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PARENT-TEACHER EXPECTATIONS:
PARENT-CHILD RELATIONSHIPS AND TEACHER-PUPIL INTERACTIONS
WITH NEW ENTRANTS IN PENINSULAR MALAYSIA

A Thesis presented in partial fulfilment
of the requirements for the degree of
Master of Arts in Education
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ABSTRACT

The concept of the self-fulfilling prophecy used by Merton (1948) to explain large scale social and economic phenomena, such as prejudice in everyday life and the causes of bank failures, has been introduced into classroom research by Rosenthal and Jacobson (1968) in terms of teacher-expectation studies.

This thesis reports a naturalistic study concerning teacher-pupil interactions in the classroom and parent-child relationships in the home arising from parent and teacher expectations of the children's ability, in the context of Malaysia - a non-Western culture. It was expected that the quality and quantity of teacher-pupil interactions in the classroom, and parent-child relationships in the home would be related to parent and teacher expectations of the children's ability. The general propositions guiding this study are given as a research model outlined below:

- i) Early in the child's life, even before he enters school, his parents have formed their expectations concerning the child's ability.
- ii) Parent expectations are translated into self-fulfilling prophecies. The quality of parent-child relationships may be determined by the parents' expectations of the child's ability.
- iii) When the child enters school, teachers also form their expectations regarding the child's ability. Perhaps because both parents and teachers are influenced by overt child behaviours, in most cases the expectations teachers hold towards the child would match the

expectation held by the parents.

- iv) Teacher expectations are also translated into self-fulfilling prophecies. Thus teachers begin to treat each child differently in accordance with their expectation of the child's ability.
- v) Finally, the cycle of self-fulfilling prophecies operates so that the more able child finds support to develop his talents both at home and at school, while the less able child is constantly reminded of his weaknesses.

The results from 30 hours of classroom observation of teacher-pupil interaction with 48 new entrants classified by their teachers (N = 4) as 'highs' (N = 24) and 'lows' (N = 24) [using teacher-pupil observation schedules based on Brophy and Good (1969) and Ashcroft (1972)] support the hypothesis that teachers treat pupils differently according to teacher expectations concerning the pupils' ability.

The results from individual home interviews with parents of the same children [using standardized interview schedules based on Marjoribanks (1971)] also support the hypothesis that parents treat children differently according to parent expectations concerning the children's ability (high, medium or low).

It is suggested that there exists a supportive network of expectations between the parents and the teachers. It is further suggested that closer attention be given to this network of expectations between home and school, and not expectations of each in isolation to explain the relative performance of children at school.

The implications of the above results for Malaysia, in particular, is that current emphasis on educational improvement should also focus on the interpersonal factors arising from teacher and parent expectations of the children, and their consequences.

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INTRODUCTIONEDUCATION IN MALAYSIA - A BACKGROUNDTO THE PRESENT THESIS

The research to be reported in this thesis was undertaken in Malaysia, a multi-racial country with about 10 million people, consisting of three major ethnic groups - the Malays, the Chinese and the Indians. Like many other developing nations, the concern for educational provision in that country has been one of the major issues in recent years. However, little research on this issue has so far been done. In the meantime, the disparities between the two major ethnic groups - Malays and Chinese, particularly in the educational and economic fields seem to grow wider. The disparities are said to be due to such factors as poverty, inadequate schooling facilities, lack of pre-school preparation, and more recently, the problem of attitudes has been proposed as a contributing factor.

The following section traces some of the major developments in Malaysian education pertinent to the present study.

Historical Survey of Education in Malaysia

A brief historical survey of educational development in that country shows that in the years before and immediately after independence in 1957, the qualitative aspects of education were largely neglected. The period before independence was characterized by separate English, Malay and Chinese schools. Each type of school offered education in the language of the respective ethnic groups, although this had never made the schools entirely ethnically homogeneous. There

was no common curriculum and the schools developed separately. It would probably be true to say that only the English schools provided a common ground in the sense that the three major groups had the opportunity to be in one school.

On the eve of independence, education in Malaysia was described by Hayden (1967) as being anything but Malaysian, referring mainly to the fact that the textbooks used contained materials not suitable to the then Federation of Malaya but to the country of origin of the various races. (See Report of the Committee on Malay Education, 1951).

Evolution of a National System of Education

The Report of the Committee on Malay Education in 1951 recommended the implementation of a national system of education. An Education Ordinance in 1952 provided for the use of Malay and English as the medium of instruction in schools, the registration of schools and teachers, and the establishment of a federal inspectorate. Much of the Education Ordinance was never implemented. In some quarters it was considered to be too daring and unrealistic because of the costs involved (Wong and Eee, 1974). In other quarters it received strong criticism from various ethnic groups (Hayden, 1967). One most obvious reason for the criticism at that time seemed to be centred on problems of the dominance of the two languages. Another reason was the threat posed by the new system which seemed to deny the relative independence enjoyed by the various schools for almost a century.

Introduction of the Malayan Secondary School Examinations

From the mid-1950's several important Reports and Committees have given the question of a national system of education extensive consideration. The Razak Report (1956) for example, recommended the establishment of a federal inspectorate, the creation of a unified teaching service and the establishment of a common curriculum for all schools. For the first time, too, the question of selection of pupils into secondary schools was mentioned. The Report claimed that only a proportion of primary school pupils were intellectually capable of deriving full benefit from secondary education and so to allow all of them to proceed to secondary schools would involve a considerable wastage of resources. That, coupled with economic necessity led to the introduction of the Malayan Secondary School Examination (MSSEE) at the end of the primary school when the children were only 11 or 12 years old. The result was that for the majority of children their formal education ended at 12 or 13 years of age.

Raising the School Leaving Age

In 1960, a Committee to review the Razak Report was established. By and large, it endorsed the report. However, the Review Committee thought the time was ripe for changes regarding the school leaving age. It considered that children at the age of 13 were too young for any normal and legal form of employment outside their own families, and such a young group without family supervision was a potential social problem.

Under utilisation of educational resources was another argument for raising the schoolleaving age to 15 years. According to the Review Committee (1960) there were more

places in secondary schools in 1960 than there were pupils to fill them. This was different from the preceding years when many children of primary school age could not find places in secondary schools at all.

The decision to raise the school leaving age to fifteen years of age was effected in 1965 when the MSSEE was abolished. All primary school children gained automatic promotion into secondary schools (see Report of the Implementation of the Education Review Committee, 1971).

Early School Leavers and Wastage at Primary Schools

The abolition of the MSSEE, and the introduction of automatic promotion into secondary schools failed to solve the problem of early school leavers. Attendance at the primary school level exceeds 90% according to the Mid-Term Review, Second Malaysia Plan 1971-75. However, at the post primary school levels the situation is somewhat different.

For example, the 1968 figures show loss among school aged children in Malaysia at the 11 year old level to be 38%. (Education in Malaysia, 1970, p. 20.) Individual figures for each of the eleven states in Peninsula Malaysia ranged from 50.3% in the State of Perlis down to 43.8% in the State of Selangor (see Murad Report, 1973, p. 111).

The problem of early leavers was seen by the Malaysian Government to be serious and led to a nationwide study of school dropouts. (Murad Report, 1973). Murad found that not only did a substantial number of students leave school at the transition age between primary and lower secondary education, but among those who left school most had no pre-school training of any kind at all. In addition, he reported that the

reasons for leaving school were not solely financial but were related to the negative attitudes parents and children had towards the school. In part, the Report suggests, teachers may have contributed to the negative self concept children have of themselves judging from the fact that children who left school felt their teachers did not expect them to succeed.

As a result, Murad (1973) recommended (a) compensatory educational services to help remedy early educational disadvantage both at the pre-school and lower primary school levels, and (b) a combination of adult-parent education. Murad's study and recommendations may well have prompted the current focus on early childhood education in Malaysia. It will be clear from the following discussion that current emphasis on early childhood education is concerned with the need to equalize educational opportunities and to reducing the number of early school leavers among the disadvantaged.

Education for the Disadvantaged: the Current Focus

Indications are that in the field of education a lot of attention is now given to the needs of the disadvantaged. Increasingly, the focus is on early childhood aspects of education believing that children are disadvantaged very early in their lives. The recommendations made by the Seminar on Early Childhood Education held in Kuala Lumpur in 1973 were evidence of emphasis being given to early childhood education in Malaysia. For example, the seminar called for (a) a formalized objectives of early childhood education, the establishment of pre-school education for children in rural and economically depressed areas, and the evaluation, improvement and expansion of existing pre-school programmes, and (b) a joint

concern and responsibility of both Government and Community in regard to pre-school education.

At present both the Ministry for Rural Development and the Ministry of Education are engaged in fostering early childhood education programmes. The Ministry of Education, in particular, is engaged in a compensatory education project aimed at identifying problem areas and developing suitable remedial materials for deprived and disadvantaged pre-school and lower primary pupils (Lokman, 1975).

It is recognized that research is also needed in the following areas:

- "a) research into the relationship between school milieu and student aspirations,
- b) research into the effects of pre-school education upon children who differ by socio-economic status and region,
- c) research into teacher expectations and behaviour toward the culturally disadvantaged,
- d) research into the relative effectiveness of competitive reward structure in the classroom, and,
- e) research into the environmental factors that have an important bearing on a child's orientation towards education such as child-rearing practices."

(Seminar on Early Childhood Education, 1973, p. 240).

The above recommendations for research, and projects by the two Ministries in Malaysia are strong evidence of the current realization that the national system of education must inevitably consider the qualitative aspects of education as well as widening educational provision.

The present research reflects the current concerns in Malaysia. In particular, the concern of this research is

with aspects of teacher expectations and teacher-pupil interaction, and with parent expectations and parent-child relationship among new entrants in the Malaysian context. Internationally there has been considerable development and interest in the field of teacher-pupil interaction, and parent-child relationship over the last decade. The major features of teacher expectation and parent-child relationship studies are reviewed in the following chapter.

CHAPTER IA REVIEW OF THE LITERATURE ON(i) TEACHER EXPECTATION STUDIES AND(ii) PARENT-CHILD RELATIONSHIP STUDIESi. Teacher Expectation StudiesIntroduction

It has been proposed that schools by operating on selective middle class criteria discriminate against children from certain socio-economic and ethnic sub-cultures so that their failures is assured (Adams, 1974). The implication here seems to be that the schools in Western societies are failing to provide equality of opportunity. Although such a claim may not necessarily be true of all schools or all societies, there have been some studies which give support to the statement.

Becker (1952a, 1952b) for instance reported that not only did teachers distinguish three social class groups among their students, but they also felt the lowest of the groups to be the most difficult to teach, uncontrollable, and morally unacceptable on such attributes as physical cleanliness and ambition to get ahead. In addition, teachers learnt to revise their expectations with regard to the amount of material they could teach lower class children, and learnt to be satisfied with a lower level of accomplishment. The following quotation from one principal illustrates the point:

"Our teachers are pretty well satisfied if the children can read and do simple number work when they leave here." (Becker, 1952, p. 474).

Rist (1970) found that kindergarten teachers made evaluative judgments of the expected capacities of the children to perform academic tasks after only eight days in school. The children designated as "fast learners" received the majority of teaching time and attention from the teacher, while those designated as "slow learners" were taught infrequently, and received little supportive behaviour from the teacher.

The above two studies also serve to introduce us to current allegations that teachers are engaged in subtle forms of discrimination within the classrooms, and, thereby, set in motion self-fulfilling prophecies. Basically this means that teachers obtain just what they expect from students in the way of performance in school. Thus if teachers expect high performance, they will set it, and conversely, if they expect low performance from certain children, these children are likely to perform poorly in school. The outcome is a matter of self-fulfilling prophecy. However, the importance of the self-fulfilling prophecy within the school had not been given much attention, until it was strongly implicated in the work of Rosenthal and Jacobson (1968). Their book Pygmalion in the Classroom attracted a number of reviews and criticisms, but more importantly it has generated a great deal of educational research into the phenomena known as 'expectation effects'. A summary of the original report is now presented, to be followed with criticisms made by reviewers of the study, and a review of some of the contemporary studies on teacher expectations.

Pygmalion in the Classroom - a summary of the original report

The quotation below partly summarizes the work reported in Pygmalion in the Classroom

".... 20 percent of the children in a certain elementary school were reported to their teachers as showing unusual potential for intellectual growth. The names of these 20 percent of the children were drawn by means of a table of random numbers, which is to say that the names were drawn out of a hat. Eight months later these unusual or 'magic' children showed significantly greater gains in IQ than did the remaining children who had not been singled out for the teachers' attention." (Rosenthal and Jacobson, 1968, p. vii).

As reported by Rosenthal and Jacobson the instrument used to measure children's intellectual abilities in the study was the Flanagan's Tests of General Ability (TOGA), a non language group intelligence test providing verbal and reasoning subscores as well as total IQ. The authors' main criterion for IQ gain was the difference between simple gain scores from the pretest in May 1964 to the basic post test in May 1965. In their study expectancy advantage has been defined as mean gain in IQ for the experimental group minus mean gain for the control group.

In summarizing the results across the eighteen classes (Grades 1-6) Rosenthal and Jacobson acknowledged the fact that their findings demonstrated teacher expectation effects to be most noticeable in the lower grades only. Their conclusions concerning teacher expectation effects especially in the lower grades were that:

".... teachers' favourable expectations can be responsible for gains in their pupils' IQs and, for the lower grades, that these gains can be quite dramatic." (Rosenthal and Jacobson, 1968, p. 98).

In general then, it was Rosenthal and Jacobson's contention that the change in teachers' expectations regarding the intellectual performance of the allegedly 'special' children had led to an actual change in the performance of these children.

Reaction to the results presented in Pygmalion in the Classroom was widespread and both favourable and unfavourable. These reactions are discussed below.

Reviews and Criticisms of Rosenthal and Jacobson (1968)

Two contrasting reactions to the report contained in Pygmalion in the Classroom are first given. Typical of the more favourable comments is the following excerpt.

"Here may lie the explanation of the effects of socio-economic status on schooling. Teachers of a high socio-economic status expect pupils of a lower socio-economic status to fail."

(Hutchins, San Francisco Chronicle August 11, 1968 cited in Elashoff and Snow, 1971, p. 9).

Comments that were less favourable were also made: "Pygmalion, inadequately and prematurely reported in book and magazine, has formed a disservice to teachers and schools, to users and developers of mental tests, and perhaps worst of all, to

parents and children whose newly gained expectations may not prove quite so fulfilling."

(Snow, 1969, p. 199).

Amongst the noteworthy commentators were: Snow (1969); Neurnberger, (1969); Jensen, (1969); Thorndike (1969); and Elashoff and Snow (1971). The criticism evolves around three main issues: (a) a question about the validity of the IQ measurement instrument used; (b) a question about the statistical analysis of the data; (c) some difficulty in replicating the research findings; and (d) a question of the pervasiveness of the teacher expectations effect. The issues have been extensively discussed by Elashoff and Snow (1971) and it is sufficient to note three specific issues raised by them.

Firstly, Elashoff and Snow felt that the descriptions of design, basic data, and analysis were incomplete. In addition, they claimed that the report gave overly dramatic conclusions, inaccurate statistical discussions, and were generally misleading.

Secondly, Elashoff and Snow criticized the lack of clarity about the details of how children were assigned to the different treatment groups, subject losses during the experiment, and the lack of balance in the design. For example, they noted:

"A 20% subject loss from pretest to posttest reduces the generalizability of the study and raises the possibility of differential subject loss in experimental and control groups." (p. 19).

Thirdly, Elashoff and Snow questioned the norms, reliability, and validity of the IQ measurements used, i.e. the TOGA. For example, their examination of the TOGA manual suggested that the test was not fully normed for the youngest children, especially for children from lower socio-economic backgrounds. They also questioned the lack of standardized administration procedures, when the tests were administered to the children separately by the class teachers.

Replies to some of the above criticisms have been made by Rosenthal (1969, 1970), and in Kester and Letchworth (1972). For example, in reply to the criticism concerning statistical analysis of the data, Rosenthal (1970) clearly establishes that his handling of the variance assumptions underlying the statistical analysis was methodologically correct. And in reply to the criticisms concerning the intelligence test used, Rosenthal (1969) carefully established the predictive validity of the instrument and by clarifying the extent of the differences obtained in reasoning IQ.

In spite of the satisfactory replies given by Rosenthal, a re-analysis of the original data, in Rosenthal and Jacobson (1968) was considered necessary by Elashoff and Snow following their criticisms of Pygmalion in the Classroom. A summary of their main results contained in a book entitled Pygmalion Reconsidered (1971) is given below.

"Pygmalion Reconsidered"

Elashoff and Snow's (1971) re-analysis of Rosenthal and Jacobson (1968) revealed no treatment or "expectancy advantage" in grades 3, 4, 5 and 6. However, according to Elashoff and Snow, the first and second graders may or may not exhibit

some expectancy effects, but the data could not provide clear conclusions. In spite of the negative findings in the upper grades, they did consider that there was "enough suggestion of an expectancy effect in grades 1 and 2 to warrant further research". (p. 44).

The results from the re-analysis of the original data in Rosenthal and Jacobson (1968) by Elashoff and Snow (1971) suggests that while the latter could not confirm the results obtained by Rosenthal and Jacobson about teacher expectancy effects on pupils' IQs in grades 1 and 2, neither could Elashoff and Snow reject them altogether.

At this stage it would be sufficient to say that even though Rosenthal and Jacobson (1968) were instrumental, and perhaps largely responsible, for generating research into teacher expectation studies, it was left to subsequent researchers to establish with greater certainty teacher expectation effects in the classroom. A review of the types and results of later studies on teacher expectation now follows.

Types of Teacher Expectation Studies

Teacher expectation studies are either induced and naturalistic. Where expectations have been induced, teachers were given false information regarding their pupils' abilities. In naturalistic studies, experimenters relied on teachers' own expectations concerning their pupils' abilities. The studies gave product or process data or both product and process. Product studies were concerned with measuring teacher expectancy effects on pupils' IQ, performances on achievement tests, language tests, mathematic ability tests,

and even on swimming ability. A summary of the results obtained in the following review of literatures on teacher expectation studies is given in Table 1.

A shorter review of teacher expectation studies was made by Baker and Crist (1971 in Elashoff and Snow, 1971). Brophy and Good (1974) provide an extensive review of the literature. The present chapter reviews a representative selection of the types and outcomes of expectation studies.

In the following sections two types of teacher expectation studies are given: the first concerns induced studies and the second, naturalistic studies. Both provided product data only.

Induced Expectation Studies with Product Data

Induced expectation studies when expectations effects on IQ was the criterion report no effects irrespective of the age level sampled. For example Evans and Rosenthal (1969, cited in Brophy and Good, 1974), and Fielder, Cohen and Feeney (1971) found no expectation effects on pupils' IQ among elementary school children. Evans and Rosenthal (1969) reported no expectancy advantage for either boys or girls on either total or verbal IQ.

No teacher expectancy advantage on IQs were also reported by Goldsmith and Fry (1970) on high school students, and Fleming and Antonnen (1971) on second graders.

When product measures other than IQs were the criteria positive expectation results were reported especially with school-based subjects such as reading, swimming and mathematics.

Findings in support of the expectation hypothesis have included a study by Flowers (1966) on the ability of children

TABLE 1

TYPES OF TEACHER EXPECTATION STUDIES AND THEIR OUTCOMES

(a) Induced Expectations

Product Measures

<u>Studies</u>	<u>Subjects</u>	<u>Criteria</u>	<u>Outcomes</u>
Evans and Rosenthal (1969)	Elementary School Pupils	I.Q.	No effects on total or verbal IQ
Goldsmith and Fry (1970)	High school Pupils	I.Q.	No effects on IQ
Fielder, Cohen, Feeney (1971)	Elementary school pupils	I.Q.	No effects on IQ
Fleming and Antonnen (1971)	Second graders	I.Q.	No effects on IQ
Flowers (1966)	Seventh graders	Reading maths IQ	Highs gained in reading and maths, not IQ
Schrank (1968)	Airforce personnel	Maths	Highs achieved more than lows
Burnham (1968)	7-14 year olds	Swimming	Highs improved in swimming ability
Schrank (1970)	Airforce personnel	Maths	No effects
Johnson (1970)	Nine year olds	Skilled task (marble dropping)	More marble dropping from highs

TABLE 1 (cont.)

(b) Induced Expectations

Product and Process Measures

<u>Studies</u>	<u>Subjects</u>	<u>Criteria</u>	<u>Outcomes</u>
Conn, Edwards, Rosenthal and Crowne (1968)	1st-6th graders	I.Q.	No effects on IQ; no overt differences in teacher behaviours
Claiborn (1969)	1st graders	I.Q.	No effects on IQ; no effects on teacher's overt behaviour
José and Cody (1971)	1st and 2nd graders	I.Q.	No change in IQ; no effects on teacher's overt behaviour
Beez (1968)	Kindergarten pupils	Word learning	Tutors taught highs more words
Carter (1969)	Kindergarten pupils	Word learning	Tutors taught highs more words
Brown (1970)	1st graders	Paired associates (States and Capital cities) learning	No expectancy advantage, but tutors tried to teach highs more pairs
Kester and Letchworth (1972)	7th graders	IQ and achievement test	No expectancy advantage on IQ and achievement tests; teachers spent more time and were generally more supportive of bright students
Meichenbaum, Bowers and Ross (1969)	Juvenile delinquents	Achievement test	Bloomers showed expectancy advantage in achievement scores, but not on grades assigned by teachers; more positive interactions and less negative teacher interactions with bloomers.
Rubovits and Maehr (1971)	6th and 7th graders	Teacher-pupil interaction	Teachers had more interactions with gifted students; requested more statements from them; and praised them more frequently

TABLE 1 (cont.)

(b) Induced Expectations

Product and Process Measures (cont.)

<u>Studies</u>	<u>Subjects</u>	<u>Criteria</u>	<u>Outcomes</u>
Rothbart, Dalfen and Barnett (1971)	8th graders	Teacher- pupil inter- action	No group difference in teacher praise and criticism, but teacher was more attentive toward brighter students; teachers considered brighter students to have greater potential for school success.

TABLE 1 (cont.)

(c) Naturalistic Expectations

Product Measures

<u>Studies</u>	<u>Subjects</u>	<u>Criteria</u>	<u>Outcomes</u>
Palardy (1969)	1st graders	Reading	Boys expected to do well did well, those not didn't
Doyle, Hancock and Kifer (1972)	1st graders	IQ, reading	Teachers systematically overrated IQ of girls and underestimated IQ of boys; higher reading achievement scores than IQ would predict
Douglas (1960)	8-12 years	School achievements (tracking)	High SES children were placed upwards, but low SES children were placed downwards; lows in higher sections improved, lows in lower sections deteriorated
Mackler (1969)	1st graders	School achievement	By end of first grade highs and lows differ by seven months on achievement. No student moves into top track after third grade
Baker Lunn (1970)	Elementary school pupils	English test	Low SES children are underrated on English test, high SES children are overrated

TABLE 1 (cont.)

(d) Naturalistic Expectations

Process Measures

<u>Studies</u>	<u>Subjects</u>	<u>Outcomes</u>
Becker (1952a) (1952b)	Kindergarten pupils	Teachers divided children into three ability groups; teachers interacted positively with highs
Rist (1970)		
Dalton (1969)	4th graders	Teachers were more direct and critical with lows, but more indirect with highs
Good (1970) Kranz, Weber and Fishell (1970)	1st graders	Teachers interact more frequently with highs
Rowe (1972)	Elementary school pupils	Teachers gave more time for highs to response to questions than lows. Teachers gave more but less appropriate praise to lows
Brophy and Good (1970a)	1st graders	No difference in total contacts; difference was in quality rather than quantity of contacts e.g. demand quality performance from highs, less frequent criticism directed at highs
Evertson, Brophy and Good (1972)	1st graders	Failed to replicate findings in Brophy and Good (1970a); instead, three teachers favoured lows, and three did not concern with either highs or lows

to read, Burnham (1970 cited in Brophy and Good, 1974) on the ability of children to swim, and Johnson (1970) on the ability of children to perform skilled tasks.

In two studies by Shrank (1968, 1970), teachers' expectations about whole classes were manipulated rather than those for individual students, using children's mathematical abilities as the criteria to measure expectation effects. Shrank found that students placed in the highest groups achieved significantly more on mathematics than those placed in the lowest groups even though the students were chosen at random.

Unlike induced expectation studies referred to above, the following naturalistic studies with product data were mainly concerned with measures employing school based criteria such as reading achievements.

Induced Expectation Studies with Process and Product Data

Studies by Cann, Edwards, Rosenthal and Crowne (1968); Claiborn (1969); and José and Cody (1971) found neither expectancy gains in pupils' IQ nor expectancy effects on overt teacher behaviours. José and Cody (1971) thought that their negative results may be due to the inability of experimenters to influence the already established teacher expectations in regard to their pupils. This was evidenced from post interview data with teachers in José and Cody's study during which eleven out of eighteen teachers stated that they did not expect more from the children who had been predicted to bloom academically.

Except for the abovementioned studies, the following reviews found that teacher expectation effects were mani-

fested in teacher behavioural patterns such as time given for pupils to respond to questions, positive reinforcements, negative reinforcements and so on, which were always subjected to perceived veridicality of information about pupils.

Thus Beez (1970) found that tutors taught more words to those children they were led to believe were clever during word learning tutorial sessions. Brown (1970) however, reported no expectancy advantage, but noted that tutors tried to teach children believed to be clever more pairs in pair associate learning of States and their capital cities.

More positive teacher interactions with 'bloomers' but fewer negative interactions were reported by Meichenbaum, Bowers, and Ross (1969), Rothbart, Dalfen and Barrett (1971), and Lester and Ketchworth (1972).

It would appear from the above studies that in cases where teachers believed the information given to them about children's abilities were real, such knowledge was found to affect teacher behaviours. The critical point seemed to be whether teachers honestly felt the children to be able or not able. If this assumption was true, then teacher-pupil interaction with pupils of different abilities would be most noticeable in naturalistic studies where information concerning children's abilities was true (veridical).

Naturalistic Studies with Product Data

Again school-based influences rather than IQ effects were reported to support the expectation hypothesis.

In a study comparing pre- and post-reading achievement results of students taught by teachers who believed differently about boys' reading abilities, Palady (1969) found that

boys taught beginning reading by teachers who expected them to do as well as girls did so, while those boys taught by teachers who did not expect them to do as well as girls did not do so.

A number of naturalistic studies involves tracking, i.e. a system whereby new entrants were assessed for their abilities in different school subjects and placed according to the results so obtained. The general findings by Douglas (1964); and Barker Lunn (1970) were that children placed in the lower tracks not only retained those tracks when they got to higher grades, but their achievement also deteriorated. This earlier research by Douglas (1964) now viewed as 'naturalistic' adds weight to the hypothesis that teacher expectations can affect pupil performance on school based subjects.

Naturalistic Expectation Studies with Process Data

Like in most induced expectation studies with process data, naturalistic studies also providing process data reported that teachers were influenced by their expectations concerning different pupils. These expectations were also manifested in differential teacher behaviours with each of the students. These studies are now reviewed.

In three primarily anecdotal studies, Becker (1952), Silberman (1969), and Rist (1970) observed that teacher-pupil interactions in the classroom were determined by teachers' impressions about pupils' abilities.

Silberman (1969) has shown that differential teacher attitudes were associated with teacher behaviour. Using a sample of ten female third grade teachers who taught in upper-

middle-class suburban school systems for at least three years, he obtained responses to the following interview items:

1. Attachment: If you could keep one student another year for the sheer joy of it, whom would you pick?
2. Concern: If you could devote all your attention to a child who concerns you a great deal, who would you pick?
3. Indifference: If a parent were to drop in unannounced for a conference, whose child would you be least prepared to talk about?
4. Rejection: If your class was to be reduced by one child whom would you be relieved to have removed?

Following these interviews, 20 hours of observation data were collected in each class to see how teachers treated the students they nominated. A summary of the results show that the teachers provided more praise to attachment students and held them up as models to their classmates; teachers initiated frequent contact with concern children and praised their work frequently, but were more careful to reward their efforts; teachers' contact with indifference children were seldom noticed, and finally teachers viewed rejection children as making illegitimate and overwhelming demands upon them, they often received criticism when they approached the teachers. According to Silberman if concern students could do no wrong, rejection students could do no right.

Rist (1970) noted at least nine variations in teacher behaviour in the kindergarten setting. These are given below:

1. Verbal supportive - "That's a very good job".
"You are such a lovely girl." "My ... but your work

- is neat."
2. Verbal neutral - "Laura and Tom, let's open our books to page 34." "May, your pencil is on the floor."
 3. Verbal control - "Lou, sit on that chair and shut up." "Kurt get up off that floor."
 4. Non-verbal supportive - Teacher nods her head at Rose. Teacher smiles at Liza. Teacher claps when Laura completes her problem at the board.
 5. Non-verbal neutral - Teacher indicates with her arms that she wants Lily and Shirley to move further apart in the circle. Teacher motions to Joe and Tom that they should try to snap their fingers to stay in beat with the music.
 6. Non-verbal control - Teacher focus at Lena. Teacher shakes finger at Amy to quit tapping her pencil.
 7. Physical contact supportive - Teacher places her arm around Mary as she talks to her.
 8. Physical contact neutral - Teacher touches head of Nick as she walks past.
 9. Physical contact control - Teacher strikes Lou with a stick. Teacher pushes Curt down in his chair.

Rist found during his period of observation that the teachers utilized somewhere between two and five times as much control-oriented behaviour with 'clowns', that is those children at the bottom group of the class they considered to be repeaters and real failures, as with the 'Tigers' that is children in the top group of the class. The combination of neutral and supportive behaviour for the 'Tigers' never dropped below 93% of the total behaviour directed towards

them by the teacher, the lowest figures for the 'Clowns' were 73%.

The results of two studies which employed teacher-pupil interaction categories as opposed to anecdotal studies cited above, are now presented.

Good (1970) sought out to assess opportunities given by the teacher for pupils to respond in four first grade classrooms. After two days of observations in each classroom he found that the number of opportunities given each child to respond was a function of his achievement ranking - high, middle, or low in the class. Good found high achievers consistently receiving many more response opportunities compared to low achievers in all the classes.

In another study, Brophy and Good (1970) found that

- a) high performing first grade pupils received praise more frequently for correct answers than low performing pupils,
- b) low performing pupils received criticism more frequently for wrong answers than high performing pupils, c) teachers responded by giving no feedback to pupil's responses (correct or incorrect) more frequently to low performing than high performing pupils.

In conclusion, Brophy and Good considered that these results are consistent with the possibility that teachers could translate expectancies into differential treatment of their pupils.

Support for Good (1970) and Brophy and Good (1970) was also illustrated by Willis (1970) who concluded that

".... the teachers provided consequences for the behaviour of the LE (Least Efficient students) which might be described as systematic extinction of the

behaviour the IE most needs to develop for social competence" (p. 5072A).

In a more recent study, Brophy and Good (1974) found that among nine classroom teachers observed only the behaviours of three of them support their earlier findings that teachers interacted differently with high and low teacher expectation pupils. The authors concluded that the phenomena of differential treatment given by teachers to pupils based on teacher expectations was not universal across teachers, but they also said that the difference between teacher-pupil interactions in the classroom among low and high ability pupils was a matter of quality rather than quantity.

Additional Data

In addition to the above studies, research has found that teacher expectations concerning pupil abilities were based on the physical as well as the interpersonal factors of the students. Teachers' expectations concerning pupil abilities based on physical factors have been reported by Yee (1968), Rubovits and Maehr (1973) on race; Cherry (1974), Goebes and Shore (1975) on sex; Clifford and Walster (1973), Rich (1974) on physical attractiveness. Teachers' expectations concerning pupil abilities based on interpersonal factors have been reported by Becker (1953), Rist (1970) on social class; and, Feshbach (1969), Silberman (1969) on personality. Finally, teacher expectations concerning pupils' abilities were found to be quite accurate (Willis, 1972, cited in Brophy and Good, 1974; Haigh, 1974). For example, Haigh found that the rankings which could be interpreted as reflecting teacher expectations teachers

assigned to various students concerning reading abilities compared well to their scores on reading performance tests.

It would be interesting to note that few studies have attempted to explore the possibility that teacher-pupil **interaction** could be a function of the 'geography' of the classroom such as seating location of the pupils. For example, Adams and Biddle (1970) discovered that most classrooms contain what they called 'action zone' where teachers spent most of their time interacting ^{with} the students. It has been suggested that the frequency of teacher-pupil interaction may be the function of the seating location of children. Some support to Adams and Biddle (1970) were obtained by Delefes and Jackson (1972) who found students seated in the front or middle room to involve more in teacher-pupil interaction, but Bates (1973) failed to find any support for the hypothesis regarding seating location. While these studies were not central to the present thesis, they are important in that they go beyond the present framework of investigating the antecedents of teacher-pupil interaction in the classroom.

Teacher Expectation Studies - a summary of results

In summary, the results are

1. There was no direct observable evidence to suggest that teacher expectations affect the cognitive behaviour (e.g. IQ) of pupils. The fact that teacher expectations may affect pupil IQs at the lower grades suggests that perhaps at that level teachers have not formed firm impressions of children's abilities.
2. There were direct observable evidence that teacher expectations affect school dependent behaviours such

as reading and mathematic abilities of high teacher expectation pupils. This suggests that perhaps IQ is more stable in character than school-based subjects. The finding also gave support to Thorndike (1969) who felt that "the self-fulfilling prophecy could be most effective in those areas most directly teacher based and school dependent." (p. 692).

3. Teachers were found to communicate their differential expectations regarding pupils' abilities in terms of the frequency and type of interactions. The findings were that the frequency and quality of teacher-pupil interactions favoured those pupils for whom teacher expectations were high compared to those pupils for whom teacher expectations were low.
4. Where expectations have been induced, informations concerning pupils' abilities affect teacher expectations only when these informations agree with teacher judgments and attitudes.
5. Teacher expectations were not based solely on perceived pupils' abilities but were based on both physical and interpersonal factors.
6. Teacher expectations concerning pupil abilities were found to be quite accurate and stable.

The results of previous expectation studies suggest that it would be more useful for future studies to abandon the Rosenthal and Jacobson product type studies in favour of product and process data. Research may also benefit more from naturalistic studies because they deal with actual classroom situations, and avoid any side effects arising from

induced expectations.

Some review of the literature on parent-child relationships have been included in this Chapter, in view of the possibility that success or failure at school could be a function of the attitudes parents hold towards their children. For example, it has been found that middle and lower S.E.S. pupils and parents have the same educational aspirations but with the lower classes it is often a wish to achieve whereas with the middle class achievement it is an expectation (Swift, 1968; Sugarman, 1970). The next section reviews of the literature on parent-child relationship studies which suggest that parent-child relationship is a function of parental attitudes, and this in turn determines the child's success or failures at school.

ii. Parent-Child Relationship Studies

Parental Attitudes and Children's Success at School

The studies reviewed below found that parent attitudes are directly related to children's success or failures at school.

Hence, Medinnus (1961) concluded that the lack of parental encouragement could be a causal factor in the child's poor adjustment to the demands of the first grade. St. John (1972a, 1972b) studied mother-child congruence in school-related attitudes among both black and white mothers. It was found that maternal estimations and aspirations, although more optimistic than those of the children themselves, were better predictors of children's attitudes than were their socio-economic background. Douglas (1964) found that not only were the highest average scores on performance tests obtained

by children whose parents showed the most interest in their education but that this relationship persisted within each social class.

Vellekoop (1969) claimed that parents determine to a large extent pupils' perceptions of themselves, and that the children entered school with all the values, knowledge and skills they acquired at home. While correlating children's aspiration with their parents' S.E.S. Vellekoop did not, nevertheless, attempt to explore how parents actually exert their influence on the children. However, a study by Strodtbeck (1962) among Italian and Jewish immigrant families in America did just that. Strodtbeck found that the Jewish families stressed the importance of education and intellectual attainment. They were ambitious for their children, compared with the Italians who were pessimistic about the chance of their children getting on in the world. The Jewish families seemed to believe that their future depended upon their own efforts, while the Italians believed their destiny was outside their control.

In a study relating parent and teacher beliefs about education, Ashcroft (1972) asked parents and teachers what they considered to be proper pupil behaviours in order for them to be successful at school. He found that where there was a high consensus between teacher and parent beliefs about appropriate pupil school behaviours, there was a high probability of the teacher producing low 'negative sanctioning' and high 'positive directing' towards the child. But where there was a high dissensus of parent and teacher beliefs, teachers were found to apply more 'negative sanctions' to the child. Ashcroft suggested that parental attitudes affected

the child's behaviour at school, and that in turn determined the quality of teacher-pupil interaction in the classroom. Ashcroft, however, did not investigate how parental attitudes affected parent-child relationship in the home.

Differences in Parent-Child Relationships

Parental attitudes towards their children may be reflected in differential parent-child relationship. Support to this statement is given below. These studies are not, however, designed to examine parent-child expectations, but they demonstrate that parents treat their children differently according to the sex of the child, the ordinal position of the child, and the ability of the child.

Bronfenbrenner (1961) found that among tenth grade adolescents, girls were especially likely to be overprotected but independence, initiative and self-sufficiency were especially valued for boys. He suggested that these differences were the result of differential aspirations parents held for their children. Neegle (1952) and Tasch (1952) found in post interviews that fathers reported not only that they expected different behaviour for their sons and daughters but they also said that they participated in different activities with their sons than with their daughters.

Research has also indicated that parental responses to children were also a function of the child's ordinal position. The findings by Gilmore and Zigler (1964), Rothbart (1967), Rothbart (1971) suggest that parents tend to be more supportive of, and also tend to exert more pressure for achievement upon first-born children. Rothbart suggests that these findings may reflect a greater anxiousness by the mothers about

good performance from the first-born child.

It has been reported by Rau (1967), Kogan (1973) and Tzuen-Jen Lei (1973) that parents favour children who were not at all handicapped. For example, among the mentally retarded children, Rau (1967) reported that fathers of high achievers reported greater frequencies in such socio-emotional contacts as greeting the child, loving him, and talking to him as did fathers of low achievers. No suggestion of differential parental expectations was made in these three studies, however.

To summarize, the review on parent-child relationship has shown that (a) research has been unanimous in recognizing that parental encouragements and supports are crucial in determining a child's success or failure at school; (b) studies indicate parent-child relationships may be a function of parental attitudes towards the children. Research concerning the last point are still lacking, and it is with this concern that the present thesis incorporates an examination of parent-child relationships in terms of parent expectations concerning children's ability in the research design.

Summary

This Chapter began with the proposition that schools may discriminate against the economic and ethnic subcultures so that their failures is assured. Support for the proposition was demonstrated in the studies by Becker (1952), and Rist (1970).

Current research into the school milieu suggests that teachers are engaged in self-fulfilling prophecies concerning pupils' abilities. A review of the literature on teacher

expectation studies found differences in teacher expectations concerning pupils' abilities to be associated with differential pupil performance on measured abilities such as mathematics and readings but little support was obtained on IQ tests. Differences in teacher expectations concerning pupils' abilities were also demonstrated to be associated with differences in teacher-pupil interactions.

A short review of the literature on parent-child relationships revealed that parents might also be engaged in self-fulfilling prophecies. The weight of evidence suggests that the school and the home complements each other (Bowles, 1972) to the advantage or disadvantage of the child.

The present study seeks, therefore, to investigate aspects of both teacher expectations and parent expectations, and subsequent teacher-pupil interactions. In this case research has been undertaken in Malaysia where questions concerning the quality and impact of educational process are now being investigated.

CHAPTER II

SOURCES, THEORETICAL FOUNDATIONS,

RESEARCH MODEL AND HYPOTHESES FOR EXPECTATION STUDIES

Introduction and Sources of Expectation Studies

The literature review in Chapter I has identified some of the consequences arising from differences in teacher expectations concerning pupils' abilities. Possible consequences of differences in parent expectations concerning children's abilities and their implications for parent-child relationships have also been pointed out.

In examining the theoretical foundations of teacher expectation studies it would be necessary to note that there have been at least three sources of expectation studies:

Firstly, there were the methodological questions of experimenter bias affects (Rosenthal and Fode, 1963; Rosenthal and Lawson, 1964). For example, in an experiment dealing with rats Rosenthal and Lawson (1964) found that the experimenters who were led to believe that their subjects (i.e. rats) were genetically superior felt (expected) those rats to perform better on a given task, compared to those experimenters who were led to believe that the rats were genetically inferior. Those rats were in fact of the same breed. The authors attributed the findings to experimenter bias affects (or expectation affects). Concerns over the methodological questions of experimenter bias affects have been expressed by a number of researchers. The controversies surrounding this methodological question are found in Barber et al. (1969) and Rosenthal (1969).

Secondly, the expectation studies have also been based

upon an aspect of sociological role theory as developed by Merton (1948, 1968). Specifically, Merton was concerned with the concept of the self-fulfilling prophecy which will be given a fuller treatment in this chapter.

Thirdly, expectation studies have also been used as an explanatory construct dealing with teacher behaviour (e.g. Finn, 1972; Brophy and Good, 1974). In studies reported by Brophy and Good (1974) it was demonstrated that the quality and quantity of teacher-pupil interaction was a function of teacher expectation concerning pupils' abilities which were self-fulfilling.

Chapter II specifically examines the origins of the concept of self-fulfilling prophecy which has been strongly implicated in teacher expectation studies. This is followed by (i) a brief description of the relationship between self-fulfilling prophecy and expectation; (ii) an examination of the meaning of expectation as is used in teacher expectation studies; and (iii) an examination of the typology of relationships of event likely to arise from the formation of expectation.

This Chapter concludes with a research model and paradigms for conceptualizing the relationship between parent and teacher expectations concerning children's ability, an outline of the hypotheses to be tested, and a brief description of the measures used to test the hypotheses.

The Origin and Concept of Self-fulfilling Prophecy

According to Rosenthal and Jacobson (1968) the concept of self-fulfilling prophecy was applied in a clinical context as far back as 1898 by Albert Moll. For example, Moll

referred to patients suffering from hysterical paralyses who recovered at the time they expected to be cured. The same was true in cases of insomnia, nausea, impotence, and stammering, all recoveries coming about when their advent was most expected. It was, therefore, Moll's belief that his subjects behaved as they believed they were expected to behave.

Later, sociologist Robert Merton (1948; 1968) began to apply the concept to large scale analysis of social and economic phenomena such as racial prejudice and bank failures. Merton (1968) illustrated the process of self-fulfilling prophecy with an example of a bank failure. In his story Merton told how depositors began to believe that the sound, solvent Last National Bank was foundering. The rush to withdraw deposits indeed caused the bank to founder (Merton, 1968, p. 477).

According to Merton, the parable illustrates that, "the self-fulfilling prophecy is in the beginning a false definition of the situation evoking a new behaviour which makes the originally false conception come true." (Merton, 1968, p. 477).

He felt that in day to day living it was the failure to comprehend the operation of the self-fulfilling prophecy which led people to retain such ethnic and racial prejudices as the belief that the Negro was a strikebreaker and was therefore a bad unionist, or the Jews were shrewd and therefore made good businessmen. Further, according to Merton,

"people experience these beliefs, not as prejudices, not as prejudgments, but as irres-

istible products of their own observation."

(Merton, 1968, p. 478).

Perhaps similar conclusions may be made with regard to teacher expectations concerning pupils' abilities based on stereotypes such as social class, sex, and other physical appearances. The studies by Becker (1953) and Rist (1970) mentioned earlier in the review of literatures are illustrative.

In the section below, the relationship between self-fulfilling prophecy and expectation is briefly described.

The Relationship Between Self-fulfilling Prophecy and Expectation

The relationship between self-fulfilling prophecy and expectation has been explained in Merton (1968) in terms of role theory. According to him, a role has certain normative rights and duties such that, when the role incumbent puts these rights and duties into effect, he is said to be performing his role. On the other hand, the expectations define what the role incumbent should or should not do under the various circumstances while occupying the particular role in the social system.

Merton then stated that role could be considered to be one of the basic units in social science, while self-fulfilling prophecy was one of its basic theorems. To put it simply, Merton explained that by the theorem of self-fulfilling prophecy, one's expectations of another's behaviour could become a more accurate prediction of that behaviour simply for its having been made.

The meaning of expectation as it has been used in teacher expectation studies requires a special definition. This is given by Finn (1972) in the following.

The Meaning of Expectation in Teacher Expectation Studies

Finn (1972) distinguished between expectations from hopes, desires or aspiration. He said that:

"An expectation, or expectation set is a conscious or unconscious evaluation which one person forms of another, or of himself, which leads the evaluator to treat the person (or event) in such a manner as though the assessment were correct" (p. 390).

This is different from hopes, desires, or aspiration in that,

"It is the anticipation that shapes the manifestations of expectations While the concept of aspirations implies some striving towards a desired goal, expectations incorporate an additional estimation of reality factor. That is expectations imply the anticipation of the behaviour most likely to actually occur, given the individual circumstances" (p. 390).

Expectations of the kind defined by Finn are quite common in daily life. In the school for example, teachers at the beginning of the new year and facing a new class, may express a desire for all the pupils in his class to achieve well at the end of the school year, but his or her past experience will tell him that this is not possible. The teacher will probably do very little to help those pupils thought to be most unlikely to succeed as the year progresses.

The same kind of analogy may be applied to parent expectations concerning their children's abilities.

Although the above examples have illustrated some negative consequences of the self-fulfilling prophecy, the consequences indeed may be negative, positive, or none at all. This is explained through a typology of relationships between events and prophecy in Rosenthal and Jacobson (1968). The relationship is described below.

Expectation: a Typology of Relationship

Assuming that people make prophecies about future events or hold expectations about them, Rosenthal and Jacobson (1968) examined the possible relationship between prophecies of events and the events as they are likely to occur.

The relationship between prophecy and event falls into three types, giving rise to 8 possibilities. They are given below:

- I) In type I (no effects), there is actually no relationship between prophecy and event, and no relationship is claimed (possibility 1); or a relationship may be claimed (possibility 2).
- II) In type II (negative effects), some relationship between prophecy and event is claimed but the relationship is negative; the negative relationship may not be due to the prophecy (possibility 3); or it may be due to the prophecy (possibility 4).
- III) In type III (positive effects), the relationship between prophecy and event is positive. The positive relationship may not be due to the prophecy (possibility 5); it may be coincidental (possibility 6); it

may be due to related past events (possibility 7); it may be due to the prophecy (possibility 8).

An important aspect of the above typology is that the relationships do not have to be negative. For example, in possibilities 3 and 4 the prophecy may accurately predict its own opposite, a state of affairs Merton (1968) calls "suicidal prophecy" (p. 477). In this case, a student who worries about failing his examinations will take extraordinary measures to ensure that the opposite will happen.

In teacher expectation studies, and in the present thesis, our interest lies with possibility 8, where there is the type of relationship between prophecy and subsequent event in which the prophecy is not incidental but instrumental in its own fulfilment. For example, the student, worried about his possible failures decided that even if he did extra work he would still fail. Or, as had been earlier pointed out, either the teacher or the parent or both perceiving that some children are clever and are likely to succeed in school, while others are not clever and therefore are unlikely to succeed in school, will assist those children they expect to do well, but will not assist those for whom they expect otherwise.

While Merton's theory may provide a very broad perspective for this investigation the construct of expectation is considered in the context of home/school relationships. Consequently, to allow for the more specific focus of the study (i.e. expectations of parents and teachers concerning children's ability) a research model used by Aschroft (1972) and Brophy and Good (1974) has been developed. As indicated

above it deals with possibility 8, in Rosenthal and Jacobson's typology. The research model is given below.

A Research Model Illustrating Parent-Teacher Expectations Effects upon Children's Ability

The research model assumes that not only are children objects of parent and teacher expectations, but that these expectations may become translated into self-fulfilling prophecies. Specifically, the model serves to illustrate ways in which parents and teachers are engaged in self-fulfilling prophecies concerning children's abilities.

- a) Parents form differential expectation regarding their children's ability very early in their lives prior to schooling.
- b) Parents begin to socialize their children in accordance with their differential expectations for them.
- c) The children develop expectations of themselves in response to their parents expectations of their ability. They will respond to their parents with behaviour that in general complements and reinforces their parents' particular expectations for them.
- d) When the children begin school, teachers too will form different expectations regarding their pupils' ability and limitations.
- e) Teachers begin to treat their pupils in accordance with their differential expectations for them.
- f) The children may either retain their former expectations of themselves, or modify their self-expectancies depending on whichever one they regard as their

significant other - their parents or their teachers. In the school they will respond to their teachers, and at home they will respond to their parents with behaviours that complement and reinforce their significant other's particular expectations for them.

- g) Where there is a consensus between parental and teacher expectations, their treatment of the children will tend to be in the same direction, providing support or disapproval for the children's behaviour in and out of school.
- h) Support for, or disapproval of the children in whatever form tends to enhance or diminish his opportunities for school success.

Assuming that the expectations teachers or parents held concerning children's abilities were either 'highs' (clever) or 'lows' (not clever), the relationship between teacher expectations and parent expectations may be depicted in the paradigm shown in Figure 2.1.

		Parent Expectation	
		High	Low
Teacher Expectation	High	1	3
	Low	4	2

Figure 2.1. The Relationship between Teacher and Parent Expectations of the Same Child.

The paradigm encompasses four different conditions of match or mis-match between parents and teachers. Cells 1 and 2 encompassing parent-teacher consensus, 3 and 4 dissensus. Respectively:

- Cell 1: Where teacher's expectations for the child are high, and the parent's expectations for the child are also high.
- Cell 2: Where teacher's expectations for the child are low and the parent's expectations are also low.
- Cell 3: Where teacher's expectations for the child are low, but the parent's expectations are high.
- Cell 4: Where teacher's expectations for the child are high, but parent's expectations for the child are low.

A Summary of the Theoretical Basis, and an Outline of the Hypotheses to be Tested

It was mentioned earlier in the review of literature in Chapter I that where teachers held high expectations regarding their pupils' ability, the frequency and quality of interactions with the pupils were higher for those pupils for whom teacher expectations were high (TEH) compared to pupils for whom teacher expectations were low (TEL).

The literature on parent-child relationships has also shown some indications that the quality of parent-child relationships may be a function of parent expectations.

Since individuals are known to hold certain expectations towards themselves and towards other people, it was also likely that the child could be the object of both parent and teacher expectations which in turn are self-fulfilling.

The hypotheses concerning these expectations about pupils' ability are now given as follows.

H₁ Differences in teachers' expectations concerning pupils' ability will result in differences in teacher-pupil interaction in the classroom.

Specifically, differences in teacher expectations will result in

- H₁
- a) More total questions
 - b) More direct questions
 - c) More indirect questions
 - d) Less negative feedback
 - e) More positive feedback
 - f) More positive sanctions
 - g) Less negative sanctions
 - h) More directions
 - i) More positive contacts
 - j) Less negative contacts

- for pupils for whom teachers hold high expectation, than for pupils for whom teachers hold low expectations.

H₂ Differences in parents' expectations concerning children's ability will result in differences in parent-child relationships.

Specifically, differences in parent expectations concerning children's ability will result in

- H₂
- a) Higher parental scores on EAA.
 - b) Higher parental scores on ELD.

- for children for whom parents hold high expectations, than for children for whom parents hold low expectations.

H₃ Pupils for whom teachers' expectations concerning their ability were high (TEH) will have higher scores on

- (a) PIPS (b) MLT (c) PAI
 (d) EAA (e) ELD

- compared to pupils for whom teachers' expectations concerning their ability were low (TEL).

H₄ Children for whom parents' expectations concerning their ability were high (PEH) will have higher scores on

- (a) the PIPS (b) the MLT (c) the PAI

- compared to children for whom parents' expectations concerning their ability were low (PEL).

H₅ (a) There will be a positive and significant correlation between teacher expectations and parent expectations concerning children's ability.

(b) There will be a significant association between teacher-pupil interactions and parent-child relationships with those children teachers and parents agreed to be of high or low ability.

The above hypotheses have assumed that parents would classify their children into 'highs' or 'lows' as depicted in Figure 2.1. However, the difficulties encountered in naturalistic research often prevent the elegant application of experimental design. The parents interviewed in this study were clearly reluctant to classify expectations concerning their children's ability into high-low categories. This may be due to the phenomena known as 'Extreme Response Style (ERS)' defined as

"the tendency to endorse extreme response categories in a multiple response format such as 'strongly agree/disagree' rather than less extreme responses like 'somewhat agree/disagree' or 'mild agree/disagree'" (Chun and Campbell, 1974).

among the Western cultures, but not among Asian cultures, the latter preferring the less extreme responses, such as high, medium, low. Parents' preference for the less extreme responses could also be due to the rural-urban influence, because no problems were discovered when the two fold categories of 'highs' and 'lows' were used in a pilot test of the parent-child relationship questionnaires among parents in a town situated only seven miles away from the village where parents included in the present study lived.

As a result of the problems just mentioned, it rapidly became apparent that a three fold classification of children by the parents into High-Medium-Low was an essential change. The paradigm in Figure 2.1 is now altered to incorporate the three fold classification and is now depicted as another paradigm in Figure 2.2 below:

		Parent Expectation		
		High	Medium	Low
Teacher Expectation	High	1	2	3
		4	5	6

Figure 2.2. The Relationship between Parent and Teacher Expectation of the Same Child.

Figure 2.2 encompasses six different conditions of match and mis-match between parents and teachers. Cell 1 and 6 encompassing parent-teacher consensus; cells 2, 3, 4 and 5 dissensus. They are described below:

- Cell 1: Where teacher's expectations for the child are high, and the parent's expectations for the child are also high.
- Cell 2: Where teacher's expectations for the child are high, but the parent's expectations are medium.
- Cell 3: Where teacher's expectations for the child are high, but the parent's expectations are low.
- Cell 4: Where teacher's expectations for the child are low, but parent's expectations are high.
- Cell 5: Where teacher's expectations for the child are low, but parent's expectations are medium.
- Cell 6: Where teacher's expectations for the child are low, and parent's expectations for the child are also low.

The change to a three fold classification of children's ability by parents made it necessary to include the following additions to hypotheses 2 and 4.

- H₂ Differences in parent expectations concerning children's ability will result in
- H₂ (c) higher parental scores on EAA
 (d) higher parental scores on ELD
- for children for whom parents hold high expectations, than for children for whom parents hold medium expectations.

H₂ (e) higher parental scores on EAA

(f) higher parental scores on ELD

- for children for whom parents hold medium expectations, than for children for whom parents hold low expectations.

H₄ (b) Children for whom parents' expectations concerning their ability were medium (PEM) will have higher scores on

(a) the PIPS (b) the MLT (c) the PAI

- Compared to children for whom parents' expectations concerning their ability were low (PEL).

H₄ (c) Children for whom parents' expectations concerning their ability were high (PEH) will have higher scores on

(a) the PIPS (b) the MLT (c) the PAI

- Compared to children for whom parents' expectations concerning their ability were medium (PEM).

The hypotheses described in this chapter have been subsequently tested using the measures given below:

Measures Used in Hypotheses Testing

In this study the following measures were employed in hypotheses testing:

- i) a measure of teacher-pupil interaction categories based on Brophy and Good (1969) and Aschroft (1972). They are: frequency of total questions; frequency of direct questions; frequency of indirect questions; frequency of negative feedback; frequency of positive feedback; frequency of positive sanctions; frequency of negative sanctions; frequency of directions; frequency of positive contacts; and frequency of

negative contacts.

- ii) a measure of parent-child relationship based on Marjoribanks (1971). They are: parental emphasis on achievement and activity (EAA); and, parental emphasis on language development (ELD).
- iii) pupils' general ability measured on the Pacific Infants Performance Scale (PIPS).
- iv) pupils' Malay language ability measured on the Malay Language Test (MLT).
- v) a measure of pupils' Parental Advantage Index (PAI).

The instruments related to the above measures are described fully in the next chapter on research methods and design.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

In this chapter, the research design is first outlined, then follow 1) details of methodology, specifically, the research instrument, 2) sample identification and selection, 3) data collection and 4) statistical models and levels of significance used.

Research Design

The variables upon which the design is based are

- a) measures of teacher expectations concerning pupils' ability - high and low.
- b) measures of parent expectations concerning children's ability - high, medium and low.
- c) measures of teacher-pupil interaction in the classroom
- d) measures of parent-child relations
- e) measures of pupils' abilities
- f) measures of pupils' socio-economic background.

A diagram of the variables studied in the research design is presented in Figure 3.1. The Figure shows parent and teacher expectations for pupils; independent measures of pupils' language ability (MLT), cognitive ability (PIPS), and pupils' socio-economic background (PAI); categories of teacher-pupil interaction and parent-child relationship.

The factors central to the study are

- a) a measure of the quantity and quality of teacher-pupil interaction in the classroom with children for whom teachers held differential expectations,
- b) a measure of the quantity and quality of parent-child

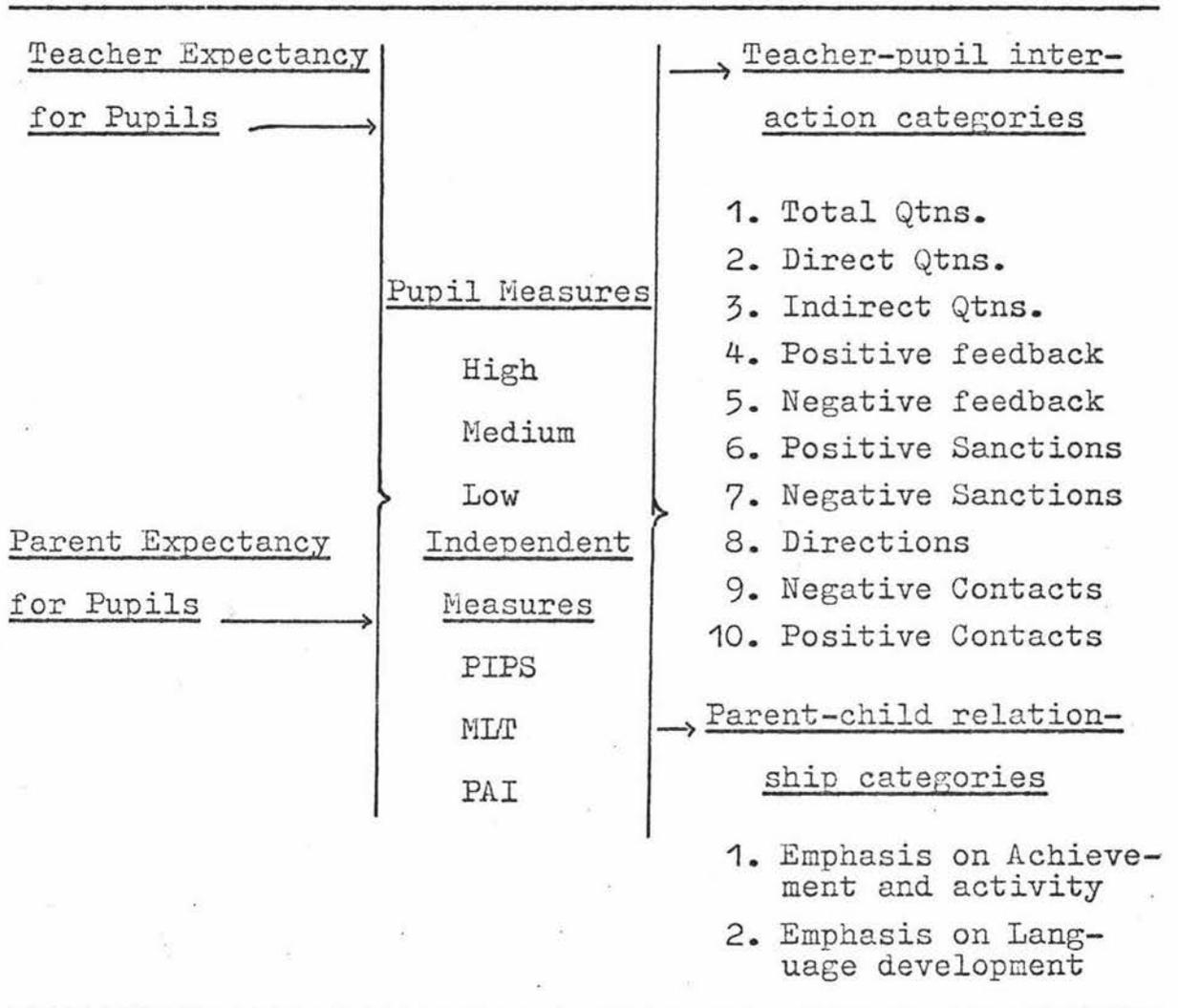


FIGURE 3.1

Diagram of the measures used in the research design

relations with children for whom parents held differential expectations,

- c) a measure of pupils' abilities and socio-economic background,
- d) a measure of parent-teacher consensus on their expectations of the same child, and their treatment of the child.

1) The Research Instruments

A brief description of the instruments used in hypotheses testing have already been given earlier in Chapter II. This section discusses in greater detail the instruments which have been employed in the present investigation:

a) Teacher-pupil interaction observation schedules

Following one week of preliminary observations of teacher-pupil interaction with new entrants in two New Zealand schools, an observation schedule based on Brophy and Good (1969) and Ashcroft (1972) was designed. The following were the final categories used.

1. Frequency of total questions asked of the pupils by the teacher.
2. Frequency of direct questions asked of the pupils by the teacher.
3. Frequency of indirect questions asked of the pupils by the teacher.
4. Frequency of positive feedback given by the teachers to the pupils.
5. Frequency of positive sanctions given by the teachers to the pupils.
6. Frequency of negative feedback given by the teachers to the pupils.

7. Frequency of negative sanctions given by the teachers to the pupils.
8. Frequency of directions given by the teachers to the pupils.
9. Frequency of positive contacts given by the teachers to the pupils.
10. Frequency of negative contacts given by the teachers to the pupils.

For the purpose of future reference throughout this study, the above teacher-pupil interaction categories are designated as total questions, direct questions, indirect questions, positive feedback, positive sanctions, negative feedback, negative sanctions, directions, positive contacts and negative contacts, respectively.

Teacher-pupil interaction categories 1, 9, and 10 in the above have been derived as follows. Category 1 is a summation of 2 and 3. Category 9 is a summation of 4 and 5. Category 10 is a summation of 6 and 7.

The contents of teacher-pupil interaction categories are given in Table 3.1. In addition, details of the coding guide and recording form are given in Appendix 2.A and 2.B.

A supervised training in the use of the observation schedules in New Zealand classrooms was also given to the author before leaving for Malaysia. The practice was considered satisfactory when agreements between two observers reached 85 percent.

b) Parent-child relationship questionnaires

Item selection for the parent-child relationship questionnaires were obtained from Sears (1957), Johansson

TABLE 3.1

Contents of Teacher-Pupil Interaction Categories

Direct Questions

Covers all instances when teacher calls on a child who does not volunteer a response opportunity (except sanctions and directions).

Indirect Questions

Teacher creates response opportunity but calls upon a child who indicates a desire to respond.

Positive Feedback

- a. Praise i.e. positive evaluation - more than merely indicate child has given a correct answer.
- b. Affirmative of correct answers: Affirms Right. Teacher indicates that child's response is correct or acceptable (verbally or non-verbally).
- c. Rephrase, provides clue or provides answer to given incorrect or part correct answer, or in any way assisting the pupil without indicating anger or criticism.

Negative Feedback

- a. Negation of Incorrect Answers: Negate Wrong. Teacher indicates that child's response is incorrect or unacceptable (verbally or non-verbally), without going on to assist pupil.
- b. Criticism: Negative evaluation - more than merely indicates response is wrong. Teacher also expresses anger or personal criticism of the child even though he provides answers, clues or he rephrases the question.
- c. No Feedback:
 - i) Teacher does not react to child's answer. For example, teacher may ask a new question, or teacher directs attention to another child.
 - ii) Child indicates he is not aware of teacher acceptance or non-acceptance of his answer.

Procedural Directing (Directions)

These are essentially utterances of an ordering or directing nature in which the emphasis is on the pupil continuing present actions or doing something different e.g. "Carry the basket", "You may carry on reading."

Sanctions

- i. Positive sanctions. These are essentially valuing responses, with the subject, or his behaviour, or his artefacts, or his work found to be good. The basic criteria for this category of teacher behaviour are approval and appreciation. e.g. "John is smartly dressed today." Teacher stamps Mary's book because she copies correctly.

TABLE 3.1 (cont.)

- ii. Negative Sanctions. These are essentially valuing responses, with the subject, or his behaviour, or his artefact, or his work found to be unsatisfactory or bad. The basic criteria for this category is teacher disapproval or denigration. Generally this includes reproach, blame, criticism, sarcasm, and discouragement. e.g. "I do not like Nancy looking outside the classroom." Teacher looks at Ahmad's book, but failed to stamp the book although teacher stamps Lim's book earlier.

(1965), Marjoribanks (1971), Newson (1963) and White and Watts (1973). The design was based on Marjoribanks (1971) who divided his questionnaires into various sub-categories such as press for achievement, activity and language development. Each sub-category was found by Marjoribanks to correlate significantly with children's level of intellectual ability. As this study was partly concerned with parent expectations concerning children's ability, a questionnaire based on the design by Marjoribanks were thought appropriate.

Certain precautions were, however, taken to select only those items relevant to the Malaysian situation where the population is relatively rural, and the country relatively under-developed. The questions were checked by staff members of the Education Department, Massey University, primarily for their content validity. Back translations of the questionnaires were made to check for their accuracy in the Malay language. This procedure has been recommended by Brislin. (See Brislin et al., 1973).

Altogether forty items were included in the original parent-child relationship interview questionnaires for use in Malaysia. However, only those items with a discrimination index of 0.3 and above were retained for analysis (Nisbet and Entwistle, 1970, Wilmut, 1975). The procedure for item analysis was based on Gronlund (1971). On the basis of content the remaining items were then classified into two scales (i) Parental Emphasis on Achievement and Activity (EAA), and (ii) Parental Emphasis on Language Development (ELD). The contents of EAA and ELD are shown in Table 3.2.

TABLE 3.2

Parent-child Relationship Questionnaire:

Questions with a discrimination index of 0.3 and above

1. Parental Emphasis on Achievement and Activity

(a) Realistically how would you rate X on the scale below?

1	2	3
Clever (High)	Average (Medium)	Not clever (Low)

- (b) How far do you think X will succeed in school?
- (c) What do you hope your child will become (job) when he grows up?
- (d) If you had a chance would you continue your education?
- (e) Before X started primary school did he know the alphabet A, B, C?
- (f) If X knew A, B, C who taught him?
- (g) Could X count 1-10 before he started school?
- (h) If X knew how to count before he started school, who taught him?
- (i) Did you and your husband even discuss X's education?
- (j) The government nominates the school to which you sent your child. Assuming you had a choice, would you have sent X to a different government school?
- (k) With reference to (j) can you give a reason?
- (l) Children are endowed with certain skills, such as the ability to draw, paint, do carpentry, etc. Did you ever try to develop any of his skills?
- (m) Does X have any toys?
- (n) How did X get those toys?
- (o) When X first learnt how to walk did you let him play outside the house when you were not with him?
- (p) Did you ever take X for outings, for example, bring him along with you to the market?
- (q) When X is busy doing his own work, e.g. looking at pictures, did you ever call on him to help you, for example ask him to attend to the baby crying?

2. Emphasis on Language Learning

- (a) How important is it for X to learn to speak Malay properly?
- (b) Who should teach Malay to X?
- (c) Do you have the following items?

radio	Malay books
television	Malay magazines
record player	Malay newspapers
	Encyclopaedia

TABLE 3.2 (cont.)

- (d) Do you or your husband ever listen to Malay programmes over the radio or TV?
- (e) Does X ever listen to the radio or watch TV programmes with you?
- (f) Do you or your husband ever read Malay books or Malay magazines or Malay newspapers?
- (g) Did you or your husband ever read to X from the literature above?

∟N.B. Where parents were illiterate they were asked if they told stories to their children.∟

c) Questionnaires on Parental Socio-economic Background

A conventional Western S.E.S. scale such as the one developed by Elley and Irving (1972) was not readily available in Malaysia. However, Murad (1973) in the Dropout Study in Malaysia used a 'parental advantage index' (PAI) in place of a S.E.S. scale. The PAI made use of information such as levels of parents' education, and combined this with data on house, means of transportation and so on available to the family, in such a way that the more points one obtains the more advantaged one is (Murad, 1973). For example, in Malaysia, a child who has electricity in the home may be considered to be more advantaged over a child who has to study under a home-made Kerosene lamp.

The items used in the PAI questionnaires in this study were subjected to a similar item discrimination analysis as that employed in the parent-child relationship questionnaires, except that in the present analysis items with a discrimination index of 0.25 and above were used. These items are shown in Table 3.3.

d) Malay language ability test (MLT)

The only Malay Language Ability Test available was that test developed by the Curriculum Development Unit, Ministry of Education Malaysia (1970). This had been used by the Education Ministry as an interim measure only. In general the MLT was designed to measure the ability of the child to follow simple instructions and to speak and understand 'standard Malay', which is the official version used in textbooks and as a medium of instructions in Malaysian schools. This test was adopted for use in the present study with the

TABLE 3.3

Parental Advantage Index: Items with
Discrimination Index 0.25 and Above

1. Occupation of Parents
2. Years of schooling of parents
3. Availability of reading materials
 - Malay books, Malay magazines
 - English books, English magazines
 - Encyclopaedia
 - Dictionaries
4. Means of Communication
 - Telephone
 - Television
 - Radio
 - Malay newspapers
 - English newspapers
5. Type of House
 - Modern brick
 - Modern wooden
 - Wooden
 - Wood with bamboo
 - Bamboo only
6. Lighting
 - Electric
 - Gas lamp
 - Kerosene home-made lamp
7. Toilets
 - Indoor flush
 - Outdoor flush
 - Indoor dug
 - Outdoor dug
 - No toilet
8. Sleep facilities
 - Separate bedroom for children
 - Beds and mattresses for all
 - Mattresses only for all
 - Mosquito net
 - Mosquito coils
 - Mats and on the floor
9. Eat facilities
 - Dining tables
 - On the floor

TABLE 3.3 (cont.)

10. Guest facilities

- Lounge suite (wooden, steel)
- Lounge suite (rattan)
- Use of mats on the floor

11. Fuel

- Electric
- Gas
- Kerosene
- Charcoal
- Wood

12. Dependents

Number of people in the house

following modifications. The alteration concerned two aspects of the test described below.

- i) The original subtests required both a reading and a written knowledge of the Malay language on the part of new school entrants i.e. children were required to read and answer given questions themselves. In this study this requirement was found to be an almost impossible condition among new entrants who would not have had any pre-school experience at all. The subtests were substituted with oral requirements instead.
- ii) The instruction manual. The original manual was limited in terms of objectivity and recording of responses. For example, the manual required that responses be recorded as good, moderate or bad. As it is important that tests of this nature be as objective as possible (Cronbach, 1970), instructions for recording were altered to either correct or incorrect responses because it was easier to judge responses as either correct or incorrect and were more objective.

The administration notes, given in Appendix 3, also provides a description of all the subtests used in the MLT.

e) Pacific Infant Performance Scale (PIPS)

No test of general ability suitable for use with 6 and 7 year olds has been developed in Malaysia. A measure of ability was, however, required, preferably one that could be easily adapted to the cultural context of Malaysia. In this respect, the PIPS developed by Ord and Schofield (1970) was used because it was thought appropriate to employ a test that did not evidence extreme cultural bias.

The PIPS is essentially a non-verbal individual performance test of general ability developed for use in Papua New Guinea as a screening device for school entrants. In New Zealand the PIPS was found to have an average test-retest reliability of 0.64, with an internal consistency reliability of $r = 0.77$. It has also a correlation of 0.77 with the Anton Brenner Developmental Gestalt test of school readiness (Brenner, 1959, 1964). The use of the PIPS in cross cultural research in the Pacific has produced encouraging reliability and validity figures (St. George, 1974).

A short training in using the PIPS was given to the author by two members of the staff in the Education Department, Massey University, both of whom have had experience in using the instrument.

2) Sample Identification and Selection

Five schools in the district of Pasir Mas, in the State of Kelantan were shortlisted and visited by the author at the beginning of 1975. Finally one school large enough to contain four classrooms of new entrants was selected. The other criteria for selection was the rural character of the school. The school selected was located seven miles away from any large town.

From each classroom teacher a list of seven pupils they considered to be 'clever' (highs) and seven they considered to be 'not clever' (lows) was obtained. The teacher judgments were made during the third week of the first school term by which time teachers indicated they were in a position to make such decisions.

In order not to prejudice subsequent observations the

actual teacher classifications were not made available to the researcher. A list of the 14 pupils per class who formed the observation group was given to the researcher without identifying the 'highs' and 'lows'. The total final sample used in this study was 48 children of between 6-7 years of age, being 12 in each of the four classes, comprising 6 'highs' and 6 'lows' per class. The original 14 pupils per class included 2 reserves to allow for possible absenteeisms.

3) Methods of Data Collection

a) Pre-testing of instruments

Trial administrations of all five instruments were undertaken and conducted at another school in Malaysia. No substantial modifications were required at this stage, and only later during the actual interviews with parents when it was found that some parents preferred not to classify their children as 'highs' or 'lows' but as 'highs', 'mediums' and 'lows'. This is referred to in another part of this chapter and earlier in Chapter II.

b) Classroom observation

Teachers were informed that the author was interested to observe the pupils only, and not the teachers. No record of teacher-pupil interaction was made in each classroom on the first day of observations. These were treated as familiarization sessions only.

A record of teacher-pupil interaction during Malay, Science and Arithmetic lessons was prepared on a record sheet for fourteen pupils simultaneously. The three lessons were chosen because they were the most convenient to observe using the interaction schedules referred to earlier. No

observation of any particular classroom was made when any of the pupils in the classroom was absent.

Altogether observation time for all four classrooms was 30 hours ranging from 5 1/2 hours in one class to 10 3/4 hours in another. Because of these differences, the observation time in each class were corrected for time to a base of 10 hours for the purposes of comparability.

c) PIPS and MLT

While it was desirable to keep the author blind to pupil performance on the PIPS and MLT during classroom observations, it became necessary to violate the rule in the second month of the observation because of a large number of absenteeisms among the pupils. The pupils were tested on the PIPS and the MLT even before the observations were over, subjected, however, to certain precautions. For example, the following procedures were followed to minimise bias:

- i) no addition of test scores were made until the classroom observations were completed,
- ii) those pupils were tested from any of the four classrooms according to availability,
- iii) no test data was made available to the teachers.

d) Parent-child relationships and PAI

Data on the above were obtained using a standard home interview schedule. According to Maccoby and Maccoby (in Lindzey, Ed., 1954),

"Standardized interviews are ones in which the questions have been decided upon in advance of the interview, and are asked with the same wording and in the same order for all respondents" (p. 451).

Standard interviews were employed because -

- "i) they incorporate a basic principle of measurement; that of making information comparable from case to case,
 - ii) they are more reliable,
 - iii) they minimise errors of question wording"
- (Maccoby and Maccoby in Lindzey, 1954, p. 451).

Home interviews were made with both parents of the children classified as highs or lows by their teachers. Personal home interviews were necessary because of the expected low level of literacy among parents, the need to visit homes for the purpose of assessing the physical home environment for use in the PAI, and the poor but almost non-existent system of postal addresses among the respondents.

The only alteration to the parent-child relationship questionnaires concerned the scale of expectations given to the parents. It was found that parents were unwilling to rate their children as highs or lows, and preferred a medium category as well. This was not earlier anticipated or discovered during the pre-testing of instruments. Because of this, parents were allowed a three point scale - high, medium, and low to rate their children (referred to earlier in Chapter II).

Some additional things need to be said with regard to the interview. Firstly, very often in a developing country, the system of addresses is minimal. The Malays do not have surnames. In the villages people are known by their social names which can be very different from the names which appear in the school records. The present study which covered

thirteen small villages ('Kampongs' as they are called in Malay) was, as a result very time consuming. For example, the author had to undergo a process of identifying the 'social names' of parents before actually locating where they lived.

Accessibility in the villages was another problem. During the interviews it was often necessary to leave any form of motorized transport several hundred yards away because the only roads accessible were either too wet, or were only accessible across rice fields.

Finally, the interviews were not themselves conducted in an ideal situation. Others around the house were bound to be listening, and if not carefully cautioned would try to answer the questions not directed at them. As such extreme care and certain amount of diplomacy was required in the interviews. This was not easy as they could easily offend.

4) Statistical Models and Levels of Significance Used to Test the Hypotheses

a) Statistical Models

The following statistical models have been used in the data analysis. With the exception of the biserial-correlation, the statistics used were all non-parametric.

- i. Mann-Whitney U (Siegel, 1956): This statistic was employed to test for significance between means of the cells in this study.
- ii. Kruskal-Wallis-H test or one way analysis of variance (Siegel, 1956): This statistic was employed to test whether children comprised three different groups as classified by their parents (i.e. high, medium, low).

- iii. Spearman Rank Order Correlation or Spearman Rho (Siegel, 1956): This statistic was employed to correlate between teacher expectations with EAA, and ELD; between teacher and parent expectations of the children, and; between each of the independent measures such as between PIPS and MLT, PIPS and PAI, and the like.
- iv. Biserial Correlation (Guilford, 1950; Glass and Stanley, 1970): This statistic was employed to correlate between teacher expectations with various independent measures of the pupils such as PIPS, MLT and PAI and; between parent expectations with various independent measures of the children just mentioned. As suggested by Glass and Stanley (1970) the children classified by their parents as 'mediums' or 'lows' were combined for the purpose of administering the biserial correlation.
- v. Binomial Probability Test (Siegel, 1956): This statistic was employed to test for association between teacher and parent expectations for the children in a 2×3 contingency table, under the null hypothesis. The chi-square test could not be used because of the extremely small number in the cells (see Chapter V, Table 4.6a).

b) Level of Significance

The 0.05 level of significance have been used in this study, even though Skipper et al. (1967) have warned that the chosen level is not 'sacred'. It has also been suggested that if we are just exploring a set of interrelations for

the purpose of developing further hypotheses a larger error rate tend to yield more hypotheses (Labowitz, 1968). Since this study is considered exploratory, the 0.05 was chosen. Where possible, and in line with Skipper's suggestion, the other levels of significance are given in the tables.

CHAPTER IVRESULTS

The research design outlined in Chapter III had three major categories (Figure 3.1): (i) teacher-pupil interaction in the classroom based on teacher expectations concerning pupils' abilities; (ii) parent-child relationship based on parental expectations concerning children's abilities, and (iii) pupil measures on the PIPS, MLT, and PAI.

In this study an analysis has been made concerning the following:

- (1) teachers' interaction with pupils for whom their expectation concerning the pupils' ability were high (TEH) and for whom their expectations were low (TEL).
- (2) parent-child relationships with children for whom their expectations concerning the children's ability were high (PEH), medium (PEM) and low (PEL).
- (3) teachers' expectations and pupil scores on the PIPS, MLT, PAI, EAA and ELD.
- (4) parents' expectations and pupils scores on the PIPS, MLT, PAI, EAA and ELD.
- (5) the consensus between teachers and parents,
 - (a) consensus between teachers' and parents' expectations concerning children's ability,
 - (b) the consensus between teachers and parents concerning their treatments of those children teachers and parents agreed to be of high or low ability.

- (6) the correlations between each of the following variables, PIPS, MLT, PAI, EAA, and ELD.

The data from all four classes were pooled together to form one large sample. Hence, the results presented in this Chapter were obtained from an analysis of the data from all the four classes combined.

The results from within class analysis concerning the above are not reported in the main body of the thesis, but are available in the Appendix. The main reason for excluding them here was attributed to insufficient data owing to the extremely small sample in each of the classes arising from parental classification of their children into 'highs', 'mediums' and 'lows', especially the data on parent-child relationships.

An inspection of those results in Appendix I concerning teacher-pupil interaction supports the general finding that teachers interacted more frequently with those pupils from whom their expectations for the pupil's abilities were high, but interacted less frequently when their expectations for the pupils were low. The results, however, show variations across teachers.

The present Chapter reports the results from the analysis of all the four classes combined to form one larger sample. The implications of those results for hypotheses are also given. A summary of the results concludes this Chapter.

1. Teachers' Interactions with Pupils For Whom Their Expectations Concerning the Pupils' Ability were High (TEH), and For Whom Their Expectations were Low (TEL)

The frequencies of teacher interactions with TEH and TEL pupils respectively, and their percentage differences on each teacher-pupil interaction category are shown in Table 4.1a. Table 4.1b shows the results on the Mann-Whitney-U test.

Inspection of Table 4.1a shows that teachers interacted with TEH pupils more frequently than they did with TEL pupils on 'indirect questions' and 'positive feedback', but there was no difference on 'directions'. TEL pupils obtained twice as many 'negative sanctions' and 'negative contacts' compared to TEH pupils, indicating that teachers interacted more frequently on these two categories with TEL pupils.

Table 4.1b, however, shows teacher-pupil interaction to be significant on the following five out of ten teacher-pupil interaction categories. These are 'indirect questions', 'positive feedback', 'positive sanctions', 'positive contacts', and 'negative contacts'.

Implications of the Results for Hypotheses

In the null-form the general research hypothesis became:

"Differences in teacher expectations concerning pupils' ability will not result in differential teacher-pupil interaction in the classroom."

Significant differences were demonstrated on 5 out of 10 teacher-pupil interaction categories. The null hypothesis concerning 'indirect questions', 'positive feedback', 'positive contacts' and 'negative contacts' were therefore

TABLE 4.1a

Frequencies of teacher-pupil interaction,
on the teacher-pupil interaction categories
for two groups of pupils - high and low teacher
expectation pupils

<u>Teacher-pupil</u> <u>Interaction Categories</u>	<u>Frequency</u>		<u>Percentage</u>	
	<u>Highs</u>	<u>Lows</u>	<u>Highs</u>	<u>Lows</u>
Number of questions	596	522	53.00	46.69
Direct questions	463	435	51.56	48.44
Indirect questions	133	67	66.50	33.50
Negative Feedback	57	76	42.86	57.14
Positive Feedback	535	420	56.02	43.98
Positive Sanctions	55	25	68.75	31.25
Negative Sanctions	94	235	28.57	71.43
Directions	87	85	50.58	49.42
Positive Contacts	606	453	57.22	42.78
Negative Contacts	150	320	31.91	68.09

TABLE 4.1b

Mann-Whitney U test on
teacher-pupil interaction categories between pupils
with high and low teacher expectations

<u>Teacher-pupil</u>			
<u>Interaction Categories</u>	<u>u</u>	<u>z</u>	<u>p (one tailed test)</u>
Number of Questions	227	-1.26	0.104
Direct Questions	250	-0.77	0.221
Indirect Questions	208.5	-1.64	0.049
Negative Feedback	347	1.22	0.113
Positive Feedback	171	-2.41	0.008
Positive Sanctions	154	-2.76	0.003
Negative Sanctions	345	1.18	0.119
Directions	243	-0.93	0.176
Positive Contacts	140	-3.05	0.001
Negative Contacts	416.5	2.64	0.004

rejected because they were significant at the 0.05 level. On the other hand, the null hypothesis concerning 'total questions', 'direct questions', 'negative feedback', 'negative sanctions' and 'directions' were not rejected.

Research hypotheses 1c, e, f, i, j were upheld and read:

"Differences in teachers' expectations concerning pupils' abilities resulted in

- H.1 (c) more 'indirect questions'
 (e) more 'positive feedback'
 (f) more 'positive sanctions'
 (i) more 'positive contacts'
 (j) more 'negative contacts'

- for pupils for whom teachers held high expectations, than for pupils for whom teachers held low expectations."

2. Parent-child Relationships with Children for Whom Their Expectations Concerning the Children's Ability were High (PEH), Medium (PEM), and Low (PEL)

It was pointed out earlier in Chapter II and III that parents were allowed to rate their children as highs, mediums, or lows. In the present Chapter the results include a comparison between all three groups given by the parents, i.e. between highs and lows, highs and mediums, and mediums and lows.

In Table 4.2 a the mean scores of PEH, PEM, and PEL children on the EAA and ELD are given. The Table shows that the mean scores are higher for PEH and PEM children compared to PEL children.

The H-test (Table 4.2b) administered on the EAA and ELD data showed that the children came from three different groups in terms of parent ratings. On the Mann-Whitney U test, however, a comparison between the scores of PEM and PEL children on EAA and ELD was not significant. But the scores on EAA and ELD between PEH and PEL children, and between PEH and PEM children were significant. On the strength of the results obtained from the Mann-Whitney U test, the children could in fact comprise only two groups and not three as given by their parents' ratings. This is shown in Table 4.2c.

Implication of the Results for Hypotheses

In the null form the research hypothesis became:
 "Differences in parents' expectations concerning children's ability will not result in differential parent-child relationships."

The results on the Mann-Whitney U test showed significantly higher score differences between PEH and PEL children and, between PEH and PEM children on both parental EAA and ELD, but not between PEM and PEL children. Therefore, the null-hypothesis concerning the differences between PEM and PEL children on parental EAA and ELD could be rejected. The null hypothesis concerning the differences between PEH and PEL, and between PEH and PEM children on parental EAA and ELD were also rejected.

Research hypotheses 2a, b, c, d, were upheld and read:
 "Differences in parents' expectations concerning children's ability will result in higher parental emphasis on achievement and activity (EAA), and language development (ELD) for children for whom

TABLE 4.2a

Mean scores and standard deviations
of pupils rated as high, medium or low
by their parents on EAA and ELD

		High		Medium		Low	
		\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
1.	EAA	43.55	7.84	35.10	7.27	28.8	5.81
2.	ELD	19.14	5.42	19.90	4.49	12.4	3.29

Table 4.2b

Kruskal-Wallis H test on EAA, ELD of children
rated as high, medium or low by their parents.

		H	P (one tailed test)	df
		1.	EAA	15.63
2.	ELD	9.19	0.02	2

Table 4.2c

Mann-Whitney U test on EAA, ELD of children
rated as high, medium or low by their parents

			u	z	p (one tailed test)
			1.	EAA	
	(a)	PEH* and PEL	102.5	2.97	0.002
	(b)	PEH and PEM	364.5	3.24	0.001
	(c)	PEM and PEL	75.5	1.46	0.073
2.	ELD				
	(a)	PEH and PEL	91	2.25	0.012
	(b)	PEH and PEM	330.5	-5.65	0.00003
	(c)	PEM and PEL	69.5	1.12	0.131

* PEH = Parent Expectation High; PEM = Parent Expectation Medium; PEL = Parent Expectation Low

parents' expectation concerning their ability were high, but not when parents' expectation concerning children's ability were medium or low."

3. Teachers' Expectations and Pupil Scores on the PIPS, MLT, PAI, EAA and ELD

The mean-scores of TEH and TEL pupils are shown in Table 4.3a. The results of the Mann-Whitney U test in Table 4.3b show that there were significant differences between pupil scores on the PIPS, MLT, PAI, EAA and ELD. TEH pupils have higher scores on those variables compared to TEL pupils.

In Table 4.3c, the results of the biserial correlations between teacher expectations and pupil scores on the PIPS, MLT, PAI, EAA and ELD were all positive and significant. The correlations between teacher expectations and MLT ($r_{bi} = 0.75$) and EAA ($r_{bi} = 0.80$) were higher than for the rest of the variables.

Implications of Results for Hypotheses

In the null form the general research hypothesis became: "Differences in teachers' expectations concerning pupils' ability were not associated with higher pupils' scores on the PIPS, MLT, PAI, EAA and ELD."

The results showed significantly higher differences between the scores of TEH pupils on the PIPS, MLT, PAI, EAA and ELD and TEL pupils on those variables. The biserial correlation between teachers' expectations and pupil scores

TABLE 4.3a

Mean scores and standard deviations on PIPS, MLT, PAI, EAA, ELD of pupils with high and low teacher expectations

<u>Variables</u>	<u>High</u>		<u>Low</u>	
	\bar{x}	SD	\bar{x}	SD
1. PIPS	23.08	5.42	16.92	5.59
2. MLT	65.08	6.53	53.46	9.13
3. PAI	23.75	7.48	17.86	4.47
4. EAA	43.92	7.18	32.71	6.79
5. ELD	18.96	5.36	14.21	4.28

TABLE 4.3b

Mann-Whitney U test on PIPS, MLT, PAI, EAA, ELD of pupils with high and low teacher expectations

<u>Variables</u>	<u>u</u>	<u>z</u>	<u>p (one tailed test)</u>
1. PIPS	123	-3.4	0.0003
2. MLT	86	-4.17	0.00003
3. PAI	148	-2.89	0.002
4. EAA	72.5	-4.44	0.00003
5. ELD	149	-2.87	0.002

TABLE 4.3c

Biserial correlations between teacher expectations and PIPS, MLT, PAI, EAA, ELD

<u>Variables</u>	<u>R_{bi}</u>	<u>z</u>	<u>P (one tailed test)</u>
1. PIPS	0.62	3.46	0.0002
2. MLT	0.75	4.18	0.00003
3. PAI	0.55	3.05	0.001
4. EAA	0.80	4.42	0.00003
5. ELD	0.56	3.05	0.001

on all the same variables were also positive and significant. Therefore, the null hypotheses concerning the above had to be rejected.

Research hypotheses 3a, b, c, d, e, were upheld and read:

"Differences in teacher expectations concerning pupils' ability were associated with higher pupils' scores on a) PIPS, b) MLT, c) PAI, d) EAA, e) ELD."

Specifically pupils with high teacher expectations concerning their abilities had higher scores on the a) PIPS, b) MLT, c) PAI, d) EAA and e) ELD, compared to pupils from whom teacher expectations concerning their abilities were low.

4. Parents' Expectations and Pupil Scores on the PIPS, MLT, and PAI

As shown in Table 4.4a, the mean scores on the PIPS, MLT and PAI were higher for PEH children compared with either PEM and PEL children. The mean scores for PEM children were not much higher than PEL children on all the variables.

The results on the Mann-Whitney U test in Table 4.4b show significant differences between PEH and PEM children on the PIPS, MLT and PAI, and between PEH and PEL children on the MLT and PAI, but not on the PIPS.

The results on the Kruskal-Wallis H test in Table 4.4c show that the 0.05 level of significance was obtained only on MLT.

Table 4.2c shows that the biserial correlations between parent expectation and PIPS, MLT, and PAI are all significant.

TABLE 4.4a

Mean scores and standard deviations on PIPS, MLT, PAI of children with high, medium and low parental expectations

<u>Variables</u>	<u>High</u>		<u>Medium</u>		<u>Low</u>	
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
1. PIPS	22.05	6.55	18.29	5.74	18.20	5.49
2. MLT	63.14	9.98	57.14	7.63	51.20	11.34
3. PAI	30.91	6.64	19.24	6.71	17.40	5.18

TABLE 4.4b

Mann-Whitney U test on PIPS, Malay, PAI of pupils with high, medium and low parental expectations

<u>Variables</u>	u	z	p (one tailed test)
1. PIPS			
PEH* and PEM	315.5	2.05	0.020
PEH and PEL	79.5	1.53	0.063
PEM and PEL	53.5	0.03	0.488
2. MLT			
PEH and PEM	329	2.38	0.009
PEH and PEL	88.5	2.09	0.018
PEM and PEL	67.5	0.98	0.164
3. PAI			
PEH and PEM	90	2.19	0.014
PEH and PEL	83.5	1.78	0.038
PEM and PEL	63.5	0.72	0.236

* PEH = Parent Expectation High; PEM = Parent Expectation Medium; PEL = Parent Expectation Low

TABLE 4.4c

Kruskal-Wallis H test on PIPS, MLT, PAI of children
with high, medium or low parental expectations

<u>Variables</u>	<u>H</u>	<u>P (one tailed test)</u>	<u>df</u>
1. PIPS	4.869	0.1	2
2. MLT	8.109	0.02	2
3. PAI	1.990	0.5	2

TABLE 4.4d

Biserial correlations between parent expectations
and PIPS, MLT, PAI

<u>Variables</u>	<u>R_{bi}</u>	<u>z</u>	<u>P (one tailed test)</u>
PIPS	0.38	2.12	0.02
MLT	0.46	2.56	0.005
PAI	0.39	2.18	0.01

Implications of Results for Hypotheses

In the null form the general research hypothesis became: "Differences in parents' expectations concerning children's abilities were not associated with higher children's scores on the PIPS, MLT, and PAI."

The results showed PEH children to have significantly higher scores on the PIPS, MLT and PAI compared to PEM children. The differences between the scores of PEH and PEL children were also significant on the MLT and PAI, but not on the PIPS. However, the differences between the scores of PEM and PEL children on any of the variables were not significant.

Therefore the null hypotheses were rejected only in relation to the differences between PEM and PEL children on all the variables - PIPS, MLT, PAI, and between PEH and PEL children on the PIPS.

Research hypothesis 4.1 was upheld. The results show:

- a) Children for whom parents' expectations concerning their ability were found to have higher scores on the MLT and PAI compared to children for whom parents' expectations concerning their ability were medium or low.
- b) Children for whom parents' expectations concerning their ability were high were found to have higher scores on the PIPS compared to children for whom parents' expectations concerning their abilities were medium, but not when compared to those children for whom parents' expectations for them were low.

Research hypothesis 4.2 . . . read :

"Children for whom parents' expectations concerning their ability were medium did not have higher scores on the PIPS, MLT and PAI compared to children for whom parents' expectations for them were low."

5. Consensus between Parents and Teachers

(a) Consensus between parent and teacher expectations concerning children's ability

The rating of the children are reproduced in the form of a 2 x 3 contingency table (see Table 4.5a). Table 4.5a shows 19 cases of direct parent-teacher agreement on the child's rated ability, i.e. where parent expectations concerning children's ability are high, teacher expectations are also high, and where parent expectations concerning the children's ability are low, teacher expectations are also low; 21 cases of medium disagreement, i.e. where parent expectations concerning children's ability are medium, but teacher expectations are high or low, and 8 cases of direct disagreements, i.e. where parent expectations are low, and where parent expectations concerning children's ability are low, but teacher's expectations are high.

The correlation between parent and teacher expectations concerning the children's ability was found to be significant ($\rho = 0.59$).

Using the binomial distribution with regard to Table 4.5a, the probability of parents' and teachers' expectations concerning children's ability to be both high, is 0.08; the probability of parents' expectations concerning children's

ability to be medium when teacher expectations are high is 0.17; and the probability of parents' and teachers' expectations to be both low is 0.03 under the null hypothesis. The Table shows that only parent and teacher expectations concerning children's ability to be both low were significant at the 0.05 level.

TABLE 4.5a

Summary of parent and teacher classifications
of pupils into highs, mediums or lows

		Parents		
		High	Medium	Low
Teachers	High	14*	10	0
	Low	8	11	5

* Figures denote number of pupils in each classification.

Implication of the Results for Hypotheses

In the null form the general hypothesis became:

"There was no positive correlations and significant association between teachers' expectations and parents' expectations concerning children's ability."

The results showed there was a positive and significant correlation between teachers' expectations and parents' expectations concerning children's ability, but the results on the binomial test showed significant association only in cases where parents and teacher expectations concerning

children's ability were low. The hypothesis concerning the above is only partially confirmed.

Hypothesis 6a read :

"There was a positive and significant correlation between teachers' and parents' expectations concerning children's ability, but there was a significant association only between parents' and teachers' expectations concerning the low ability of the children."

(b) The Consensus Between Parents and Teachers Concerning Parent and Teacher 'Treatments' of those Children Parents and Teachers Agreed to be of High or Low Ability.

There were 19 cases of direct parent-teacher consensus concerning their expectations of the children's ability in the sample. In 14 of them parents and teachers' expectations concerning the children's abilities were 'high', and in 5 of them, their expectations were 'low'.

For the purpose of testing the Significance between teacher-pupil interaction and parent 'treatments' of the children, five teacher-pupil interaction categories earlier found to be significant were used. They were 'indirect questions', 'positive feedback', 'negative sanctions', 'positive contacts' and 'negative contacts'. The mean scores of the two groups of children on the EAA and ELD, and on the five teacher-pupil interaction categories are given in Table 4.5b.

The results on the Mann-Whitney U test of the EAA, ELD and the five teacher-pupil interaction categories are shown in Table 4.5c. The Table shows that where parents'

TABLE 4.5b

Mean scores and standard deviation on EAA, ELD and teacher-pupil interaction categories of children with direct parent-teacher consensus of children with high and low parent and teacher expectations

1. <u>Parent-child Relationship</u>	<u>Highs</u>		<u>Lows</u>	
	\bar{x}	SD	\bar{x}	SD
EAA	46.93	6.34	28.80	5.81
ELD	20.36	5.39	12.40	3.29
2. <u>Teacher-pupil Interaction</u>				
Indirect Questions	7.43	5.63	2.40	1.82
Positive Feedback	24.36	6.01	19.80	5.36
Negative Sanctions	5.07	3.43	13.80	7.98
Positive Contacts	27.14	5.93	20.40	5.08
Negative Contacts	6.86	4.15	19.80	11.79

TABLE 4.5c

Mann-Whitney U test on EAA, ELD and teacher-pupil interaction categories of children with direct parent-teacher consensus of children with high and low parent and teacher expectations

<u>Categories</u>	<u>u</u>	<u>z</u>	<u>P (one tailed test)</u>
EAA	67	2.96	0.002
ELD	60	2.31	0.010
Indirect Questions	55.5	1.90	0.029
Positive Feedback	20.5	-1.34	0.09
Negative Sanctions	10.5	-2.27	0.012
Positive Contacts	56	1.94	0.026
Negative Contacts	9	-2.41	0.008

and teachers' expectations concerning the children's ability were high, children's scores on EAA and ELD were significantly higher than when parents' and teachers' expectations concerning the children's ability were low. Similarly, where parents' and teachers' expectations concerning the children's ability were high, children's scores on 'indirect question', and 'positive contacts' were significantly higher, and children's scores on 'negative sanctions' and 'negative contacts' were significantly lower compared to those children from whom parents and teacher expectations for their ability were both low. There were no significant differences between the two groups of children with regard to their scores on 'positive feedback'.

Implications of Results for Hypotheses

In the null form the general hypothesis became:

"There was no significant association between teacher-pupil interactions and parent-child relationships with those children teachers and parents agreed to be of high or low ability."

Except for the category designated as 'positive feedback' the results in this section require the null hypothesis stated above to be rejected.

Hypothesis 5b read :

- i) "Where teacher's and parents' expectations concerning children's ability were high, teacher-pupil interaction with those children were significantly more frequent on 'indirect questions', and 'positive contacts' but were significantly less on 'negative sanctions' and 'negative contacts', compared to

those children from whom teachers' and parents' expectations were low."

- ii) Where teachers' and parents' expectations concerning children's ability were high, parent-child relationship with those children on EAA and ELD were significantly higher than with those children from whom teachers' and parents' expectations were low.

6. The Correlations between PIPS, MLT, PAI, EAA and ELD

In addition to the above results, the correlations between PIPS and MLT, PAI, EAA and ELD, and between each one of them were obtained and are shown in Table 4.6.

TABLE 4.6

Spearman rank order correlations
between PIPS, MLT, PAI, EAA, ELD

	1	2	3	4	5
1. PIPS		0.58 ($P \leq$.0005)*	0.33 ($P \leq$.01)	0.51 ($P \leq$.0005)	0.29 ($P \leq$.025)
2. MLT			0.53 ($P \leq$.0005)	0.67 ($P \leq$.0005)	0.52 ($P \leq$.0005)
3. PAI				0.61 ($P \leq$.0005)	0.74 ($P \leq$.0005)
4. EAA					0.67 ($P \leq$.0005)
5. ELD					

* All P values on one tailed test.

Inspection of Table 4.6 shows that the correlations were all significant, although the correlation between PIPS and PAI ($\rho = 0.33$), and between PIPS and ELD ($\rho = 0.29$) were low.

Summary of Results

The findings from a combined analysis of data from four classes reported in this Chapter are summarized as follows:

1. Teachers' interactions were significantly more frequent with pupils for whom teachers' expectations concerning pupils' ability were high compared with their interactions with pupils for whom teacher's expectations were low on the categories: 'indirect questions', 'positive feedback' and 'positive contacts'.
2. Teachers interactions were significantly less frequent with pupils for whom teachers' expectations concerning their ability were high compared with their interactions with pupils for whom teacher's expectations were low on the categories: 'negative sanctions', and 'negative contacts'.
3. Parental emphasis on achievement, activity, and language development (EAA and ELD) were significantly higher for children for whom parents' expectations concerning children's ability were high compared to children for whom parents' expectations were medium or low.
4. Parental emphasis on achievement, activity and language development (EAA and ELD) were not significantly higher for children for whom parents' expectations concerning

children's ability were medium compared to children for whom parents' expectations were low.

5. Pupils for whom teachers' expectations concerning their ability were high had significantly higher scores on the PIPS, MLT, PAI, EAA and ELD compared to pupils for whom teacher expectations were low. The biserial correlations between teacher expectations concerning pupils' ability and the variables were also positive and significant.
6. Children for whom parents' expectations concerning their ability were high had significantly higher scores on the PIPS, MLT and PAI compared to children for whom parents expectations were medium, but not compared to children for whom parent expectations were low on the PIPS. The biserial correlations between parent expectations concerning children's ability and the variables were also positive and significant.
7. Children for whom parents' expectations concerning their ability were medium did not have significantly higher scores on the PIPS, MLT and PAI compared with children for whom parents' expectations were low.
8. The correlations between teachers' and parents' expectations concerning children's ability were significant. However, the association between teacher's and parents' expectations was significant only for the lows, under the null hypothesis.
9. Where there was a direct consensus between parents and teachers concerning their expectations of pupils' ability, children for whom parents' and teachers'

expectations concerning their ability were both high had significantly higher scores on teacher-pupil interaction categories: 'indirect questions', 'positive contacts', and parent-child relationship categories: parental emphasis on 'achievement', 'activity' and 'language development', but had significantly lower scores on teacher-pupil interaction categories: 'negative sanctions' and 'negative contacts' compared to pupils with both low parent and teacher expectations.

10. The correlations between children's scores on the PIPS and MLT, PAI, EAA and ELD and, between each one of the variables were all positive and significant.

A discussion of points arising from these results follows in Chapter V.

CHAPTER VDISCUSSIONS AND IMPLICATIONS OF THE RESULTSReview of Aims and Basis of the Present Investigation

The introduction to this thesis considered the need to improve the qualitative aspects of Education in Malaysia, partly to ensure children's success at school, and perhaps improve their retention rate, especially at the post-primary school levels.

It was argued that the quality of teacher-pupil interactions and relationships were important in this regard, and consequently that the quality of teacher-pupil interaction in the classroom be investigated. In the international scene, research has shown that teachers may willingly or unwillingly be engaged in subtle forms of influence and even discrimination. Often their actions set in motion self-fulfilling prophecies.

It was primarily the work of Rosenthal and Jacobson (1968), that introduced the self-fulfilling prophecy concept to classroom research. However, results reported by Rosenthal and Jacobson (1968) concerning the effects of teacher expectations on pupils' IQs, have not always been substantiated in replications (e.g. Claiborn, 1969; José and Cody, 1969). The idea initially proposed by Rosenthal and Jacobson (1968) concerning the impact of teacher expectations on pupil performance has been widely accepted. For example, teacher expectations have been found to affect pupils' achievement levels, in measures other than IQs (Beez, 1970; Brown, 1970). Overall,

results from teacher expectation studies provide substantial support for the above proposition concerning teacher expectation and the self-fulfilling prophecy in the classroom.

An equally important factor which may influence children's success and retention rates at school is the quality of parent-child relationships. The evidence accumulated from a review of the literature on parent-child relationships suggests that parents may also be involved in establishing and maintaining the self-fulfilling prophecy. Although there does not seem to be any study directly concerned with parent expectations concerning children's ability, some studies have nevertheless suggested a positive relationship between children's success at school and parental attitudes towards those children (e.g. Medinnus, 1961; Douglas, 1964).

No evidence of studies concerning teacher-pupil interaction and parent-child relationship have been reported in Malaysia. Therefore, in this respect the present study has been both an attempt to verify some of the findings in teacher expectation studies and an attempt to study parent and teacher expectations concerning children's ability in the Malaysian context.

The results of this study reported earlier in Chapter V, support the general hypotheses that the quality of teacher-pupil interactions in the classroom are related to teacher expectations concerning pupils' ability, and that the quality of parent-child relationships is similarly related to parent expectations concerning children's ability.

Discussion of these results and the implications derived from them now follows.

Discussion of Results and their Implications

1. Teacher-Pupil Interaction and Teacher Expectation

It was found that teachers treat pupils differently according to the expectations they hold of the pupils' ability. However, the difference does not seem to be in terms of the quantity of instruction but in terms of its qualitative aspects. For example, there was no difference between teacher-pupil interactions with high teacher expectation pupils as compared to those with low teacher expectations on the frequency of 'total questions' and 'direct questions'. In 'direct questions', the interactions were teacher initiated, and in this respect the teachers were found to provide equal distribution of direct questions to the high and low expectation pupils.

On the other hand, high teacher expectation pupils received 'positive sanctions', 'positive contacts' and 'positive feedback' more frequently than low teacher expectation pupils; the latter in turn received more 'negative sanctions' and 'negative contacts'. These findings provide support for the results reported in Meichenbaum, Bowers and Ross (1969), Brophy and Good (1970), Rothbart, Dalfen and Barrett (1971) and Lester and Ketschworth (1972). Brophy and Good (1970) suggested that the difference between teacher-pupil interactions with high and low teacher expectation pupils was in the quality of instructions, not in its frequency.

The findings in the present study are evidence that teachers were involved in subtle differential treatments of high and low teacher expectation pupils in ways that are self-fulfilling.

In this study, however, it was not possible to say whether teachers were deliberately involved in treating the high and low teacher expectation pupils differently. A study by Haigh (1974) for example, showed that teachers were mostly unaware of their differential behaviour with the various groups of students. Although this awareness was not investigated herein, it would therefore be interesting to investigate whether teachers would behave differently if they were indeed aware of their own differential behaviours towards high and low expectation pupils and the implications of these behaviours for the students.

The other interesting point, to be discussed concerns the frequency of teacher-pupil interactions with high teacher expectation pupils on 'indirect questions' which are pupil initiated. The data in this study does not suggest any firm conclusion as to whether or not this was a function of the more able students, although this could be the case.

It may also be relevant to indicate that individual analyses of class data on teacher-pupil interactions show some variations between teachers. Class results show some teachers to engage in subtle forms of differential treatments between the high and low teacher expectation pupils more so than other teachers. In this respect the present findings did not support the conclusion made by Brophy and Good (1974) that differences in teacher-pupil interaction

between high and low teacher expectation pupils were not universal across teachers. However, variations between teachers suggest that one has to be cautious so as not to over generalize the findings concerning teacher-pupil interaction.

2. Parent-Child Relationship and Parent Expectation

The results show that the quality of parent-child relationship was related to parent expectations concerning their children's ability. For example, where parent expectations for their children's ability were high, parental emphasis on achievement, activity and language development for these children was higher than for children rated in either medium or low expectation categories. It would appear from these results that children with medium parent expectations had no advantage over children with low parent expectation. According to these results, to be considered 'advantageous' children would have to be classified as 'highs' by their parents, not 'medium', and definitely not 'lows'.

Again the results provide evidence that parents practised some forms of differentiation between high, medium and low expectation children which were also self-fulfilling. However, firm conclusions could not be made because, unlike teacher-pupil interactions in the classroom, the study was not made in terms of general parent-child relationships but in terms of individual parents and individual children. It is suggested that perhaps more definite conclusions could be made concerning parent expectations and parent-child relationships if similar

Results are obtained through studies between each parent and his several children.

The data on parent-child relationships in each class were too small to allow for any specific analyses. It is therefore not possible to state here whether parent-child relationships related to parent expectations concerning children's ability is universal across classes. Perhaps future study could consider obtaining larger class samples so that analysis of class by class could be made.

3. Teacher Expectations, PIPS, MLT, PAI, EAA, ELD

It was found that high expectation pupils obtained higher scores on the test of general ability (PIPS), and Malay Language Ability Test (MLT). These pupils also came from a higher socio-economic background as indicated by the Parental Advantage Index (PAI), while their parents emphasise achievement, activity, and language development in their children's development. The significance of these results appear below.

(i) Teacher Expectations and PIPS

Higher scores on the PIPS obtained by pupils with high teacher expectations compared to pupils with low teacher expectation suggest that teacher expectations concerning pupils intellectual ability may not be in fact false. This is significant since teachers had been with the pupils for only three weeks, and had not obtained any assistance from tests of any kind when they provided the author with the list of high and low expectation pupils. However, this conclusion assumed that the PIPS was appropriate for use to measure the level of intellectual ability among new

entrants in the context of Malaysia.

An inspection of the raw data shows some discrepancies between teacher expectations and pupils' actual ranking on the PIPS, a finding also reported in Haigh (1974). Therefore, even though teachers were generally correct in rating each child as 'highs' or 'lows' for a minority of children classified as 'lows' scores on the PIPS indicate they were above some of those children classified as 'highs'. The consequences for the minority of children could be equally bad unless teachers were willing to change their opinion concerning those children they originally thought were lows. It was also significant to note that during an informal discussion between the author and each of the class teachers involved in this study that teachers did not expect the children classified as lows to change much over the years, except maybe one or two pupils. This information suggests that once teachers have made up their minds concerning their expectations of pupils' ability these expectations can be quite stable (Brophy and Good, 1974).

(ii) Teacher Expectations and MLT

Almost the same things that were said concerning teacher expectations and pupil scores on the PIPS may be said of teacher expectations and pupil scores on the MLT. However, unlike measures of intellectual ability, indices of language ability could be expected to correlate highly with teacher expectations simply because language as a form of pupil behaviour could be easier detected. Indeed, as had been found in this study, the biserial correlation between teacher expectations and pupils' scores were higher for the Malay language than the PIPS.

The results on the Malay language raised the point as to whether pupils' language ability was instrumental in gaining teacher attention in the classroom. This was observed earlier in the section on teacher-pupil interaction with high expectation pupils concerning 'indirect questions' which were pupil initiated and which could be due to pupils' verbal ability.

(iii) Teacher Expectations and Parental Advantage Index

Although one could expect teacher expectations to be highly correlated with pupil socio-economic measures in view of the fact that these indices are readily apparent in young children, the actual correlations obtained were rather low (i.e. between teacher expectations and PAI) compared to the correlations between teacher expectations and each of the other variables.

As a matter of further interest, teachers were asked to list the criterion or factors that influenced their judgments of the pupils after the data on teacher-pupil interaction had been collected. A translation of these into English is given in Appendix 4. They support the conclusion made by Becker (1952) and Rist (1970) that teachers were influenced by pupil parental background, physical appearance, and behaviours in the classroom, and may have a bearing upon teacher expectations concerning pupils' ability.

(iv) Teacher Expectations and Parental Emphasis on Achievement, Activity and Language Development

The results suggest that pupils with high teacher expectations enjoy the benefits of both worlds. In the classroom they benefit from a qualitatively different form of

instruction received from the teachers, while in the home receive support and encouragement from their parents.

Parental support and encouragement for high expectation pupils were expressed in terms of parental emphasis on achievement oriented behaviours such as aspirations for high status jobs, and assisting the children in school related activities such as reading, writing and counting. These kinds of parental support have been reported to be most directly related to pupil performance levels at school (Medinnus, 1961; Douglas, 1964). Ashcroft (1972) has suggested that parental attitudes affected the child's behaviour at school, and that in turn determined the quality of teacher-pupil interaction in the classroom.

One implication of these findings is that pupils with high teacher expectations will achieve success and be accelerated at school while those pupils with low teacher expectations will tend to fail more often and make slower progress. This of course assumes that there is a reciprocal relationship between teacher-pupil interactions in the classroom and parent-child relationship at home. As a matter of fact, the data in this study showed that such a reciprocal relationship does not always exist. For example, there was a small number of children (N = 10) for whom teacher expectations were high, but parent expectations were medium. Because it was found that medium expectations children had no advantage over the lows, teacher-pupil interaction and parent-child relationship with children of medium parent expectation were in opposite directions. Thus children of medium parent expectations received support

from the teachers at school, but found little encouragement from their parents at home. The opposite is expected to be true for pupils with low teacher expectations but with high parent expectations which was for eight children in this study.

The directions of parent approval/disapproval, and teacher approval/disapproval found in this study is shown as a paradigm in Figure 5.

Given the conditions as in Figure 5, and the number of students in each cell, it could be speculated that the likelihood of children receiving little encouragement might have been higher at home than at school.

		<u>Parent Expectation</u>		
		High	Medium	Low
Teacher Expectation	High	1 (14)*	2 (10)	3 (0)
		4 (8)	5 (11)	6 (5)

* No. of children in brackets for each cell.

Figure 5: Parent and Teacher Expectations and the Directions of Their Approval/Disapproval on the Child.

4. Parent Expectations, PIPS, MLT, PAI

(i) Parent Expectations and PIPS

It was found that children of high parent expectations did not obtain higher scores on the PIPS than children of low parent expectations, although the former did obtain higher scores than children of medium parent expectations. It was also found that medium expectation children did not obtain higher scores on the PIPS compared to low expectation

children. These findings could only suggest that parents were less accurate in classifying those children as lows, when indicated by the PIPS. In this respect the overall rating of the children given by the teachers were more accurate when children's scores on the general ability test were considered.

It is interesting to note that for a small number of children (N = 5) low expectations were held by both parents and teachers, despite the fact that these children scored relatively well on the PIPS. This raises questions of 'match' between the perceptions of people on the one hand (teachers and parents), and the evidence of test results on the other.

(ii) Parent Expectations and MLT

Children's scores on the Malay language ability test (MLT) were closely related to parent expectations concerning the children's ability. It may be concluded that there was a tendency for parents to be influenced by their children's verbal ability when classifying their children as highs, mediums or lows. This tendency was substantiated during the interviews when parents most often used 'percakapan' meaning 'the ability to talk' as one of the criterion for rating their children's ability.

(iii) Parent Expectation and Parental Advantage Index (PAI)

The results indicate that parent expectations concerning children's ability were positively related to the PAI advantage. It may well be that the expectation which parents hold towards their children are directly related to their favourable socio-economic backgrounds rather than

owards expectation related purely to their children's ability. This conclusion is possible when one considers that children with high parent expectations did not obtain significantly higher scores on the PIPS compared to children with low parent expectations.

5. Consensus between Parents and Teachers

(i) Parent Expectations and Teacher Expectations

Although the correlations between parent and teacher expectations concerning children's ability were significant, there was not sufficient evidence to conclude that there was a consensus between parents and teachers. The possibility of such a consensus, could not, however, be ruled out. This is due to the fact that even though parents and teachers used two different scales to classify the children the final result showed that in nineteen out of forty cases there was a direct agreement on their ratings of the children, with only eight direct disagreements, and twenty medium disagreements. The percentage of direct agreements were 39.6 compared to 16.7 percent in direct disagreements. An even more direct comparison could have been achieved had the same scale been employed by both parents and teachers. Such a scale might employ high, medium and low categories for both sets of raters.

(ii) Parent-Teacher Treatment of Pupils

The results concerning parent-child relationships and teacher-pupil interactions between pupils of high and low expectations so far are quite sufficient to indicate that there are areas of agreements between parent and teacher treatments of those children they agreed to be 'highs' or

'lows'.

However, an analysis specifically concerned with those cases where there was a direct consensus between parents and teacher ratings of the children's ability was undertaken so that some conclusion on the nature of the treatments of those children could be considered.

This additional analysis demonstrated that where parent expectations for the children were high, their emphasis on achievement, activity and language development for those children was also high. The same high expectation children in turn received more favourable treatment in the classroom from their teachers.

The same supportive relationships between parents and teachers were also true of the low expectation group.

6. The Correlations between PIPS, MLT, PAI, EAA, ELD

The results of the correlations between PIPS and MLT, PAI, EAA and ELD, and between each of these variables were found significant.

The strength of the correlations between parental emphasis on achievement and activity (EAA) and measured ability of the children on the PIPS was higher than either the correlations between parental emphasis on language development (ELD) and PIPS or between Parental Advantage Index (PAI) and PIPS.

Furthermore PAI correlates higher with MLT than does PAI with PIPS.

The implications here seem to be that social class standing alone may be inadequate to explain the relative performance of children at school. It is equally important

that the conditions related to parent attitudes on achievement and language development be also fulfilled. The finding here supports past conclusions made by Douglas (1964), Swift (1968), and Brandis and Henderson (1970) concerning social class the the educability of the child. For example, Swift (1968 cited in Ashcroft, 1972) pointed out that

"When we are concerned with describing the social environment of individuals and relating it to their development, a social class must be looked upon as a summarizing variable and not an effective influencing variable."

(Swift, 1968; cited in Ashcroft, 1972, p. 3).

This study suggests closer attention be given to the network of expectations between home and school, and not the expectations of each in isolation. With reference to the present findings, it is important that both teachers and parents are aware of their behaviours towards those children they classify as high, medium and low in terms of expectations, and the possible consequences arising from their judgements.

In summary:

1. Teachers treat pupils differently according to the expectations they hold of the pupils' ability. These differences are qualitative rather than quantitative. Pupils with high teacher expectations receive positive sanctions and positive contacts more frequently than pupils with low teacher expectations. The latter receive more negative sanctions and negative contacts.

2. The quality of parent-child relationship is related to parent expectations concerning their children's ability. Where parent expectations for their children are high parental emphasis on achievement, activity and language development for their children was higher than for children rated in either medium or low expectation categories.
3. It was found that pupils with high teacher expectation obtained higher scores on the test of general ability (PIPS) and Malay Language Ability Test (MLT). These pupils also came from higher socio-economic background as indicated by the Parental Advantage Index (PAI) while their parents emphasise achievement, activity and language development in their children's development. In addition,
 - i) Children with high parent expectation also obtained higher scores on the test of general ability (PIPS) and Malay language ability (MLT).
 - ii) High parent expectations for the children are associated with a higher socio-economic background as indicated by the Parental Advantage Index (PAI).
- 4.i) Although the correlations between parent and teacher classification of pupils were significant, there is insufficient evidence to conclude that there is a consensus between parents and teachers on their ratings of the pupils' ability.
 - ii) There is a supportive relationship between parent and teacher treatments of the children for whom their expectations concerning children's ability are both

high or both low.

5. Even though the correlations between the PIPS and MLT, PAI, EAA and ELD, and between each one of them are all significant the important findings were:
- i) The correlations between parental emphasis on achievement and activity (EAA) and pupils' performance on the PIPS are higher than between the PIPS and other variables, particularly with PAI.
 - ii) However, the correlations between parental advantage index (PAI) and children's Malay language ability as measured by the MLT are higher than between PAI and pupils' general ability as measured by the PIPS.

On the basis of the present findings, the rest of this Chapter presents a restatement of the research model central to this study and offers some suggestions for further research.

Restatement of the Research Model and Suggestions for Further Research

The results of the present study can be incorporated into the research model outlined in Chapter II. It may be stated that :

- i) Early in the child's life, even before he enters school, his parents have formed their expectations concerning the child's ability.
- ii) Parent expectations are translated into self-fulfilling prophecies. The quality of parent-child relationships may be determined by the parents' expectations of the child's ability.

- iii) When the child enters school, teachers also form their expectations regarding the child's ability. Perhaps because both parents and teachers are influenced by overt child behaviours, in most cases the expectations teachers hold towards the child would match the expectation held by the parents.
- iv) Teacher expectations are also translated into self-fulfilling prophecies. Thus teachers begin to treat each child differently in accordance with their expectation of the child's ability.
- v) Finally, the cycle of self-fulfilling prophecies operates so that the more able child finds support to develop his talents both at home and at school, while the less able child is constantly reminded of his weaknesses.

The results obtained in the present study clearly indicate that the cycle of self-fulfilling prophecy is universal, and that it is substantiated in the Malaysian context. The implication for Malaysia, in particular, is that current emphasis on educational improvement should also focus on those factors relating to teacher-pupil interactions, and parent-child relationships arising from parent and teacher expectations concerning children's ability. In other words, there is a case to explore the interpersonal factors that may contribute towards the relatively poor success and retention rates among certain groups of children in Malaysia.

Perhaps the results from the present investigation could be extended to cover other areas and levels of education

as well. But before any generalizations can be made, future research in Malaysia should also consider the following:

- i) an extension of this study at other levels of education such as at the secondary and upper secondary schools, employing larger class samples.
- ii) an extension of the present research to obtain both process and product data on the effects of expectations on children's school performance particularly on school-related subjects.
- iii) a closer study concerning parent expectations and parent-child relationships with their children using a design very much similar to that of teacher-pupil interaction studies.

APPENDIX ICLASS BY CLASS ANALYSIS OF RESULTSIntroduction

Owing to the lack of data, and the extreme smallness of samples in certain cases, some of the analyses that were available in Chapter IV are excluded from the class by class analysis of results. The results below have been obtained from a separate class by class analysis, but were not used in hypotheses testing. They are, however, indicative of the general trend in the main body of results.

1. Teachers interactions with Pupils for Whom Their Expectations Concerning Pupils' Ability were High (TEH) and for Whom Their Expectations were Low (TEL)

The frequency of teacher-pupil interaction in each class are shown in Tables 6.1a, b, c, d. Inspection of the frequency tables show that teachers' interactions with the pupils were in the hypothesised direction. However, test of significance between TEH and TEL pupils revealed variations between the classes to be as follows (see Tables 6.2a, b, c, d).

'Positive sanctions' and 'negative contacts' were significant in class I; 'directions' in class 2; and 'positive feedback' and 'positive contacts' in class 3; class 4, however, had the most number of significant teacher-pupil interaction categories. These were 'total question', 'direct questions', 'indirect questions', 'positive feedback', 'positive sanctions' and 'positive

contacts.'

TABLE 6.1a

Class 1: Frequency of Teacher-pupil Interaction
on the Teacher-pupil Interaction Cate-
gories for Two Groups of Pupils -
Highs and Lows

<u>Interaction Categories</u>	<u>Frequency</u>		<u>Percentage</u>	
	<u>Highs</u>	<u>Lows</u>	<u>Highs</u>	<u>Lows</u>
Questions	106	116	47.75	52.25
Direct Questions	96	102	48.48	51.52
Indirect Questions	10	14	41.67	58.33
Negative Feedback	9	12	42.86	57.14
Positive Feedback	96	103	48.24	51.76
Positive Sanctions	19	2	90.48	9.52
Negative Sanctions	11	29	27.50	72.50
Directions	7	13	35.00	65.00
Positive Contacts	116	107	52.02	47.98
Negative Contacts	21	83	20.19	79.81

TABLE 6.2a

Class 1: Mann-Whitney U test on Teacher-pupil Interaction
Categories between Pupils with High and Low
Teacher Expectations

<u>Interaction Categories</u>	<u>U</u>	<u>P (one-tailed test)</u>
Questions	15	0.35
Direct Questions	16.5	0.47
Indirect Questions	12	0.19
Negative Feedback	12	0.19
Positive Feedback	15	0.35
Positive Sanctions	2	0.004
Negative Sanctions	10	0.12
Directions	9	0.09
Positive Contacts	14.5	0.35
Negative Contacts	2	0.004

TABLE 6.1b

Class 2: Frequency of Teacher-pupil Interaction
on Teacher-pupil Interaction Categories
for Two Groups of Pupils - Highs and Lows

<u>Interaction Categories</u>	<u>Frequency</u>		<u>Percentage</u>	
	<u>Highs</u>	<u>Lows</u>	<u>Highs</u>	<u>Lows</u>
Questions	140	110	56.00	44.00
Direct Questions	104	93	52.79	47.21
Indirect Questions	36	17	67.92	32.08
Negative Feedback	12	12	50.00	50.00
Positive Feedback	124	97	56.12	43.88
Positive Sanctions	32	19	62.75	37.25
Negative Sanctions	26	40	39.39	60.61
Directions	40	17	70.18	29.82
Positive Contacts	159	119	57.19	42.81
Negative Contacts	38	55	40.86	59.14

TABLE 6.2b

Class 2: Mann-Whitney U test on Teacher-pupil Interaction
Categories between Pupils with High and Low
Teacher Expectations

<u>Interaction Categories</u>	<u>U</u>	<u>P (one tailed test)</u>
Questions	8	0.07
Direct Questions	15	0.35
Indirect Questions	5.5	0.32
Negative Feedback	16.5	0.47
Positive Feedback	10.5	0.12
Positive Sanctions	10	0.12
Negative Sanctions	12	0.19
Directions	6	0.03
Positive Contacts	8.5	0.09
Negative Contacts	16	0.41

TABLE 6.1c

Class 3: Frequency of Teacher-pupil Interaction
on the Teacher-pupil Interaction Cate-
gories for Two Groups of Pupils -
Highs and Lows

<u>Interaction Categories</u>	<u>Frequency</u>		<u>Percentage</u>	
	<u>Highs</u>	<u>Lows</u>	<u>Highs</u>	<u>Lows</u>
Questions	186	183	50.41	49.59
Direct Questions	173	175	49.71	50.29
Indirect Questions	13	8	61.90	38.10
Negative Feedback	21	43	32.81	67.19
Positive Feedback	165	136	54.82	45.18
Positive Sanctions	1	0	100.00	0
Negative Sanctions	19	53	26.39	73.61
Directions	41	18	43.75	56.25
Positive Contacts	166	139	54.43	45.57
Negative Contacts	41	97	29.71	70.29

TABLE 6.2c

Class 3: Mann-Whitney U test on Teacher-pupil Interaction
Categories between Pupils of High and Low
Teacher Expectations

<u>Interaction Categories</u>	<u>U</u>	<u>P (one-tailed test)</u>
Questions	17.5	0.47
Direct Questions	16.5	0.47
Indirect Questions	13.0	0.24
Negative Feedback	8.0	0.07
Positive Feedback	6.0	0.03
Positive Sanctions	Insufficient Data	
Negative Sanctions	12.0	0.19
Directions	14.5	0.35
Positive Contacts	6.0	0.03
Negative Contacts	8.5	0.09

TABLE 6.1d

Class 4: Frequency of Teacher-pupil Interaction
on the Teacher-pupil Interaction Cate-
gories for Two Groups of Pupils -
Highs and Lows

<u>Interaction Categories</u>	<u>Frequency</u>		<u>Percentage</u>	
	<u>Highs</u>	<u>Lows</u>	<u>Highs</u>	<u>Lows</u>
Questions	152	102	59.61	40.39
Direct Questions	90	65	58.06	41.94
Indirect Questions	62	38	62.00	38.00
Negative Feedback	15	18	45.45	54.55
Positive Feedback	150	84	64.10	35.90
Positive Sanctions	13	4	76.47	23.53
Negative Sanctions	48	73	39.67	60.33
Directions	46	37	55.42	44.58
Positive Contacts	163	88	64.94	35.06
Negative Contacts	58	85	40.56	59.44

TABLE 6.2d

Class 4: Mann-Whitney U test on Teacher-pupil Interaction
Categories between Pupils of High and Low
Teacher Expectations

<u>Interaction Categories</u>	<u>U</u>	<u>P (one tailed test)</u>
Questions	7	0.05
Direct Questions	6.5	0.05
Indirect Questions	5	0.02
Negative Feedback	15	0.35
Positive Feedback	4	0.01
Positive Sanctions	4.5	0.02
Negative Sanctions	15	0.35
Directions	8.5	0.09
Positive Contacts	2.5	0.01
Negative Contacts	11	0.16

2. Teachers' Expectations (TE) and Pupil Scores on the PIPS, MLT, PAI, EAA and ELD

The mean scores of TEH and TEL pupils on the PIPS, MLT, PAI, EAA and ELD are shown in Table 6.3a. The scores of TEH pupils were higher in all the classes except class 3 on the PAI where the lows obtained a higher mean score.

On the Mann-Whitney U test, significant levels were obtained as follows (see Table 6.3b).

- a) for the PIPS in class 4;
- b) for the MLT in classes 1, 3, 4;
- c) for the EAA in class 1, 3, 4;
- d) for the ELD in class 4.

The correlation between teacher expectations and pupils scores on the above variables are shown in Table 6.3c. The set level of significance were obtained between PIPS and TE in class 4; between MLT and TE in classes 1, 3, 4; between PAI and TE in classes 2, 4; between EAA and TE in class 1, 3, 4, and between ELD and TE in class 4. Among all the classes, only class 4 had significant correlation between TE and each of all the variables.

TABLE 6.3a

Mean Scores and Standard Deviations of Pupils with High and Low Teacher Expectations on PIPS, MLT, PAI, EAA, ELD

<u>Variables</u>	<u>Highs (N = 12)</u>		<u>Lows (N = 12)</u>	
	\bar{x}	SD	\bar{x}	SD
1. PIPS				
Class 1	20.83	7.36	16.33	6.35
Class 2	22.50	4.37	17.50	5.96
Class 3	21.67	3.67	16.83	5.08
Class 4	27.33	4.23	17.00	6.42
2. MLT				
Class 1	64.00	6.07	52.00	8.29
Class 2	66.50	6.28	59.67	8.07
Class 3	60.33	5.82	51.50	10.48
Class 4	69.50	5.65	50.67	8.76
3. PAI				
Class 1	22.00	6.57	17.50	3.78
Class 2	25.33	6.71	17.17	6.24
Class 3	18.00	6.16	20.16	4.99
Class 4	29.67	6.53	16.67	2.16
4. EAA				
Class 1	42.50	5.68	32.33	4.63
Class 2	38.50	6.89	36.50	7.23
Class 3	43.00	6.48	29.83	6.91
Class 4	51.67	2.16	32.17	7.96
5. ELD				
Class 1	15.83	5.78	14.50	4.18
Class 2	19.00	5.79	14.17	6.59
Class 3	17.83	4.79	14.83	3.06
Class 4	23.17	2.79	13.33	3.56

TABLE 6.3b

Mann-Whitney U Test on PIPS, MLT, PAI, EAA and ELD
of Pupils with High and Low Teacher Expectations

<u>Variables</u>	<u>u</u>	<u>P (one tailed test)</u>
1. PIPS		
Class 1	10.5	0.16
Class 2	8	0.07
Class 3	9	0.09
Class 4	3	0.008
2. MLT		
Class 1	3	0.008
Class 2	10	0.12
Class 3	6	0.03
Class 4	1	0.002
3. PAI		
Class 1	10	0.12
Class 2	5.5	0.03
Class 3	12.5	0.24
Class 4	0.5	0.002
4. EAA		
Class 1	2.5	0.008
Class 2	14	0.29
Class 3	3	0.008
Class 4	0	0.001
5. ELD		
Class 1	16	0.41
Class 2	11	0.16
Class 3	11	0.16
Class 4	1	0.002

TABLE 6.3c

Spearman Rank Order Correlations Between Pupils with
High and Low Teacher Expectations on the
PIPS, MLT, PAI, EAA and ELD.

<u>Variables</u>	<u>Rho</u>	<u>P (one tailed test)</u>
PIPS		
Class 1	0.36	>0.05
Class 2	0.48	>0.05
Class 3	0.43	>0.05
Class 4	0.73	0.01
MLT		
Class 1	0.72	0.01
Class 2	0.39	>0.05
Class 3	0.58	0.05
Class 4	0.82	0.01
PAI		
Class 1	0.39	>0.05
Class 2	0.60	0.05
Class 3	-0.27	>0.05
Class 4	0.85	0.01
EAA		
Class 1	0.75	0.01
Class 2	0.13	>0.05
Class 3	0.73	0.01
Class 4	0.87	0.01
ELD		
Class 1	0.10	>0.05
Class 2	0.34	>0.05
Class 3	0.34	>0.05
Class 4	0.82	0.01

3. Parents' Expectations (PE) and Pupil Scores on the PIPS, MLT, PAI, EAA and ELD

The mean scores of children according to parent expectations concerning their ability are shown in Table 6.4a. The mean scores of PEH (Parent Expectation High) children were generally higher on all the variables compared to the mean scores of either PEM (Parent Expectation Medium) or PEL (Parent Expectation Low) children.

In Table 6.4b the results of the correlations between PE and each of the variables are shown. The results showed that none of the correlations in Class 1 was significant; correlations in class 2 were significant on MLT and EAA; correlation in class 3 was significant on EAA; correlations in class 4 were all significant. Correlations between PE and EAA were most consistently significant in three out of four classes.

TABLE 6.4a

Mean Scores and Standard Deviations
of Children with High, Medium and Low
Parental Expectations on PIPS, MLT, PAI, EAA and ELD

<u>Variables</u>	<u>High</u>			<u>Medium</u>			<u>Low</u>		
	<u>N*</u>	<u>\bar{x}</u>	<u>SD</u>	<u>N*</u>	<u>\bar{x}</u>	<u>SD</u>	<u>N*</u>	<u>\bar{x}</u>	<u>SD</u>
PIPS									
Class 1	6	18.00	7.87	5	19.80	7.19	1	16.00	n.a.
Class 2	4	21.25	5.44	7	18.43	5.77	1	26.00	n.a.
Class 3	4	21.75	2.99	5	19.00	6.00	3	16.33	4.73
Class 4	8	25.63	6.23	4	15.25	4.35	0	n.a.	n.a.
MLT									
Class 1		58.67	11.38		60.00	4.85		44.00	n.a.
Class 2		69.50	5.69		59.57	7.23		62.00	n.a.
Class 3		59.25	7.18		56.80	8.70		50.00	13.10
Class 4		65.25	10.78		49.75	7.14		n.a.	n.a.
PAI									
Class 1		19.33	3.83		21.60	7.27		13.00	n.a.
Class 2		24.25	4.99		20.57	8.69		14.00	n.a.
Class 3		20.00	6.68		17.80	5.59		20.00	5.29
Class 4		26.88	7.57		15.75	2.06		n.a.	n.a.
EAA									
Class 1		37.83	9.06		37.6	5.67		34.00	n.a.
Class 2		42.75	3.77		35.14	7.05		33.00	n.a.
Class 3		42.50	7.94		38.00	7.28		25.67	5.51
Class 4		48.75	5.72		28.25	6.60		n.a.	n.a.
ELD									
Class 1		15.67	5.65		15.40	4.51		11.00	n.a.
Class 2		20.00	5.48		15.86	6.34		8.00	n.a.
Class 3		19.25	5.44		15.20	3.03		14.33	2.31
Class 4		21.25	4.89		12.25	1.71		n.a.	n.a.

N* remains constant for all classes

TABLE 6.4b

Spearman Rank Order Correlations Between
Parental Expectations and PIPS, MLT, PAI, EAA and ELD

<u>Variables</u>	<u>Rho</u>	<u>P (one tailed test)</u>
PIPS		
Class 1	0.16	>0.05
Class 2	0.15	>0.05
Class 3	0.32	>0.05
Class 4	0.66	0.05
MLT		
Class 1	0.08	>0.05
Class 2	0.55	0.05
Class 3	0.38	>0.05
Class 4	0.67	0.05
PAI		
Class 1	0.22	>0.05
Class 2	0.41	>0.05
Class 3	0.05	>0.05
Class 4	0.80	0.01
EAA		
Class 1	0.09	>0.05
Class 2	0.53	0.05
Class 3	0.68	0.05
Class 4	0.82	0.01
ELD		
Class 1	0.13	>0.05
Class 2	0.41	>0.05
Class 3	0.29	>0.05
Class 4	0.67	0.05

4. Consensus between Parent and Teacher Expectations
Concerning Children's Ability

The results of parent-teacher expectations concerning children's ability are shown in 2 x 3 contingency tables, as in Table 6.5a. The binomial probability that all subjects rated 'highs' by parents, also rated 'highs' by teachers were: 0.23 for class 1; 0.38 for class 2; 0.06 for class 3; and 0.11 for class 4 under the null hypothesis. None of them reached the 0.05 level of significance.

The correlations between parent expectations and teacher expectations concerning children's abilities are shown in Table 6.5b. The correlations were all positive, they were significant only in classes 3 and 4 (class 3, $\rho = 0.77$, class 4, $\rho = 0.71$).

TABLE 6.5a

2 x 3 Contingency Tables Showing Parent-Teacher Ratings of Individual Children

		Parents		
		H*	M	L
Teachers	H	2	4	0
	L	4	1	1
		<u>Class 1</u>		

		Parents		
		H	M	L
Teachers	H	4	2	0
	L	0	3	3
		<u>Class 3</u>		

		Parents		
		H	M	L
Teachers	H	2	4	0
	L	2	3	1
		<u>Class 2</u>		

		Parents		
		H	M	L
Teachers	H	6	0	0
	L	2	4	0
		<u>Class 4</u>		

*H=high; M=medium; L=low.

TABLE 6.5b

Spearman Rank Order Correlations Between Parent and Teacher Rating of Individual Children

<u>Classrooms</u>	<u>Rho</u>	<u>P (one tailed test)</u>
Class 1	0.21	>0.05
Class 2	0.11	>0.05
Class 3	0.77	0.01
Class 4	0.71	0.01

5. The Correlations between PIPS, MLT, PAI, EAA and ELD

The results of the correlations between each of the above variables using the Spearman rho are shown in Table 6.5. Inspection of the table shows significant correlations between the following in the respective classes.

- (a) PIPS and MLT in classes 2, 3, 4.
- (b) PIPS and PAI in classes 2,4.
- (c) PIPS and EAA in class 4.
- (d) MLT and PAI in classes 1,2, 4.
- (e) MLT and EAA in all classes.
- (f) MLT and ELD in classes 1, 2, 4.
- (g) PAI and EAA in classes 1, 2, 4.
- (h) PAI and ELD in classes 1, 2, 4.
- (i) EAA and ELD in classes 2, 3, 4.

Except for two instances in class 3, i.e. the correlations between PIPS and ELD, and between MLT and PAI, the results were all positive and generally consistent with the results obtained in the combined analysis of classes in Chapter IV.

TABLE 6.6

Spearman Rank Order Correlations Between

PIPS, MLT, PAI, EAA and ELD

(Class 1, 2, 3 and 4)

		1	2	3	4	5
1. PIPS	Class 1 SESE		0.32	0.17	0.07	0.02
	Class 2		0.73 SESE	0.54 SE	0.29	0.44
	Class 3		0.53 SE	0.13	0.45	-0.03
	Class 4		0.64 SE	0.53 SE	0.79 SESE	0.41
2. MLT	Class 1			0.68 SE	0.69 SE	0.53 SE
	Class 2			0.63 SE	0.57 SE	0.63 SE
	Class 3			0.10	0.51 SE	0.09
	Class 4			0.67 SE	0.81 SESE	0.73 SESE
3. PAI	Class 1				0.61 SE	0.63 SE
	Class 2				0.74 SESE	0.78 SESE
	Class 3				0.31	0.42
	Class 4				0.79 SESE	0.82 SESE
4. EAA	Class 1					0.20
	Class 2					0.69 SE
	Class 3					0.73 SESE
	Class 4					0.75 SESE
5. ELD	Class 1					
	Class 2					
	Class 3					
	Class 4					

~~SE~~ Significant at 0.05 level, one tailed test.

~~SESE~~ Significant at 0.01 level, one tailed test.

~~SESESE~~ Results of respective classes across.

APPENDIX 2.ATEACHER-CHILD DYADIC INTERACTION

A guide to Coders

(Modified from Brophy and Good, 1969; Ashcroft, 1972)

A. General Class Activities

RESPONSE OPPORTUNITIES

Involves a public attempt by an individual child to deal with a question posed by the teacher.

1. Types of response questions:

Direct Questions (D)

Covers all instances when teacher calls on a child who does not volunteer a response opportunity (except sanctions and directions).

Indirect Questions (I)

- i) Teacher creates response opportunity but calls upon a child who indicates a desire to respond.
- ii) Call outs are also included in this category. Call outs refer to response opportunities created by children who call out answers to teachers public questions without waiting for permission to respond. Teacher must make some feedback response to child who calls out answer.

Decision rules for ambiguous situations

- a. Indecision between direct and indirect question code direct.
- b. Indecision between call outs and direct questions code direct questions.

2. Type of Answers

i. Correct Answers (+)

- a. Child answers in way that satisfies teacher. To be correct the answer must be what the teacher is looking for.
- b. Part correct answers are coded incorrect answers.

ii. Incorrect Answers (-)

- a. Child's response is treated as simply wrong by the teacher (who may tell the child he is wrong, ask someone else, or provide answer himself).
- b. Part correct answers are coded incorrect answers.

iii. No Response (0)

- All cases where child fails to make a substantive response to teacher's question either by making no response whatever, by indicating through word or gesture that he cannot answer the question, or by mumbling something which the teacher indicates he cannot understand.

Decision rules for ambiguous answers

- i. If unsure of correct or incorrect answer look for indications by the teacher. Indications of teacher dissatisfaction requires the answer to be coded incorrect; teacher satisfaction indicates correct answers.
- ii. Indecision between whether an answer is provided by the pupil or not provided, code no response.
- iii. When the teacher remains with the child on the same subject consider it as a single event.

3. Teacher Feedback

The aim here is not merely to tap correct or incorrect answers, but to note the quality of teacher feedback. For example, the pupil may provide an incorrect answer, but the teacher may encourage him to search for a correct answer, in this case teacher feedback is positive.

i. Positive Feedback (+)

- a. Praise i.e. positive evaluation - more than merely indicate child has given a correct answer.
- b. Affirmation of correct answers: Affirms Right. Teacher indicates that child's response is correct or acceptable (verbally or non-verbally).
- c. Rephrase, provides clue or provides answer to given incorrect or part correct answer, or in any way assisting the pupil without indicating anger or criticism.

ii. Negative Feedback (-)

- a. Negation of Incorrect Answers: Negate Wrong. Teacher indicates that child's response is incorrect or unacceptable (verbally or non-verbally), without going on to assist pupil.
- b. Criticism: Negative evaluation - more than merely indicates response is wrong. Teacher also expresses anger or personal criticism of the child even though he provides answers, clues or he rephrases the question.
- c. No feedback (0)
 - i. Teacher does not react to child's answer. For example, teacher may ask a new question, or teacher directs attention to another child.
 - ii. Child indicates he is not aware of teacher acceptance or

non-acceptance of his answer.

Decision rules for ambiguous teacher feedback

- a. Unsure of positive feedback code negative.
- b. Unsure of negative feedback code negative.
- c. Unsure of any feedback occurring code no feedback.

4. Procedural Directing (P)

These are essentially utterances of an ordering or directing nature in which the emphasis is on the pupil continuing present actions or doing something different e.g. "Carry the basket", "You may carry on reading".

5. Sanctions

i. Positive Sanctions (S+)

These are essentially valuing responses, with the subject, or his behaviour, or his artefacts, or his work found to be good. The basic criteria for this category of teacher behaviour are approval and appreciation. For example, "John is smartly dressed today". Teacher stamps Mary's book because she copies correctly.

ii. Negative Sanctions (S-)

These are essentially valuing responses, with the subject, or his behaviour, or his artefact, or his work found to be unsatisfactory or bad. The basic criteria for this category is teacher disapproval or denigration. Generally this includes reproach, blame, criticism, sarcasm, and discouragement. For example "I do not like Nancy looking outside the classroom". Teacher looks at Ahmad's book but failed to stamp the book although teacher stamps Lim's book earlier.

Decision rules for ambiguous events

1. If unsure between procedural directing and negative sanctions code negative sanctions.
2. If unsure of positive sanctions and negative sanctions do not attempt to code at all.

APPENDIX 3
(MALAY LANGUAGE TEST)
BAHASA MALAYSIA TEST

Administration Notes

1. This test comprises five sub-tests.
2. Testers are required to read instructions and sentences slowly and clearly in Bahasa Malaysia (Standard Malay).
3. Testers are required to cease testing each sub-test after failure of three successive items.
4. Where pictures are used, these must not be made available to the subject until required to do so.

INSTRUCTIONS ON SUB-TESTS

1. ORAL SUB-TEST A. This is a sentence repetition test. Pupil is required to repeat in full and in Bahasa Malaysia given sentences. Tester will instruct pupil to repeat sentences after him. Tester will read each sentence only once. Pupil will have five seconds in which to commence repetition. After five seconds is over, tester will repeat the sentence once, and another period of five seconds is allowed.

Two marks will be given if the pupil succeeds during the first attempt, and one mark only will be awarded if the second attempt is correct. The tester can assist the pupil only once, and this is considered a second attempt, but the pupil has to repeat the whole sentence all over again, not just the part of the sentence where he went wrong.

20 Marks

2. ORAL SUB-TEST B. This test involves comprehension of the spoken word. This sub-test requires the pupil to answer the questions asked by the tester. Questions are to be answered in full. Tester will instruct pupil to answer in full sentence giving one example

e.g. Question - "What is your name?"

Answer - "My name is Jennifer."

Correct answers are full sentences made in the first attempt and within five seconds of the question. Correct answers earn two marks.

The tester will repeat the sentence only once after the first five seconds are up. Correct answers given in the second attempt score one point.

An incomplete answer like 'Jennifer' scores 1 point either in the first or second attempt, since it indicates that the subject understands the question, but fails to answer in a manner required by the school. (For example as prescribed in the Malay language syllabus for Standard One).

20 Marks

3. LISTENING COMPREHENSION SUB-TEST. This sub-test requires the subject to follow the instructions given by the tester. Two points are given for the first correct attempt, and one point for the second correct attempt.
- The tester will repeat the instructions after a lapse of five seconds if the subject fails to do anything. If the subject fails to follow correctly the instructions given, the tester will stop him, and repeat his instruc-

tions once. This is considered a second attempt.

NOTE: In the preceding sub-test - ORAL TEST A, ORAL TEST B, and LISTENING COMPREHENSION two attempts are allowed.

In the following sub-tests - PICTURE MATCHING A and PICTURE MATCHING B, only one attempt is allowed.

20 Marks

4. PICTURE MATCHING A SUB-TEST - identifying named objects depicted in pictures. One practise with a given example as set out in the sub-test is allowed and administered. Tester is to read from three alternative pictures depicted in sub-test Form 4 (to accompany this test).

The tester will make sure that only the required pictures are seen. Only five seconds are given for the pupil to decide on the alternative. A correct match scores one point.

10 Marks

5. PICTURE MATCHING B SUB-TEST - identifying events shown in the pictures. The procedure for this form is as for PICTURE MATCHING A SUB-TEST. Pictures are depicted on sub-test form 8 (to accompany this test). A correct match scores two points.

20 Marks

SCORE The total possible score for the tests is 90 being the simple addition of correct items with a 1 or 2 point credit.

APPENDIX 4Introduction

Each class teacher was requested to fill a form stating their reasons for classifying pupils into 'highs' (clever) or 'lows' (not clever) after data on teacher-pupil interaction had been obtained. The following are translations of their replies, including also some information concerning the teachers.

A. Class I

1. a) Professional Status: trained teacher
b) Teaching Experience: 23 years
c) Sex: female
d) Age: 37 years.
2. Characteristics of pupils classified as clever
 - a) Of good health, with no defects in all the senses, smart and happy.
 - b) Pays attention to teacher's instructions.
 - c) Less playful/understands teacher's instruction easily.
 - d) Availability of extra tuition at home before and after school.
 - e) Likes to discuss/or to question materials that are not understood.
3. Characteristics of pupils classified as not clever
 - a) Of poor health. All or part of the senses are affected.
 - b) Does not pay attention to teacher's instructions.
 - c) No opportunity to receive extra tuition at home.
 - d) Often the child lives too far away from the school,

and because of the absence of any form of transportation, the child became tired and failed to revise lessons taught at school.

B. Class 2

1. a) Professional Status: trained teacher
b) Teaching Experience: 21 years
c) Sex: Female
d) Age: 37 years
2. Characteristics of pupils classified as clever
 - a) The child is able to carry out daily instructions made by the teacher.
 - b) The child is able to answer personal questions made by the teacher about himself and his family.
 - c) The child is quick to adjust himself to school environment.
 - d) Dares to ask questions/is inquisitive.
 - e) The child worries if he does not do his work well.
 - f) His facial expression provides some indication.
 - g) The child is clean and well dressed.
 - h) The child's senses have no defects.
3. Characteristics of pupils classified as not clever
 - a) The child is not able to carry out daily instructions made by the teacher.
 - b) The child is not able to answer personal questions made by the teacher about himself and his family.
 - c) The child takes more time to adjust himself to the school environment.
 - d) The child never asks questions.
 - e) The child does not worry when his work is not satisfactory.

- f) His facial expression provides some indications.
- g) The child is dirty and poorly dressed.
- h) The child's senses are defected, for example, hearing problems.

C. Class 3

1.
 - a) Professional Status: Trained teacher
 - b) Teaching Experience: 27 years
 - c) Sex: male
 - d) Age: 43 years.
2. Characteristics of Pupils classified as clever
 - a) The child is not quiet (likes to talk).
 - b) The child is healthy; his movements are fast.
 - c) The child's forehead is broad, the ears are large.
 - d) The child's head is big, and the rear of the head rises slightly.
 - e) The child's parents are responsible.
 - f) The child's home background is conducive to education.
3. Characteristics of pupils classified as not clever
 - a) The child is quiet - does not like to talk.
 - b) The child's health is poor.
 - c) The child's parents are irresponsible.
 - d) The child's movements are slow.
 - e) The child's oral expressions are difficult to be understood.

D. Class 4

1.
 - a) Professional Status: Trained teacher
 - b) Teaching Experience: 23 years
 - c) Sex: female
 - d) Age: 38 years

2. Characteristics of pupils classified as clever

- a) The child's facial expressions are one of happiness and peace.
- b) The child is active, and likes doing work given to him.
- c) The child always talks and discusses with his friends.
- d) The child is able to express himself orally, and to mix around appropriately.

3. Characteristics of pupils classified as not clever

- a) The child's facial expressions seems unhappy, full with worry, and least appealing.
- b) The child does not like to be active and in fact avoids doing any work.
- c) The child finds difficulty in expressing himself orally. His command of the language is limited.

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