THE RELATIONSHIP BETWEEN TEACHERS FACILITATING CONDITIONS AND CHANGES IN TEACHERS PERCEPTIONS OF CLASSROOM BEHAVIOURS OF GRADE TWO STUDENTS

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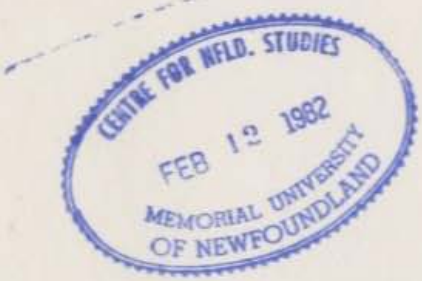

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The Relationship Between Teachers Facilitating Conditions and Changes in Teachers Perceptions of Classroom Behaviours of Grade Two Students

by

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ABSTRACT

The purpose of this study was to examine the nature of motivation in the classroom and specifically the relationship to be found between student behaviours, teacher reinforcing behaviours, student achievement and changes in teacher expectancy.

Nine grade two classroom teachers were observed. Four students with learning problems and four students with average achievement were observed in each classroom using the Classroom Motivation Observation Scale. The Child Behaviour Trait Checklist was administered to teachers at the beginning and end of the academic year to identify those students for whom teacher expectancy gains were low, and students for whom teachers expectancy gains were high.

Comparison of behaviours observed based on achievement and teacher expectancy gain, using ANOVA showed significant behaviour differences for each of the variables observed in the study. Four distinct groups emerged as a result of the combination of achievement and teacher expectancy gain. These were: Average Achievers - High Expectancy Gain, students who had high on-task student-teacher interactions, high off-task interactions with peers and to whom the teacher responded with high non-acceptance, interest provision and low levels of praise. Average Achievers - Low Expectancy Gain, students who engaged in fewer student-teacher interactions, most of which were off-task and had high on-task peer interactions.

They received high acceptance and praise but low interest providing motivation. Learning Problem - High Expectancy Gain, students for whom behaviour patterns were similar to the Average Achievers - High Expectancy Gain students except they received less esteem enchancement. Learning Problem - Low Expectancy Gain, students who were characterized by having high off-task and disruptive behaviours and to whom the teacher response was generally positive and similar to the Average Achievers - Low Expectancy group. They received less esteem enchancement than the Average Achievers - Low Expectancy group and no interest provision.

The results of this study indicate that a change in teacher expectancy observed over the course of a school year might be due in large measure to the students' actual behaviour and performance during that time. The change in teacher expectancy can be associated with student desires to satisfy growth and deficiency needs, the students' perceptions that the teacher is a reliable source of needs satisfaction and the ability of students to find suitable behaviours to alter teacher expectations, producing the desired teacher behaviours.

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

CHAPTER I

INTRODUCTION

Purpose of the Study

The purpose of this study was to compare the student-teacher interactions in Grade II classrooms as they apply to average achieving students and students with learning problems who have associated gains or losses in teacher expectancy. Comparisons of pupil behaviors which can be related to achievement were also made.

Significance of the Study

The basic premise of the concept of expectancy is that one person's expectation of another person's performance will somehow affect that person's actual performance in the direction of the expected performance. This "expectancy effect" holds a particular interest for educators and educational researchers. If a teacher's expectations can actually affect the level of a student's academic achievement in the classroom, it becomes important to discern the ways these expectations are formed, how they are communicated to the student, and how they become self-fulfilled.

The behaviors and attitudes of teachers have been studied in the light of teacher expectations and the effect these expectations could have on the ultimate academic

achievement of the students towards whom they are directed. In much research, teachers have been considered as stereotypes with a characteristic style or pattern of behavior, while students have been considered as groups represented by a mean score on an achievement or I.Q. test (Carew and Lightfoot, 1979). To treat students and teachers as groups, can cloud research findings since they are really individuals with specific and varying personal characteristics. It is important to find individual teacher and student behavior differences in relation to expectancy. "Expectations, even prophecies, develop out of interactional experience, and research must document the behavior of both actors in the process, teacher and child" (Carew and Lightfoot, 1979).

Some research in the area of teacher expectancy indicates that teachers do, in fact, communicate differential performance expectations to different children through their classroom behavior and the nature of the differential treatment encourages children to begin to respond in a way which would confirm teacher expectations (Brophy and Good, 1970). Little available research, however, indicates the possibility that differences in student behavior may direct teachers differing attitudes and behaviors. None of the literature reviewed indicates a relationship between expectancy and the level of student needs being met in the classroom.

Maslow's motivational theory hypothesizes a set of basic human needs which are of two types, growth and deficiency (Maslow, 1962). The deficiency needs encompass

the physiological, safety, love and belonging and esteem needs. According to Maslow, these needs are satisfied primarily through social interaction. He has hypothesized that children will behave in ways which lead to satisfaction of these needs, and will avoid behaviors which fail to satisfy the needs or which increase the degree of need deficiency. He has concluded that these needs must be satisfied if mental health is to be preserved.

The growth needs of self-actualization and aesthetics have an entirely different character from deficiency needs. Satisfaction of these needs come from within the self, through the activity of the child. According to Maslow, satisfaction is not required for the continued satisfactory mental health of the individual. Thus, satisfaction of this need may be deferred, or even foregone by the individual.

Students may differ with regard to their type of needs requiring satisfaction. The teacher is one of several motivating influences in the classroom and among others helps to satisfy the needs of the student.

There is evidence, however, that the nature of teacher feedback to students is determined by the students, who behave in ways which govern teacher feedback; in short, manipulating teachers, possibly to satisfy needs (Brophy, 1979).

Many possible sources of teacher expectancy have been identified (Bognar and Martin, 1981), among which pupil conduct stands out. Other pupil characteristics such as

gender, socio-economic status and past performance are largely beyond the control of the student and may be regarded as constants. Thus, it may be hypothesized that teacher expectancies formed early in the school year are largely a function of the constant factors, and that a change in teacher expectancy, observed over the course of a school year, would then be due in large measure to the student's actual behavior and performance during that time. It may be further hypothesized that the change in teacher expectancy can be associated with student desires to satisfy growth and deficiency needs, the students' perceptions that the teacher is a reliable source of needs satisfaction, and the ability of students to find suitable behaviors to alter teacher expectations, producing the desired teacher behaviors.

Different teacher behaviors have been reported for high and low achieving students. For example, Brophy and Good (1970) found that teachers were more likely to praise high-achieving students than they were to praise low-achieving students. Good (1971) found that high achievers received a greater number of opportunities for response than did low achievers.

Differences in behaviors of high and low-achieving students have also been reported. For example, Turpin (1981), in reviewing the literature, concluded that the level of achievement of the students has been most frequently associated with the level of on-task behavior. McKinney et al. (1975) found that indices of attention and inattention seemed to

emerge as the most significant predictors of achievement.

Given that teachers hold different expectancies for high and low achievers and given that high and low achievers behave differently toward the teacher, it can be hypothesized that the reasons in terms of student behavior for changes in teacher expectancy, will be related to differences in student behavior in the achievement groups.

Research Questions

1. Are there differences in student behaviors and the facilitating reinforcement experienced by students between those who are average achieving and students who are having learning problems?

2. Are there differences in student behaviors and the facilitating reinforcement received by students between those who have low residual teacher expectancy gains and those having high residual teacher expectancy gains?

3. Are there differences in student behaviors and the facilitating reinforcements received by students among those with different combinations of achievement and teacher expectancy residual gains?

Definition of Terms

Categories of Student Behavior

1. On-Task - Any action which pertains to the task or activity of immediate concern in the classroom.

2. Teacher-Directed Action - Any verbal or non-verbal action directed toward the teacher, including all interactions or attempts at interaction with the teacher.

3. Peer-Directed Action - Any verbal or nonverbal action directed toward a fellow student or group of students. This category includes all physical acts and verbal interactions or attempts to communicate with peers.

4. Attending - Any on-task behaviour which cannot be classified as Peer-Directed or Teacher-Directed action. Eye or body orientation is directed toward the task or teacher, or the student is otherwise involved in the general ongoing classroom activity. Working with pencil and paper, listening to the teacher, laughing at some amusing class incident, are examples.

5. Non-Attending - The students' attention is directed away from the teacher or task and the student does not appear to be involved in on-going activity. This does not include non-attending behavior which may be coded as Teacher or Peer-Directed actions. Being turned away from teacher, playing with objects on desk, are examples.

6. Off-Task - Any teacher or pupil action which is not related to the task or activity of immediate concern in the classroom.

7. Disrupt - Any pupil behaviour which elicits from the teacher an off-task response. Such pupil behaviours may be any one of Peer-Directed Action, Teacher-Oriented Action or non-attention to task.

8. Distract - Any peer-directed behaviour which distracts a fellow student or group of students from on-task behaviour, but which does not elicit an off-task response from the teacher.

9. Non-Disrupt - Any off-task, Teacher-Directed Action or non-attending behaviour which does not elicit an off-task, teacher response.

10. Positive Action - Any Teacher-Directed Action which, from the teacher's point of view, is considered to be a desirable behaviour on the part of the student. Examples include: raising the hand to be recognized, giving a correct answer, asking a pertinent question.

11. Negative Action - Any Teacher-Directed Action which, from the teacher's point of view is considered to be an undesirable behaviour, but which does not elicit an off-task teacher response. Failure to respond, giving an incorrect response, or giving an incomplete answer are examples.

12. Pupil Initiated - A Teacher-Directed Action by the target student which occurs when that student is not specifically called upon or designated by the teacher.

13. Teacher Initiated - A Teacher-Directed Action which is the result of a question or command directed, by the teacher, specifically to the target student.

Categories of Teacher Behavior

1. Motivating - Any teacher behaviour aimed at obtaining the participation of the student in on-task behaviour, or at reinforcing and/or rewarding such behaviour.

2. Non-Motivating - Teacher behaviours which are not intended to obtain or reward student participation. Teacher lecturing and administrative duties are examples.

3. Positive - Any motivating teacher behaviours which directly or indirectly provide for the satisfaction or recognition of student needs. Such behaviour may occur on one of three levels: Accepting, Esteem Enhancing, and Interest Providing.

4. Negative - Any motivating teacher behaviours which directly or indirectly deprive the student of needs satisfaction. Such behaviour may occur on one of three levels: Non-Accepting, Degrading, and Interest Reducing.

5. Indeterminate - Any motivating teacher behaviour which cannot be classified as being either positive or negative, or which cannot be identified as occurring on any three levels of motivation considered here.

6. Direct - Any motivating teacher behaviours which, of themselves, provide immediate reinforcement to the child for engaging in present or past behaviour.

7. Indirect - Any motivating teacher behaviours which serve as cues that direct reinforcement is contingent upon some future student behaviour. Teacher statements of a promising or threatening nature are examples of behaviour in this category.

8. Accepting - Teacher behaviour of a generally facilitative nature, involving warmth, positive regard and understanding. The teacher recognizes the student as a person of worth and communicates this recognition to the student.

9. Esteem Enhancing - Teacher behaviour of an evaluative nature, aimed at enhancing the student's personal sense of worth or sense of pride in task involvement and accomplishment.

10. Interest Providing - Teacher behaviours aimed at providing interesting and fulfilling activities to students.

11. Non-Accepting - Teacher behaviour which lacks warmth

and understanding and which fails to recognize the individual worth of the student.

12. Degrading - Teacher behaviours of an evaluative nature which diminish the student's personal sense of worth and/or sense of task accomplishment.

13. Interest Reducing - Teacher behaviours which reject opportunities to provide interesting activities for students, or which tend to destroy already existing interest.

14. Orientation - The intended direction of any motivating teacher behaviour. Any particular behaviour may be directed toward the class as a whole, toward the target student, or to a student other than the one under observation.

Other Definitions

1. Average Achiever - A student who falls in the top seventy-five per cent of the class population following ranking on reading achievement by the classroom teacher. In addition, those students the teacher did not perceive as having a learning problem.

2. Learning Problem Student - A student who falls in the bottom twenty-five per cent of the class population following ranking on reading achievement by the class-

room teacher. In addition, those students are perceived by the teacher not to be achieving as well as they could.

3. Low Teacher Expectancy Gain - A student whose computed standardized residual gain score on the Child's Behaviour Traits Scale (CBT) was lower than the average residual gain score of the sample.

4. High Teacher Expectancy Gain - A student whose computed standardized residual gain score on the CBT was higher than the average residual gain score of the sample.

Limitations of the Study

This study was limited by factors which are outlined below:

1. The study was conducted in grade two classrooms in communities which are rural in character but which are relatively near to the city of St. John's. Classrooms in more remote communities were excluded. The conclusions of the study may be limited by this.

2. All the teachers in the study were experienced. No teachers new to teaching were included. Furthermore, most of the teachers received their training at the same university. In addition, the curriculum tended to be fairly standardized. The findings of the study could be influenced by these factors.

Organization of the Remainder of Thesis

Chapter II presents a review of related literature. Chapter III discusses methodology and procedures followed in the study. Chapter IV presents the statistical data and analysis from the study itself. Chapter V discusses the conclusions which were drawn with respect to the research questions, with implications and recommendations for practice and future research.

CHAPTER II

REVIEW OF THE LITERATURE

Teacher Expectancy and Student Achievement

In the self-fulfilling prophecy theory, the contention is that one person's expectations of another person's performance can be a determinant of that other person's subsequent performance. Teachers have expectations for different students based on group and individual characteristics. Sex (Palardy, 1969), race (Rubovits and Maehr, 1973; Gay, 1975), and socioeconomic status (Rist, 1970) are some aspects of groups in a class which affect expectations teachers may have for members of these groups. Individual differences, which are reflected in teachers' attitudes and expectations, are: student achievement (Good, 1970), student behaviour and personality (Nash, 1973; Helton and Oakland, 1977), physical attractiveness (Clifford and Walster, 1973), and even desirability (teacher-rated) of students' first names (Garwood, 1976).

Many studies have been conducted to determine if these teacher expectations have a causal relationship to the students' classroom learning and achievement. In 1968, Rosenthal and Jacobson reported a study of eighteen classes ranging from Grades I to VI, in which changed teacher expectations resulted in differing increases in student I.Q. Teacher expectations for 20 per cent of their students were

biased by identifying these students as "late bloomers" --- students who would show increased achievement during the coming year. These late bloomers were, in fact, chosen at random by the experimenters. At the end of the school year, Rosenthal and Jacobson found the students designated as late bloomers showed a greater increase in I.Q. than did the control students. This "expectancy effect" was most pronounced in the lower grades --- Grades I and II. They felt that expectancy effects operate to a greater extent in these grades because (1) induced teacher expectations about younger children are more acceptable by their teachers because they have no well established reputations; (2) being younger, they may be more susceptible to teacher influences; and/or (3) teachers of lower grades may communicate their expectations differently than teachers of higher grades.

Attempts to replicate the work of Rosenthal and Jacobson, which provided negative or mixed results (Jose and Cody, 1971; Claiborn, 1969), have led to criticism of their study with respect to methodology, design, validity of measures of intellectual growth, and reliability. However, these replication studies can be criticized in that they differed from the original study in the time the expectations were induced (Rosenthal and Jacobson induced expectations at the beginning of the school year as opposed to the beginning of the second term), whether the teachers actually internalized the new expectations, and whether the teachers became aware of the purpose of the experiment.

Meichenbaum, Bowers and Ross (1969) induced high expectations in four teachers of juvenile delinquent girls by identifying 6 of the 14 girls as late bloomers. The results showed an expectancy effect with respect to objectively scored exams but not subjectively scored exams or teacher assigned grades.

Studies using induced expectancy involve biasing a teacher's expectations with a false report of a student's intelligence, capability, or potential for future achievement. These induced expectancy studies have resulted in mixed, mostly negative results. The teachers may not have acquired the expectancy the experimenters tried to induce (Jose and Cody, 1971). Attempts to induce expectations in teachers will fail if the expectations are too obviously discrepant from the teacher's natural expectations, and from the student's observable behavior. Gaite (1974) notes two other problems in using induced expectations: (1) for ethical reasons, researchers are limited to biasing a teacher's expectations in an upward direction, and may not suggest that a student's performance will deteriorate; and (2) it is becoming difficult to find teachers who have not heard of Rosenthal and Jacobson's studies of teacher expectancy influencing student achievement; therefore, it would be hard to try to manipulate the expectations of these teachers without having them become aware of the nature of the study. Therefore, the majority of studies now incorporate the teachers' own naturally developed expectations into the

design of the experiment.

Dusek and O'Connell (1973) report a study in which both teacher bias and self-generated teacher expectations were studied with respect to student achievement. The teacher bias was set up by identifying students, randomly selected, as those who would show large gains in language and arithmetic achievement during the school year. Naturally existing expectations were solicited by having the teacher rank the students in her class on the basis of expected future achievement in language and arithmetic. Although the bias manipulation did not significantly influence students' test performance, there were significant effects related to teachers' natural expectations. The researchers felt the effects due to teacher expectations may have been the result of teacher accuracy in estimating student ability levels. "It appears that the student's academic potential determined the teachers' expectations rather than the reverse" (Dusek and O'Connell, 1973, p. 375). However, they suggested that teachers' own expectations may relate to the way they treat different groups of students and thus influence students' self-concepts and classroom performance in a cyclical effect.

Crano and Mellon (1978) examined the relationship between students' academic achievement and two types of teacher expectations: (1) expectations concerned with the teacher's evaluations of the student's academic ability, and expectancy concerned with the student's conduct and social skills. They found that teachers' expectations and evaluations

of the child's social development had a greater relationship to academic achievement than expectation concerning academic ability. This indicates that the teacher's affective response, particularly in the primary grades, is a possible influence on the child's academic achievement.

Palardy (1969) found that, when teachers reported they believed boys are far less successful than girls in learning to read, the boys in their classes were less successful than girls in learning to read. When teachers said they believed boys learn to read as easily as girls, the boys in their classes did learn to read as successfully as the girls did. This suggests that differing reading achievement may be due to, in part, expectancies about abilities of boys and girls held by their teachers. Cooper and Baron (1977) suggest there is a cultural expectation that girls will outperform boys in the lower grades, but this is reversed in high school where boys are expected to outperform girls. In the lower grades, high expectation girls are praised more and low expectation girls are criticized more per correct answer, but in high school it is high expectation boys who receive more praise and low expectation boys who receive more criticism per correct answer.

Cooper and Baron reported results supporting Rosenthal's (1968) hypothesis that the relationship between teacher expectation and student achievement may be explained by differences in teacher behavior. Cooper and Baron (1979) state that students who are the subject of high teacher

expectations will receive greater positive reinforcement than students with low teacher expectations and that high and low expectation students will be more frequently criticized for failure than students who fall between these two groups.

Pupil and Teacher Behaviour and Achievement

The research linking the classroom behaviour of students with their achievement is not very extensive. From the existing literature, however, Turpin (1981) concluded that the level of achievement of the student has been most frequently associated with the level of on-task behavior.

Cobb (1972) examined the relationship between the frequencies of specific task-oriented behaviours and academic achievement in fourth grade children. Multiple regression equations were generated for each of two schools in which eight categories of behavior were used to predict Reading and Arithmetic scores. It was found that the most powerful predictors of achievement were attention and task oriented behaviour. McKinney et al. (1975) collected behavioural and achievement data and again, indices of attention and inattention seemed to emerge as the most significant predictors of achievement.

Smith (1979) reported a study in which twenty high school algebra teachers taught a lesson to a class and immediately afterwards tested for comprehension of the material taught. The results indicated that a high degree of classroom activity focusing on the relevant content

positively influenced achievement.

Hoge and Luce (1979) reviewed a set of studies concerned with the classroom behavior - academic achievement relation. The pupil was the unit of analysis. Positive relations between measures of pupil attention and pupil performance appeared with some consistency, while generally negative relations appeared between measure of pupil inattention (e.g. inattention, looking around, distractible behaviour) and performance measures.

Hoge and Luce (1979) reported also on the variable of classroom structure. Behaviours associated with high levels of achievement within a traditional type of classroom also showed no association with achievement in a more open classroom. The studies they surveyed were conducted within traditional types of classrooms. One study done by Spaulding and Papageorgion (1972) differed. Two types of classrooms, teacher-directed and pupil-oriented, were compared. These writers found their index of ideal classroom behaviour predicted achievement within teacher-directed classroom but not pupil-oriented classrooms.

Hoge and Luce (1979) concluded that there remains considerable uncertainty regarding factors which mediate the behaviour-achievement relations and considerable uncertainty regarding the nature of these relations. Although there is some question as to the validity of the recent research in this area, certain consistencies in the data are beginning to emerge. As a result, new hypotheses are being formed

with respect to behaviours which are associated with achievement and hypothesis with respect to factors mediating the behaviour-achievement relation.

Ayllon and Roberts (1974) showed that modifications in pupils' achievement levels lead directly to changes in pupils' classroom behaviours. This study supports the contention of Hoge and Luce (1979) that the relationship between student behavior and achievement is complex and interactive.

Much evidence suggests that the teacher is a major source of feedback influencing academic performance (Burns, 1979). Their view of literature on this topic by Hoge and Luce (1979) showed that teacher-pupil interaction measures reflecting level of academic activity (e.g. pupil initiated work contacts, volunteering) related positively to performance. The teacher-pupil interaction variables which reflected teacher attention to the pupil showed rather complex relations with achievement. While negative teacher contacts (e.g. criticisms, behavior warnings) generally related negatively to achievement, positive types of attention (e.g. teacher initiated work interactions) showed more variable relations with achievement. They also reported only a moderate correlation between behavioural categories and achievement.

Aspy (1977), in his review of the research on facilitating conditions, concluded that "the higher the levels of understanding, genuineness and respect a teacher

gives to students, the more the student will learn." Brophy and Good (1974) in reviewing the literature on teacher effectiveness, concluded that teacher warmth and enthusiasm consistently correlate with student achievement. Carkhuff (1966) came to a similar conclusion.

Thurstone (1937) predicted that motivation would not decisively affect a person's ability to solve problems, but that greater motivation could increase the variability of achievement. Praise stimulated both low and high achieving students to do better on mechanical arithmetic tests, while blame had a clear inhibiting effect, particularly on low achieving students. In his review of the literature on teacher praise, Brophy (1979) showed that under some, but not all circumstances, teacher praise was associated with the achievement of the child. If the praise was specific, timely and perceived to be genuine by the child, then an association with achievement could be expected.

Brophy and Good (1970) studied the classroom behaviour of four first-grade teachers toward high- and low-achieving students, and found teachers were more likely to praise high-achieving students than they were to praise low-achieving students. They concluded that there is considerable evidence that students of different achievement levels have very different kinds of interactions with their teachers. Hoehn (1954) noted that low achievers were subject to a greater proportion of conflictive and dominative teacher contacts than high achievers, and conversely, that high achievers received more supportive and promotive contacts

than low achievers. De Groat and Thompson (1949) found that low achievers received a disproportionate share of disapproval while high achievers received more praise.

Good (1971) found that high achievers received a greater number of opportunities for response than did low achievers. "Low achievers have limited skills and attention spans. If teachers provide only limited response opportunities and negative feedback, low achievers will not be helped to overcome their deficiencies."

Teacher-Student Interactions and Teacher Expectancy

Much research is available supporting the idea that teacher-student interactions varies with teacher expectations. Rosenthal and Jacobson (1968) suggested that interactions between teachers and high expectancy students differed in quality, and not quantity, from interactions with low expectancy students. Meichenbaum, Bowers and Ross (1969) observed teacher behaviour in the classroom and noted that they had more positive and fewer negative interactions with high expectancy (induced bias) students as compared with the control students.

In a microteaching experiment with induced expectancy, Rubovits and Maehr (1971) found that teachers requested significantly more statements from and gave significantly more praise to the "gifted" students compared to the control students, although there was no difference in the total amount of attention paid to either group. Rothbart, Dalfen, and Barrett (1971) also used a microteaching situation to

study the effect of induced expectations on teacher behaviour. They found teachers paid more attention to the "brighter" students and after the experiment rated the high expectation students as being more intelligent and having more potential for future success.

Brophy and Good (1970) found a tendency for teachers to favour highs over lows in demanding and reinforcing quality answers. Teachers also seemed to praise the highs more when they answered correctly and criticize less when they were incorrect or unable to answer the question. They were more likely to accept poor performance from students for whom they held low expectations and were less likely to praise good performance from these students when it occurred, even though it occurred less frequently. It was also found that low expectation students were given easier tasks or were simply not asked to do academic work.

Willis (1970), investigated teacher-pupil interaction trends in five special classes. Teachers were asked to rank their pupils from most efficient to least efficient learners. The top teachers were then observed. Findings revealed that teachers ignored the comments of "low efficiency" students more frequently than comments of "high-efficiency" students. Teachers also responded verbally more often to "high-efficiency" students.

Cooper and Baron (1979) stated that students who are subject to high teacher expectations will receive greater positive reinforcement than students with low teacher expec-

tations and that high and low expectation students will be more frequently criticized for failure than students who fall between these two groups.

Cooper and Baron (1977) found that high expectancy students received more praise per correct answer than did either low-expectation students and that low-expectation students tended to receive a greater percentage of criticism than high-expectation students. They concluded that "there appears to be little doubt that performance expectations were more potent predictors of teachers' feedback behavior than were attributions of responsibility."

In a study of teacher behaviour using teachers' naturally existing expectations, Cornbleth, Davis, and Button (1974) found that teachers interacted more frequently with high expectancy students than low expectancy students. Teachers gave highs more opportunities to answer in class than lows. In interactions initiated by the teacher, the same amount of feedback was given to both high and low students, but in pupil-initiated interactions highs received more process feedback than lows. The authors also found that teachers appeared to spend more time and interest verbally in more positive and supportive ways with high achievers than with low achievers.

Brophy and Good (1970) found a tendency for teachers to initiate more interactions with low expectancy students. This was in the area of teacher criticism and control rather than in work-related contacts or provision of opportunities

to respond. "Teachers were systematically, though not necessarily deliberately and consciously, treating one group more favourably than the other" (Brophy and Good, 1970, p. 370). "Low achievers have limited skills and attention spans. If teachers provide only limited response opportunities and negative feedback, low achievers will not be helped to overcome their deficiencies" (Good, 1970, p. 197). However, a teacher may have reason for failing to give opportunities to respond to low expectation students, i.e. students a teacher may expect to give the wrong answer or fail to respond. Good (1970) mentions three reasons: (1) the teacher may wish to motivate or encourage the class by calling on a student whom she expects will give a quality answer, (2) the teacher may be seeking personal gratification and reinforcement; hearing a good answer will assure her she is doing a good job, (3) the teacher may refrain from asking a student she feels will give the wrong answer in an effort to reduce anxiety for the student and to remove them from the criticism of their peers.

Teachers see interactions with low expectation students as more time and energy consuming and generally less successful than interactions with other students (Cooper, 1977). Cooper feels that one way in which teacher expectations for a student may become self-fulfilling is by giving more criticism when low expectation students seek out the teacher (i.e. by asking questions) than when they pass in uncompleted or inaccurate work. This greater use

of criticism is a function of the teachers' desire for more control over personal rewards. Cooper and Baron (1977) found teachers use negative feedback to discourage unsolicited interactions with low expectation students. In this way, teachers can control content and timing of interactions and achieve greater control over when the students achieve success and failure. This greater use of criticism, however, may lead the low expectation student to believe that effort on a task is not related to his teacher's assessment of his work. This may hamper future success as the student may be less willing to expend effort in the future.

Cooper, Burger and Seymour (1979) showed that interactions with high ability students are perceived as being more controllable and more successful than interactions with low ability students. Also, teacher-initiated interactions were seen by teachers as providing more control than student-initiated interactions.

Garner and Bing (1973) looked at the teacher's view of the child and the teacher's behaviour with the child as an interactive process rather than a strictly causal one. Researchers asked teachers to rate each child in their classes on a number of behaviour and personality traits which the researchers later clustered on the basis of similarity of trait. By observing pupil-teacher interactions in the classroom, they found that children who are not distinctive in personality or conduct receive less than average teacher contacts. "A child's noticeability depends on his teacher's

attitude towards him and his activity level, and the kind of activity determines the kind of contacts he will tend to receive" (Garner and Bing, 1973, p. 242). There was a tendency for active children --- whether hard workers who initiate teacher contacts or students who behaved badly, to receive high levels of contact with teachers. This study is similar to one by Silberman (1969) in which teacher attitudes of "attachment," "concern," "indifference," and "rejection" were studied. Silberman found that, although teachers may try to ignore their personal feelings when dealing with their students, these attitudes are generally revealed in their actions.

> Thus it is likely that the daily classroom experience of recipient students is significantly altered by teachers' actions which express their attitudes. These actions not only serve to communicate to students the regard in which they are held by a significant adult, but they also guide the perceptions of, and behavior toward, these students by their peers (Silberman, 1969).

Students for whom teachers have differing expectations behave differently in class. High expectation students seem to create more output opportunities for themselves than low expectation students do. They respond to the teacher's positive attention by talking up more in class (Rothbart, Dalfen and Barrett, 1971) and by initiating more work-related contacts with their teachers (Cornbleth, Davis, and Button, 1974). Brophy and Good (1970) found children for whom teachers held high expectations, raised their hands in class more frequently than lows. They also

initiated more work-related and procedural interactions. This behaviour may be the result of teachers' attitudes and reinforcement patterns, or there is a possibility that differences in student behavior may establish teachers' differing attitudes and behaviours. (McKinney, Mason, Perkerson and Clifford, 1975). More probably, the behaviour of teachers and students is mutually accommodating (Noble and Nolan, 1976).

Bolstad and Johnson (1977) examined the relationship between the descriptions that teachers gave of their students and the actual behaviour the students exhibited. They found that the teachers were fairly accurate and that, for the most part, the direction of the behavioural scores was in the order predicted by the teacher. However, they found that some teachers were quite inaccurate in judging behaviour of some of their students. These teachers may have relied on infrequent behaviour or unrelated variables such as appearance or socioeconomic status. Dusek (1975) thinks that, if teacher expectancies are based on sound objective data regarding the students' abilities, then the teacher is not biasing the student's education. Differing student-teacher interactions may be the basis of a different teaching style design for a student's individual needs. However, if expectancies are based on incorrect impressions or irrelevant information, the differing teacher-student interactions may result in biasing the student's interest and motivation in school and other related activities, and may result in poor academic performance.

"Relevant literature indicates that teacher expectancy does not always produce performance differences in students, yet the effect is observed often enough that its importance should not be discounted" (Smith and Luginbuhl, 1976, p. 265). In the study by Meichenbaum et al., there was considerable evidence of individual variation in teachers' classroom interactions with bloomers and control groups. Some teachers increased positive interactions and others decreased negative interactions, although there was no change in total amount of interaction. Brophy and Good (1970) feel that the extent to which teachers are influenced by their expectancies to treat students differently varies from teacher to teacher.

Research clearly indicates that a significant positive relationship exists between teacher-student interactions and teacher expectancy. While most of the research seems to indicate that the interaction process is the result of teacher attitudes and reinforcement patterns, some research indicates the possibility that differences in student behaviour may establish differing attitudes and behaviours on the part of the teacher.

Summary

From the preceding discussions, it can be seen that the research under consideration is mixed and controversial. It is apparent that relationships between the variables do exist but further research is needed.

CHAPTER III

PROCEDURES

The general procedures for this study were as follows. Eight subjects, four with learning problems and four average achievers, were identified in each of nine classrooms. Near the end of the school year, the subjects were observed in the classroom setting for three successive days for a total of fifteen hours of observation per classroom. A measure of teacher expectancy was obtained for each of the children using the Child Behavior Trait Scale. This was administered to teachers at the beginning and again at the end of the school year. Expectancy residual gains were computed for each of the subjects, and each was categorized as having low or high expectancy gain. The four groups which resulted were compared with respect to the pupil and teacher behaviours which were observed.

The Sample

This sample was undertaken as part of a larger ongoing study being carried out by the Institute for Educational Research and Development at Memorial University of Newfoundland. The population consisted of grade two students and teachers from schools in the rural St. John's area. Grade two was chosen as expectancy effects are thought to be more pronounced in the lower grades (Rosenthal and Jacobson, 1968).

The subjects for this study consisted of nine grade two teachers and seventy-two of their students selected from the schools participating in the larger study. Eight students from each of the nine classrooms served as target subjects. These subjects were selected from their classes according to the following criteria. First, all students were rated by their classroom teachers, according to their reading achievement. Based on the rankings given by their teacher, students were divided into two groups.

1. Learning problem students: defined as being those students who were placed by their teachers in the bottom twenty-five per cent of their class in reading achievement, and further identified by the teacher as having learning problems.

2. Average achieving students: defined as being those students who were placed by their teachers in the top seventy-five per cent of their class in reading achievement, excluding those identified by the teacher as having learning problems.

Next, four students were randomly selected from each of these two groups in each target classroom to produce a total sample of seventy-two students. Two students, one from the group of average achieving students and one from the learning problem group, were absent for more than one half the observation time and were, therefore, eliminated from

further analysis. The remaining sample consisted of seventy students, thirty-nine male and thirty-one female subjects.

The Instruments

Classroom-Motivation Observation Scale. The observation instrument used in this study is based on the premise that the primary motivating function of the teacher is to encourage the on-task behaviour of students in the classroom. Student-teacher interaction and the level of student needs being met by this interaction is a primary focus of this instrument. This scale, developed by Glasgow and Spain (1978), employs the direct observation of target students and teachers by placing classroom behaviours within a category on a coding sheet. The scale is designed to code selected student and teacher behaviours during a thirty second time period. The reliability of the observation has been reported to be satisfactory by Glasgow (in progress).

Prior to collecting the data, observers were trained in observation techniques and received supervised practice sessions with written dialogues and videotaped excerpts of real classroom situations for a one week period. These sessions were followed by the supervisor's evaluation of the observers' ratings.

Pupil behaviours previously defined in Chapter I are placed by the scale into thirteen categories. Four major types of student behavior were described, three of which have been divided into more specific pupil behaviours, interactions,

and disruptive activity of the target individual. The organization of these categories of behaviour are graphically illustrated in Figure 1.

The teacher focus of the observation scale was on the motivational aspect of the teacher's behaviour and upon the primary targets of that behaviour. The particular emphasis of the coding scheme is in the determination of levels of motivation employed by a given teacher. The categories used in the coding of teacher behaviour have already been described in Chapter I and are illustrated in Figure 2.

Child Behaviour Traits Checklist (CBT). The Child's Behaviour Traits Checklist, a Likert-type scale developed by Levenstein (Johnson, 1976) for research purposes was used to obtain a measure of teacher expectancy. Since it was administered both in September and May, changes in expectancy could be observed, and related to student and teacher behaviours.

Twenty items, classified into five subscales, are rated on a scale of 1 to 5, with a total score ranging from 20 to 100. The total score was used in this study. The five subscales on the CBT are entitled; Responsible, Independence, Social Cooperation, Cognitively Related Skills, Emotional Stability, and Task Orientation. The ratings are made by a teacher for each child. A coefficient alpha of .95 for the internal validity of this scale was reported by Johnson (1976). Other evidence of validity indicates a

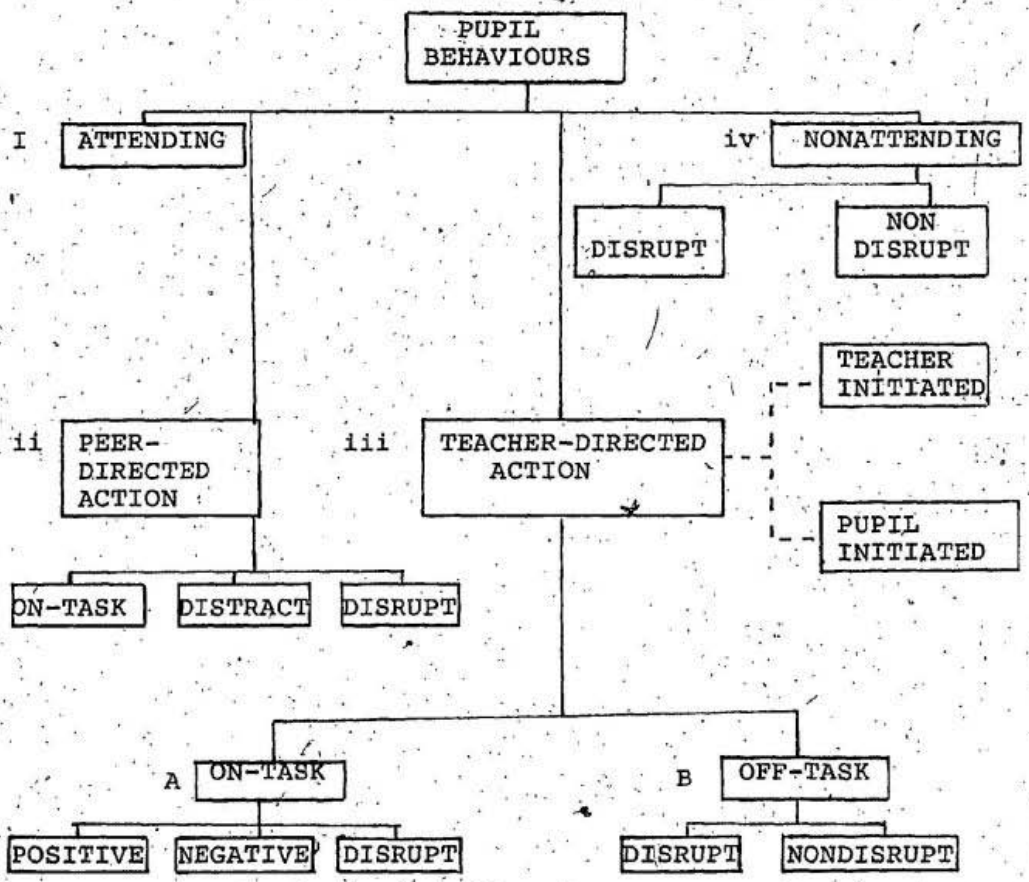

Figure 1. Major and Sub-Categories of Pupil Behaviour

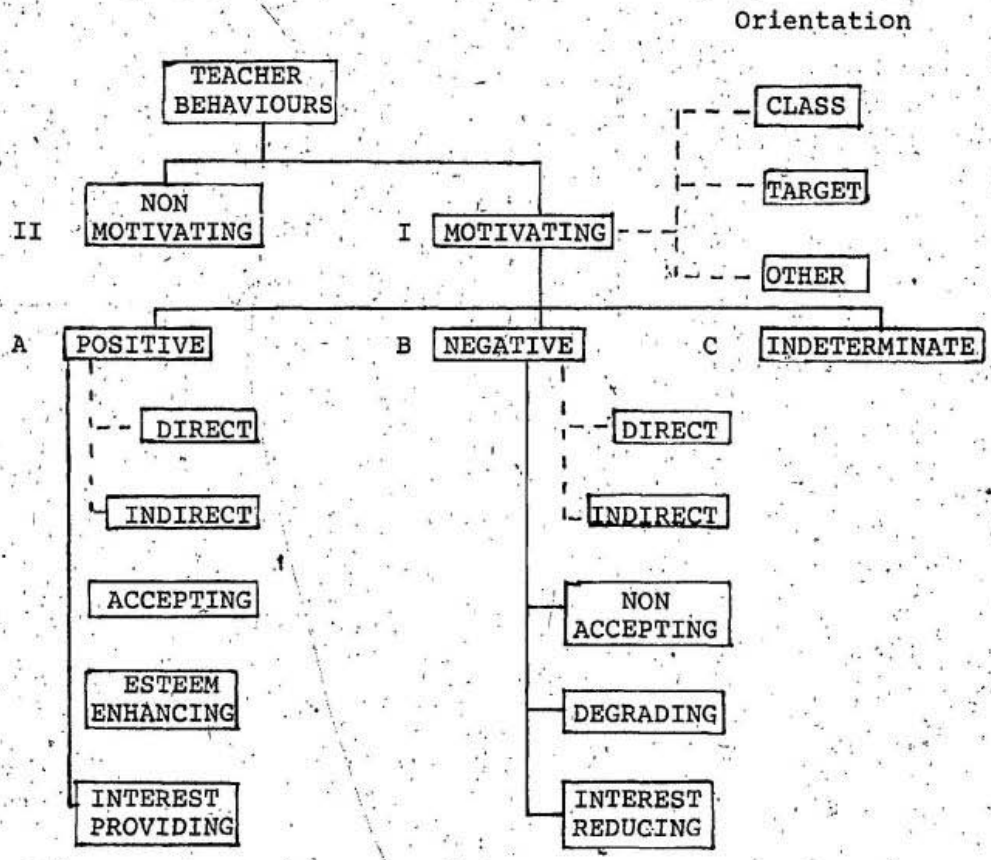

Figure 2. Major and Sub-Categories of Teacher Behaviour

significant correlation between CBT scores and classroom teachers' perceptions of school problems. A correlation of .43 was found to exist between CBT and I.Q.

The CBT was administered in late September and again in May, to the teachers involved in the broader study. The special observations employed for this study were not directly associated by the teachers with the CBT, although they were aware that all the data being collected could be correlated.

Observation Procedure

Each classroom was observed for a total of three morning and three afternoon sessions. Thus, a total of three full days of observation was accumulated over a six-week period for each classroom, a total of fifteen hours in each classroom. At the time of the observations, the observers were unaware of the rankings obtained by target students on reading achievement, and did not know the teacher expectancy ratings of the children being observed.

The observers were located so a clear view of teacher and students could be maintained. The observers did not interact with either the teacher or the students. A code number between one and eight was randomly assigned to each of the target students in a classroom. An observation cycle was established so that the observers focused their attention on one target at a time in numerical order.

A thirty second observation period was employed

during which a target student and the teacher were observed. During the first ten seconds, attention was focused on the target student and a judgement was made concerning the students' behaviour. Attention was then focused on the teacher for the next ten seconds and a judgement was made concerning the teachers' behaviour category. The remaining ten seconds was spent checking the appropriate columns on the coding form. All observations were carried out in the home-room. No observations were carried out during library, music or physical education. Observers did not interact with students outside the classroom.

Observers and teachers did not interact about the nature of the observations. Teachers had agreed to this procedure with respect to the larger study, and were asked to cooperate in an extension of that study. They were unaware that the procedure was related to their ranking of the students in the class.

Statistical Analysis

Residual gains for the CBT ratings of the grade two students in the larger study were computed from the pre-test and post-test CBT ratings in order to obtain a measure of change of teacher expectancy for the students.

The sample size was nearly 1,000 students, rated by thirty-nine different teachers. The seventy students of this study were a subsample of this group, and were among the nearly 270 students rated by nine teachers.

The residual gains were computed subsequent to the second administration of the CBT in May. The mean CBT residual gain was computed and the seventy target students were rated as having high expectancy gain if they were above the mean gain for the sample, and low expectancy gain if they were below the mean gain. Thus, four groups of students could be obtained: those having average achievement and high expectancy gain, those with average achievement and low expectancy gain, those with learning problems and high expectancy gain and those with learning problems and low expectancy gains.

As the classroom observation systematically sampled student and teacher behaviours at thirty second intervals, the average number of times each behaviour was observed in each classroom was taken as the proportion of total time that students and teachers engaged in that behaviour. In this study, interest was focused on the time that the teacher interacted with target students. As this time was quite low for each student, a matter of a few minutes over the fifteen hours of observation, students in each learning group category were assigned the average by classroom for teacher behaviours for that learning group category. The four groups were compared with respect to student and teacher behaviours using analysis of variance.

Hypotheses were tested at both the .05 and .20 levels. The small size of the sample increased the risk of committing a Type 11 error. By increasing the risk of Type 1 error from .05 to .20, the risk of committing Type 11 error was reduced.

This procedure was justified in that the study did yield testable hypotheses which were not contrived or trivial. The findings of this study confirmed the findings of other studies and led to theoretical implications which were consistent with and permitted the elaboration of existing theory in a meaningful way.

CHAPTER IV

ANALYSIS

Introduction

The analysis of the data collected in this study is presented in this chapter. As a preface to the discussion of the research questions, an examination is made of the differences which were observed between the classrooms which participated in the study. Following this, the research questions are considered in the order outlined in Chapter I.

Classroom Differences

Table 1 shows the teacher expectancy residual mean gain scores across classrooms and achievement groups. There was a wide variation between classrooms on the total residual mean gain scores. Classroom number five, in particular, was extremely high in comparison to the mean for the entire population. There were differences between classrooms on the mean expectancy residual gains for average and learning problem students. The residual mean gains for the average achieving students were above the total population mean for six of the nine classrooms, while for the learning problem students, six were below.

Research Question 1: Are there differences in student behaviours and the facilitating reinforcement experienced

Table 1

Teacher Expectancy Residual Mean Gain Scores

Classroom	Number	Achievement Group	Mean
1	4	Average	-.02
	4	Learning Problem	-.40
	8	Total	-.21
2	4	Average	-.77
	4	Learning Problem	-.73
	8	Total	-.75
3	4	Average	.82
	3	Learning Problem	-.37
	7	Total	.31
4	4	Average	-.29
	4	Learning Problem	-1.03
	8	Total	-.66
5	4	Average	1.85
	4	Learning Problem	.46
	8	Total	1.15
6	3	Average	-.19
	4	Learning Problem	-1.02
	7	Total	-.66
7	4	Average	-.55
	4	Learning Problem	.00
	8	Total	-.27
8	4	Average	.63
	4	Learning Problem	-1.00
	8	Total	-.18
9	4	Average	-.63
	4	Learning Problem	-.39
	8	Total	-.51

* Mean for Entire Population -.20

by students between those who are average achieving and students who are having learning problems?

Table 2 shows the mean percentage of student time for each of the student behaviour categories which were observed. Means are shown for the two achievement groups, the two expectancy gain categories and the four groups formed from the combinations of achievement and expectancy gain. Table 3 gives similar information for the target-oriented teacher behaviours which were observed. Target-oriented behaviours were those teacher behaviours which occurred when the teacher was interacting with the student who was being observed at the time. Table 4 gives the results of the analysis of variance testing the significance of the mean differences between the groups.

Significant differences between the average achieving students and the students with learning problems were not found at the .05 level for either category. However, differences in student behaviours were found at the .20 level of significance in the categories on non-attending non-disrupt, total pupil on-task behaviour, attending peer-directed on-task, and teacher-directed off-task disrupt. Average achievers had a total of 86.2 per cent of their time categorized as on-task compared to 81.5 per cent for the students with learning problems. In the non-attend non-disrupt category, the comparison was about 7.6 per cent for the average achievers and 11.5 per cent for the students with learning problems. In the attending, and peer-directed on-task categories, the

Table 2

Pupil Classroom Behaviours Comparing Expectancy Gain Category and Achievement Category

Pupil Behaviour	Achievement Group	High Expectancy Gain Mean	Low Expectancy Gain Mean	Total
Attending	Average	75.8	80.4	77.5
	Learning Problem	77.0	71.3	73.3
	Total	76.3	74.6	
Peer Directed On-Task	Average	3.1	5.2	3.9
	Learning Problem	3.4	2.7	2.9
	Total	3.2	3.6	
Peer Directed Distract	Average	5.7	2.2	4.4
	Learning Problem	5.6	4.8	5.1
	Total	5.7	3.9	
Peer Directed Disrupt	Average	0.16	0.0	0.1
	Learning Problem	0.16	0.13	0.1
	Total	0.2	0.1	
Teacher Directed on-Task Positive	Average	5.6	2.2	4.3
	Learning Problem	4.0	4.8	4.6
	Total	5.1	3.9	
Teacher Directed On-Task Negative	Average	0.7	0.05	0.5
	Learning Problem	0.4	0.8	0.7
	Total	0.6	0.6	

Table 2 (Continued)

Pupil Behaviour	Achievement Group	High Expectancy Gain Mean	Low Expectancy Gain Mean	Total
Teacher Directed Off-Task Disrupt	Average	0.2	0.2	0.2
	Learning Problem	0.5	0.4	0.5
	Total			
Teacher Directed Off-Task Non-Disrupt	Average	0.9	2.0	1.3
	Learning Problem	0.4	1.7	1.3
	Total	0.9	1.8	
Teacher Directed Pupil Initiated	Average	4.00	3.26	
	Learning Problem	3.33	3.85	
	Total			
Teacher Directed Teacher Initiated	Average	3.41	1.20	
	Learning Problem	2.46	3.85	
	Total			
Non Attending Disrupt	Average	0.1	0.1	0.1
	Learning Problem	0.1	0.2	0.2
	Total			
Non Attending Nondisrupt	Average	7.5	7.6	7.6
	Learning Problem	8.2	13.2	11.5
	Total	7.8	11.2	
Total on-Task	Average	85.2	87.9	86.2
	Learning Problem	84.8	79.9	81.5
	Total	85.1	82.6	

Table 3

Teacher Classroom Behaviours Target Orientation Comparing Expectancy Gain and Achievement Category

Teacher Behaviour	Achievment Group	High Expectancy Gain	Low Expectancy Gain	Total
Indeterminate	Average	0.24	0.58	0.37
	Learning Problem	0.27	0.45	0.39
	Total	0.25	0.50	
Accepting	Average	1.8	1.8	1.85
	Learning Problem	1.4	1.5	1.46
	Total	1.7	1.63	
Esteem Enchancing	Average	0.23	0.35	0.28
	Learning Problem	0.10	0.15	0.14
	Total	0.19	0.23	
Interest Providing	Average	0.14	0.04	0.10
	Learning Problem	0.19	0.00	0.06
	Total	0.16	0.01	0.06
Non Accepting	Average	1.4	1.0	1.26
	Learning Problem	1.0	0.7	0.84
	Total	1.27	0.84	
Degrading	Average	0.09	0.01	0.06
	Learning Problem	0.01	0.02	0.02
	Total	0.06	0.02	
Indirect	Average	3.0	2.2	2.74
	Learning Problem	2.1	1.8	1.90
	Total	2.68	1.98	

Table 3 (Continued)

Teacher Behaviour	Achievement Group	High Expectancy Gain	Low Expectancy Gain	Total
Direct	Average	0.80	1.1	0.92
	Learning Problem	0.80	0.7	0.74
	Total	0.80	0.85	
Total Target Directed Motivation	Average	3.8	3.4	3.65
	Learning Problem	2.9	2.5	2.65
	Total	3.49	2.83	

Table 4

Analysis of Variance

Achievement Group and Expectancy Category with Pupil and Teacher Behaviour as Dependent Variables

Behaviour	F Achievement Group	F Expectancy Gain	F Interaction
Pupil Behaviour:			
Attending	2.75[b]	0.06	4.59[a]
Peer Directed: On-Task	1.74[b]	0.74	2.61[b]
Peer Directed: Distract	1.06	2.88[b]	1.14
Peer Directed: Disrupt	0.56	1.25	0.58
Teacher Directed: On-Task Positive	0.46	2.44[b]	6.18[a]
Teacher Directed: On-Task Negative	1.31	0.27	6.04[a]
Teacher Directed: On-Task Disrupt	0.57	0.57	0.57
Teacher Directed: Off-Task Disrupt	2.84[b]	0.11	0.09
Teacher Directed: Off-Task Non Disrupt	0.67	7.73[a]	0.06
Teacher Directed: Pupil Initiated	0.13	0.97	1.56
Teacher Directed: Teacher Initiated	1.24	1.53	6.66[a]
Nonattending, Disrupt	1.25	1.70[b]	1.41
Non attending, Nondisrupt	3.39[b]	2.17[b]	2.00[b]
Total Pupil On-Task Behaviour	3.78[b]	0.34	3.11[b]

Table 4 (Continued)

Behaviour	F Achievement Group	F Expectancy Gain	F Interaction
Teacher Behaviour -- Target Orientation			
Indeterminate	0.31	8.60[a]	0.89
Accepting	3.24[b]	0.03	0.02
Esteem-Enhancing	11.06[a]	3.26[b]	0.39
Interest Providing	0.01	11.89[b]	1.06
Non Accepting	3.48[b]	3.64[b]	0.05
Degrading	4.14[a]	3.66[b]	5.04[a]
Indirect	6.81[a]	3.67[b]	0.54
Direct	2.42[b]	0.69	2.83[b]
Total Target Directed Motivating Behaviour	6.54[a]	1.29	0.01

[a]Significant at the .05 level

[b]Significant at the .20 level

differences were 77.5 per cent and 3.9 per cent respectively for the average students and 73.3 per cent and 2.9 per cent for the students with learning problems. The teacher directed off-task disrupt was 0.20 per cent for the Average and 0.46 per cent for learning problem students.

Significant differences between the achievement groups and the target-oriented teacher behaviours were found at the .05 level for esteem enchancing, degrading, indirect and total target directed motivating behaviour. All other behaviours were significant at the .20 level except for the indeterminate and interest providing categories. The average achieving students received twice as much esteem enchancement, 0.28 per cent, than did the learning problem students who received 0.14 per cent. The average students had 1.9 per cent and 0.1 per cent accepting and interest providing teaching behaviours directed towards them compared to 1.5 per cent and .06 per cent respectively for the learning problem students. The teacher was more non-accepting of and degrading towards the average student with 1.3 per cent and .06 per cent respectively for the average students and .84 per cent and .02 per cent for the learning problem students. There were no significant differences in the amount of indeterminate motivating behaviour shown toward the two groups, but significant differences in both the amount of indirect and direct motivation and the total motivating teacher behaviour favored the average students.

Research Question 2: Are there differences in student behaviours and the facilitating reinforcement received by students between those who have low residual expectancy gains and those having high residual expectancy gains?

The findings for this question are presented in the Tables 2 to 4.

Significant differences at the .05 level were found for the teacher-directed off-task non-disrupt behaviour category with 1.83 per cent for low expectancy gain students compared to 0.93 per cent for high expectancy gain students. Significant differences at the .20 level were found in four student behaviour categories. High expectancy gain students had more peer-directed-distract behaviour (5.7 per cent) than the low expectancy gain students (3.9 per cent). The teacher-directed on-task-positive behaviour of students with high gain was 5.1 per cent compared to 3.9 per cent for low gain students. Low gain students exhibited more non-attending-disrupt behaviour (0.16 per cent) and non-attending non-disrupt behaviour (11.2 per cent) than did the high gain students who had 0.05 per cent and 7.8 per cent respectively in these behaviour categories.

Significant differences at the .05 level were found in the indeterminate category of the target-oriented teacher behaviours. Low expectancy gain students received twice as much indeterminate teacher behaviour (.50 per cent) as did the high expectancy gain students who received 0.2 per cent. Significant differences at the .20 level were found in five

target-oriented teacher behaviours. Low expectancy gain students received 0.23 per cent esteem enchancement compared to 0.19 per cent received by high expectancy gain students. However, high expectancy gain students received more interest providing motivation, (0.16 per cent) compared to low expectancy gain students who received .01 per cent. More non-accepting teacher behaviour (1.27 per cent) was directed toward the high expectancy gain students compared to 0.84 per cent for the students wtih low expectancy gain. While the amounts were very small, significant differences in degrading behaviours were found. The level for the high expectancy gain students (0.06 per cent) was higher than the level for students with low expectancy gain which was 0.02 per cent. High expectancy gain students also had more indirect motivating behaviour shown them (2.7 per cent) compared to 2 per cent experienced by low expectancy gain students.

Research Question 3: Are there differences in student behaviours and the facilitating reinforcement received by students among those with different combinations of achievement and expectancy residual gain?

Again, the reader is referred to Tables 2 to 4 for data relating to this question. In Tables 2 and 3, the reader is referred to the mean per cent recorded for each of the four combinations of achievement and teacher expectancy gain categories. In Table 4, the ANOVA test of significance of the interaction was the important statistical consideration

for this question. As can be seen, significant interactions were found for the student behaviours of attending, peer-directed-distract, teacher-directed on-task positive and negative, teacher-directed teacher initiated, non-attending non-disrupt and total pupil on-task behaviour. Significant interactions were found on two teacher target-oriented behaviours, degrading and direct motivation.

It would be difficult to convey the significance of the interactions which were found by discussing the mean values found for each of the achievement/teacher expectancy gain categories. What is of real interest are the profiles of student and teacher behaviours which were generated for each of the categories. Tables 5 and 6 were prepared to help describe the behaviour profiles which were developed. Profiles were prepared for the group of average achievers with high teacher expectancy gains (AH), the group of average achievers with low teacher expectancy gains (AL), the group of learning problem children with high teacher expectancy gain (LH), and the group of learning problem children with low teacher expectancy gain (LL). In the two tables, + indicates that the observed behaviour for a group was observed more frequently than for the sample as a whole, - means the behaviour was observed less frequently than for the sample as a whole, while a blank means that the behaviour for a group was observed to be at about the average frequency for the sample as a whole. In the following sections, the behaviour profile of each of the

Table 5

Pupil Behaviour Profile

Pupil Behaviour	(AH) Average Achievement High Exp. Gain	(AL) Achievement Low Exp. Gain	(LH) Learning Problems High Exp. Gain	(LL) Low Exp. Gain
Attending		+		-
Peer Directed				
On-Task		+		-
Off-Task Distract	+	-	+	
Off-Task Disrupt	+	-	+	
Teacher Directed				
On-Task Positive	+	-		
On-Task Negative	+	-	-	+
Off-Task Disrupt	-	-	+	
Off-Task Nondisrupt		+	-	
Pupil Initiated	+	-		
Teacher Initiated	+	-		+
Nonattending				
Disrupt	-	-	-	+
Nondisrupt	-	-	-	+
Total On Task	+	+		-

+ is higher in the observed behaviour than typical for the sample as a whole.

- is lower in the observed behaviour than typical for the sample as a whole.

Table 6

Target-Oriented Teacher Behaviour Profile

Teacher Behaviour	(AH) Average High Exp. Gain	(AL) Achievement Low Exp. Gain	(LH) Learning High Exp. Gain	(LL) Problems Low Exp. Gain
Indeterminate	-	+	-	+
Accepting				
Esteem-Enhancing		+	-	-
Interest Providing	+	-	+	-
Nonaccepting	+			-
Degrading	+	-	-	
Indirect	+			-
Direct		+		
Total Motivating	+		-	-

+ Higher than typical for the sample as a whole.

- Lower than typical for the sample as a whole.

groups is described.

Average achievers with high teacher expectancy gain (AH). The group of students with average achievement and high teacher expectancy gain had student behaviours characterized by the highest ratings in the following categories: peer-directed distract, teacher-directed on-task positive and off-task disrupt, and teacher-directed pupil initiated interactions. With regards to the teacher-directed pupil-initiated interactions, these interactions were on task more than 73 per cent of the time. This group had the second highest level of teacher-directed teacher-initiated interactions. It had nearly the same level of peer-directed disrupt behaviour as for the learning problem high teacher expectancy gain group which rated highest of the four groups. It had the lowest level of non-attending non-dusrupt behaviours and was one of the two groups which obtained the lowest rating in the non-attending disrupt category of behaviours. The peer-directed on-task, teacher-directed off-task non-disrupt and attending behaviours of this group were typical; whereas the teacher-directed on-task negative and total on-task behaviours were higher than typical for the sample as a whole.

Teacher behaviours directed toward this group were high in non-accepting and degrading behaviours. The level of indirect and total motivating behaviours was also highest for this group. The indeterminate behaviours of teachers were

lower than for the other groups. In all other categories except interest providing, the behaviours directed toward this target group were moderate and typical of the sample as a whole. Interest providing behaviours of teachers toward this group were almost as high as for the learning problem high expectancy group which obtained the highest rating of all four groups.

Average achievers with low teacher expectancy gain (AL). The group of students that had average achievement but low teacher expectancy gain were characterized by having the highest attending and total on-task behaviours of all groups. It also had the highest peer-directed on-task and teacher-directed off-task non-disrupt behaviours. It had the lowest peer-directed-distract and disrupt behaviours, teacher-directed off-task disrupt, and teacher-directed on-task positive and negative behaviours. Teacher-student interactions, both pupil-initiated and teacher-initiated, were also lowest for this group. Teacher-directed pupil-initiated interactions were on task less than 38 per cent of the time. The non-attend disrupt and non-disrupt behaviours of this group were similar to two other groups and were lower than for the learning problem low expectancy gain group.

Teacher behaviours directed toward this group were high in indeterminate and esteem enhancing behaviours. The direct motivating behaviour of teachers was also highest for this group, however, the indirect and total motivating

teacher behaviours were about average for the sample as a whole. The accepting and non-accepting behaviours of teachers were typical of the other groups. There was a below average level of interest providing behaviour directed toward this group, however, it was not as low as for the learning problem low expectancy group. The level of degrading behaviour shown was lower than for two groups but the same as for the learning problem high expectancy gain group.

Learning problem students with high teacher expectancy gain (LH). The group of students with learning problems and high expectancy gain was characterized by having about the same amount of peer-directed-disrupt behaviour and almost the same amount of peer-directed-distract behaviour as the average high expectancy group who were rated highest in the sample in these categories. The learning problem high expectancy group exhibited the highest level of teacher-directed off-task disrupt behaviours and the lowest level of teacher-directed off-task, non-disrupt behaviours. The level of non-attending disrupt behaviours exhibited was the same as for the average high expectancy gain group which obtained the lowest rating in this category. The non-attending non-disrupt and teacher-directed on-task negative were lower than typical for the sample. The teacher-directed pupil-initiated interactions were typical for the sample and were on task more than 75 per cent of the time. In all other categories, the

pupil behaviours of the LH group were typical for the sample as a whole.

Teachers responded to the learning problem high expectancy gain students with a higher level of interest providing behaviour than for any other group. They used lower levels of esteem enchancement than for the other groups. Indeterminate motivating behaviours were lower than was typical, however, they were higher than the level for the average high expectancy students. The level of degrading behaviours exhibited by teachers towards this group was the same as for the average low expectancy gain students which was lower than for the other two groups. The levels of acceptance and non-acceptance were typical for the sample as were the levels of direct and indirect motivation, and the level of total motivating behaviour.

Learning problem students with low teacher expectancy gain (LL). The group of students with learning problems and low teacher expectancy gains had the lowest level of peer-directed on-task, attending and total on-task student behaviours of all groups. It had the highest level of disrupt and non-disrupt non-attending behaviours, as well as the highest teacher-directed on-task negative behaviours. It also had the highest level of teacher-directed teacher-initiated behaviours. It had the second highest level of teacher-directed pupil-initiated interactions, however, these interactions were on-task only about 56 per cent of the time. All other behaviour categories for this group

were typical for the sample as a whole.

In comparison to the other groups, teachers responded to this group with the lowest level of non-accepting and interest providing motivating behaviours, as well as with the lowest level of direct, indirect and total motivating behaviours. The level of indeterminate teacher motivation was higher than average for the sample whereas the level of esteem enhancement was lower. The accepting and degrading behaviours of teachers toward this group were typical when compared to the sample as a whole.

Summary

It can be seen that the four groups of children differed decidedly with respect to the behaviours they exhibited in the classroom and with respect to the teacher motivating behaviours shown toward them. The next chapter will discuss the implications of these findings.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this chapter is to examine the differences which were observed between the classrooms which participated in the study, discuss the conclusions which were drawn with respect to the research questions, and present recommendations for practice and future research. The presentation will be in that order. The conclusions will be discussed in the order of the questions presented in Chapter I.

Classroom Differences. In the discussion of expectancy rating and classroom behaviours which follow, it must be remembered that important differences existed between classrooms in terms of teacher expectancy residual mean gains. There was a wide variation between classrooms on the total residual mean gain scores. One classroom, in particular, was very high in comparison to the mean for the entire population. The results seem to indicate that, over the year, teachers may change their expectations of students in their classrooms. There were differences between classrooms on the mean expectancy residual gains for average and learning problem students. The residual mean gains for the average achieving students were above the total population mean for six of the nine classrooms, while for the learning problem students, six were below. This seems to indicate that

teachers tend to become more positive in their expectancy ratings for average achieving students than for learning problem students and is supported by the literature reporting that teacher expectancies remain relatively stable. More importantly, the existence of significant differences between classrooms suggests that change in teacher expectancy may be a function of initial expectancies, characteristic of the incoming students, characteristic teacher behavior, teacher personality and attitudes.

The Relationship of Student and Teacher Behaviours to Achievement. The first research question asked if there were differences in student behaviour and the facilitating reinforcement experienced by students who are average achievers and students who are having learning problems. From the analysis, it was found that differences between the groups do exist, in both the areas of student and teacher behaviour. In general, the findings of this study were similar to those of other studies examining the same question.

Average achieving students differed from those with learning problems in that they had higher levels of attending, total on-task behaviour and lower levels of non-attending non-disrupt and teacher-directed off-task disrupt behaviours. This finding was consistent with those reported by Hoge and Luce (1979) and McKinney et al. (1975). The present study also found that the average achieving students

had higher levels of peer-directed on-task interactions. Similar findings have been reported by Perkins (1965) and Soli and Devine (1976). Students with learning problems had higher levels of off-task disruptive teacher interactions but their levels of on-task positive and negative teacher interactions were similar to the level experienced by the average achieving student. Similar levels of teacher interactions were initiated by both the average achieving students and those with learning problems. The same level of interaction with both groups were initiated by the teacher. Therefore, it appeared that pupils with learning problems initiated fewer on-task interactions. While those findings generally support those of Hoge and Luce (1979), who reported a positive relationship between achievement and pupil initiated work contacts, they are interesting in that they suggest that the overall level of pupil-teacher interaction is not directly associated with achievement, and, therefore, that it must be the nature of the contact that is important.

Average achieving students were also found to experience different levels of teacher facilitating reinforcement than did the learning problem students. The findings of this study were not entirely consistent with the literature. The average achieving students received twice as much esteem enchancement as did the students with learning problems. This was consistent with the report of Brophy and Good (1970) and Thurstone (1937) respecting teacher praise. Some of the literature regarding teacher expectations for

achievement also supported this finding (Cooper and Baron, 1977).

Average achieving students received more reinforcement of all types than did the learning problem students. The total amount of reinforcement was not an issue in most of the literature reviewed. The average achieving students were found to experience slightly more accepting, more non-accepting and degrading teacher responses than the learning problem students. This finding varied somewhat from that of Hoge and Luce (1979), who, in their review of the literature on this topic, found that, while negative teacher contacts (e.g. criticisms, behaviour warnings) generally related negatively to achievement, positive types of attention (e.g. teacher initiated work interactions) showed more variable relations to achievement. The average achieving students also experienced higher levels of interest providing facilitation from the teacher. However, research has found that interest and achievement tend not to be associated except when the learning goals have been internalized by the student (Clifford, 1973). The findings of this study regarding the relationship of achievement and teacher facilitation suggested a much more complex relationship than did the findings of most of the above authors. Hoge and Luce (1979) drew similar conclusions concerning this relationship.

The Relationship of Student and Teacher Behaviour to Teacher Expectancy Gain. The second research question asked if there were differences in student behaviours and

the facilitating reinforcement received by students who had low gains in teacher expectancy and those having high gains in expectancy. From an analysis, differences were found with respect to both student behaviours and teacher facilitating reinforcement.

Those students who experienced high levels of teacher expectancy gain had more teacher-directed on-task positive behaviour. This finding is consistent with that of Brophy and Good (1970) who found that children for whom teachers held high expectations raised their hands more frequently than lows and initiated more work related and procedural interactions. Cornbleth, Davis and Button (1974) also found that high expectancy students initiate more work related contacts with their teachers. The students who experienced low levels of teacher expectancy gain had more teacher-directed off-task non-disrupt and non-attending disrupt behaviours. Brophy (1979) found that teachers with low expectations for certain students may dev. more time to controling conduct than to actual instruction. Brophy and Good (1970) found a tendency for teachers to initiate more interactions with low expectancy students in the area of teacher criticism and control rather than in work related contacts or provision of opportunities to respond. Students who experienced high levels of teacher expectancy gain had more peer-directed distract behaviour but no difference in other peer oriented interactions suggesting that there were more off-task social interactions with peers among this group.

The literature reviewed does not examine the relationship of expectancy to student behaviour very extensively. It is worthy of note, however, that off-task peer interactions were higher and off-task teacher interactions were lower among students experiencing high teacher expectancy gain.

Students with high teacher expectancy gains experienced more non-accepting and degrading reinforcement from their teachers whereas low expectancy students received more esteem enchancing reinforcement. This is in conflict with the studies of Brophy and Good (1970) who found that teachers seemed to praise the highs more when they answered correctly and criticize less when they were incorrect or unable to answer the question. Cooper and Baron (1977) also found that students for whom teachers had expressed high performance expectations received more praise per correct answer than did low-expectation students.

A basic difference between this study and those reported, was that expectancy gains, rather than expectancy levels, were the basis for analysis. To the extent then that positive gains occur for low as well as high expectancy students, the reported nature of teacher behaviours associated with high and low expectancy would be expected to be a factor in modifying the findings of teacher behaviours associated with gains in expectancy.

After considering the above, a second explanation emerges. In this study, changes in teacher expectancy have been theoretically associated with student behaviour. As

students behave in ways which lead to higher expectancy, teachers could become more demanding that the desired behaviours be maintained and less accepting of student behaviour which is not congruent with the new expectancy. It is possible that the teacher will also be less ambiguous in reinforcing these students, thus explaining the lower levels of indeterminate teacher behaviours which were found for the high gain students. This is in agreement with the review by Good and Brophy (1977) who found that more is demanded from high expectancy students by their teachers than from low expectancy students. Brophy (1979) concluded that praise is more likely to be associated with achievement if it is applied to specific behaviours and outcomes in the learning situation. Even though Brophy was specifically concerned with the application of praise associated with achievement, his conclusions may be applied to the above findings. An important finding is that teachers used interest to reinforce the high expectancy gain students much more frequently than they did with low expectancy gain students. In fact, interest provision was virtually limited to the high expectancy gain students.

Student and Teacher Behaviour and the Interaction of Achievement and Teacher Expectancy Gain. The third research question asked if there were differences in student behaviours and the facilitating reinforcement that were related to the combination of achievement group and teacher expectancy gain category. This question grew from research

which suggested that student and teacher classroom behaviours were highly variable. From this it followed that academic achievment might not be always associated with teacher expectancy gain, and this proved to be the case. Four groups of students were identified. The first was a group of average achieving students with high teacher expectancy gains (AH). The second, a group of average achieving students with low teacher expectancy gains (AL). The third was a group of students who had learning problems with high teacher expectancy gains (LH). The fourth was a group of learning problem students who had low teacher expectancy gains (LL). Each of the groups differed from the others in terms of student behaviours and teacher provided facilitating reinforcement and will be discussed in turn.

Average Achievement and High Teacher Expectancy Gain. These students had the highest rating of all groups in the teacher-directed on-task positive, student-teacher interactions, both pupil and teacher initiated, and the lowest level of non-attending behaviours of all groups. These findings are in agreement with those of Rothbart, Dalfen and Barrett (1971), Cornbleth, Davis and Button (1974) and Brophy and Good (1970). The students with average achievement and high expectancy gain had the highest level of peer-directed off-task behavior of all groups. However, studies by Perkins (1965) and McKinney et al. (1975) suggested that achievers spend significantly more time engaged in work oriented interactions with peers than underachievers.

While this was true in general for this study, it was the AL students who interacted most with peers on-task.

The total level of reinforcement was higher for the AH group, a finding which is in accord with findings of Rothbart et al. (1971) and Cornbleth, et al. (1974), suggesting higher levels of contact between teachers and high expectancy pupils. This group also experienced the highest level of indirect and the second highest level of interest providing motivation of all groups. The teacher used less indeterminate behaviour with this group, suggesting that the teacher responses were less ambiguous and more specific to the behaviour of students, a finding in accord with Brophy's (1979) conclusion that praise is more likely to be associated with achievement if it is applied to specific behaviour and outcomes in the learning situation. This group experienced more nonaccepting and degrading teacher responses than any of the other groups, a finding which is inconsistent with those of Brophy and Good (1970) and Cooper and Baron (1977) who found that students for whom teachers held high expectations were praised more and blamed less than students for whom the teachers expectations were low.

An important significant finding for this group was that the total time on-task was, if anything, slightly lower than for the AL group who were also achievers but for whom teachers dropped their expectancies. Another significant finding was that pupil-initiated teacher-directed interactions were on task more than 73 per cent for this group,

whereas when AL students initiated interactions with the teacher they were off-task more than 62 per cent of the time.

Average Achievement and Low Teacher Expectancy Gain. The student behaviour of this group had the lowest level of teacher-directed on-task positive and negative and teacher-student interactions, both pupil and teacher initiated, of all groups. This is consistent with the findings of Rothbart et al. (1971) and Cornbleth et al. (1974) who found higher levels of contacts between teachers and high expectancy students. However, it is somewhat inconsistent with the findings of Brophy and Good (1970) who found a tendency for teachers to initiate more interactions with low expectancy students, in the area of teacher criticism and control rather than in work related contacts. An important finding for this group was that pupils initiated less interactions with the teacher than any of the other groups and these interactions were off task more than 62% of the time. Also, this group of students were lowest of all groups in their level of teacher-directed off-task disrupt and highest in teacher-directed non-disrupt behaviours which is contradictory to the findings of the above author. The peer-directed off-task behaviour was lowest and peer-directed on-task behaviour was highest for this group. With regards to achievement, this finding is in agreement with those of Perkins (1965) and McKinney et al. (1975) who found a relationship between achievement and work oriented interaction with peers. The literature reviewed does not examine the relationship of teacher-expectancy to

peer interactions. However, this finding is different from that found with the AH students who were also achievers and for whom there was a higher teacher expectancy gain, suggesting that the differences found in peer interactions were related to the differences in teacher expectations and not to the differences in the achievement level of students. It is interesting to note that in all student behavior discussed so far, the behaviors of the AL group contrasted to those of the AH group. The AL group had the highest attending and total on-task behaviour of all groups, a finding which is consistent with the literature which has associated achievement with task oriented behaviour (Hoge and Luce, 1979; McKinney et al., 1975). The levels of attending and on-task behaviour for this group were slightly higher than for the AH group who were also achievers but had higher teacher expectancy gain. It is also worthy of note that the teacher appeared reasonably tolerant of off-task peer involvement of the AH students but tolerated off-task involvement of the AL students completely. This can be explained by the fact that the AL group had higher on-task peer involvement and relatively much less off-task involvement so that when the AL group were involved with peers, they were much more likely to be on-task (70 per cent of the time), than the AH, LH or LL group.

The teacher response to this group was high in esteem enchancing behaviour, a finding which is inconsistent with the findings of Brophy (1977) who found that teachers

seemed to praise the highs more when answered correctly and criticize less when they were incorrect or unable to answer the question. These students also experienced the highest level of indeterminate motivation, suggesting that teacher responses were more ambiguous and not as specific to the behaviour of students as for the other groups. This finding is inconsistent with findings of Brophy (1979) that praise is associated with achievement if it is applied to specific behaviours and outcomes in learning situations.

It is interesting to note that the AH group experienced the highest level of determinate behaviour, suggesting that the difference in motivating behaviours experienced by the two groups might be related to the nature of the changes in teacher expectancy. The AL group experienced the highest level of direct teacher motivation in contrast to the AH group who experienced the highest level of indirect motivation. This finding could be explained by hypothesizing that when expectations change for the worse, the teacher is more likely to reinforce immediately. The nature of the teacher reinforcement again very clearly distinguished the AL group from the AH students. The AL group experienced high esteem enchancing behaviour whereas the AH group experienced high non-accepting and degrading behaviours. The AH group were high in determinate and indirect teacher behaviours whereas the AL group were high in indeterminate and direct behaviours. The AH group were high and the AL group low in the amount of interest providing motivation

experienced. There is no doubt that the difference in student-teacher interactions can be related to the changes in teacher expectancy rather than to differences in achievement. Academic achievement might not always be associated with teacher expectancy gain.

A clear pattern also emerged regarding the nature of the pupil feedback which led to the changes in teacher expectancy among the average achievers. The total level of teacher-pupil interaction was much higher for the AH group than for the AL group. The preponderance of this interaction was on task, though it was both positive and negative. The AL group had much less on-task interaction with the teacher even though this was almost exclusively positive.

Learning Problem and High Teacher Expectancy Gain. These students initiated more off-task disruptive and fewer off-task non-disrupt teacher interactions than any other group. They had the same level of disruptive and almost the same level of distract peer interactions as the AH group which was highest of all groups. Their on-task behaviour was typical of the sample as a whole. However, their non-attending disrupt behaviours was the same as for the AH which was lowest of all groups. The literature is not very helpful in interpreting these findings, the problem being that the LH group were not achieving even though their level of task orientation was almost as high as for the AH group who did achieve. In the research the disruptive student is usually

regarded as less likely to achieve but the actual relationship of disruption and achievement has generally been confounded with more general measures of inattention or distractibility (Hoge and Luce, 1979; Cobb, 1972; McKinney et al., 1975). One interesting observation about this group is their similarity to the AH students with respect to their peer-directed off-task and non-attending disrupt behaviours. Another interesting observation was that the LH students were more likely to initiate on-task interactions with teachers than the LL students. The LH group initiated on-task with the teacher 75 per cent of the time whereas the LL group initiated on task 56 per cent of the time.

The LH students received more interest providing reinforcement and less esteem enchancement than any group. Teachers acted in a relatively positive way, except for esteem enchancement, toward the LH students and the teacher expectancy gains which were observed would be consistent with this but would not be consistent with the lower levels of achievement observed in this group. In comparison to the LL group, teachers responded to this group with about the same level of acceptance, more interest providing and relatively more total motivation. They received relatively less esteem enchancement, a little more non-acceptance, less criticism and indeterminate motivation. Again, the pattern for the LH group was precisely the same as for the AH group except there was less total reinforcement directed toward the LH group. This difference could be due to the lower

level of esteem enchancement directed toward the LH group. This finding could be explained by hypothesizing that if LH students were, in general, not good achievers, then teachers found less to praise. It is also worthy of note that there was virtually no criticism directed toward the LH group.

Learning Problem and Low Teacher Expectancy Gain.

These students had the lowest level of all groups of attending, peer-directed on task and total on-task behaviours and the highest level of disrupt and non-disrupt non-attending behaviours, findings in agreement with those of Perkins (1965), McKinney et al. (1975), Hoge and Luce (1979), Cobb (1972). This group had nearly the highest level of teacher-directed pupil-initiated interactions of all groups. However, it is significant that only 56 per cent of these interactions were on task. Consequently, these students had a high proportion of pupil-initiated off-task interactions. This proportion was much higher than for the LH group. The teacher, however, responded basically the same to both groups suggesting that the teachers appeared tolerant of this behaviour, even though the expectancy change was different. The teacher-directed teacher-initiated interactions were the highest of all groups. These interactions tended to be positive but were more negative than with the LH or AL group.

The level of direct, indirect and total motivating behaviour was lower for this group than for any other group. The literature did not provide a basis for the inter-

pretation of this finding. The teacher response to this group was generally positive. They received average levels of acceptance, low non-acceptance and criticism. They experienced no interest providing and relatively high indeterminate motivation. The pattern of behavior was similar to the AL group who also experienced a negative expectancy gain. However, they did differ in that the LL group experienced less total motivation mainly due to low esteem enchancement. Again, this might be attributed to low achievement, giving teachers less to praise.

Summary

The major purpose of this study was to identify, through observation, actual classroom behaviours of grade two students and teachers. More specifically, the study focused on actual classroom behaviours of these students and teachers and how they varied with differences in achievement and teacher expectancy.

The major factors under consideration in this study were: 1) teacher classroom behaviours; 2) student classroom behaviours; 3) academic achievement, and 4) teacher expectancy.

A strong relationship was found between achievement and classroom behaviour which was, for the most part, consistent with the literature reviewed. However, the findings of this study regarding the relationship of achievement and classroom behaviours suggest a very complex relationship.

From the literature which has been previously cited, for example Cooper and Baron (1977), there can be little doubt that a relationship exists between teacher expectancy and teacher behaviour. In this study, it has been hypothesized that these expectations may change as a result of feedback from students, and that in any given context, an expectation will exist and that it will constitute the standard against which student performance or behaviour will be gauged. It can be hypothesized that, in some sense, teacher expectations will be stereotyped based on initial impressions from records, reports from other teachers, and outward appearances, but the expectations will become more personalized, and may change as a result of pupil-teacher interactions and pupil performance.

Most of the literature reviewed regarding teacher expectation suggested that teachers communicate differential performance expectations to different children through their classroom behaviour and the nature of this differential treatment is what encourages children to begin to respond in a way which confirm teacher expectations. Very little literature is available on how student behaviour may establish changes in teacher expectancy. Garner and Bing (1973) found a relationship between a student's distinctive personality or conduct and the teacher's attitude towards him. McKinney, Mason, Perkerson and Clifford (1975) found that student behaviour may be the result of teachers' attitudes and reinforcement patterns or there is a

possibility that differences in student behaviour may establish teachers' differing attitudes and behaviours. Noble and Nolan (1976) suggested that more probably the behaviour of teachers and students are mutually accommodating.

In comparing the AH and AL students, some interesting trends emerged. The teacher rated these two groups of students on expectancy at the beginning of the school year. In general, it may be assumed that similar behaviors were expected from students rated the same in terms of expectancy, and that therefore the initial interactions of the teachers with these students would have been similar. However, at the end of the year, there was a change in teacher expectations for some students as evidenced by differences in teacher ratings. Therefore, it can be argued that the change in student-teacher interactions must be initiated by the low expectancy gain student.

The student feedback of the AL group differed from the AH group in that there were fewer teacher-directed pupil-initiated interactions. A much higher percentage of these interactions were off-task. The teacher as well initiated fewer interactions with the AL students. The AH group was high in peer-directed on-task behaviours. The teacher was reasonably tolerant of the off-task behaviour of the AH group but tolerated the off-task involvement of the AL group completely. The teacher responded to the AL group with a high level of acceptance, high esteem enchancement, high indeterminate and direct motivation, low non-accept and degrading

motivation and very little interest provision. It appears then that as students behaved in ways which led to low expectancy, teachers remained accepting of the student, but gave more praise and more immediate reinforcement. Teachers also became less demanding that desired behaviours be maintained and became more ambiguous in their reinforcement. They gave little interest providing motivation. Interestingly enough, with the provision of this teacher feedback, students remained on task and attending even slightly more than the AH students.

Teachers responded to the AH students with the same levels of acceptance, less praise and more non-acceptance and criticism. Interest provision, indirect determinate and total motivation were high. It appears that as students behaved in ways which led to higher expectancy, teachers became more demanding that desired behaviours be maintained and less accepting of student behaviours which are not congruent with the new expectancy. They became less immediate but more specific in their reinforcement. Interestingly, interest provision was high. Overall, these students received more motivation.

In comparing the behaviours associated with changes in expectancy for the LH and LL students, the same pattern emerged as for the AH and AL groups. However, there were some differences in behaviours which could be due to the poor achievement of the LH and LL students.

The behaviours of the LH group differed from the LL

group in a similar fashion as the AH group differed from the AL group. In fact, the LH teacher behaviours followed the exact pattern of the AH group except the LH received less total reinforcement, the main difference being in a low level of esteem enchancement, perhaps due to their poor achievement.

The LL group had low attending and on-task behaviours and high disruptive behaviours. The teachers tolerated this behaviour but their expectancy dropped. The teachers responded in a generally positive way, similar to the AL group but again differing in total motivation due to low levels of esteem enchancement. Interestingly, this group received no interest providing motivation whatsoever.

Nothing has been said in the literature to explain why student behaviour should deviate from teacher expectations. Developmental change could provide an explanation. The difference in the peer interactions of the AH and AL students could be explained by hypothesizing that the attraction of some students for peers becomes more pronounced at this time. The observations in this study focused on the interactions between teachers and their students, with emphasis on the level of student needs being met by the teacher in the classroom. If pupils are assumed to have fundamental needs, as in Maslow (1962), then reinforcement can be viewed as the satisfaction of these needs and students would learn, and tend to repeat those behaviours which lead to needs satisfaction.

Before further discussion, it is worthy of note that

studies have consistently concluded that on-task behaviour is the general pupil behaviour most related to achievement (McKinney, 1975; Cobb, 1972). One of the most important roles of the teacher, then, is to optimize the participation of the student in the learning process.

Maslow's motivational theory (1962) hypothesizes a set of basic human needs which are of two types, growth and deficiency. The deficiency needs encompass the psysiological, safety love and belonging and esteem needs and are satisfied primarily through social interaction. The growth needs of self actualization and aesthetics are satisfied from within the self, through the activity of the child.

According to the findings of this study, the low expectancy gain students fit into Maslow's deficiency category of needs. According to Maslow, these needs are satisfied primarily through social interaction. These students obtained fulfillment of their deficiency needs by the high levels of accepting, esteem enchancing and direct motivation received. Peers as well as teachers were the possible sources of need satisfaction. The change in teacher expectancy associated with these behaviours simply reflects the nature of pupil behaviours which were being positively reinforced by the teacher. In the case of the LL students, teachers were apparently positively reinforcing less on-task behaviour, and thus could be directly influencing the lower achievement of these students.

On the other hand, it can be hypothesized that the high expectancy gain students had experienced adequate

satisfaction of deficiency needs (possibly outside the school) and were growth motivated. Satisfaction of these needs must come from within the self through the activity and could be accomplished by the interest or challenge associated with the activity. High interest providing and indirect motivation were provided to the high expectancy gain students as a basis for motivating learning behaviour. The high expectancy students experienced much more non-accepting behaviour than the low expectancy students, but again this would not necessarily have a negative effect on their on-task behaviour if their deficiency needs had been met.

Implications

This study implies that a crucial issue for the classroom teacher is the control of reinforcement. In terms of satisfaction of deficiency needs, it is quite irrelevant where the reinforcement comes from, except that it must be through social interaction; however, regardless of its source, it becomes important that reinforcement be provided only for on-task behaviours if achievement is to be enhanced. The motivational goal of the teacher, therefore, must be to establish control over the satisfaction of needs, so that control may be exercised of pupil on-task behaviour. There are many reasons why this may be difficult to accomplish in practice. The student may have developed alternate, and equally reliable sources of the satisfaction of needs, or the student may perceive the teacher as unreliable in

facilitating the satisfaction of needs. In either case, the teacher would lose control of the learning behaviour of the student.

Students who are growth motivated comprise an entirely different problem. Growth motivation implies that the deficiency needs are being adequately satisfied. Since, according to Maslow (1962), people can defer or forego satisfaction of growth needs without suffering psychological trauma, and furthermore, since the source of satisfaction is probably due to the interest or challenge associated with the activity, the teacher must provide interesting problems or activities, or seek to develop interest if growth needs are to be used as a basis for motivating learning behaviour.

Recommendations

Recommendations for Further Research

This section discusses possible recommendations for further research as a result of this study. First, it is recommended that research be conducted to further investigate the causes of changes in teacher expectancy.

Second research should be conducted to further investigate the behaviours associated with changes in teacher expectancy, especially interest providing motivation as a function of changing expectancy.

Third, further research should be conducted to investigate the factors involved in the development of

initial teacher expectations.

Fourth, further research involving in classroom observations should be conducted to investigate the nature of the indeterminate category of teacher behaviour used in this study.

Recommendations for Practice

This study suggested several areas which might be of concern to school counsellors and teachers. The first is the hypothesis that expectancy changes are related to the level of student needs being met in the classroom. It is important that these needs be identified and controlled if mental health and achievement are to be attained. Following this, it is evident that students should be screened with respect to their level of needs. In screening and subsequent assessment, ways in which the students needs could possibly be met outside the classroom should be examined.

Third, teachers should be assisted to find ways to increase their control of the satisfaction of needs in the classroom.

Four, teachers should be made aware of the importance of regular meetings with parents to ensure that the reinforcement provided by parents is complimentary to that provided by the teacher to direct the learning behaviour of the student.

Five, counsellors should be trained in classroom observation procedures with respect to the interactions of students with teachers and other students. They should learn

to focus on specific interactions of the teacher, with the students, rather than the general classroom climate created by the teacher, and, in particular, the level of on-task pupil-teacher interactions initiated by the pupil.

Sixth, counsellors should be skilled in methods to increase the level of on-task pupil-teacher interactions initiated by students for whom the teacher has a low expectancy.

Seventh, in-service with teachers should focus on helping teachers to understand the expectancies they have for the achievement and behaviour of each of their students. They must also learn that student behaviour will differ in relation to the needs they are seeking to satisfy, and that changes in teacher expectancy and behaviour will change in relation to these needs.

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