home, requests for homework,

3. Management Constraints

a) scheduling

statements about time, case load, time of the year, time line restrictions

b) procedures statements

about obtaining permission, examining files, mainstreaming, testing

4. Classroom Constraints

a) class

statements about homogeneity, classmate referrals,
ability of group, peer relations

b) program

statements about method of instruction, textbooks,
equipment, materials, individualization

c) teacher

statements about expectations of resource,
experience, training, attitude, interest, motivation

5. Resource Teacher Constraints

a) competence

statements about experience, training, knowledge

b) mental plans

statements about images, intentions, dispositions,
objectives

c) attitude

statements about feelings, motivation, interest

6. Instructional Constraints

a) activity

statements about task, method, strategies,
techniques, materials

b) objectives

statements about content, grade level skills, goals

c) routines

statements about rules, practical principles,

control, rapport

d) instructional moves

statements about differences from planning,
continuations, shifts or postponements, additions,
changes

7. Learner Constraints

a) ability

statements about previous knowledge, skills,
placement, test results, individualization of
instruction, experience, rate of learning, learning
style, performance, language development

b) attitudes

statements about motivation, co-operation, attention,
interest,

c) independence

statements about maturity, self-confidence,
perseverance, responsibility, reaction to resource
teacher

d) social ability

statements about getting along with others, working
in groups, communication with peers, adults

8. Miscellaneous