

CHAPTER 2

REVIEW OF LITERATURE

2.0 Introduction

A review of the literature indicates that the number of studies on academic achievement of Tamil primary schools is limited. However, the number of studies related to factors influencing the academic achievement of the school population in both developed and developing societies is relatively large. A review of the following perspectives is of relevance to this study: (1) factors influencing academic achievement (2) pupil factors (3) school factors (4) parental factors.

2.1 Factors Influencing Academic Achievement

It is widely acknowledged that what a pupil learns depend not only on school facilities and teachers' abilities but also on his or social environment outside the school. These factors are influenced

by pupils' parents, family circumstances and the values that permeate life outside the classroom.

The importance of SES factors and its relationship to academic achievement has long been recognized. Studies summarized by Judd and Moock (1976) and Simmons and Alexander (1980) showed that the SES factor is the most important variable in explaining educational attainment, income and occupation of parents (especially fathers) and material possession of items such as a car, television and a home, (Isahak, 1977, Scott and Teddlie, 1987, Aziz, 1989, Leong et al., Holloway, 1990 and Wentzel, 1991).

Besides the family's socio-economic characteristics, family processes and culture which include parental educational expectation, parental job expectation, encouragement to work hard and parental motivation were found to have strong and positive effects on pupils' participation in school. Floud et al. (1957), Fraser (1957), Dave (1957), Wolf (1964) and major educational surveys like Early Learning, the Plowden Report in

England, the Coleman Report in the United States and the International Study of Mathematics (Husen, 1967) brought about a public awareness of the importance of the motivational factor of the home over those relating specially to material circumstances.

In school, particularly at the primary level, availability of facilities influences the level of academic achievement. A number of studies have been conducted to investigate the relationship between academic achievement and variables such as class size, size of school, quality of teachers, number of library books available per child, student-teacher ratio and school and classroom facilities. These studies have been summarized by Simmons and Alexander (1978), Bridge *et al.* (1979), the International Development Centre (IDRC 1979) and Madaus *et al.* (1980).

Since there is an enormous amount of literature on academic achievement, some of which may not be readily available in Malaysia, it is convenient to base the present review partly on that given by Glasman and

Biniaminov (1981) which summarises 33 studies pertinent to American schools published between 1959 and 1977. Other relevant studies in developed countries such as Great Britain and Japan as well as previous reviews (Shea, 1976 and Rutter, 1983) have also been considered. Nevertheless, relevant studies from developing countries like Indonesia, Thailand, Nepal, Sri Lanka and Malaysia have been included in this review.

2.2 Pupil Factors

In this study, sex, SES, IQ, kindergarten education, frequency of absence from school, self-perception of ability, tuition, academic and occupational aspirations were considered as pupil factors.

The research evidence of Douglas (1964) and Davie et al. (1972) shows that girls generally performed better than boys, except in Mathematics, in the primary school. In a comprehensive review of the literature, Maccobby and Jacklin (1974) found that girls are better off in verbal skills while boys perform better in visual and spatial tasks, and in Mathematics. These

differences however, are small. A more recent review of research concluded that current sex differences in verbal ability are negligible, and differences in quantitative ability are declining (Linn and Hyde, 1989 and Skaalvik and Rankin, 1994).

In Indonesia, Paige (1978) reported a negative correlation between gender of pupils and achievement, while Ndapatondo (1979) found male students to outperform consistently the female students. Ndapatondo's finding contradicted many of the studies carried out in developed countries which suggested that female students performed better than the male students (Maccoby, 1978). However, the findings of the International Association for Evaluation and Achievement Studies (IAEA, 1973 and 1976) suggested that girls perform poorly when compared to the boys in nearly all of the 23 developing countries in the sample. In a recent study, Wirawan found that there was no significant difference between boys and girls, even though boys scored slightly higher than girls. The Malaysian studies, Aziz (1989) and Leong et al. (1990) showed that the girls performed better than boys in all subjects except Mathematics in the UPSR.

Research findings on SES and academic achievement have ranged from an almost perfect relationship of SES with achievement to one of zero relationship. In the developed countries, the 'class-advantage' view was supported by Curry (1962). The study on the effect of SES on the scholastic achievement of sixth-grade children found that, to some extent, academic attainment was dependent on the SES of the home. Hammond and Cox (1967) reported that correlations between home factors and educational attainment were father's occupation, place of residence, family love scale, family achievement orientation and mother's employment status.

Another study by Mosteller and Moynihan (1972) found that children whose parents had less than an eighth grade education scored lower on tests than those whose parents had a college education. In the study by Keeves (1972), father's education was the most powerful variable in predicting generalized achievement. The correlation between the home environment and achievement was 0.57, significant at the 0.1 level. Father's occupation was found to be significantly correlated with the achievement test scores. Examples of studies

which concurred with the view that father's occupation was an important factor were Simmons and Alexander (1980), Mercy and Steelman (1982) and Noell (1982).

An attempt to explain the relationship between pupil SES, and teacher and parent expectation for children's education and achievement was made by Scott and Teddlie (1987). In their study of 5,289 third grade pupils in Louisiana, they found that SES was the best single predictor of achievement. In the United States, Holloway et al. (1990) found that pupil's performance in elementary school was related to three variables (concern for school achievement, school ability beliefs and social class) as well as micro-level socialization variables. By contrast, children's performance in Japan depended on the social class of their family rather than the status granted to the school.

Many studies had explained the variation in pupil attainment by the use of SES characteristics based on gross measures of parental income, parental education or parental occupation indices. Majoribanks (1979) questioned the utilization of such measures alone. He claimed that the measurement of the environ-

ment had accounted for only a relatively small proportion of the variability in the academic performance of the children. Furthermore, he stated that even when statistically significant relationships were found between global classificatory environmental variables and cognitive performance, the results failed to reflect the dynamics of the learning environment. The global classification of SES, in his opinion, had little function or diagnostic value for the teacher, student, counsellor or educational administrator. These were what he termed as 'non-malleable indices'.

Another researcher who dismissed the concept of social class and neighbourhood advantage on the basis that these variables required further refinement was Donarchy (1979). Among the home variables which he considered paramount were attitudinal factors rather than physical home conditions or family size. Donachy subscribed to the process variable as being more important than static factors such as social class and neighbourhood. The findings of Rollins and Thomas (1979) and Iverson and Walberg (1981) concurred with those of Donachy.

In the developing countries, Muller and Parcel (1981) considered SES to be sufficiently important as an explanatory or control variable to merit care in social studies. Cooksey (1981), who conducted a study among grade six pupils in the Cameroons, showed that parental education was a major determinant of class position and of the pupil's scholastic performance. Another study, conducted by Lanzas and Kingston (1981) in Zaire, reports that high status background boosted the academic achievement of students. Niles (1981) conducted a study in Colombo, Sri Lanka and evidence indicated that the relationship between SES and academic achievement was not only substantial but also stronger than that which was reported in the industrialized West.

Wolfe and Behrman (1984) found that there was strong evidence that student's family background alone contributed significantly to both educational attainment (enrolment and persistence) and achievement (learning) in developing countries. The effect was however, not merely a relationship between family background and the quality of schools. Family background determined the probability that children would

enrol in school, attend, and complete various levels of schooling. Sudarsono (1984) found that father's education was a significant variable among other socio-economic status indicators such as occupation, income, possession of material items and social status.

Using household income as a rough proxy for student's social class, Chernichovsky and Meesook (1985) found significant educational attainment effects in Indonesia. Similar effects were established by King and Lillard (1987) in Malaysia. After analysing historical data from the Philippines, Smith and Cheung (1986) noted that the educational and occupational attainment of parents shaped children's achievement in school since the early twentieth century.

In Nepal, Jamison and Lockheed (1987) observed that the social class of parents and grandparents, determined by their landholding, caste, schooling and degree of literacy determined strongly the children's participation in school. Moock and Leslie (1986) found that children's nutritional condition had strong effects on their participation in school. Parental literacy was also reported to be associated strongly with

the number of years that children attended school in Brazil (Psacharopoulos and Arriagata, 1977).

Students' family background also affected their learning while they were in school. Schiefelbein and Simmons (1981), for example, found that social class helped to predict the achievement of students in 28 of the 37 Third World studies reviewed by them. Moreover, the influence of family background was salient for subjects such as reading but less so for subjects such as science which was relatively less familiar to many Third World communities. On this point, Schiefelbein and Simmons noted that students' family characteristics accounted for a higher proportion of variance in reading than in science achievement in multivariate studies from India, Peru and Malaysia.

Lockheed et al. (1989) found that Thai students whose fathers were engaged in professional occupations and whose mothers had higher levels of education showed greater achievement in Mathematics. Students living in wealthy districts and families using the medium of instruction at home scored high grades in school.

In Malaysia, the findings indicated the importance of SES in determining the pupil's scholastic performance. Ishak (1977) concluded that there was evidence that pupils' SES and background factors contributed significantly to their academic achievement. The study by Aziz (1989) attempted to see how pupil background variables influenced the variations in academic achievement scores of primary school pupils. Pupil background variables studied were gender, ethnic origin, SES, parental support for pupils' education, home environment, pupils' academic aspirations, and locus of control. The sample for the research consisted of 626 Standard VI pupils in the district of Kuala Kangsar, Perak. The sixteen schools represented a sampling of Malay, Chinese and Tamil medium schools.

In Aziz's study, background variables accounted for nearly 4.5 % of the variance in the achievement of primary school children. His study confirmed the overall influence of SES on academic achievement. It was noted that the indirect effect was through parental involvement in the home environment and the presence of

support variables such as the provision of reading materials and tuition.

The report by Leong et al. (1990) showed that the socio-economic origin of the pupil as measured by combining father's occupational and educational status emerged as the most important factor in influencing educational achievement. The SES index explained 29.0% of the total variance in academic achievement.

Besides SES, the IQ of the child is considered an important variable in determining his academic achievement. The importance of IQ as a predictor of academic achievement had been tested in research studies. Rossi (1961) found that between 40 % to 60 % of the variation in educational achievement among students could be accounted for by variations in IQ levels. He also found that when IQ was held constant, the correlations between achievement and other variables were reduced in size. This was the case for both elementary and secondary schools. While Lavin (1965) concluded that the correlation between IQ scores and grades at high school level was about 0.60, a higher correlation was attained when achievement test scores were used instead of grades.

In a study based on a large sample of British elementary school children, Messe et al. (1979) found a strong predictive relationship between mental ability scores and classroom performance, irrespective of the pupils' SES. Entwistle and Hayduk (1981) concluded that children's IQ shaped their performance.

In dismissing the total innate ability theory, Cohen (1969) offered the 'cumulative deficit' phenomenon in which poverty and economic deprivation bred poor health that retarded reading ability. In his view, intelligence was modified by environmental stimuli. Environmental features were of great importance to the child. In a review of studies, Naylor (1972) concluded that the individual differences in school could not be reduced to individual differences in pupil intelligence. Majoribanks (1979) indicated that, normally, intelligence test scores had high concurrent validity in relation to children's school achievement. However, when social status, intelligence and children's outcome had been included in the same analysis, the findings were inconsistent in substance.

McCarthy and Houston (1980) were of the opinion that environment and heredity interacted in the development of an individual intellectual activity. The child's physical maturation in combination with his experiences determined his intellectual development. If the child's physical maturation was retarded, intellectual development could be retarded too, regardless of the extent of experiences gained. Similarly, limited experiences could retard intellectual development. McCarthy and Houston conceded that cognitive development was important although three other dimensions (physical, social and emotional) and their interactions between and amongst them should be fully understood if the child was to be helped in terms of academic achievement. Nil Sovic et al. (1994) indicated that a discrepancy can often be observed between children's IQ and their academic performances. This indicates that other variables may interact significantly with the learning of academic tasks.

Regarding IQ, Sundarsono (1984) found that elementary pupils' ability in Indonesia indicated by the Wechsler Verbal Test and previous achievement in Semesters I and II were the most important variables in

explaining variances in pupils' achievement. The findings of Wirawan (1986) supported the findings that intelligence was clearly related to success in school for both boys and girls.

Influenced by Guilford's original work, Howard Gardner (1983) concluded that most conceptions of intelligence were too narrow and should be broadened beyond the confines of the narrow book learning emphasized in schools. He describes seven major and relatively independent dimensions of intelligence and makes a persuasive argument for the idea of multiple talents. Gardner's main argument for multiple talents derives from the diversity of skills found in a modern technological society. There are individuals who may not be high in verbal or logical dimensions but who excel in other aspects like spatial skills (artists and architects) and interpersonal skills (effective counsellors and empathetic teachers).

An interesting revelation which threw light on the Japanese success was their concept of indigenous psychology. According to Shimara (1986), the Japanese view was that normal children would develop the ability

to learn well. It attributed achievement to effort rather than innate ability. It ignored IQ as a criterion for assessing student performance. According to Butler (1993), the process of human development within the concept of intelligence is one which takes place within the bounds of the individual person and within the limited influence exerted by factors outside the individual. In contrast, cognitive models predict considerable scope for development through the interactive processes between person and context.

While there is evidence that both hereditary and environmental factors affect intellectual functioning, it is usually not possible to establish the extent that each contributes to academic achievement, given that the proportions change over time. It is sufficient for educators to note that both factors are in operation and that educational strategies need to be designed with this in mind (Briggs and Telfer, 1987).

Over the years, evidence had shown that kindergarten education was very important in enhancing child development. Studying the data from the pilot project

on compensatory education, Kratt et al. (1965) stated that preschool training provided children with a better background for success in regular school grades. Cohen (1973) noted that highly structured preschool programmes aimed at language development influenced the school grades of pupils.

The study conducted by Sudarsono (1984) in Indonesia showed that there was a significant relationship between academic attainment and kindergarten education. This finding was in accordance with Fuller (1976) and Wirawan (1986) in Thailand. In the Malaysian context, findings of Aziz (1989) and Leong et al. (1990) indicated the importance of kindergarten education in relation to academic performance in school.

The variable that is associated negatively with academic achievement is absenteeism. The West Riding Education Committee Report (Wiseman, 1967) found a strong relationship between attendance at school and academic achievement. Meyeske (1972) found that students' absence was associated negatively with academic achievement. These findings were in accordance with

those of Fuller (1976) in Thailand, and Paige (1978) and Sudarsono (1984) in Indonesia.

The relationship between self-perception of ability and academic achievement was significant in the studies carried out by Youngman (1980), Bartal (1980) and Clarke (1985). The survey by Glasman and Biniaminov (1981) found that internal locus of control, high self-concept and high academic aspirations affected achievement in a positive manner. Likewise, other studies indicated that the relationship between self-concept and achievement was positive (Entwistle and Hayduk, 1980; Hansford and Hattie, 1982; Marsh and Holmes 1990; Walberg, 1991; Beane, 1991; Skaalvik and Rankin, 1994; Vrugt, 1994 and Moore, 1995).

A number of studies in developing countries revealed a positive relationship between internal locus of control and academic achievement. Song In-Sub and Hattie (1984) investigated the relationship between home environment, self-concept and academic achievement of about 2,350 Korean students in Seoul. The results indicated that self-concept was a mediating variable between home environment and academic achievement.

Within self-concept, academic concept affected academic achievement more strongly than social self-concept.

Lockheed et al.(1989) found that the main impact of family social status and students' background characteristics was through the initial level of achievement. Once established, conventional background variables contributed little to achievement. By comparison, students' educational expectations and students' attitudes were related positively to achievement in both urban and rural settings in Thailand.

In Malaysia the study by Aziz (1989), indicated that after SES, the second most important variable influencing academic achievement was locus of control. Previous research carried out in Malaysia had also suggested the importance of locus of control as a predictor of academic achievement. This was confirmed by the findings of Maznah and Ng (1985) , Maznah (1987) and Leong et al. (1990). It has been suggested that serious consideration should be given to teaching units within the primary school curriculum which would increase the locus of control of children.

There was a significant relationship between pupils who took tuition and their general level of academic achievement. It appeared that tuition could enhance the academic achievement of pupils. The studies by Keeves (1972), Wirawan (1986), Sudarsono (1989) and Leong et al. (1990) yielded similar results.

From the above discussion on pupil factors, it is possible to conclude that sex, SES, intelligence quotient, kindergarten education, frequency of absenteeism from school, self-perception, tuition, and pupils' academic and occupational aspirations are important variables in determining the academic achievement of pupils.

2.3 School Factors

The Coleman report concluded that teachers had little impact on student learning, suggesting instead that students' SES was the primary factor influencing achievement (Coleman et al. 1966). A re-analysis of the Coleman data, however, revealed very different results, indicating that individual teachers produced

varying levels of achievement (Simmons and Alexander, 1978; Heyneman and Loxley, 1983; Anastasia, 1989 and Good and Brophy, 1991).

Research has indicated the importance of school factors on academic achievement. School district conditions include variables such as school size, fiscal resources, pupil-teacher ratio, administrator-teacher ratio, professional staff services and facilities such as laboratories and libraries, average class size, school location (urban/rural), social class of the pupils and ethnic composition. Other variables as suggested by Centra and Potter (1980) include the degree of control or centralization of decision-making, reward mechanism, instructional organization such as tracking or streaming, team-teaching and open versus traditional classrooms, student peer influences, quantity of schooling and school environment or climate.

An investigation into the quality of schooling as measured by the number of hours in school on achievement was taken by Wiley and Harnischfeger

(1974). The assumption was that the amount of schooling was an important factor in achievement . They found that where students received 24% more of schooling, they increased their gain in Reading Comprehension by two-thirds and in Mathematics and Verbal Skills by a third.

No measurable school resource or policy shows a consistent relationship between school effectiveness and student achievement. Jencks et al. (1972) found that specific school resources which had a statistically significant relationship with achievement changed from one survey to the next, from one kind of school to another and from one type of student to another. Averch (1971) also reached a similar conclusion as Jencks et al.. What the findings of these studies seemed to suggest was that the effect of school resources on scholastic achievement tended to be pupil-specific.

The study by Summers and Wolfe (1975) examined the interaction between the types of students and selected school and teacher variables. One of the findings was that in junior high school, class size of thirty-two or more reduced achievement, with low-income

students being most affected adversely. Glass and Smith (1978) presented evidence for a threshold effect for class size. The researchers found dramatic gains in achievement when class size was reduced to 15 or below. It seems that much of the previous research which had not found any achievement advantage in small classes as compared with large classes studied very few classes of less than 15 students.

Bourke (1986) made an interesting study on class size concerning 34 elementary schools in Melbourne. The main finding was that there was a significant relationship between student ability and teaching practices when school factors were controlled. This indicated, to some extent, that teachers used different methods according to student ability. For example, higher ability classes required less management and were more often taught as a class and given additional homework. It was also found that class-size differences were related to teaching practices which, in turn, influenced achievement.

In a study on school effectiveness in the Republic of Ireland, Madaus et al. (1979) reported that

differences in school characteristics contributed to differences in achievement. They believed that school resources could contribute to student achievement. Madaus' findings indicated that school variables which were important predictors of achievement were those that reflected the school and its characteristics (size, physical amenities and qualification).

Another interesting finding with regard to elementary school was that high-achieving pupils were best with experienced teachers while the learning capacity of low achievers was, in fact, reduced by the very same teacher. The low achieving pupils were best with new, relatively inexperienced teachers who, perhaps, had an undampered enthusiasm for teaching those who found it difficult to learn (Centra and Potter, 1989).

Research by Thomas (1962) and Kiesling (1969) found that pupil expenditure, class size, teacher qualification and teacher experience were related to pupil achievement in scores and information tests.

While Good's (1978) study was an examination of teacher effectiveness in elementary school, Armento (1977), Bush et al. (1977) and Peng, Ashburn and Garry (1979) studied teacher clarity and teacher effect on pupil achievement.

In his study, Anthony (1969) explored the relationships between the process variables of the classroom environment and academic achievement. He concluded that the classroom was a system involving not only the teacher but also the students, the materials and equipment used by the teacher, and the materials and experiences provided for the students. Anthony's study provided strong evidence of the important contribution of different aspects of the classroom environment that were concerned with something more than observable teacher behaviour. Teacher effects on achievement were found to be stronger with grade level than all other school inputs (Kyriacou, 1986; Anderson and Burns, 1989; Good and Brophy, 1991; Eggen and Kauchak, 1992; and Lundeborg and Fawver, 1994). They found teacher effect to exert a strong influence on achievement.

A summary of 15 studies related to academic achievement in developing countries was undertaken by Simmons and Alexander (1978). These were studies which used a variety of input variables. The findings were mixed and sometimes conflicting in nature. The researchers stated that there was also a lack of agreement among the studies with respect to the influence of teacher characteristics on student performance.

In his study of primary pupil achievement in Thailand, Fuller (1976) divided the national sample of primary school pupils into groups according to their socio-economic background. School variables such as school size, grade repetition, class-size, teacher qualification, pupils' school attendance, teacher's absence record, distance of home to school and previous attendance in kindergarten were independent variables. The results showed that school size accounted for a sizeable portion of the explained variance in the scholastic achievement of pupils of each socio-economic category. However, the influence of kindergarten education on achievement was reported to be inconsistent. He estimates that up to 15% of the total variance in

scholastic achievement in Thailand could be attributed to school resources. This seems to be a relatively larger school resource effect than normally found in industrialized countries.

Fuller speculated that one explanation might be that in economically and educationally advanced countries, the schooling system had already reached a critical threshold of quality beyond which variations made little difference in achievement. In the developed countries, almost all the teachers were trained and books, materials and visual aids were readily available. Conditions in less developed countries, including Thailand, were considerably different. A substantial percentage of teachers were untrained, textbooks were inadequate in number and kind, and teaching aids were almost non-existent. In a subsequent review of approximately 60 empirical studies of the determinants of achievement in developing countries, Fuller (1987) found that the characteristics of schools were related to students' achievement in a majority of studies when students' social-class background was held constant. Some of these school characteristics were class size,

teacher qualification, pupils' school attendance and school facilities.

In a review of 26 studies in 20 developing countries, Schiefelbein and Simmons (1978) found that of the 98 observations of schooling and achievement, 47 had statistically significant effects while 51 had either no impact or an impact in the direction opposite to what was expected. In particular, availability of textbooks and homework demonstrated positive relationships with achievement in 7 out of 10 and 6 out of 8 studies respectively. On the other hand, in 19 out of 32 studies, teachers without certificates in educational training had students who tested as well as those taught by teachers with certificates.

According to Farrel (1974), the conclusion by Jencks and others that education at the elementary or high school level had a rather negligible role as an agency for reducing inequality was unlikely to hold in developing countries. Farrel argued that there were at least three critical differences between rich and poor nations which suggested that the conclusion of Jencks

and others were far from applicable to the latter. First, school related variables varied much more in developing countries than in developed nations, and thus were potentially capable of explaining more of the observed variations in cognitive outcomes. Second, re-analysis of the original Coleman data had indicated that the strongest relationships between educational resources and cognitive outcomes occurred among Negroes in the South. What was suggested is a threshold point in achievement level, below which schools do have an effect. Finally, there were a number of educational variables (or variables manipulated by educational officials) which were of great relevance in developing societies, for example, nutrition and textbooks.

In El Salvador, Loxley and Heyneman (1980) examined the influence of school resources on learning outcome. They found that the existence of libraries in rural areas had an important impact on student learning. In urban settings, money allocated for books also appeared to stimulate achievement performance. Loxley and Heyneman concluded that general investments in

school and teacher quality were likely to have a significant statistical impact on scholastic achievement.

In a study of science achievement across 29 high-income countries, Heyneman and Loxley (1983) found that children who attended primary school in countries with low per capita incomes had learned substantially less than pupils in high-income countries, given the same amount of schooling. At the same time, the lower the income of the country, the weaker was the influence of pupils' social status on achievement. Conversely, in low income countries, the effect of school and teacher quality on academic achievement in primary school was comparatively greater.

The Malaysian study of Isahak (1977) examined the effect of various school variables such as school size, class size, library usage, teacher qualifications and experience, and possession of textbooks on achievement. Separate regression analyses were carried out comparing ethnic and rural-urban sub-groups. It was found that the effects of school variables varied from group to group. There was no one school variable that

registered a consistent significant or non-significant relationship with achievement. What seemed to emerge was that there were different 'production functions' of educational achievement for different ethnic and rural-urban groups of pupils in Malaysia's plural society.

Isahak used the variable 'possession of textbooks' to examine whether the relationship between availability of textbooks and pupil achievement would be maintained when SES was held constant. The variable seemed to have its greatest effect among precisely those children who were most lacking in educational assistance, namely, the children of lower social strata. The report by Leong et al. (1990) indicated that educational reasons for schooling and improvement of knowledge through the use of library resources were major school factors influencing academic performance .

The review from various countries had indicated that there were a number of variables that were related significantly to academic achievement of pupils. Some of those variables were school size, class size, school facilities, teacher qualification, teacher experience,

educational reasons for schooling, and classroom instruction.

2.4 Parental Factors

Researchers had frequently concluded that parental involvement, encouragement and interest were important for the academic achievement of children. Parental praise for educational success, encouragement to the child to work hard, parents' knowledge of pupils' progress, parents' reaction to the child's performance in school, parents' attention to the child's learning difficulties and the parents' educational and occupational aspirations for the child were important variables associated with the academic achievement of pupils (Dale and Griffith, 1965; Cohen, 1972; McCarthy and Houston, 1980; Sudarsono, 1984; Swick and Graves, 1986; Maznah, 1987; Aziz, 1989; Holloway, 1990; and Leong et al., 1990; Epstein, 1991).

A study of pupils of the same social class and IQ to find out why some had higher aspirations than others was undertaken by Kahl (1953). He found that parental pressure, that is, a clear and overt attempt

by parents to influence' was closely associated with academic achievement.

The interaction patterns of parents and their children influences learning. Some parents are more likely to 'tell' rather than 'explain'. Their language is less elaborate, their direction is less clear, and they are less encouraging. By contrast, other parents communicate more with their children, explain ideas and the causes of events, and encourage independent problem-solving. Regarded as the 'the curriculum of the home' (Walberg, 1991), these interaction patterns provide a strong foundation for better school performance.

The influence of pupils' background on their achievement in developing countries could be estimated better if we took into account family background characteristics such as parental values and press for the child to achieve, and the child's own effort and perceived efficacy. In a study undertaken in Thailand, Cochrane and Jamison (1982) found that parents' aspiration for their children's education was the most important predictor of educational attainment.

The study by Sudarsono (1984) in Indonesia showed that parental motivation, parental expectation and learning facilities at home were significantly associated with pupil achievement. Sudarsono found that his results were in close agreement with that of Paige (1978). Similar findings were reported by Wirawan (1986). He declared that since parents are children's first and most influential teachers, their involvement as a stimulant of the child's intelligence and school achievement was crucial.

A research on the determinants of children's schooling in Nepal was conducted by Jamison and Lockheed (1987). It examined a number of variables, including the modernity of parental attitudes and parental demand for their children's education. Both variables were found to have strong and positive effects on children's participation in school.

In a Malaysian study, Aziz (1989) found that the parental involvement in the education of their children was unsatisfactory. The observed low level of parental involvement in the Malaysian rural child could, to a

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certain extent, be attributed to cultural reasons. For the rural Malays, Chinese and Indians, a low level of parental involvement was due partly to the traditional attitude towards teachers as the all-knowing 'gurus' (masters). Another possible explanation could be that rural parents did not themselves feel sufficiently adequate to discuss school matters with teachers. Most of the rural parents were not highly educated.

In another Malaysian study (Leong et al., 1990), a number of independent variables pertaining to the home and their effects on academic achievement were analysed. These independent variables, categorised as home factors, relate to the number of siblings at home, size of household, facilities in the home, type of house lived in, frequency with which parents inspect homework and school grades, importance of good marks to parents', parental reaction to child's poor performance, educational and occupational aspirations of parents for the child, and parental reward for child's success in studies and co-curricular activities. Regression analysis indicated that within the home factors, parental educational and occupational aspirations for the primary child contributed to 14.0 % and 3.6% of

the variance in educational attainment respectively. Parental praise for educational success and reaction to a child's poor performance in school accounted for 1.8% and 1.2% of the variance in educational achievement respectively. The findings seem to be in general agreement over the importance of the role of parents in their children's education.

This review had tried to provide an overview of the studies on factors influencing academic achievement of pupils. Although a few of the studies seem to suggest that there are conflicting and inconsistent findings between the developed and developing countries, there are common pupil, school and parental factors which influence the academic achievement of pupils, irrespective of the level of development. Some examples of these factors are SES, IQ, parental interest and encouragement, and qualification and experience of teachers, all of which have been taken into consideration in the formulation of the research design for this study.