

THE EFFECTIVENESS OF
CURRENT PRESCHOOL EDUCATION
PROGRAMMES WITH SPECIAL REFERENCE
TO CHILDREN'S READINESS FOR FORMAL SCHOOLING

by

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in the

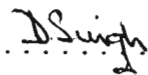
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December 1993

DECLARATION

I hereby declare that this dissertation is my own original work and has not been submitted previously for a degree at any other university.

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Durban

1993

DEDICATION

This dissertation is dedicated to:

1. My parents who were the source of inspiration in my life.
2. My husband Suresh and my sons Sherwin, Presheh and Nishane.

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ABSTRACT

The two principal aims of this study were:

- (a) to evaluate the effectiveness of existing pre-primary education for Indian children and
- (b) to determine the relative effectiveness of three current school readiness programmes..

Random samples of pupils, with varying preschool backgrounds, were drawn from Class i children attending selected Indian primary schools in the Greater Durban area. Information relating to the four groups formed in this way are given below:

Sample A: pupils who had attended registered private pre-primary schools (N = 50);

Sample B: pupils who had attended departmental bridging module classes (N = 40);

Sample C: pupils who had attended community-run pre-primary classes (N = 50); and

Sample D: pupils who had had no formal preschool education (N = 30).

To make the four groups comparable, variables such as age, sex, intelligence and socio-economic status were controlled. In keeping with the abovementioned aims the following sets of comparisons were made:

- (a) the performances, on a test of school readiness, of those pupils who had had some form of formal pre-school education (Groups A, B and C) were compared with those who did not receive any such education (Group D); and
- (b) the performances, on a test of school readiness, of pupils who came from the three different types of preschool backgrounds (A, B and C) were compared with one another.

Questionnaires were also completed by a sample of Class i Junior Primary teachers in the Greater Durban area (N = 35). Teachers were asked to comment and report on issues relating to pre-primary schools and classes, the extent of pupil readiness for Class i, the effectiveness of school readiness tests, and matters relating to the Class i curriculum. The purpose of this part of the study was to identify problems in subject areas related to preschool education so that appropriate remedial action could be suggested.

There was consensus among Class i teachers that preschool education promotes school readiness. This was confirmed by the results of this study. Groups A, B and C which had received preschool education performed significantly better than group D which comprised pupils who had had no preschool education. The findings also indicated that the preschool programme offered by the departmental bridging module classes was more effective in promoting school readiness than the programme offered by either the registered private pre-primary schools or community-run pre-primary classes.

Teachers rated the programme offered by Departmental bridging module class to be the most effective for preparing children for formal education. The registered, private pre-primary schools came second, and the community-run classes, third. This rating was again confirmed by the findings of this study.

When it came to rating the various subjects in the Class i curriculum in order of difficulty, the following rank-orders were obtained: English (most difficult) followed by Mathematics, Writing, Environmental Studies, Art and Music. They also identified specific short-comings among Class i pupils in each subject area.

A number of recommendations are made so that the problems identified by the investigation can be addressed. These relate to pre-primary educational provision, resources and support services, the environment as a resource, teaching, testing and the curriculum. Education authorities, pre-primary teachers, parents and Junior primary teachers are urged to adopt a team approach in the solution of problems relating to young children's education.

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CHAPTER 1

NATURE, PURPOSE AND SCOPE OF THE RESEARCH

1.1 INTRODUCTION

The problem of non-readiness for school has received considerable attention in developed countries in recent decades. Pupils admitted to school on the basis of certain criteria have been failing in large numbers. Bell and Aftanas (1972:659-667), for instance, estimate that the use of chronological age as the sole criterion for entry into first grade has resulted in the failure of 25 % to 30 % of children to achieve "the solid foundation skills necessary for their subsequent education." Researchers also cite other possible factors. The HSRC Report (1981:274) for instance, cites socio-economic disadvantage as a major reason for children not being ready for school. Tissier (1990:12) believes that many of the difficulties young children have in learning can be traced to inadequate parenting. Taylor (1984:138-143) asserts that deficiencies in the home as a learning environment can have a serious effect on a child's readiness for school.

South African studies among White children (Coetzee, 1969:23) and among Blacks (Gordon, 1986:70) established that between 20 % and 30 % of pupils entering school for

the first time, were not school ready. According to the statistics provided by the South African Institute of Race Relations Survey (1992), the drop-out rate among Black pupils in 1990 in Class i was 25 %.

Evidence of widespread concern for the problem of non-readiness for school is found in the Head Start Programme (1965) in the United States and the Plowden Report (1967) in the United Kingdom. The Plowden Committee was concerned with culturally disadvantaged children. The Head Start Programme was involved in the provision of compensatory education for preschool children from low-income groups.

Fischer and Lazerson (1984:346-353) note that some of the most decisive developments in a person's life take place between the ages of two and six. These include developments in the cognitive, language, physical and social parameters.

Verhoef, Kruger and Engelbrecht (1990:507-513) state that after almost three decades since the renaissance of preschool education in the sixties, there is clear evidence of the lasting scholastic, psychological, social and economic benefits resulting from early childhood educational intervention. They report that in most coun-

tries of the world today, preschool education, to a greater or lesser extent, has become institutionalized within the official education system.

As early as 1966 local junior primary educators and administrators expressed concern about the school readiness of the pupils admitted to Class i. In Indian education these children had met the chronological age requirements of the department, viz.: "No child may be admitted to school earlier than the year in which he attains the age of six years. A child who turns six before 1 July during any year may be admitted to school only during January and February of that year" (Department of Indian Affairs, 1966). However, early in their Class i year it was found that many of the pupils were not ready for formal work.

Gajadhur (1990:2) notes that the problem of school readiness is now viewed with such concern that professionals in other disciplines such as medicine and psychology feel obliged to offer their expertise in trying to find answers to vexing questions related to school entrants.

Brenner (1968:4) states that under the present system of using chronological age by itself as an entrance criterion, no account is taken of the fact that indivi-

duals grow, develop and mature at different rates. Consequently, when they begin formal lessons they differ in school readiness and in their capacity to learn.

The Class i teacher's dilemma can be appreciated when one considers the following statement by Krech, Crutchfield and Livison (1969:64): when a first grade teacher meets her class of children, all about six years of age chronologically, she is, in fact, confronted with a group of pupils whose readiness ranges from three to eleven years.

In such an educational system "school is established: the child must fit the establishment" (Cooper, 1966:1817). Garbers (1969:49) and Wills (1958:297-8) rightly criticise such a set-up as being too rigid. Garbers (1969) suggests that a school system should be flexible enough to absorb each child in an educationally sound manner. It is unwise to compel pupils with varying degrees of school readiness to follow the same programme. A child confronted by tasks beyond his or her capabilities can, for instance, develop resistant behaviour caused by a lack of interest and failure (Frandsen, 1967:119). On the other hand, a school-ready child deprived of appropriate learning experiences can become demotivated and this, in turn, can

lead to underachievement (Edwards, 1968:69).

Socio-economic disadvantage has been cited as a major reason for a large proportion of South African Class i children not being ready for formal schooling (HSRC Report, 1981:274; Singh, 1987:25; Gajadhur, 1990:106). Deutsch (1967:59-75) makes a similar observation in respect of children in the USA. When the lower-class child enters Class i, his/her cognitive, sensory and language skills are often insufficiently developed to cope with what, for him/her, are the complex and confusing stimuli offered by the school. Deutsch (1966:78-83) emphasizes that these children are less prepared to meet the demands of the school and the classroom situation than their middle-class colleagues for whom the school is, in many respects, an extension of the home.

According to the National Education Policy Investigation (NEPI) (1992:34), disadvantaged children benefit more from early childhood programmes than do children from homes which provide intellectually stimulating environments.

Morlan and Ramonda (1963, cited in Tiedt, 1968:9) identify inadequate language skill development as a factor affecting success at school. Those who come from homes

where another language is spoken must learn very rapidly to use English. However, hurried acquisition of language is problematic.

Tiedt (1968:50) states that the listening and speaking skills are fundamental to the development of reading and writing skills.

Fischer and Lazerson (1984:342) caution against over-emphasising grammatical rules during language development. Preschool children often use telegraphic speech to express ideas and needs, ie. they use only two or three important words to convey meaning rather than well-constructed sentences. If children, whose cognitive abilities do not permit them to speak in full sentences, are forced by teachers or parents to do so, such children would become frustrated and their development will suffer (Fischer and Lazerson, 1984:346-353).

In Britain the concept of being culturally disadvantaged was accepted by the Plowden Committee (Mortimore and Blackstone, 1982:8). According to this Committee a child, brought up in a family which cannot provide the security of sufficient emotional or intellectual stimulation, often misses a significant stage in his/her early development.

What he/she often lacks is the opportunity to develop intellectual interests and this generally shows up in his/her poor command of language. Singh (1987:24) states that the working class sub-culture is portrayed as a sub-standard version of the mainstream middle-class culture. It is deficient in certain important respects which account for the low educational attainment of members of these groups.

The degree of contact a child has with his/her parents, the quality of the language model they provide for him/her, and their reinforcement of his/her speech activities are important determinants of his/her language and cognitive development. Lower social class and culturally disadvantaged children tend to live in much more impoverished verbal environments. Therefore, they often display verbal and cognitive retardation (Gajadhur, 1990:26). Haralambos (1980: 197) states that during primary socialization, middle-class children receive greater attention and stimulus from parents. These environmental influences that operate during preschool years influence performance at school. Singh (1987:25) states that these disadvantaged children must be given compensatory education. Several writers including Bernstein (1971), Midwinter (1972), Friedman (1976), Halsey (1977), and Lubeck (1985) suggest that compensatory education should concentrate on preschool years.

One major solution to school readiness problems appears to be appropriate pre-primary education. Follow-up studies of long-term overseas intervention programmes like Head Start and the Perry Pre-School Project show that quality preschool programmes can contribute significantly towards making disadvantaged children school ready in spite of certain criticisms that have been raised (Feeney, Christensen and Moravcik, 1987:28). The study of the Westinghouse Learning Corporation (1969), for instance, produced evidence that, in so far as cognitive development and achievement were concerned, the summer programmes of Head Start were not producing the degree of anticipated effects. White (1977) notes that as the Head Start programme grew, it became expensive. Also, Head Start intended to provide comprehensive services to very poor families but numerous problems prevented the realization of the original plans.

In South Africa the first major investigation into pre-school education was undertaken by the Human Sciences Research Council (HSRC, 1981). It accepted school readiness as a pre-requisite for success at school, reviewed existing ways of providing preschool education, and identified problem areas that needed attention.

A recent study by Esterhuyse, Kotze and Weyers (1992:131-135) investigated the relationship between nursery school attendance and the intellectual and emotional development of the South African adolescent. They found that nursery school attendance made a positive contribution to the development of a person's emotional life and intellectual abilities.

Although some education departments are presently involved in providing pre-primary education, many had to scale down their activities owing to severe budget restrictions. The Education Ministers in the tricameral parliament decided in 1987 that the needs of formal school education should be given priority over pre-primary education. However, children who showed that they were not yet school ready were given the opportunity of participating in a special bridging programme. Such programmes have since been introduced in some schools and are being developed further. According to the Education Renewal Strategy (ERS) document prepared for the Committee of Heads of Education Department (CHED, 1991) there is no national policy for pre-primary education in South Africa. The various education departments determine their own approaches. The ERS document recommends that the South African Council for Education should develop a national strategy for pre-primary

education particularly in view of the high dropout in the black school population.

1.2 NATURE AND DEFINITION OF SCHOOL READINESS

School readiness is generally accepted as a pre-requisite for success at school, especially during the initial period of education (Reilly and Hofmeyer, 1983).

Grove' and Hauptfleisch (1981:3) have defined school readiness as "a stage in a child's development at which he or she learns easily and effectively and without emotional or other disturbances". Brenner (1962:20) expresses a similar idea when he refers to readiness as a stage of all round development ie, physical, mental, emotional and social, at which a child can fulfil the demands of the school without undue difficulty.

This readiness, says Haenen (1970:48), occurs without pressure: it occurs as a result of the child's own volition. Readiness is a function of development, and development, in turn, proceeds at different rates in different individuals (De Hirsch 1967:309; Hurlock 1964:24-6). Kephart (1960: 19-20) states that what a child brings to school is his readiness for present learning. It is normally a continuous process, i.e. the culmina-

tion of a very extensive and rapid period of learning throughout the preschool years.

One must draw a clear distinction between school readiness and school maturity. School readiness, according to Holman (1970:13), refers to the will to grow up and undertake the tasks imposed by the school. It is concerned with the child's disposition towards the acceptance of the school situation. School maturity refers to a particular capability to achieve in relation to the concrete learning requirements at school. School maturity is an important condition for school readiness which is a stage of development that includes school maturity (Garbers, 1969:49; Ausubel, 1967:238-240).

Gajadhur (1990:6) summarizes some of the more important characteristics of a school ready child as follows:

- a) has good powers of linguistic comprehension and expression;
- b) is able to concentrate on a task for a reasonable period of time;
- c) is interested in formal and systematic learning;
- d) is physically developed to enable him/her to cope with the strains and demands of school;

- e) is ready to accept and complete a task independently as well as to work with a group;
- f) has the intellectual capacity appropriate to his/her age level to solve problems, to group symbols meaningfully, to remember instructions and to carry them out in a specified sequence.

1.3 NATURE OF CURRENT PRE-PRIMARY EDUCATIONAL PROGRAMMES

The provision of pre-primary school facilities for white children in South Africa can be traced back to 1930 (Webber, 1978). Following the Amendment Act of 1969, the Provinces were empowered to pass Ordinances, enabling them to open Provincial pre-primary schools and classes (Webber, 1978:95).

By contrast the development of these facilities for the other race groups was very slow, mainly because of the massive backlog in formal education. In 1980 about 16 % of white children under six-years of age were in preschool centres. The percentages for the other groups were: Coloured 3,5 %; Indian 1 % and Black 0,4 % (Reilly and Hofmeyer, 1983:38-74). In 1990 the percentages had increased to white 21%; coloured 10 %; Indian 23 % and black 3 % (McGregor and McGregor, 1992:242).

This research is confined to issues related to school readiness and pre-primary education services concerning the Department of Education and Culture in the House of Delegates. According to Singh (1987:42) this Department has three types of preschools namely:

- a) registered private pre-primary schools;
- b) departmental bridging module classes;
- c) community-run pre-primary classes using departmental premises.

The nature and function of each type of preschool facility is described below.

1.3.1 REGISTERED PRIVATE PRE-PRIMARY SCHOOLS

Private pre-primary schools are run by individuals or private organisations and are registered with the Department of Education and Culture in the House of Delegates. Presently there are eighteen private pre-primary schools in the Greater Durban area (Dayanarain, 1992). They cater for children in the age group three to five years. Provision is made for state subsidization of certain registered private pre-primary schools. These operate on a non-profit basis. Teachers from these schools attend work-shops regularly organised by the Association for Training and Resources in Early Education

The recommended approach to teaching is around a theme. This is a widely accepted way of introducing a child to his environment (Smith, 1992). A theme is a subject of interest from the child's world. To make it alive to the children and to deepen their understanding of it, the theme becomes the centre of their programme and all the teacher's activities in the school are linked to it. These include discussions, ringtime songs, books and stories, creative activities, puzzles and games.

Programme Guidelines for teachers have been published and are easily available. Each main or interest theme has two supporting themes, viz., a nature theme and a cognitive theme. Activities include discussions, puzzles and experiments. Observation and progress reports are based on the rate of a child's physical, emotional, social, and mental development and on his level of school readiness. Specific activities in the classroom concentrate on body image, the five senses, colour, mathematics, language, art-craft and music.

1.3.2 DEPARTMENTAL BRIDGING MODULE READINESS CLASSES

Bridging Module readiness classes are offered in depart-

mental schools within the regular school context (Joshua, 1986). In 1992 fifty-two schools offered bridging module classes in the Durban area (Dayanarain, 1992). These classes cater for five-year olds who are due to enter Class i in the following year. The main purpose of these classes is to provide an environment in which physical, experiential and psychological development can take place and is especially designed for children of parents from the lower socio-economic group.

Teachers in charge of the bridging module classes are qualified for their specific tasks and spend approximately 4 to 5 hours per day at school. Their work is supervised by the Junior Primary Head of Department and they are provided with syllabuses and guides by Junior Primary inspectors.

The objectives and curriculum of the bridging module readiness programme, extracted from the programme guide, are given below.

The general objectives of the readiness classes are:

- (i) to assist the child to become school ready;
- (ii) to identify, by means of evaluation, observation, and exploration, pupils who are relatively less ready for school;

- (iii) to get to know the school beginner;
- (iv) to assist the teacher in evaluating a child's growth and development.

The readiness programme includes:

- (i) right living and guidance which aim to develop religious and ethical mouldings;
- (ii) aesthetic development which is promoted through listening and observation;
- (iii) the inculcation of healthy habits;
- (iv) providing opportunities for self-expression through various kinds of activities; and
- (v) language development exercises.

Specific objectives of the readiness programme are:

- (i) to ensure harmonious development of the child;
- (ii) to develop physical skills and perceptual motor co-ordination;
- (iii) to develop emotional stability;
- (iv) to develop a healthy self-concept, intellectual habits and language proficiency.
- (v) to develop social strengths and good relationships with others.

Teaching is aimed at intellectual and social development, the expression of creative skills, form perception and musical ability. Other subjects include right living, writing, reading, and simple mathematics including serialisation and spatial relations.

1.3.3 COMMUNITY-RUN READINESS CLASSES

These classes are also conducted in departmental schools. At present there are ninety-one schools offering community-run readiness classes in the Greater Durban area (Dayanarain, 1992). They have a daily two-hour programme normally conducted from 12h30 to 14h30 in classrooms that have been vacated by Junior primary pupils.

Teachers are employed and paid by community organisations to conduct readiness classes for five-year olds. Unlike the teachers in the bridging module classes, these teachers generally possess little formal, academic or professional qualifications in the area of pre-primary education. However, some receive in-service training but are not guided by Junior Primary teachers or Junior Primary inspectresses. The curriculum is the same as that for private pre-primary classes. The teaching approach is the thematic one used by teachers in private pre-

school classes.

1.3.4 A COMPARISON OF THE THREE PRESCHOOL PROGRAMMES

Although teachers in private preschools and community-run preschool classes use the same teaching guide, there are differences in their teaching approaches. Factors relating to the functions and how they operate vary. The community-run preschool teachers are guided by the Junior Primary Head of Department. Time is a crucial factor as these teachers merely have two hours each week day in which to cover various aspects related to school readiness. Since there are approximately twenty-five to thirty children in each class the teacher is not able to give each pupil individual attention.

Most of the private preschool teachers are qualified. They teach for approximately four hours per week. The teacher-pupil ratio is more favourable with a maximum of twenty-five pupils in her class. The teacher is, therefore, able to give individual attention to pupils. These schools are also able to provide more aids and equipment because they receive subsidies from the department. Children are also provided with refreshments. Parents pay a higher fee than parents of children in the other two

types of preschools.

Some of the bridging module class teachers also attend workshops organised by the Association for Training and Resources in Early Education. Each of these bridging module units has a maximum of twenty-five children. All three types of preschools mentioned above have the same major goal, i.e. the optimal development of a child's potential, culminating in school readiness. However, they differ in terms of the quality of educational services they provide. This is related to the number of trained staff and the quality of their training, teacher-pupil ratio, physical provisions (including equipment), involvement of parents, support services available and the quality and effectiveness of management and supervision (Reilly and Hofmeyer, 1983:75). These issues will be examined more fully in the chapters that follow. Singh (1987:42) reports that about 50 % of the pupils entering Class i in Indian schools have had access to one or the other of the above pre-basic educational programmes.

1.4 AIMS AND OBJECTIVES OF THE STUDY

The main aims of this study are:

- a) to evaluate the effectiveness of pre-primary education for Indian children;

- b) to determine the relative effectiveness of the more important current programmes.

A secondary aim is to identify problem areas related to preschool education so that preventive and remedial measures can be taken.

Specific questions related to the above-mentioned aims include the following:

- a) To what extent are pupils who enter Class i ready for formal instruction?
- b) What are some of the more important subject areas in which pupils entering Class i experience difficulties?
- c) What are the specific problems in respect of each subject area?
- d) How can pre-primary teachers assist in overcoming these problems?
- e) Are current school readiness programmes effective?
- f) If they are effective, are some of them more effective than others?
- g) If some programmes are more effective, what makes them so?
- h) In the opinion of Class i Indian teachers, how effective are the school readiness tests that are

currently used in their schools?

The information required for answering these questions was obtained from Junior Primary and Class i teachers. A questionnaire (for teachers), and in the case of children, a test of general intelligence and a test of school readiness were used as data-gathering instruments. The pupils who participated in this study had, in the previous year, attended one of the following types of pre-school:

- a) a registered private pre-primary school;
- b) a departmental bridging module class;
- c) a community-run pre-primary class.

The fourth group of pupils had had no preschool education.

The testing was done early in the year in which these children had entered Class i.

1.5 DESIGN OF RESEARCH

This study is essentially descriptive in nature. More specifically, it is a survey describing existing conditions and comparing these conditions with pre-determined criteria. In addition, the effectiveness of the prog-

rammes are evaluated, the relationship between the variables are determined, and relevant hypotheses are tested.

The samples of pupils were drawn from Class 1 children in Indian primary schools in the Greater Durban area. Through random sampling, four sub-samples (30 to 50 pupils per group) were drawn as follows:-

Sample A: pupils who attended registered private pre-primary schools (N = 40);

Sample B: pupils who attended departmental bridging module classes (N = 50);

Sample C: pupils who attended community-run pre-primary classes (N = 50); and

Sample D: pupils who had had no preschool education (N = 30).

To make the four groups comparable, variables such as age, sex, intelligence and socio-economic status were controlled. Two basic sets of comparisons are made in this study, viz.

- a) Those pupils who received some form of preschool education (Groups A, B and C) are compared with those who did not receive such an education (Group D).

This will indicate whether preschooling helps significantly to prepare children for formal instruction.

- b) Next, the performances on a test of school readiness of pupils who came from three different types of preschool backgrounds (i.e. Groups A, B, and C) are compared with one another to determine whether some programmes are more effective than others.

Differences in mean achievements were tested for significance by using the t-test and the analysis of variance (in those cases where the data were of the interval or ratio strength). Chi-square was used to analyse nominal data.

Questionnaires were also completed by a sample of Class i Junior primary teachers in the Greater Durban area. They were asked to comment and respond to items relating to the scholastic progress of their pupils and the kinds of problems they themselves experience when teaching these children.

The data were analysed both quantitatively and qualitatively and the findings were used to formulate a set of recommendations for the benefit of designers of school readiness programmes. This report closes with a discus-

sion of how Class i teachers and parents can work together to promote the all-round development of young children.

1.6 CHAPTER ORGANIZATION OF THE RESEARCH

In addition to this first chapter on the nature, purpose and scope of the research, this report has five other chapters. Chapter Two provides an overview of literature related to school readiness and pre-primary education. Chapter Three describes the research procedures and techniques employed in the investigation. Chapters Four, and Five present and analyse data obtained from the field work. A discussion of the results as well as the conclusions and recommendations arising from them is given in Chapter Six.

CHAPTER TWO

REVIEW OF LITERATURE: SCHOOL READINESS AND SCHOOL READINESS PROGRAMMES

2.1 INTRODUCTION

As pointed out in Chapter One, whether a particular child is ready for school or not depends on the extent to which he/she fulfils certain developmental criteria - physical, socio-emotional, cognitive and linguistic. In turn, the extent to which these aspects have developed depends largely on the interaction between his/her biological potential and the conditions he/she has experienced in the preschool years.

Brierley (1978:32) cautions that we cannot easily quantify the extent to which a particular characteristic is inherited and how much of it is due to environment. Heredity and environment interact and the proportion of each is unique to the individual. If the child is to learn effectively, his or her individual needs must be catered for.

If the home is deficient as a learning environment the prognosis for a child's later development is poor. Factors which may contribute to a deficient learning environ-

ment in the home are, for example, a low level of educational development of the parents, poor standard of living arrangements, lack of essential amenities in the home, low levels of reading patterns among the parents and a lack of sufficient interaction between children and parents (Gajadhur, 1991:166).

2.2 SCHOOL READINESS

2.2.1 HOME BACKGROUND FACTORS AFFECTING SCHOOL READINESS

The picture of the working class subculture is not an attractive one. It is portrayed as a substandard version of the mainstream middle-class culture. It is from such a portrayal that the theory of cultural deprivation was developed. It states that the culture of low-income groups is deprived of or deficient in certain important respects and this accounts for the low educational attainment of members of these groups (Haralambos, 1980:201). However, this is a contentious issue. This theory argues that the child, his family, his background and the subculture of his social group are responsible for the child's educational failure.

In third world countries a very large percentage of the population is disadvantaged and the problem of school readiness is therefore very acute. The problem of

non-readiness for school and consequent early dropout is largely the result of the restrictive influence of an educationally inadequate environment on the development of the child into an independent, responsible, functional adult. School readiness is a pre-requisite for success at school, and environmental disadvantage is the main reason for children not being ready for school at the normal school going age (De Lange, 1981).

There is ample evidence that the environment influences the behaviour of people (Prescott and David, 1977:118). It is also believed that the central fact in the growth and development of children is not hunger satisfaction or thirst satisfaction but the opportunity for effective interaction with the environment as manifested in the child's curiosity and exploratory activities (Getsels, 1975:31). The impact of many of these factors - individual, family, environmental and cultural - is clearly considerable (Mortimore, 1983). Literature reveals that the working class subculture is clearly different from that of the middle class subculture (White, 1977; Elkin and Handel, 1984). The prevalence of such a class differential has a significant impact on the expectations for and of the child.

In essence, being environmentally disadvantaged refers to circumstances prevailing in a community where the economic, social and cultural qualities are inadequate for the development of the young child's potential. Biesheuvel (1943:80) says that an inadequate environment situation reduces the potential for learning. Bereiter and Engelmann (1966:5) found that the environmentally disadvantaged child's characteristic lag of approximately one year at the age of five, increases to a lag of four years at secondary school level, particularly with regard to language and readiness skills.

Pringle (1975:4) identifies four basic needs for children: the need for love and security, need for new experiences, need for praise and recognition, and need for responsibility. Those needs have to be met from the very beginning of life.

The importance of home as a factor influencing school learning is emphasized by studies such as the Manchester Survey. Reporting on this survey, which set out to investigate the relationship between the educational attainment of primary school children and environmental factors, Campbell (1971:85) summarized the results as follows: "The most important of our findings, perhaps, is the demonstration that the major forces associated with edu-

cational attainment are to be found within the home circumstances of the children. These home variables have, pro rata, nearly twice the weight of neighbourhood and school variables put together.

The home plays a vital role in arousing and sustaining motivation for school learning. Within the home is created an intellectual climate which at one extreme, fosters favourable attitudes to school, develops in children a commitment to striving and learning and leads to a high value being placed on school success. At the other extreme, school learning is held in low or negative regard and there is an absence of parental reinforcement of the academic endeavours of the child.

Lubeck (1985:13) states that for every child early in life when the first thought hovers and begins to take form, others are there (usually family members) to guide its formation and when expressed to value it or to dismiss it. It is through this process of early social development, or primary socialization that the child begins to acquire norms, values, attitudes and skills in the course of social interaction with those immediately around him.

This process of social development continues throughout the process of pre-primary education, hence it constitutes

the foundations of human development, directly influencing adult life. The role of the family is fundamental in that the child's earliest experiences powerfully influence the way in which he/she ultimately responds to school (White, 1977:65).

Middle-class children are encouraged from their earliest years to plan and organise rationally i.e., their explanation of concepts, giving information, solving problems and showing the child what conduct is acceptable or undesirable. For the most part, school teachers follow the same approach. It is not surprising, therefore, that lower-class children are handicapped in intellectual and educational development and tend to be confused and frustrated at school because they are accustomed to a restricted mode of discourse and are faced with learning what is almost a new language (Bernstein, 1961:288-314). Gajadhur (1991) in her study found that family social privilege was a powerful indicator of educational success.

Entwisle and Hayduk (1988) found that better school performance was related not only to cognitive ability, but to early influences of parents and teachers. Entwisle and Hayduk's findings suggest that patterns of academic performance are established early and that the social context within the family and classroom are important in how

these patterns are established and maintained. Singh (1987:66) states that in order to understand the social condition of education, one needs to understand that the educational process, including pre-primary schooling, is directly related to the conditions of society at large.

Coleman (1966) states that the sources of inequality of educational opportunity appear to be first in the home itself and the cultural influences surrounding the home; then they lie in the schools' ineffectiveness to free achievement from the impact of the home, and in the schools' cultural homogeneity which perpetuates the social influences of the home and its environment.

According to Wiseman (1967) what matters is the degree of literacy within the home and the attitude of parents towards books and towards school. These characteristics are seen as more important than mere membership of a particular social class. There are many "good homes" in the working class and many "bad" homes in the middle-class.

Although parental encouragement has an important influence on school achievement Tizard and Hughes (1984) state that evidence on parental attitudes needs to be treated with caution. Lack of interest has often been assumed, but

direct evidence from parents suggests that most do not lack interest; rather they are inhibited by a lack of self-confidence.

Gajadhur's (1990:26) research in the Indian community, found that the degree of contact a child has with its parents, the quality of the language model they provide for the child and their reinforcement of the child's speech activities are important determinants of his language and cognitive development. Children who have a high degree of contact with their parents generally show better language development. Homes differ considerably in the number of opportunities they offer for such contact. In the typical middle-class home, settings for verbal interchange are created and utilized. Conversation for example, is fostered at meal times and family discussions on topics of interest are common. Rewards and punishments tend to be verbal rather than physical. Stories are told and books are read to children as part of the daily pattern of life.

In South Africa, environmental disadvantage is prevalent, particularly among blacks. It is aggravated by more mothers with small children finding it necessary to work. Statistics provided by the Research Institute for Educational Planning in July 1991 showed that the drop-out rate

among black pupils in Class i in South Africa in 1990 was 25 percent. A large percentage of these disadvantaged children are not school ready. They are, therefore, unable to cope with school. This leads to failure and early drop-out. White (1977:27-28) elaborates on the varying styles of mothering to illustrate the influence of social class on school readiness.

Many writers stress the importance of play for child development. The idea that children must play is also backed by research (Smilansky, 1968). Without play children do not have the opportunity to develop the freedom of thought required for living in a democracy (Bikson, 1978:69). Beaty (1979:98) states that through play children imitate, explore and create almost anything and everything they want to see or know about. In some of his studies Jones (1964) indicates that children who expressed themselves easily in one area of the arts also expressed themselves easily in other areas.

Cohen (1977:103) states that play leads to discovering, reasoning and thought. All of these are crucial for the intellectual development of the child.

Cass (1977:65) also confirms that as far as young children are concerned, play is the major motivating force in their

intellectual learning and its significance is revealed in every aspect of their development. Gerhart (1973) stresses the intellectual value of movement by indicating its importance for the development of body image and conceptual abilities. She writes that movement is the foundation of conceptualization.

It has always been obvious to many teachers in poor communities that children who come to school inadequately clothed, poorly fed and tired, find it difficult to keep abreast of their fellow pupils in their learning.

The disadvantaged or economically disadvantaged children present an acute problem. They are reared in poor conditions, either in rural or urban circumstances. This group comes to school lacking the requisites for success. Third World countries should reflect on Hechinger's (1966:10) conclusions from research findings in the United States that a number of important considerations must be borne in mind when dealing with disadvantaged children. These are:

- a) a great deal must be known about the slum household;
- b) giving the disadvantaged child a quick, one shot pre-school opportunity simply is not enough - the advantages gained from such a programme are quickly lost;

- c) the funds available are impressive only in terms of pilot projects and not mass ventures;
- d) it is vitally important that adults in the slum - preferably parents - become involved in the preschool programme.

During early childhood, changes in the physical-motor area involve rapid development of gross and fine motor skills and the emergence of body image and body awareness. The development of cognitive concepts with regard to size, shape, time and number is related to the child's egocentric view of the world. Language ability also improves rapidly, and by the time children are ready for school they can understand and use it quite well. Autonomy and initiative are characteristic of the socio-emotional area in early childhood. The socialization process takes place in the home and the school. In this area play, moral development and sex typing are important components.

2.2.2 PSYCHOLOGICAL AND EDUCATIONAL FACTORS AFFECTING SCHOOL READINESS

In the 1930's child psychologists spent great amounts of effort trying to discover the relative contributions of

heredity and environment to a child's intellectual development (Medinnus and Johnson, 1969:434). Bloom (1964:69) states that from conception to age four one develops 40 percent of mature intelligence; from age four to eight another 30 percent, and after age eight the remaining 30 percent.

By the 1940's, interest had shifted from improving children's IQ's to the effect of nursery school experience on their social and emotional adjustment. Studies found that a number of personality traits were more clearly noticable in children with nursery school experience compared to those who did not have such experience. The former group seemed more spontaneous in behaviour and showed more independence, initiative, self-reliance and curiosity than the control groups (Walsh, 1931:72-73, Hattwick, 1936:180-190; Van Alstyne and Hattwick, 1939:43-72). Bonney and Nicholson (1958:125-133) for instance, found that elementary school children who had had nursery school experience were more popular with their peers.

Mortimore (1983) states that research on school differences and school effectiveness suggests that the educational system can increase or decrease pupils' chances of achievement and that those within the system are in a

position to exert influence. The progress of all groups of pupils needs to be monitored carefully so that differences in achievement can be identified early and remedial action taken. Conscious efforts need to be made to raise teachers' expectations of the achievement of pupils from working class homes in order to reduce the influence of negative stereotypes.

There are several approaches to early childhood education and these differ in concept and procedure (Roopnarine and Johnson, 1987:15-24). Some of the more basic approaches are considered below.

The psychoanalytic view of the young child is based on the theories of Freud and his followers, including Erikson. The approach assumes that human personality unfolds through the development and satisfaction of stages of psychosocial behaviour. Fixations at an early stage can thwart or distort development in the child and create problems. Therefore every effort should be made to help the child pass through the various stages in as healthy a manner as possible.

The developmental or normative approach focuses upon the sequential stages of growth in children. Teachers and parents are urged to wait until the child reaches the ap-

appropriate developmental stage before trying to teach certain tasks. The proponents of this view argue that most preschoolers are not developmentally ready for formal reading instruction (Ames, 1968:39-76).

In the behavioural approach, the behavioural psychologists take the view that a child's environment can be planned and arranged to bring about predetermined forms of desirable behaviour in children. Skinner is a pioneer of the behavioural approach to learning. Reinforcements, rewards, careful counting of observable behaviour, and the baseline measurement of skills to be learned, are all important to this approach. The early childhood programme developed by Bereiter and Engelmann (1966) is based upon this style of education.

The cognitive approach is a relatively recent approach. It concentrates on the child's maturing thinking abilities and the changing ways in which he/she views and understands the world about him/her. Piaget's theories and ideas of the intellectual development of children are widely used in designing early childhood curricula and instruction.

There is evidence that suggests that the more carefully a teacher plans, the more progress children make (Weikart,

1971). According to Rohawer, Ammon and Cramer (1974:245) a teacher who endorses the cognitive developmental theory sees the goals of education as particular ways of thinking about particular kinds of content. The attainment of such goals is inferred from different kinds of behaviour in a variety of situations, not from a restricted set of specific performances.

2.3 SCHOOL READINESS/PRE-PRIMARY EDUCATIONAL PROGRAMMES

Preschool education is generally accepted as an integral part of the total education system. The idea of preschool education is not by any means new and revolutionary. Almost every society, in which parents need to be away from home, has devised some form of preschool care and training.

The Human Sciences Research Council Report (HSRC, 1981:27) states that the scientific objective of pre-primary education is to make the child ready for school. According to Reilly and Hofmeyer (1983:6) the aim of pre-primary education is the optimal development of the young child's potential, culminating in school readiness. Pre-primary education provides a specific, planned, educationally accountable world of experience for the child younger than compulsory school-going age, in order to promote optimal

development of the child.

Reilly and Hofmeyer (1983:18) describe preschool education as experiential, concerned with providing a specifically designed, concrete environment, with activities purposefully structured to become progressively more complex as the child develops. Preschool education directs an appeal to the child to explore, discover and experiment, and in so doing promotes his/her all-round development: physical, sensory, motor, cognitive, language, as well as social interaction and a positive self-image.

Donaldson (1978) has demonstrated that preschool children are not only capable of deduction but are also capable of reflecting on their actions. She also argues that preschool children can learn much that was thought to be beyond them if that learning is put in a human setting which makes sense to the children. Lloyd (1975) found that although preschool children do not often ask for explanations or further information when they cannot understand something, nevertheless, when they are encouraged and shown how to do so, they do ask questions.

Recognition of the facts of being disadvantaged and of the needs of slum children or their equivalents in underdeveloped rural areas has logically led to the preschool

movement. The arguments in favour of preschool education are compelling. If disadvantaged starts to build up at an early age and progressively limits and eventually blocks entry into the mainstream of society, an early start must be made to offset the lack of parental teaching, care and mind moulding. This is the challenge facing preschool education, especially from disadvantaged children. On it has been based much of today's experimentation (Hechinger, 1966:6).

Since the end of World War II there has been a rapidly growing interest in the needs of children whose school progress and life chances are adversely affected by social handicaps such as poverty, a broken or incomplete home, and a background offering little stimulation.

In the post-war period a number of factors combined to make the need for preschool education an urgent one, including an increased value which society placed on educational achievement, the wastage of talent arising from the inability of numerous children to take advantage of their educational opportunities, and a growing dissatisfaction with the school system (Chazan, 1973:1-2).

Mialaret (1974:26) says that interest in everything connected with pre-primary education goes deep, and the needs

being voiced are very real ones. More mothers with young children work to improve the quality of life of the family, and their children are cared for by nursery schools.

Short (1992:240) stressed that it is generally accepted that a child's learning experiences during the years before school provide an essential foundation for all later learning. The nature and adequacy of these early experiences, the issue of school readiness, and the extent to which special intervention programmes can improve later scholastic achievement, are still subject to debate. These topics all relate to the overriding issue of the continuity between the preschool learning environment and early years of schooling. Therefore, early childhood education is a valuable concept. It encourages educators to think about the education and developmental needs of the children from birth until about eight years of age.

2.3.1 SCHOOL READINESS/PRE-PRIMARY EDUCATION PROGRAMMES OVERSEAS

In this section a brief overview is given of school readiness programmes in selected western countries. Special reference is made to the degree of state involvement, the types of preschool facilities available; the aims, me-

thods and curricula relating to the programmes; and staffing.

2.3.1.1 STATE INVOLVEMENT

The degree of state involvement varies. In France the vast majority of children attend preschool by law (Vos and Brits, 1990:124). By contrast, England has less state provision for preschool education than any other country in Europe (Nicholas, 1983:38). In the former USSR (Commonwealth of Independent States) the state encourages pre-primary education but industry, collective and state farms also play an important part (Kashin, 1985:4728). In Germany (Old Federal Republic of Germany) the state is not directly involved, and the bulk of the responsibility for pre-primary education is undertaken by local communities, church groups, industry and commerce (Hearnden, 1976:75).

2.3.1.2 TYPES OF PRESCHOOL FACILITIES AVAILABLE

The kindergarten or infant school is most popular in the United States. Four- and five-year-olds attend such institutions in about half the public school systems (Vos and Brits, 1990:155).

In England many parents resort to unofficial and largely unregulated child-minding centres. More recently another form of self-help called "play groups" has proliferated, mainly in affluent neighbourhoods (Nicholas, 1983:38). On a smaller scale, day nurseries admit two- and three-year olds. Children can also attend nursery schools and classes attached to primary schools (Dekker and van Schalkwyk, 1989:134). In the Commonwealth of Independent States pre-primary education is provided in child care centres for children aged three to six years. Nursery schools are also available (Szekely, 1986:328). In France the vast majority of children attend nursery classes. Nursery schools are either independent or attached to primary schools (Vos and Brits, 1990:124).

2.3.1.3 AIMS OF SCHOOL READINESS PROGRAMMES

In both England and the United States the emphasis is on developing the child physically, intellectually, socially and emotionally (Nicholas, 1983:20; Vos and Brits, 1990:145). In the Commonwealth of Independent States, the state's intention was to influence the child from an early age with a communist ideology (Dekker and van Schalkwyk, 1989:185). The emphasis in France is to anticipate and remedy learning problems, to trace physical handicaps and to compensate for inequalities (Vos and Brits, 1990:124).

2.3.1.4 CURRICULA AND METHODOLOGY

In the USA the key aim is "learning while doing". Contents of teaching material are of a practical and experimental nature (Wynn, de Young and Wynn, 1977:128). While in England school readiness is pursued through informal activities, in the Commonwealth of Independent States the state prescribes teaching matter. The syllabus includes environmental studies, speech, mathematics, drawing, modelling, sewing, singing, reading and writing (Kashin, 1985:4728). French pre-primary schools present varied programmes: educative games, modelling, singing, and self expression through movement (Vos and Brits, 1990:125).

2.3.1.5 TEACHING, SUPERVISORY AND SUPPORT STAFF

Training of pre-primary teachers is undertaken by the state in Germany (Dekker and van Schalkwyk, 1989:51), France (Vos and Brits, 1990:125) and Russia (Grant, 1979:84). In the Commonwealth of Independent States medical staff (doctors and nurses) are employed to serve pre-school pupils while France has specialist inspectresses to assist preschool teachers (Nicholas, 1983:17).

2.3.2 RESEARCH IN SOUTH AFRICA RELATING TO PRE-PRIMARY EDUCATION

Research into pre-primary education in South Africa is limited. Pioneering research on school readiness was undertaken by Ramphal (1972). In the absence of an appropriate instrument to measure school readiness among Indian children, he modified the National Bureau Group Test for five- and six-year old white children for this purpose.

The first major study of pre-primary education was conducted by Reilly and Hofmeyer (1983) on behalf of the Human Sciences Research Council.

Reilly and Hofmeyer (1983:75) investigated the adequacy of existing pre-primary educational services for children in South Africa and summarized their findings as follows:

- a) The number of trained preschool teachers was found to be very low. Consequently, school authorities were compelled to use teacher-aides and other untrained personnel.
- b) Facilities and opportunities for training preschool teachers were limited.

- c) Physical provisions for conducting pre-primary classes were generally unsatisfactory.
- d) The quality of management and supervision at many of the preschools was of poor quality.

Singh (1987:48) made similar observations in relation to preprimary education for Indian children. In her view the following shortcomings needed to be rectified urgently:

- a) inadequate funding;
- b) a lack of attractive incentive schemes for training teachers;
- c) a general lack of suitable classrooms; and
- d) a narrow conception of pre-primary education, as if the academic aspect was the only important one

Singh (1987:48-49).

In her research into school readiness, Gajadhur (1990:44), observed that many Indian parents in South Africa are aware of the value of preschool education. They acknowledge that a child's experiences during the preschool years are closely related to his/her later development.

2.3.3 SCHOOL READINESS PROGRAMMES IN SOUTH AFRICA (EXCLUDING INDIANS)

Pre-primary education in South Africa has a relatively short history. Due to economic pressures, especially in the second half of this century, white, Indian and coloured mothers, like their black counterparts, were forced to seek employment.

The large discrepancies between the White and Black sectors are evident not only in the quality and extent of state financing, as in other areas of education, but also in access to any kind of early education programmes (Short, 1991:241). The following table gives the distribution of schools and pupils in government and private pre-primary schools in South Africa as at 1990.

TABLE 2.1
PRE-PRIMARY ENROLMENT IN GOVERNMENT SCHOOLS AND PRIVATE
SCHOOLS IN SOUTH AFRICA IN RACIALLY DESIGNATED AREAS 1990

	PUPIL ENROLMENT			NUMBER OF SCHOOLS
	GOVERNMENT	PRIVATE	TOTAL	
Black in White designated area	18 462	2 424	20 906	159
Coloured	6 780	675	7 455	251
Indian	12 668	2 567	15 235	43
White	82 877	1 145	84 022	1148

South African Institute of Race Relations Survey: 1992

As Table 2.1 indicates 71,7 percent of the schools are for Whites who make up 65,8 percent of the total preschool enrolment. The problem of access to preschool education is clearly evident.

In June 1991, a government committee investigating an "Education Renewal Strategy" (ERS) for South Africa stated in its document that there was no national policy for pre-primary education (South African Institute of Race Relation Survey, 1992). Given that pre-primary educa-

tion assisted in improving performance at ordinary school level and given the high dropout rates from Black schools, the ERS document recommended that the South African Council for Education "develop a national strategy for pre-primary education" (CHED, 1991).

None of the present systems of education provides a programme, accessible to all, spanning the period from preschool to compulsory education. In general, the State seems to be withdrawing from preschool provision and one can fairly safely assume that its contribution is unlikely to increase in the foreseeable future (Short, 1991:242).

Table 2.2 shows the number of children (in pre-primary schools and classes in South Africa) who are subsidised by education departments (Preliminary Education Statistics, Department of National Education, 1990).

TABLE 2.2
THE NUMBER OF CHILDREN IN PRE-PRIMARY SCHOOLS AND CLASSES
SUBSIDISED BY EDUCATION DEPARTMENTS IN 1990

	TOTAL NUMBER OF CHILDREN IN PRESCHOOLS	NUMBER OF CHILDREN IN SUBSIDISED PRE- PRIMARY SCHOOLS/ CLASSES
House of Assembly	160 000	53 200 (33%)
House of Delegates	16 000	14 700 (92%)
House of Represen- tatives	40 000	24 400 (61%)
DET and self- governing states	172 500	53 250 (31%)

In 1991 an estimated 32 percent of white children had access to some form of pre-primary education provision in comparison to only 6 percent of blacks, coloureds and Indian children combined, in the age group, birth to six

years (South African Race Relation Survey, 1992).

Since 1981, the Department of Education and Training has insisted that the first 12 to 15 weeks of the school year be devoted to a school readiness programme in order to upgrade primary education. The result of this effort is evident in certain schools where the drop out rate in Sub A (first year of formal schooling) has significantly decreased (Vos and Brits, 1990:85).

In all communities, parents and community organisations, including churches, play a major role in initiating pre-school services of all kinds and financing them (Short, 1991:245).

A network of non-governmental resource agencies, such as the Early Learning Resource Unit, the Border Early Learning Centre, and the Grassroots Educare Trust have developed, in most parts of the country, non-formal training facilities for teachers and a variety of other support services for early childhood programmes. Most of these agencies operate on a non-racial basis, serving mainly the Black communities where the need is the greatest. Most of these non-governmental organisations depend almost entirely on funding from foundations, the corporate sector, foreign aid (Short 1991:247).

2.3.4 SCHOOL READINESS PROGRAMMES FOR INDIAN CHILDREN
(HOUSE OF DELEGATES)

Pre-primary schools for Indian children in South Africa developed slowly for two important reasons. Firstly, there was the Indian tradition of the extended family system. In this structure preschool children were often cared for at home. Secondly, the Department of Education has limited its assistance to readiness programmes conducted on its school premises (Singh, 1987:34).

Another reason, given by Reilly and Hofmeyer (1985:28), is that education departments have concentrated on eliminating backlogs in formal education at the expense of pre-school education. A system of grants-in-aid for pre-primary education has been in operation for some time (Circular from the Director of Indian Education, (A) S1(A) 1/9/44/2). However, these grants are very limited. At present the indications are that there is a growing demand for preschool care and education services within the community.

The department of Education and Culture in the House of Delegates has become involved in the provision of pre-primary education through direct and indirect means in the following ways:

- a) the registration and subsidisation of private pre-primary schools;
- b) the provision of bridging module readiness classes at departmental schools; and
- c) the provision of school premises for local community organisations conducting school readiness classes (Joshua, 1986).

2.3.5 CURRENT PROBLEMS/DILEMMAS RELATING TO PRESCHOOL EDUCATION

The well documented relationship between scholastic achievement and socio-economic background, is also evident in this country. The disadvantages in low-income urban communities is likely to persist for many years (Short, 1985).

It is not known how many preschool children require day care services in South Africa, but the figure according to Short (1991:151), is probably between 15 percent and 30 percent of the preschool population. In South Africa, access to high quality pre-primary education is confined largely to the privileged communities. Most centres in the black communities have full-day programmes, but many of these do not meet even the most basic requirements of acceptable child care (Short and Kawa, 1989).

Although there is some controversy over how many black children drop out of school, a recent calculation suggests that 31 percent repeat Grade One (Taylor, 1989:7). There are many indications that this situation has not improved significantly in the last fifteen years (Taylor, 1989; Pillay, 1980; Lategan, 1990; SAIRR, 1989/90).

A bottleneck has been created in Grade One for coloured children because of a high enrolment rate of more than 31 percent. Such a high percentage is due to re-enrolling "repeaters" as well as under-age and late school entrants. This situation requires serious attention (Taylor, 1989).

Early childhood programmes can also play an important role, especially when linked to the education of women, community control and empowerment. Their education is directly associated with health-care quality, family spacing, use of resources and the educational quality of the home (UNICEF, 1989; Biersteker, 1979). What is required are effective, low cost programmes that can be implemented on a scale commensurate with actual need.

An important finding of research to date is the lack of significant differences in the effects of a variety of curricula used in early childhood programmes, ranging from the traditional 'free-play' advocated by Montessori and

Piaget, to highly didactic pre-academic and behaviourist approaches (Short 1987). Curricular problems relate to the issue of what aspects of preschool programmes are most helpful when children enter formal school (Tizard and Hughes, 1984).

As noted in the Government Education Renewal Strategy discussion document (CHED, 1991), there is no national policy regarding pre-primary education. A national education policy free of discrimination of any kind and including firm proposals for pre-primary education is an urgent necessity.

Selected pre-primary education literature was closely scrutinized in order to prepare a theoretical framework for the investigation. A study of relevant literature also assisted in the compilation of items for the questionnaire. Chapter Three describes the research design used in this study, the procedures involved in the construction and selection of the instruments.

CHAPTER THREE
THE PRESENT STUDY

3.1 INTRODUCTION

This chapter describes the research design used in this study, the procedures involved in the construction and selection of the instruments used to collect essential data, and sample selection.

Bailey (1982:5-11) notes that all research projects involve essentially the same basic stages, namely:

- a) statement of a theoretical issue;
- b) formulation of a research problem;
- c) selection of an appropriate type of study;
- d) measurement of information items;
- e) data collection;
- f) data processing;
- g) interpretation and reporting; and
- h) integration of findings into theory or pragmatic use.

Helmstadter (1970:83) classifies methods of research along the following lines:

- a) Historical and case study approaches

- b) Descriptive approaches
- c) Experimental approaches

The present investigation falls into the second category. It is mainly descriptive and empirical. More specifically, this is a causal-comparative study and comprises the following steps:

- a) the translation of the problem into the specific characteristics to be measured;
- b) choosing tests and constructing a questionnaire to measure the variables being studied;
- c) gathering data by administering tests and a questionnaire;
- d) analysing the data by computing various descriptive indices and by making appropriate comparisons among groups.

A survey of schools, teachers and pupils is an integral part of this study. Surveys permit structured, indirect observation through questionnaires (Marais, 1990:122). Data in this study were collected through the use of psychological and other tests.

3.2 DATA COLLECTION INSTRUMENTS

3.2.1 THE QUESTIONNAIRE

The questionnaire is a commonly used technique for gathering data and is used in more than one-half of the total research studies in education (Good, 1963:271). While many questionnaires seek factual information, others are concerned with obtaining opinions, attitudes and interests. Behr (1973:72) states that the questionnaire continues to be, if properly constructed and administered, the best available instrument for obtaining information from a wide variety of sources.

In this study the main objectives of the questionnaire were to ascertain from teachers their perceptions and opinions regarding the following:

- a) the specific problems experienced by pupils entering Class i;
- b) the quality and effectiveness of existing school readiness programmes;
- c) ways and means of improving the quality of pre-school programmes.

It was anticipated that data gathered would form the basis

for recommendations beneficial to teachers, parents, administrators, and programme designers involved in pre-primary education.

Some of the reasons for using a questionnaire in this study are the following:

- a) It provided a relatively quick and convenient means of obtaining information about current conditions and practices relating to school readiness. It also enabled the researcher to gauge, in a cost effective way, the opinions and attitudes of a large number of Class i teachers on a variety of issues.
- b) It provided anonymity to the respondents, thereby enabling them to respond more openly and honestly to the questions.
- c) It gave the respondents the time they needed to furnish well considered answers. They were not expected to complete the questionnaire at a time when they were weighed down by a busy school schedule.
- d) The administration and scoring of the questionnaire was relatively simple and straightforward.

Although the questionnaire approach has distinct advantages, it has to be used with caution since it also has certain shortcomings. There include the following:

- a) It is difficult to cover all the aspects of the subject being investigated by means of a single questionnaire.
- b) Analysing and quantifying data obtained from open-ended questions can become problematic.
- c) The Likert-type alternatives in the structured questions do not always draw, precisely and accurately, the views of respondents.
- d) Often the response rates on postal questionnaires are low and this works against valid generalisations (Ary, Jacobs and Razavick, 1972).

The researcher took cognizance of these problems and countered their effects wherever possible.

Selected pre-primary education literature was closely scrutinized in order to prepare a theoretical framework for the investigation (Chapter 2). A study of relevant literature also assisted in the compilation of items for

for the questionnaire.

A review of the literature suggested that both open-ended and closed questions should be used. Other researchers found that open-ended questions enable the respondents to state their views freely and provide reasons for their responses. In this way they evoke fuller and richer responses and probe more deeply than closed questions (Best and Kahn, 1986:167). They frequently go beyond impersonal statistical data and enter the area of hidden motivations that lie behind attitudes, interests, preferences and decisions.

Closed items were of the fixed-alternative type, mostly on a five-point scale. The advantages of closed items are that they facilitate responses and make data analysis efficient and objective (Gay, 1987:196). However, there is some doubt as to whether closed, structured questions always tap the respondents' true feelings. For this reason the open-ended items form a useful complement and this fact led to the researcher using a combination of closed and open questions in this study (Black and Champion, 1976:185; Popham, 1981:282).

The questionnaire for this study (Appendix A) was subdivided into seven major sections as follows:

- Section 1: Respondents' biographical data.
- Section 2: Teachers' estimation of pupils' readiness for Class i.
- Section 3: Questions on teaching problems related to newcomers in Class i.
- Section 4: Questions on the effectiveness of pre-primary schools/classes.
- Section 5: Teachers' assessment of current school readiness tests.

3.2.2 THE RAVEN'S COLOURED PROGRESSIVE MATRICES (RCPM)

The Raven's Coloured Progressive Matrices (Raven:1947) tests "observation and clear thinking" among children who are between five and eleven years of age.

The child is shown a series of patterns with parts removed. The missing part is shown at the bottom of the page among other figures of similar shape which do not complete the pattern and the child is asked to point to the correct part.

The problems are arranged in order of increasing difficulty within each set so that the relatively easy solution for the first item helps to show the subject the way in which the more difficult problems are to be answered. The score is based on the total number of matrices correctly completed.

In fact, as Cronbach (1960:215) points out, the test can be administered in pantomime so that verbal ability is entirely eliminated.

Martin and Weichers (1954:143-4) found that the RCPM correlates with an r of 0,91 with the Full Scale Wechsler Intelligence Scale for Children (WISC) when subjects in the normal range of intelligence are involved. With children of limited intelligence, correlations appear to be considerably lower. Correlations with WISC subtest scores range from 0,74 (Block Design) to 0,47 (Picture Arrangement).

3.2.3 SCHOOL READINESS TEST A

Readiness tests are designed to determine how well an individual will profit from a subsequent course of instruction (Anastasi, 1968:382; Athmann and Glock, 1967:4). School readiness tests assist the Class i teacher to establish the extent to which a pupil entering Class i is ready for formal work.

School readiness tests can be categorized into two specific types:

- (a) General Readiness Tests: These tests, determine readiness for learning by measuring a number of different

traits and skills which contribute to success in school work (Hildreth, 1950:69).

(b) Specific Readiness Tests: These tests measure readiness for specific subjects such as reading, number work, and so on (Hildreth, 1950:69).

Both these types of tests are important. However, a Class i teacher is generally interested in overall readiness variables.

Tests of school readiness have been constructed by the Department of Education (House of Delegates) to enable a teacher to assess the children individually. Pupils entering Class i in most Indian primary schools write Readiness Test A. Ideally, this test is completed by the end of the second school week. The nature and purpose of each of the six subtests is described briefly below:

Test 1: "Jig Saw Puzzles"

Pupils are given an envelope containing pieces of a puzzle. Attached to the envelope is a picture of a particular shape. The pupils are required to set the pieces correctly to make the shape.

Test 2: "Sorting"

Pupils are given different shapes in an envelope. They have to sort out the shapes into similar sets: squares, circles and triangles.

Test 3: "Same"

The teacher places her finger on a picture and asks the child to find another picture that is the similar to it.

Test 4: "Different"

The teacher asks the child to point to a picture that is different from the other pictures in a set.

Test 5: "Body Awareness"

The child is asked to show the tester various parts of his/her body and perform certain simple actions. Examples include the following:

"Show me your head", "your eyes", "your fingers". "Touch your ear". "Touch your nose".

Test 6: "Head and Eye Co-ordination"

The teacher demonstrates on the chalkboard what is required. The child observes, listens, and follows the instructions to complete the exercise on his/her sheet of paper.

The maximum score is 28. Pupils who gain scores of 22 or higher are considered to be school ready. Those pupils who obtain scores that are below 22 continue with the readiness programme before taking School Readiness Test B later in the year. The readiness programme gives those pupils who enter school with certain deficiencies - such as limited language comprehension, perceptual problems, short attention span, and co-ordination problems - the opportunity of remedying their weaknesses - so that they can cope with a formal teaching programme.

In this study the class teacher was requested to provide the researcher with readiness assessment scores obtained by each pupil selected for the investigation. These scores were entered on a readiness assessment sheet provided by the researcher (Appendix C). The distribution of pupils' scores are shown in Table 3.1:

TABLE 3.1

DISTRIBUTION OF SCHOOL READINESS SCORES OF SAMPLE

SCHOOL READINESS SCORES (CATEGORIES)	NUMBER OF PUPILS (FREQUENCIES)
0 - 10	12
11 - 15	6
16 - 21	34
22 - 25	74
26 - 28	44
Total	170

The data in Table 3.1 are presented graphically in Fig. 3.1

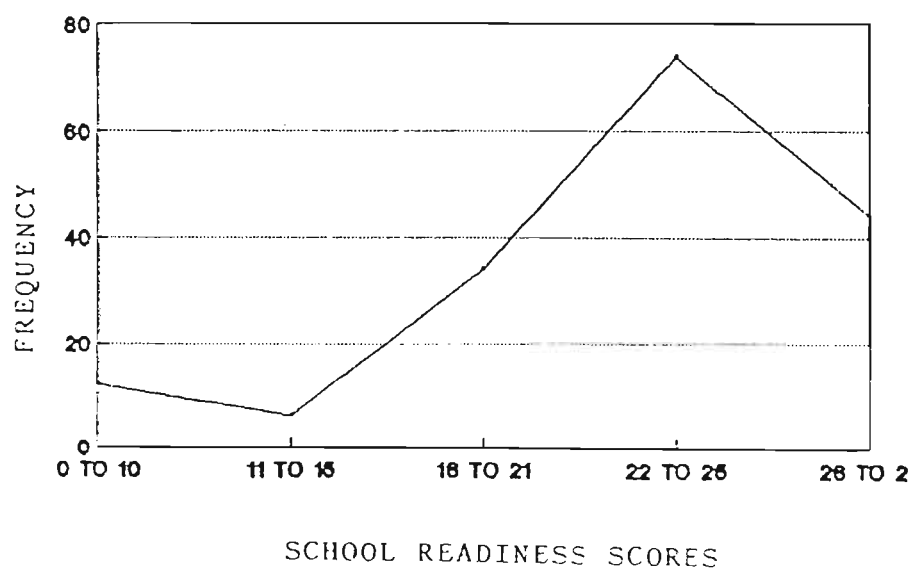


FIG. 3.1 DISTRIBUTION OF SCHOOL READINESS SCORES OF PUPILS

The teachers were requested to enter the scores within two weeks as the researcher had to return to school after this period of time. To ensure the anonymity of pupils, of teachers, and of the schools involved in this study, no names were required on the questionnaires and the result sheets. In some cases the researcher had to increase the number of pupils selected for testing in certain groups or schools for the following reasons:

- a) It was not possible to obtain the required number of pupils in all four groups at each school;
- b) some schools had bridging module classes only;
- c) some schools did not have any non-preschoolers.

The principals, Junior Primary heads of departments, and Class i teachers gave the researcher their full co-operation. She visited all the selected schools at a rate of two schools per day. The purpose and nature of the study as well as the testing procedures were explained to the principals. The principals generally introduced the researcher to the Junior Primary Head of Department who, in turn, introduced the researcher to the Class i teachers.

The researcher explained the purpose of her visit and her requirements. With the aid of the class register, the teacher-in-charge and the researcher together selected the pupils who

pupils who were to be tested. These pupils were approximately of the same age, ability grouping, and family background.

3.3 THE PILOT STUDY

The basic purpose of a pilot study is to determine how the design of a proposed study can be improved. Borg (1967:70) states this in more specific terms as follows:

- a) It permits a preliminary testing of the hypotheses; these may be refined and stated more precisely in the main study.
- b) It often provides the researcher with ideas, approaches and insights not noticed earlier.
- c) It enables the researcher to check on the effectiveness of the proposed statistical and analytical procedures.
- d) It reduces the number of treatment errors because unforeseen problems revealed in the pilot study may be overcome by redesigning the study.

- e) It could save the researcher major expenditure of time and money on a project that may yield less than expected.
- f) It may provide useful feedback from research subjects and other persons that may be used to improve the study.
- g) The researcher has the opportunity of trying out a number of alternative measures and procedures and then selecting those that are likely to produce the best results.

It was against this background that the researcher decided to conduct a pilot study. Draft questionnaires were handed to ten Class i teachers in the Phoenix area. These teachers were required to complete the questionnaires and make comments where necessary.

Some teachers reported that the questionnaire was too long. Many suggested that questions relating to Class i teaching and those concerning parents were not relevant to the main study. Since these were valid the sections on teaching and parents were omitted from the questionnaire. Other useful criticisms related to the relevance of some questions concerning the Class i curriculum. Examples of these were:

(i) What additional subjects (if any) would you like to see included in the Class i syllabus?

(ii) What subject/subjects (if any) would you like to see deleted from the Class i syllabus?

These two items were therefore deleted from the questionnaire. Certain items were regarded as ambiguous ; others were not clear or precise enough. Examples of these are given below:

(i) How would you describe the demand placed on parents by the school?

(ii) To what extent is the value system of the school similar to those of pupils' parents?

These constructive criticisms were noted and the necessary steps were taken to improve the questionnaire. The final version is included in Appendix A.

3.4 SAMPLING AND SAMPLE SELECTION

Two sets of samples were used in this study:

a) A group of Class i teachers; and

- b) four groups of Class i pupils who came from varying types of preschool background. One of these groups had no formal preschool experience.

3.4.1 SELECTION OF THE SCHOOLS

As socio-economic status is an important factor in education it was decided to control for this variable by selecting pupils with similar home backgrounds. Gajadhur (1990: 164) found that material disadvantage may limit access to education; or where access is available, material disadvantage may make it more difficult for children to benefit from it. Hyman (1967, cited in Haralambos, 1980:14) distinguishes the following differences between working class and middle-class value systems: firstly, members of the working-class place a lower value on education; secondly, they place a lower value on achieving higher occupational status; and thirdly, they believe that there is less opportunity for personal advancement compared to their middle-class counterparts. Sugarman (1970, cited in Haralambos, 1980:194) argues that the nature of manual and non-manual occupations largely accounts for these differences.

It was decided that the pupil sample in this study should come from lower socio-economic homes. The districts of Phoenix, Merebank and Chatsworth were chosen because the

majority of parents residing in these areas are semi-skilled or unskilled workers. These townships were developed by the Durban City Council as a housing scheme for masses of lower-income earners in the Indian community (Gajadhur, 1990:52).

A total of 14 schools drawn from three districts, participated in the study. They were distributed as follows:

- (a) Chatsworth: 5 schools
- (b) Merebank : 3 schools
- (c) Phoenix : 6 schools

Figure 3.2 shows the location of the three districts in the Greater Durban area.

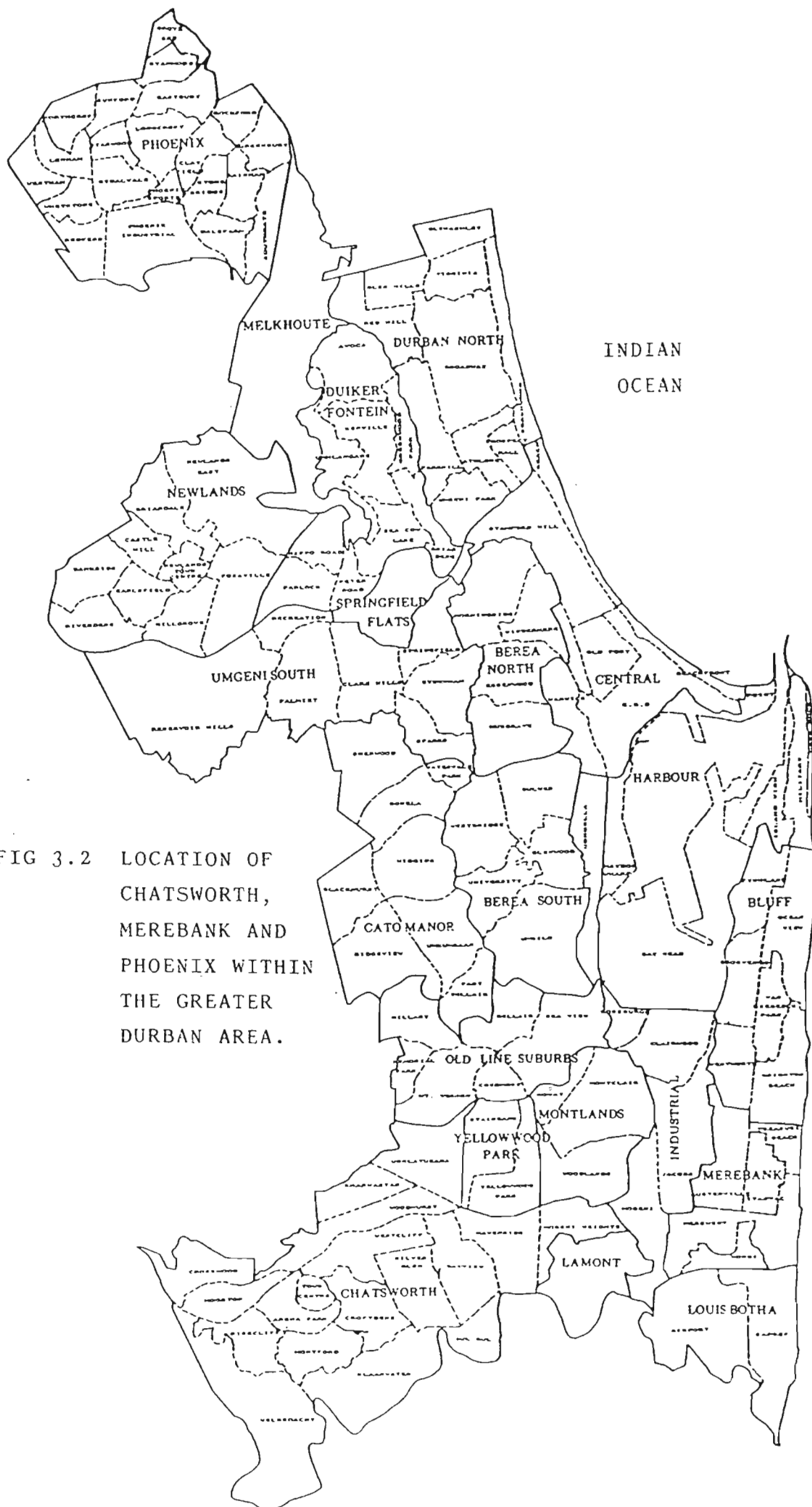


FIG 3.2 LOCATION OF CHATSWORTH, MEREBANK AND PHOENIX WITHIN THE GREATER DURBAN AREA.

A pie graph of the distribution of the schools by district is given in Fig. 3.3.

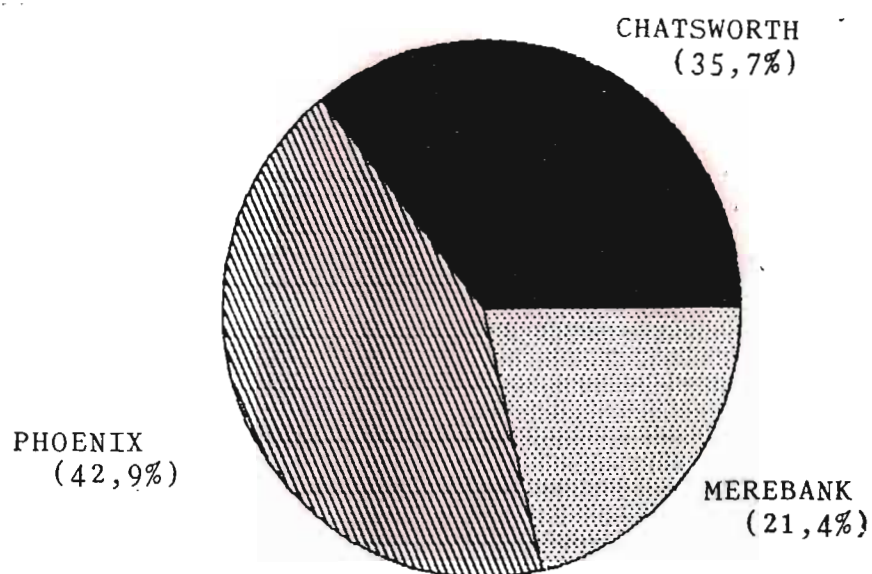


FIG. 3.3 DISTRIBUTION OF THE SCHOOLS SELECTED FOR THE STUDY ACCORDING TO DISTRICT

The researcher had to visit an additional school in each of the three areas other than those reflected in Section 3.4.1 because she could not obtain the required number of pupils at the schools originally selected. As mentioned earlier (Section 3.2.3), a number of these schools did not have pupils from all three types of preschools under study; others did not have any non-preschoolers.

3.4.2 SELECTION OF TEACHERS AND TEACHER SUB-SAMPLES

Most of the questionnaires were given to teachers of Class i pupils at the school in which the tests were conducted. Ten more questionnaires were given to other teachers from schools with Class i units. This was done to get as large a sample as possible. A total of thirty-five questionnaires were completed by teachers who were distributed as follows according to the districts in which their schools were located: Chatsworth (13), Merebank (7), and Phoenix (15).

The distribution of the sample of teachers and the districts from which they came are presented in Fig. 3.4.

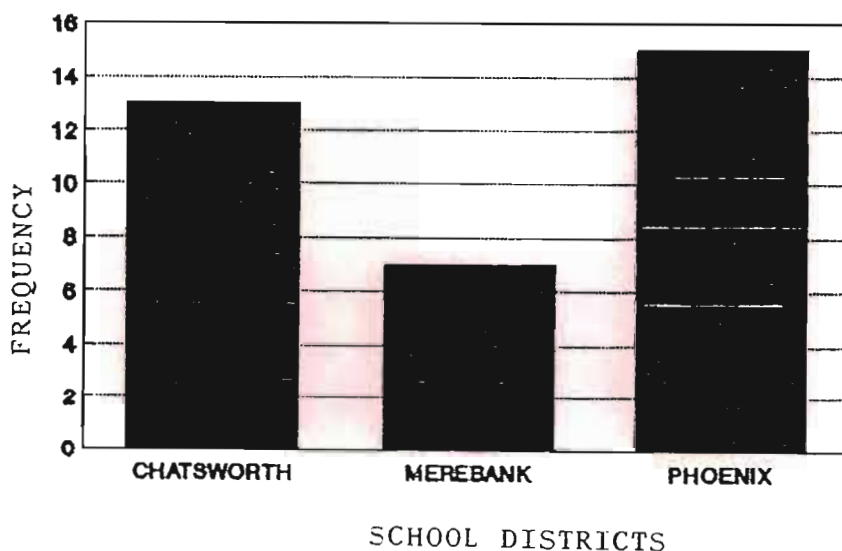


FIG. 3.4 THE DISTRIBUTION OF TEACHERS ACCORDING TO THE DISTRICTS IN WHICH THEIR SCHOOLS WERE SITUATED

In Section 1 of the questionnaire teachers were asked questions relating to their sex, age, marital status, academic qualifications, professional qualifications and teaching experience (Appendix A). These data were collated and analysed in order to determine whether subcategories of teachers, based on these variables, differed in their views, perceptions and judgements relating to school readiness issues.

All 35 teachers in this sample were females. This is not surprising since it is a rarity to find a Junior Primary teacher in Indian schools who is not a female. Those few who do happen to be males were not on the staffs of the schools under study.

The majority of the Junior Primary teachers who comprised the sample were young, i.e. between the ages of 20 and 29 (57,14 %). This is a positive feature as these recently qualified teachers are more likely to be familiar with the latest theories and practices relating to Junior Primary teaching than their older colleagues.

Almost three-quarters (74,29 %) of the teachers in the sample were married. This is also a positive feature since married women, especially those who themselves are mothers, are likely to have a better understanding of children, their behaviour and their needs.

Of the 35 teachers only one was a graduate and a further six had degree courses to their credit. A negative feature is that 28 teachers (80 %) had not upgraded their initial qualification of Senior Certificate/Matriculation.

All 35 teachers in the sample were qualified to teach in a primary school. An educationally sound feature was that 32 (91,43 %) of the 35 teachers were qualified to teach Junior Primary classes.

Over 85 % of the sample had Junior Primary teaching experience in excess of five years. Further, all 35 teachers had taught Junior Primary classes from the commencement of their teaching careers.

Overall, the teachers' credentials inspired confidence and augured well for the quality and reliability of the responses they had to offer.

3.4.2.1 SEX

All 35 respondents were females.

3.4.2.2 AGE

This variable was included to establish whether there were

significant differences between the views and perceptions of younger and older teachers in respect of issues linked to school readiness. The distribution of the teacher sample, according to age, is shown in Table 3.2.

TABLE 3.2
DISTRIBUTION OF TEACHERS ACCORDING TO AGE

AGE (YEARS)	20 – 29	30 – 39	40 – 49	50 – 59	TOTAL
No	20	8	6	1	35
%	57,14	22,86	17,14	2,86	100

The disproportionately high percentage of teachers in the 20 to 29 year category is clearly illustrated in Fig. 3.5.

FIG. 3.5 DISTRIBUTION OF TEACHERS ACCORDING TO AGE

3.4.2.3 MARITAL STATUS

This variable was included to determine whether there were significant differences between the views and perceptions of married and unmarried teachers in respect of issues related to school readiness. The sample comprised 5 teachers who were single (14,28 %), 26 who were married (74,29 %) and 4 who were divorced (11,43 %). This distribution is presented graphically in Figure 3.6.

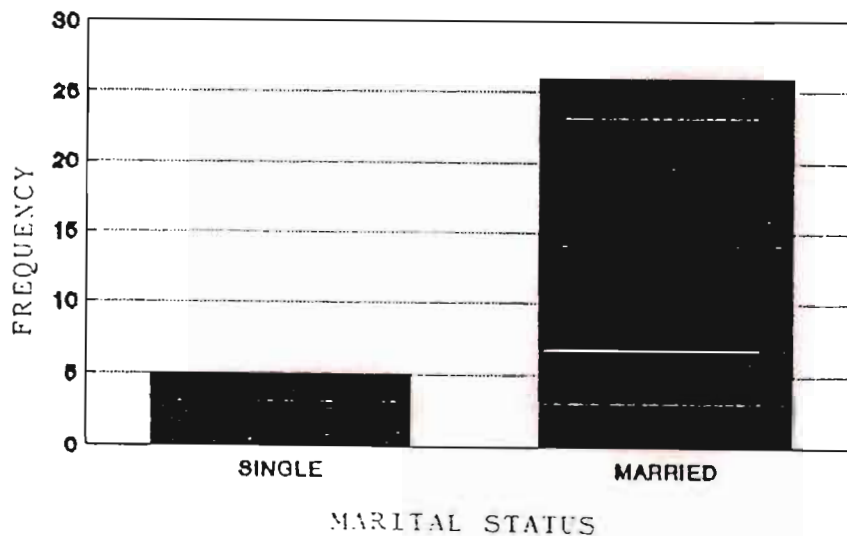


FIG. 3.6 DISTRIBUTION OF TEACHERS ACCORDING TO MARITAL STATUS

3.4.2.4 TEACHER QUALIFICATIONS

ACADEMIC QUALIFICATIONS

The distribution of the teacher sample according to academic qualifications is shown in Table 3.2. It is generally believed that better qualified teachers are more knowledgeable. Table 3.3 shows that all the teachers in the sample have at least a diploma qualification. This is a positive feature and suggests that they would be able to give informed and reliable responses to the questionnaire items in this study.

TABLE 3.2

DISTRIBUTION OF TEACHERS ACCORDING TO THEIR ACADEMIC QUALIFICATIONS

	SENIOR CERT MATRIC	DEGREE COURSES	B. DEGREE	TOTAL
NO	28	6	1	35
%	80	17,14	2,86	100

PROFESSIONAL QUALIFICATIONS

The distribution of teachers according to their professional

qualifications is shown in Table 3.4. An encouraging feature is the fact that 91,43 % of the teachers in the sample are qualified well enough to teach Junior Primary children. This feature, based on the researcher's observations, is typical of Indian education as a whole, i.e. teachers are generally well qualified for their jobs throughout the school system.

TABLE 3.4

DISTRIBUTION OF TEACHERS ACCORDING TO THEIR PROFESSIONAL QUALIFICATIONS

	JUNIOR PRIMARY EDUCATION DIP.		HIGHER EDUCATION DIPLOMA: PRIMARY	TOTAL
NO	2	30	3	35
%	5,72	85,71	8,57	100
DURATION OF COURSES IN YEARS	2	3	3	—

3.4.2.5 TEACHING EXPERIENCE

Teachers were asked to indicate the length of their teaching experience in years. Presumably, experienced teachers have better insights into problems and issues relating to school readiness. The distribution of the teachers according to

the length of their teaching experience is shown in Table 3.5.

TABLE 3.5

DISTRIBUTION OF TEACHERS ACCORDING TO YEARS OF TEACHING EXPERIENCE

YEARS	0-5	6-10	11-15	16-20	21-25	TOTAL
No	5	19	3	6	2	35
%	14,28	54,29	8,57	17,14	5,72	100

More than 85 % of the respondents in this study were teachers with more than five years of teaching experience. This is a pleasing feature not only from the profession's point of view but also from that of the researcher. It gives her confidence to know that her research is based on the responses of experienced, well-qualified teachers who have a good insight into problems and issues relating to education.

Subjects were also required to indicate the length of their teaching experience specifically as Junior Primary teachers. Information obtained in relation to this aspect is given in Figure 3.7.

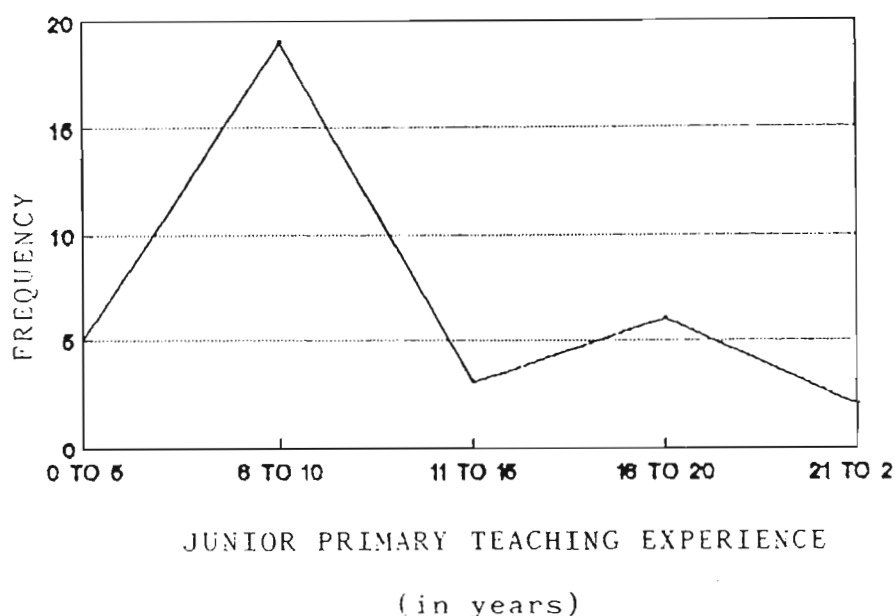


FIG. 3.7 DISTRIBUTION OF TEACHERS ACCORDING TO THE LENGTH OF THEIR JUNIOR PRIMARY TEACHING EXPERIENCE

One would expect that the more experience the respondents have as Junior Primary teachers, the more efficient and effective they would be in the classroom. It was also more likely that they would give reliable responses since they are in a position to draw on the wisdom of many years of infant class teaching.

3.4.3 SELECTION OF PUPILS

The researcher selected her sample in terms of certain predetermined criteria. Her groups included pupils who had attended one of the three available types of preschools

mentioned earlier, as well as non-preschoolers. A good balance between males and females minimised the influence of the sex variable on the test results. This made it possible for her to examine any differences attributable to the sex factor. Pupils selected also had to be within a specified age range and their parents had to be in the same occupational category, namely, semi-skilled or routine non-manual workers. To control for socio-economic status pupils were selected in accordance with the Cass Occupational Categories (Schlemmer and Stopforth, 1979:9). These categories are given in Table 3.6.

TABLE 3.6

CLASSIFICATION OF OCCUPATIONAL CATEGORIES (CASS)

1. Professional and Managerial
2. Middle White Collar
3. Manual Foreman, Skilled Artisans, Farmers and Status Equivalent
4. Routine Non-Manual and Semi-Skilled Manual
5. Unskilled Manual and Menial

The above categories provide broad distinctions among various socio-economic levels. Occupational status is a basic variable in analysing survey data, education, and sometimes, neighbourhood status (Hall and Jones, 1950: 31-55).

Schlemmer and Stopforth's intention in producing this guide is to encourage standardization in the coding of occupations in survey research in South Africa. Classification of occupational status is simply a way of differentiating systematically between occupations which represent various levels of achievement in work-status.

The Cass index is a provisional one because research on occupational prestige in South Africa is far from complete. Nevertheless, in the absence of any other comprehensive framework for the socio-economic assessment of occupations, the Cass Occupational Categories was used. Only children of parents falling in group 4, viz., "Routine Non-Manual" and "Semi-Skilled Manual", were selected for this study. This category was chosen to control for socio-economic status as parents in this category fell in the lower socio-economic class.

The Raven's Progressive Matrices also featured prominently

in the selection of pupils for this study. The RCPM Test A was administered by the researcher to a minimum of six pupils selected from each of the four groups - equal numbers of boys and girls. From these at least two pupils per group, where possible, with scores within the range 8 to 9 in each group, were selected for the study.

In this study the Raven's Coloured Progressive Matrices (RCPM) was used to select pupils of approximately the same intellectual ability in each of the four groups. It was necessary to match the groups on this crucial variable. If this was not done it would have been difficult to determine whether any differences that might appear was the result of mean intelligence dissimilarities or of programme disparities.

In each school a minimum of two boys and two girls were selected for each of the four groups investigated. A total of 170 Class i pupils participated in the study and they were representative of the following groups:

- a) pupils who had attended registered private pre-primary schools;
- b) pupils who had attended departmental bridging module classes;

- c) pupils who had attended community-run pre-primary classes; and
- d) pupils who had had no pre-primary education.

As described earlier, in order to minimise the contaminating effects of other variables, steps were taken to ensure that the pupils were more or less similar in terms of age, ability grouping, and family background.

A 2 X 2 factorial analysis of variance conducted with randomly selected groups of 30 pupils from each of the pre-school and no - preschool categories showed no significant differences in respect of the following variables: type of preschool background, sex, and the interaction between these two. This indicates that, intellectually, the children from the four groups registered mean scores that were comparable and are not significantly different. All the null hypotheses, therefore, have to be accepted.

A summary of the ANOVA results are presented Table 3.7.

TABLE 3.7
ANALYSIS OF VARIANCE OF RAW SCORES ON THE RCPM OF PUPILS FROM
FOUR DIFFERENT TYPES OF PRESCHOOL BACKGROUND

SOURCE OF VARIATION	SUM OF SQUARES	D.F	MEAN SQUARE	F.RATIO	P
A : TYPE OF PRESCHOOL BACKGROUND	11,225	3	3,742	9,110	>0,05
B : SEX	0,408	1	0,408	0,994	>0,05
AXB : TYPE OF PRESCHOOL BACKGROUND X SEX	0,358	3	0,119	0,291	>0,05
ERROR: WITHIN GROUP	46,000	42	0,411		

Table 3.8 shows the distribution of pupils participating in this study according to gender and the type of preschool experience they had.

TABLE 3.8

DISTRIBUTION OF PUPIL SAMPLES ACCORDING TO GENDER

Groups	Boys	Girls	Total
Registered Private Pre-primary	15	15	30
Departmental Bridging Module	26	24	50
Community-Run Pre-primary	24	26	50
No Pre-primary education	22	18	40
Total	87	83	170

3.5 FIELD WORK

As described in Sections 3.2 and 3.3, three separate instruments were used to gather data for this study. These were the following:

- (a) Raven's Coloured Progressive Matrices Test A
- (b) School Readiness Test A, and
- (c) Questionnaire for Class i teachers.

The distribution of the questionnaires, selection of the

pupils, administration of the Raven's Matrices, and the distribution of the Assessment score sheets to the teachers were all done during the same visit. The researcher gave a minimum of two questionnaires to Class i teachers in each of the fourteen schools selected for the study. These teachers were given two weeks in which to complete the questionnaire.

The majority of the questionnaires were completed and returned timeously. This was the result of the ready co-operation given by the teachers and management staff of schools. In a minority of cases the researcher had to visit some schools a second, and sometimes, a third time, before the questionnaires and test scores of pupils were ready for collection.

In a few cases arrangements had to be made to collect the few questionnaires and test scores from the teachers' homes since the researcher's period of study leave had expired and she was, therefore, unable to collect them during school hours. Eventually 35 completed teacher questionnaires and 170 pupils' test scores were returned for analysis. The response rate from the teachers was 92 %.

After all the required data were collected, they were tabulated and analysed. These results are presented in Chapters Four and Five.

CHAPTER FOUR

FINDINGS OF THE PRESENT STUDY: PUPILS' READINESS FOR CLASS i AND THE CURRICULUM

As stated in Chapter One, this research has two main aims: firstly, to evaluate the effectiveness of pre-primary education for Indian children; and secondly, to assess the relative effectiveness of some of the more important types of preschool programmes currently in existence. These aims, it will be recalled, were restated in the form of several sub-questions so as to gain clear directions about the nature of the answers that were required and to assist in organising the data in a coherent form.

Since the research questions which needed to be answered broadly match the subdivisions in the Junior Primary Class i Teacher's Questionnaire (JPCT, Annexure A), the primary instrument used to gather information for this study, it would help to summarise the purpose of each subdivision. In this way the link between a particular research question, its location in the Junior Primary Class i Teacher's Questionnaire, and the relevant findings would become clearer.

Part One of the questionnaire is mainly directed towards obtaining personal details of the teachers' participation in this study (Questions 1.1 to 1.7). Much of the information obtained from this section was presented in Chapter Three.

Part Two comprises a set of twelve items. These seek the opinions of teachers about the readiness of pupils in specific areas such as their powers of observation and memorization, the degree to which they are literate and numerate, and some differences between the home environment of the pupils and their school environment (Questions 2.1 to 2.9).

In Part Three, teachers were asked questions relating to the Class i curriculum and the changes they would like to see in this regard.

In Part Four, teachers were asked questions relating to the need for pre-primary education, the effectiveness of existing pre-primary programmes and those shortcomings among Class i pupils which pre-primary teachers can assist in overcoming.

In Part Five, teachers were required to evaluate the effectiveness of the school readiness test used by the

Department of Indian Education (House of Delegates). They were asked questions relating to the overall effectiveness of the test, difficulties relating to the sub-tests, their satisfaction/dissatisfaction with them, and changes they would recommend if the test were to be revised.

Owing to the mass of data that had to be handled it was decided to present the results of this study over two Chapters, ie. Chapters Four and Five. Chapter Four deals with the results pertaining to two aspects viz., Pupil Readiness for Class i and the Class i Curriculum. The data relating to the two remaining variables ie., Pre-primary schools/classes and School Readiness tests, are analysed in Chapter Five.

The discussion in Chapter Six is based on the findings of both Chapters Four and Five taken together. This structure makes it easier for the researcher to link related ideas.

Brief notes on some of the more important statistical techniques used for analysing the data are presented in Appendix D. NWA Statpak (1986) was used for computations.

The findings relating to Pupils' readiness for Class i and the Curriculum follow.

4.1 PUPILS' READINESS FOR CLASS i

A knowledge of the current pre-primary programmes is important, for without it, the planning and implementation of measures to remedy problems would be difficult. To date no extensive or detailed scientific survey on the effectiveness of pre-primary education for Indian children has been undertaken. In spite of the lack of such data, there has been a growing awareness of the need for pre-school education on the part of Education Departments, communities and the business sector. There are strong moral, social, political, and economic arguments for increased support of early childhood care (Myers; 1992:253).

Research data collected in a scientific manner would not only support these efforts but would also provide the impetus for establishing resources to assist those pre-primary teachers who require assistance.

4.1.1 PUPILS' LEVEL OF DEVELOPMENT IN SELECTED READINESS PARAMETERS

Teachers were asked to assess, in general terms, various areas of readiness among pupils entering Class i. The distribution of their responses are given in Table 4.1.

TABLE 4.1

CLASS i ENTRANTS' LEVEL OF READINESS IN SELECTED
PARAMETERS

READINESS PARAMETER	VERY HIGH	HIGH	MODE- RATE	LOW	VERY LOW	CAN'T SAY	TOTAL	\bar{X}	MEAN RANK
Social Readiness	0	11	23	0	0	1	35	2,66	1
Emotional Readiness	1	4	27	1	0	2	35	2,85	3
Physical Readiness	0	10	22	1	1	1	35	2,75	2
Aesthetic Readiness	0	3	20	8	1	3	35	3,72	4

To obtain mean scores and mean ranks a widely used procedure was employed. The responses were weighted as follows: very high was given a weighting of 1; high, a weighting of 2; moderate, a weighting of 3, and so on. The higher the rating, the lower was the degree of readi-

ness.

To obtain the mean, the number of responses in each category was multiplied by the corresponding numerical weighting; the products were added and the sum divided by the total number of persons who responded to that item.

A similar procedure was used in Tables 4,3; 4,4; 4,5; 4,6; 4,11 and 4,13.

An example of the way in which the mean scores and mean ranks were computed is given in Appendix E.

The weighted mean was computed for each item in Table 4.1.

According to Table 4.1 teachers rated social social readiness as most evident among pupils entering Class i ($\bar{X} = 2,68$). This was followed by physical readiness ($\bar{X} = 2,79$) and emotional readiness ($\bar{X} = 2,85$).

Chi-square computations showing the relationship between the social readiness ratings given to the pupils in the sample and the ages of the teachers who did the rating are given in Table 4.2.

TABLE 4.2
YOUNGER AND OLDER TEACHERS' PERCEPTIONS OF SOCIAL READI-
NESS AMONG CLASS i ENTRANTS

	DIFFERENCES SEEN AS VERY HIGH TO HIGH	DIFFERENCES SEEN AS MODERATE TO VERY LOW	TOTAL
Younger Teachers	6 (30 %)	14 (70 %)	20 (100 %)
Older Teachers	5 (36 %)	9 (64 %)	14 (100 %)
Total	11	23	34 ^(a)

$$\chi^2 = 0,123 \quad df = 1 \quad p > 0,05$$

Table 4.2 shows that the differences in opinions expressed by younger and older teachers are not beyond what would be expected by chance. Thus this study does not provide conclusive evidence showing a significant relationship between the variables "teacher's age" and "social readiness".

The teachers also felt that most school entrants, irrespective of their type of preschool background, rank low on the variable "aesthetic readiness". This is probably due to the fact that these children are too young and too

(a): One teacher's response had to be omitted from the computation since she was not sure of her response.

inexperienced to differentiate between what is beautiful and what is not.

Reilly and Hofmeyer (1983) state that readiness is an important factor in learning. Optimal learning is most likely to occur when a match is achieved between what the child already knows and fresh intellectual challenges.

4.1.2 DEVELOPMENTAL LEVEL OF SELECTED ABILITIES IN CLASS i ENTRANTS

Class i teachers were required to indicate the extent to which certain abilities of pupils entering Class i were developed. Their responses are shown in Table 4.3.

TABLE 4.3

CLASS i ENTRANTS' LEVEL OF READINESS IN SELECTED DEVELOP-
MENTAL PARAMETERS

ABILITIES	VERY HIGH	MODE HIGH RATE	LOW	VERY LOW	CAN'T SAY	TOTAL	\bar{X}	MEAN RANK
Observation	1	8 20	4	1	1	35	2,88	1
Memorization	0	7 19	8	0	1	35	2,03	2
Environmental Awareness	1	5 18	7	3	1	35	3,18	3

Although the teachers ranked observation as the ability most evident in children entering Class i ($\bar{X} = 2,88$), the remaining powers, memorization ($\bar{X} = 2,03$) and environmental awareness ($\bar{X} = 3,18$) are not far behind. The responses indicate moderate development in all three powers.

4.1.3 PUPILS' READINESS FOR ENGLISH

Teachers' responses relating to the degree of readiness in selected aspects of English are presented in Table 4.4.

TABLE 4.4

CLASS i ENTRANTS' LEVEL OF READINESS IN SELECTED ASPECTS
OF ENGLISH

	VERY HIGH	HIGH	MODERATE	LOW	VERY LOW	CAN'T SAY	TOTAL	\bar{X}	MEAN RANK
Speak	0	8	23	3	0	1	35	2,85	1
Read	0	1	5	15	11	3	35	4,13	4
Write	0	1	9	14	10	2	35	3,97	3
Overall	0	1	13	15	1	2	35	3,69	2

The weighted mean ranking for the four components of English show a clear superiority in the ability to speak ($\bar{X} = 2,85$) over the pupils' prowess to write ($\bar{X} = 3,97$) and read ($\bar{X} = 4.13$).

Speech development begins at home while the abilities to read and write usually commence at pre-primary schools or in Class i. The difficulty with reading is acknowledged by Smith (1971) who states that reading is an active decision-making process in which the reader must

differentiate, categorize and integrate information in order to identify a letter, a word or meaning, and make his or her own books with his thoughts and words written down.

4.1.4 (a) DIFFERENCE BETWEEN TYPES OF LANGUAGE USED AT HOME AND IN SCHOOL

This item required teachers to estimate how wide a difference they felt existed between the language level generally operational in the childrens' homes and the level of language required for effective functioning at the Class i level. The distribution of the teachers' responses is given in Table 4.5.

TABLE 4.5
TEACHERS' PERCEPTIONS OF THE DIFFERENCES BETWEEN TYPE OF LANGUAGE USED BY CLASS i ENTRANTS AT HOME AND AT SCHOOL

	VERY LARGE	LARGE	MODE- RATE	SMALL	NIL	CAN'T SAY	TOTAL	MEAN
No.	2	8	14	4	0	7	35	2,71
%	5,71	22,86	40	11,43	0	20	35	

The weighted mean score of 2,71 indicates that teachers generally regarded the difference as being moderate to large. The mean of 2.71 lies between 2 (large difference) and 3 (moderate difference). Chatsworth, Merebank and

Phoenix are residential areas for Indians in the lower socio-economic levels and this could possibly affect the quality of English spoken in some homes. Bloom (1980:382-385) states categorically that the home has the greatest impact on language development and the child's ability to learn.

Language instruction has been commonly accepted as an aspect of the curriculum that should be given priority when dealing with the disadvantaged child (Parke, 1966:383). Further, many working mothers spend very little time with their children correcting their spoken English. For some families English is a replacement language and hence poses further difficulties. According to Wiseman (1967) what matters is the degree of literacy within the home and the attitude of parents towards books and towards school.

4.1.4 (b) TEACHERS' COMMENTS ON THE DIFFERENCES BETWEEN THE FORMS OF LANGUAGE USED AT HOME AND AT SCHOOL

Teachers' opinions about why there are differences in the language used at home and at school are discussed below.

FAMILY BACKGROUND

A large number of teachers believed that since spoken English at home was "incorrect", pupils tended to spell and write incorrectly. They experienced problems with vocabulary and language. Teachers reported that pupils from bridging module remedial classes come from lower socio-economic areas and they are not exposed to an enriched language environment. Pupils are inclined to omit prepositions. Moreover, the vocabulary range of a majority of the pupils tends to be limited, causing problems in communication. On the positive side, the family background of some of the pupils from Phoenix and Chatsworth is favourable. Generally the parents of such pupils are well educated and this has a beneficial influence on their children. Many of the children are exposed at home to media such as television, newspapers and radio.

GENERAL

Several teachers reported that there are pupils who tended to 'baby talk' and to spell words in the same way as they are pronounced. They also reported that there is a lack of sufficient "quality language" interaction between parents and pupils. It is, therefore, not surprising to

find that a number of these children experience problems with the pronunciation of words and often speak in incomplete sentences.

4.1.5 PUPILS' READINESS FOR MATHEMATICS

Table 4.6 shows the distribution of teachers' estimates of pupils' maturation for academic work in selected mathematical concepts.

TABLE 4.6

CLASS i ENTRANTS' LEVEL OF READINESS IN SELECTED ASPECTS
OF MATHEMATICS

CONCEPT	VERY HIGH	HIGH	MODE- RATE	LOW	VERY LOW	CAN'T SAV	TOTAL	T	MEAN RANK
Number Concept	0	4	23	7	0	1	35	3.09	3
Place Value	0	0	3	24	7	1	35	4.12	6
Counting	1	5	25	3	0	1	35	2.68	2
Size and Shape	0	10	20	3	1	1	35	2.65	1
Quantity	0	6	11	15	2	1	35	3.29	4
Addition/ Subtraction	0	1	4	14	10	6	35	3.43	5

According to the respondents, most pupils entering Class i show a moderate to high level of maturation in the mathe-

mathematical concepts of size and shape ($\bar{X} = 2,85$), counting ($\bar{X} = 2,88$), and number ($\bar{X} = 3,09$). Fundamental ideas related to quantity appear to present them with more problems ($\bar{X} = 3,29$). As expected, the operations of addition and subtraction are not easily grasped at this stage ($\bar{X} = 3,43$). The most difficult concept for Class i pupils to acquire is that of place value ($\bar{X} = 4,12$).

4.1.6 PUPILS' READINESS FOR FORMAL WORK

Respondents were required to estimate the degree of readiness for formal work of children entering Class i. They had to indicate the percentage of pupils in their classes who are fully ready, moderately ready, slightly ready or not ready at all for formal work. The distribution of their responses are given in Table 4.7.

TABLE 4.7

TEACHERS' ESTIMATES OF CLASS i ENTRANTS' LEVEL OF READI-
NESS FOR FORMAL WORK

TEACHERS' RESPONSES	%
Fully ready	41,7
Moderately ready	33,6
Slightly ready	16,3
Not ready at all	8,4
Total	100

Whilst Table 4.7 indicates that Class i pupils fall into all four categories it is very encouraging to note that over 75 % are regarded as either fully ready or moderately ready for formal work on entry to Class i.

4.1.7 DISTRIBUTION OF SCHOOL ENTRANTS ON IMPULSIVE-
NOT IMPULSIVE DICHOTOMY

Teachers were requested to classify the behaviour of pupils into two broad categories on the trait "impulsivity". The majority of the teachers (65,71 %) considered most pupils to be impulsive in their behaviour. This is not surprising when one considers that the sample comprised a group of young children.

Seven teachers described their pupils as "restrained". They attributed this characteristic to "insufficient command of language" on the part of some of these pupils; they could not express their ideas easily. Others were inhibited and could not easily relate to people and fit into formal school situations. Teachers also found that pupils who had had no preschool education were more restrained compared to those who had attended preschool.

Teachers also referred to some pupils as "normal", "natural", or "hyperactive". They saw hyperactive children as out-going, very talkative, always moving about, and unafraid. These children, according to the teachers, often tend to be in a hurry and hand in their written exercises without giving too much thought to arrangement and neatness. They also have few inhibitions. Pupils who had had preschool education generally settled into the formal classroom situation more easily and presented fewer disciplinary problems.

4.1.8 PERSONS USED AS ROLE MODELS BY PUPILS

Table 4.8 gives the teachers' views about whom children generally use as role models.

TABLE 4.8
CLASS i ENTRANTS' ROLE MODELS

	PARENTS	TEACHERS	FELLOW PUPILS	OTHER	TOTAL
No.	6	19	7	3	35
%	17,14	54,29	20,00	8,57	100

More than 50 % of the respondents replied that pupils modelled themselves on the teacher. This places a great responsibility on teachers to ensure that they serve as good role-models.

Part of the explanation for a large proportion of children using teachers as role models may be found in the fact that children spend a great deal of time with teachers. During this time they observe and listen closely and as time passes many of them begin to idolise the teacher and imitate her.

A smaller proportion of teachers felt that children mainly imitate their fellow pupils. Play and classroom situations offer them many opportunities for imitating those peers whom they admire.

Parents form yet another group whom some pupils imitate. According to teachers who gave this as their response, children have ample opportunity in their preschool years

to imitate their parents. The teacher's influence then becomes secondary.

Some pupils imitate television characters while a minority use other relatives as role models.

Singh's (1987:131) research indicates that both teachers and parents are particularly influential in pupil's lives. Similarly, Mead (1934), and Berger and Luckmann (1967), state that during primary socialization, individuals who are closest to the child, influence him/her in a fundamental way.

4.1.9 (a) TEACHERS' PERCEPTIONS OF DIFFERENCES IN CHILDREN'S HOME AND SCHOOL ENVIRONMENTS

Teachers were asked if they found the childrens' social experiences at school notably different from those that existed in the home environment. Their responses are reflected in Table 4.9.

TABLE 4.9

TEACHERS' PERCEPTIONS OF DIFFERENCES IN CHILDREN'S HOME
AND SCHOOL ENVIRONMENT

	IN MOST CASES	IN MANY CASES	IN SOME CASES	IN A FEW CASES	NEVER	CAN'T SAY	TOTAL	\bar{X}
No.	1	0	10	18	2	4	35	3,65
%	2,86	0	28,57	51,43	5,71	11,43	100	

The majority of the teachers (18) reported that only in a few cases were the childrens' social experiences at school so different that they conflicted with those found in the home environment.

In Table 4.10 the responses of younger and older teachers are compared in respect of children's social experiences at home and at school.

TABLE 4.10
YOUNGER AND OLDER TEACHERS' PERCEPTIONS OF DIFFERENCES IN
CHILDREN'S SOCIAL EXPERIENCES AT HOME AND AT SCHOOL

	DIFFERENCES SEEN AS VERY HIGH TO HIGH	DIFFERENCES SEEN AS MODERATE TO VERY LOW	TOTAL
Younger Teachers	6 (33 %)	12 (67 %)	18 (100 %)
Older Teachers	5 (38 %)	8 (62 %)	13 (100 %)
Total	11	20	31 (a)

$$x^2 = 0,087 \quad df:1 \quad p > 0,05$$

Table 4.10 shows that the differences in opinion expressed by younger and older teachers on the issue of pupils' social experiences at school and at home, are not beyond what would be expected by chance. This study does not produce conclusive evidence that there is a relationship between the two variables.

(a) Four teachers mentioned that they were not sure of their responses. They were left out of the computations.

4.1.9 (b) TEACHERS' COMMENTS RELATING TO CHILDREN'S SOCIAL EXPERIENCES

A large number of teachers (80,00 %) reported that the school system offers a social environment that is not very different from the one found in pupils' homes. Consequently, children have relatively few experiences at school that conflict with those at home. This facilitated children's adaptation to the conditions in school. In some cases pupils who associate freely with "problem" children from their neighbourhood often reveal similar kinds of adjustment problems.

Some teachers believed that teachers had a duty to reconcile school and home environments wherever there was a conflict between the two. According to these teachers if the home provided negative or anti-social experiences, the teachers needed to remedy the situation. The child had to be helped to understand in what situations his/her home language was appropriate or inappropriate. Gajadhur (1990:165-166) notes that a home that is deficient as a learning environment will retard the child's development.

4.2 THE CLASS i CURRICULUM

This section of the questionnaire was devoted to shortcomings relating to the Class i curriculum, and ways and means of overcoming them. Responses to questions were expected to:

- (a) inform education authorities of the problems experienced by teachers with the Class i curriculum and
- (b) make pre-primary teachers aware of the problems experienced by Class i teachers in relation to the curriculum.

4.2.1 RANKING OF SUBJECTS ACCORDING TO DIFFICULTY

Teachers were required to rank the subjects comprising the Class i curriculum in order of difficulty, as experienced by pupils. They had to write 1 for the subject pupils generally found most difficult; 2 for the next most difficult one; ...; and 6 for the least difficult one. The distribution of their responses is shown in Table 4.11.

TABLE 4.11

RANKING OF SUBJECTS ACCORDING TO DIFFICULTY

SUBJECTS	R A N K						TOTAL	\bar{X}	\bar{X} RANK
	1	2	3	4	5	6			
Art	1	1	0	6	16	9	35	4,89	5
English	20	13	1	0	0	1	35	1,57	1
Environmental Studies	0	1	4	26	2	2	35	4	4
Maths	11	21	1	0	1	1	35	1,91	2
Music	1	1	1	1	11	20	35	5,29	6
Writing	1	0	26	3	2	3	35	3,4	3

The mean rank scores indicate that English was found to be, by far, the most difficult subject ($\bar{X} = 1,57$), followed closely by Mathematics ($\bar{X} = 1,91$). Writing and Environmental Studies were considered as being moderately difficult.

Art (\bar{X} = 4,89) and Music (\bar{X} = 5,29) were categorized as subjects not presenting pupils with much difficulty. The quality of home life has an important bearing on a child's preparation for school. According to the Child Development Programme at Bristol University, (Osborn and Milbank, 1987), many of the difficulties young children have in learning can be traced to an inadequate and unstimulating home background.

4.2.2 MAJOR PROBLEMS RELATING TO THE TEACHING OF VARIOUS SUBJECTS

Class i teachers were asked to list the major problems they experienced when teaching various subjects. Their responses and comments are presented below.

ART

Almost 55 % of the teachers indicated that children generally fail to make maximum use of space on the sheet of paper provided. Pupils tend to produce stereotyped pictures. They lack imagination, especially in drawing animal shapes and figures. Some pupils don't seem to find enjoyment in their creations. Many pupils appear to exercise poor choice of colours. Pupils are generally afraid to experiment with colours. Teachers noted that a majority of the pupils could not handle instruments and paints easily.

ENGLISH

The majority of teachers (83 %), experienced problems teaching phonic sounds and flashwords. Children who do not know single sounds cannot blend and pronounce words properly. Many pupils lack the skills for expressive reading. There are too many rules and exceptions that have to be applied.

ENVIRONMENTAL STUDIES

Teachers generally agreed that the pupils' general knowledge in this area is limited due to very little or no exposure to the environment. Most of the pupils seem oblivious of even their immediate surroundings.

MATHEMATICS

A large majority of teachers (90 %) emphasized that pupils experienced problems understanding instructions given to complete a given exercise. Learning bonds seems to be a problem area for most of the pupils. Difficulties are experienced with the recognition and comparison of number concepts and when doing mental calculations.

MUSIC

Approximately 50 % of the teachers stated that pupils experience problems remembering words and melodies. They prefer to listen to 'pop' music and identify with adult tastes. The teacher who is not musically inclined or trained experiences difficulty in teaching music.

WRITING

As many as 85 % of the teachers indicated that pupils experience problems with the formation, spacing, and size of letters and numerals. Children not exposed earlier to writing materials experience greater problems. Very often the teacher is required to undo what the child has learnt at home or in pre-primary schools. Some of the pupils move their pencils in a clock-wise direction instead of an anti-clockwise motion when forming certain letters, namely: o; a; d; g; q.

4.3 CONCLUSION

The analysis in this chapter reveals that Class I teachers in Indian primary schools are appropriately qualified for their jobs.

It was also found that pupils entering Class i display a wide range of differences and deficiencies in their readiness for formal schooling. These, to a great extent, appear to be derived from the socio-economic levels of the homes of the pupils. Teachers also identified specific curricular shortcomings which need to be addressed in school readiness programmes.

Chi-square computations (2 X 2 tables) were conducted, wherever appropriate, to test for significant relationships between different sets of variables. All were found to be "not significant" at the 5 % level of confidence. A summary X^2 table relating to these variables is given in Appendix F.

In order to gain a better insight into the findings of the present study it will be necessary to proceed to a discussion of the remaining two variables, viz. pre-primary schools/ classes and school readiness tests. The data pertaining to these two variables would be analysed in Chapter Five.

CHAPTER FIVE

FINDINGS OF THE PRESENT STUDY (CONTINUED)

ASPECTS RELATING TO PRE-PRIMARY SCHOOLS/CLASSES AND THE EFFECTIVENESS OF SCHOOL READINESS TESTS AS INSTRUMENTS FOR MEASURING SCHOOL READINESS.

In Chapter Four analyses relating to the first two variables appearing in the Junior Primary Class i Teachers' Questionnaire were presented, i.e. Pupil Readiness for Class i and the Class i Curriculum. Items on Pupil Readiness for Class i sought the opinion of teachers about the readiness of pupils in specific areas, such as their powers of observation and memorization, the degree to which they are literate and numerate, and some differences between the home environment of the pupils and their school environment. Questions on the Class i Curriculum asked teachers about pupils' difficulties with the curriculum and how pre-primary teachers could proactively assist.

In Chapter Five, analyses pertaining to the two remaining aspects of school readiness are considered, viz., aspects relating to Pre-primary Schools/Classes and data pertaining to School Readiness Tests. The first of these, viz., Pre-primary schools/classes, deals with the need for pre-

primary education, the effectiveness of existing pre-primary programmes and the shortcomings among Class i pupils which pre-primary teachers may assist in overcoming.

The last section of the questionnaire deals with teachers' opinions about the effectiveness of School Readiness Test A as an instrument for measuring school readiness. In addition, this Chapter has included in it, an analysis of the results relating to School Readiness Test A which was taken by the four groups of pupils participating in this study. Here the performance of each of the four groups is compared on each of the six subtests in the School Readiness Test A. These groups are:

- (i) pupils who had attended registered private pre-schools;
- (ii) pupils who had attended a departmental bridging module classes;
- (iii) pupils who had attended a community-run readiness class;
- (iv) pupils who had had no preschool education.

The subtests on which they are compared are the jig-saw

puzzle, sorting, similarity, difference, body awareness and head-eye co-ordination.

5.1 ASPECTS RELATING TO PRE-PRIMARY CLASSES

This part of the questionnaire relates to the need for pre-primary education, the effectiveness of existing pre-primary programmes, and those shortcomings evident among Class i pupils which pre-primary teachers may assist in overcoming.

5.1.1 THE NEED FOR PRE-PRIMARY EDUCATION

Teachers were asked if pre-primary education was necessary for children before they entered Class i.

All the teachers agreed that preschool education is necessary. Most of them (85,71 %) were emphatic about this. This position is supported by Donaldson (1978) who, in the course of substantiating her viewpoint, explains that pre-school children are capable of deduction and reflection relating to their actions. They are capable of learning much more of what is often thought to be beyond them, provided that the material is presented to them in a way that makes sense. Pre-primary education exposes children to a variety of such learning situations.

The teachers who participated in this study pointed out that pre-primary classes help children become socially, physically and emotionally ready for school. This, they say, is especially true when the child comes from a home where both parents work. Often these children need additional opportunities for socialization and speech training. They are also given wide-ranging opportunities in preparing for formal work through mastering readiness concepts and such skills as hand-eye co-ordination, muscular dexterity, practice in concentrating on tasks for a reasonable length of time, exercising a sense of responsibility, responding to discipline, and interacting with other children.

In short, a child's pre-primary schooling assists in the total development of the child. Empirical data supports this observation made by the teachers in this study. Goldberg (1963), for instance, reports that black pupils who had attended preschool gained higher scores at each grade level than those who had not. Deutsch (1963; 1964), a pioneer of research in this field, believes that early intervention, using well-structured programmes, significantly reduces the attenuating influence of a socially marginal environment.

5.1.2 THE VALUE OF PRE-PRIMARY SCHOOLING

Teachers were required to state to what extent they thought pre-primary schools/classes were fulfilling their objectives of optimal development of young children's potential, culminating in school readiness.

A majority of teachers (62,86 %) felt that pre-primary schools/classes in overall terms, were succeeding only moderately in getting pupils ready for schooling. Twelve teachers (34,28 %) adjudged pre-primary schools/classes as being successful or highly successful.

Teachers' comments relating to the efficacy of pre-primary schools/classes were a mixture of positive and negative ones. On the positive side, it was noted that a significant proportion of pupils from pre-primary classes go to school ready to begin formal work. They enter Class i equipped with the knowledge and skills required for success in the formal learning situation. On the negative side, pupils, mainly from the community-run classes, often lack the basic skills required to facilitate their transition to a more formal setting.

Teachers' support for preschool education is endorsed by Kohlberg (1968) who states that educators are becoming more aware that early academic achievement among children is influenced by preschool experiences, including pre-primary education.

The quality of training given by the various preschool education agencies, according to the respondents, appear to vary. Private preschools and bridging module classes appear to enjoy greater success than the community-run preschool ones in developing readiness in pupils. One reason for this difference could be the fact that teachers in the community-run classes are unqualified while the private preschools and bridging module classes generally have qualified staff.

The value of preschool experience as opposed to no such experience, can be seen from the evidence obtained from the longitudinal Child Health and Education Study at Bristol (Osborn and Milbank, 1987). This study found that children who had had nursery education gained higher scores on a range of tests relating to language, numeracy and verbal reasoning compared to those who had not attended nursery classes.

5.1.3 EFFICACY OF DIFFERENT TYPES OF PRE-PRIMARY SCHOOLS/CLASSES

The Class i teachers in this study were requested to rate the efficacy of the three educational agencies that were "feeders" to their classes in terms of which one generally sent in most pupils who were ready for formal instruction. They had to write '1' for the school/class that sent in the most; '2' for the one that came second; and '3' for the one that came third.

The distribution of their responses are shown in Table 5.1.

TABLE 5.1
TEACHERS' RATINGS OF SCHOOLS/CLASSES PRODUCING THE HIGHEST
NUMBER OF SCHOOLREADY PUPILS

	R A T I N G					
	1	2	3	TOTAL	\bar{X}	\bar{X} RANK
Registered private pre-primary schools	15	17	3	35	1,66	2
Departmental bridging module classes	20	14	1	35	1,46	1
Community-run readiness classes	0	4	31	35	2,89	3

The Departmental Bridging module classes were considered the best educational agency ($\bar{X} = 1,46$). Registered private pre-primary schools were considered a close second ($\bar{X} = 1,66$). However, the Community-run readiness classes were ranked a distant third ($\bar{X} = 2,89$). While twenty teachers gave bridging module classes a first rating and fifteen gave private schools a first rating, no teacher gave the community-run school such a rating. This makes teachers' views self-evident.

5.1.4 SPECIFIC CURRICULAR SHORTCOMINGS THAT PRE-PRIMARY SCHOOLS/CLASSES CAN ATTEMPT TO RECTIFY

The questionnaire requested respondents to list specific shortcomings in Class i pupils that pre-primary schools/classes can concentrate on in order to enhance school readiness. Their responses are discussed according to subject categories.

ART

Preschool children should be dissuaded from drawing stick figures; they should, instead, draw human figures and use various shapes to create designs. They should also be given the freedom to experiment with paints and crayons of different colours. Free expression should be fostered and

the development of aesthetic ability nurtured. Teachers should, where possible, not be prescriptive or unduly critical lest the child's confidence is undermined. Nor should adult interpretations or representations be forced on children.

ENGLISH

Teachers felt that there is a need to include more plays, choral singing and other such team activities in the curriculum so that children are given increased opportunities for interacting with others. Correct speech should be encouraged, especially through the use of full sentences and the avoidance of "baby talk". Since the children often come from impoverished linguistic backgrounds, oral discussions should be used as a means of widening pupils' vocabulary and improving their expression. In this connection Bernstein's observations (1961:288-314) are interesting. He notes that lower class children tend to be confused and frustrated at school because they are accustomed to a restricted language code. To them the language used in the formal school situation is almost a new form of communication.

ENVIRONMENTAL STUDIES

The teachers in this study would like to see preschool children undertaking more field trips and excursions. This, say Prescott and David (1977:118), would give pupils a better understanding of their surroundings and provide children with the essential link between the environment and the behaviour of its inhabitants.

MATHEMATICS

Class i teachers recommend the use of play methods as an effective way of introducing children to various mathematical concepts. Opportunities for practical work is essential and should be done on a greater scale. A good number sense can be inculcated through games, stories, picture discussions and self-discovery.

MUSIC

Teachers recommended the use of a greater variety of musical instruments in school readiness classes. Pupils should be taught listening skills, a feature which is lacking in most cases.

WRITING

The respondents stated that it was necessary for children to concentrate on correct letter formations. This can be done by exposing pupils to a variety of writing materials such as crayons, pencils and chalk. More hand co-ordination and fine muscle development can be fostered through the use of tracing cards, templates, left to right eye-movement activities, and the cutting of pictures.

5.1.5 PUPIL SHORTCOMINGS IN SELECTED ASPECTS OF READINESS

Teachers were requested to list specific shortcomings in pupils entering Class i. The purpose was to pinpoint those areas which pre-primary teachers can improve on. Their responses are discussed below.

SOCIAL AND EMOTIONAL READINESS

Teachers felt that pupils had to be taught how to communicate better with fellow pupils and teachers. Many could also benefit from further training in co-operative activities, independence and self-reliance.

PHYSICAL READINESS

Teachers suggested that more motor development activities should be included in school readiness programmes. During movement, pupils should be introduced to games specifically designed for muscular development and hand-eye co-ordination.

5.2 COMPARISON OF THE PERFORMANCES OF FOUR GROUPS OF PUPILS, WITH VARYING PRESCHOOL EXPERIENCES, ON THE SUBTESTS OF SCHOOL READINESS TEST A

In this section the performance of the pupils in the six subtests of School Readiness Test A and in the test as a whole, are analysed. The scores of the four groups of pupils involved in this study are compared, viz.: those from registered private pre-primary schools, those from departmental bridging module classes, those from community-based readiness classes, and those pupils who did not have any preschool experience.

The six subtests of the School Readiness Test A are the following:

- (i) Jigsaw puzzle
- (ii) Sorting

- (iii) Similarity
- (iv) Differences
- (v) Body Awareness
- (vi) Head-Eye Co-ordination

These subtests were described in Chapter Three.

Two tables are presented for each group. The first table displays performance in each of the school readiness subtests and, at the end (Section 2.9), for total test. In the tables the various groups are designated as follows:

- Group A: registered private pre-primary schools;
- Group B: departmental bridging module classes;
- Group C: community-run pre-primary classes and
- Group D: non-preschoolers.

The second table shows whether the differences between the mean scores of groups differ significantly from each other.

5.2.1 SCHOOL READINESS SUBTEST: JIG-SAW PUZZLE

Table 5.2 (a) shows the performance of the subgroups on the Jig-Saw Puzzle subtest.

TABLE 5.2 (a)

A COMPARISON OF THE PERFORMANCES OF PUPILS OF VARYING PRE-SCHOOL EXPERIENCES ON THE JIG-SAW PUZZLE

	GROUP			
	A Registered Private Pre- Primary Schools	B Departmental Bridging Module Classes	C Community-Run Readiness Classes	D Non Pre- Schoolers
Number of Pupils	30	50	50	40
Maximum Mark	6	6	6	6
Highest Score	6	6	6	6
Lowest Score	0	3	0	0
Mean Score	5,33	5,60	5,46	3,73
Standard deviation	1,47	0,73	1,23	1,78

Only group D, representing pupils with no pre-primary education, had a relatively low mean score of 3,73 in the Jig-Saw Puzzle test which carried six marks. The remaining three groups had mean scores exceeding five, with the departmental bridging module group topping the list with a mean of 5,60.

A more rigorous statistical comparison of the performances of the subgroups on the Jig-saw subtest are given in Table 5.2 (b).

TABLE 5.2 (b)
VALUES OF t FOR DIFFERENCES BETWEEN THE MEANS OF GROUPS
A, B, C AND D FOR THE JIGSAW PUZZLE SUBTEST

GROUPS						
	A and B	A and C	A and D	B and C	B and D	C and D
Mean Scores	5,33 5,60	5,33 5,46	5,33 3,73	5,60 5,46	5,60 3,73	5,46 3,73
t Values	1,07	1,36	3,06	0,77	6,31	5,88
Level of Significance	$p>0,05$	$p>0,05$	$p<0,01$	$p>0,05$	$p<0,001$	$p<0,001$

The mean performance of pupils who had not attended pre-school (D) was significantly lower than that of every other group.

There were no significant differences between the mean performances of the three groups who had attended pre-school classes before enrolling in Class i.

5.2.2 SCHOOL READINESS SUBTEST: SORTING

The performance of the four groups in the Sorting subtest

is given in Table 5.3 (a)

TABLE 5.3 (a)

A COMPARISON OF THE PERFORMANCES OF PUPILS OF VARYING PRE-SCHOOL EXPERIENCES ON THE SORTING SUBTEST

	GROUP			
	A Registered Private Pre- Primary Schools	B Departmental Bridging Module Classes	C Community-Run Readiness Classes	D Non Pre- Schoolers
Number of Pupils	30	50	50	40
Maximum Mark	3	3	3	3
Highest Score	3	3	3	3
Lowest Score	1	2	0	0
Mean Score	2,90	3,00	2,86	2,35
Standard deviation	0,48	0,20	0,53	0,86

In the sorting test the departmental bridging module group again excelled with a mean score of three which is the maximum mark. The pupils with no preschool experience again had the lowest mean score of 2,35. The remaining two groups had high mean scores approaching the maximum.

A further statistical analysis of the Sorting subtest scores is presented in Table 5.3 (b).

TABLE 5.3 (b)

VALUES OF t FOR DIFFERENCES BETWEEN THE MEANS OF GROUPS
A,B,C AND D FOR THE SORTING SUBTEST

	GROUPS					
	A and B	A and C	A and D	B and C	B and D	C and D
Mean Scores	2,90 3,00	2,90 2,86	2,90 2,35	3,00 2,86	3,00 2,35	2,86 2,35
t Values	1,44	0,24	3,20	1,73	4,81	2,98
Level of Significance	p>0,05	p>0,05	p<0,01	p>0,05	p<0,001	p<0,01

The results of the sorting subtest are similar to those of the Jig-saw puzzle. The performance of the "no preschool experience" group was significantly lower than that of every other group.

5.2.3 SCHOOL READINESS SUBTEST: SIMILARITY

Table 5.4 (a) displays the scores of the four subgroups on the Similarity subtest.

TABLE 5.4 (a)

A COMPARISON OF THE PERFORMANCES OF PUPILS OF VARYING
PRESCHOOL EXPERIENCES ON THE SIMILARITY SUBTEST

	GROUP			
	A Registered Private Pre- Primary Schools	B Departmental Bridging Module Classes	C Community-Run Readiness	D Non Pre- Schoolers
Number of Pupils	30	50	50	40
Maximum Mark	5	5	5	5
Highest Score	5	5	5	5
Lowest Score	2	2	0	0
Mean Score	3,80	4,20	3,74	2,60
Standard deviation	1,03	0,81	0,99	1,37

This test (Similarity) is apparently more difficult than the earlier tests as the mean scores ranged from 2,60 (52 %) for pupils with no preschool education to 4,20 (84 %) for pupils who had attended bridging module classes. The remaining two groups had mean scores of approximately 75 %. As in the previous tests the group with no pre-school education performed relatively poorly while the bridging module group performed best.

Table 5.4 (b) contains a more detailed statistical analysis of the Similarity scores.

TABLE 5.4 (b)

VALUES OF t FOR DIFFERENCES BETWEEN THE MEANS OF GROUPS
A, B, C AND D FOR THE SIMILARITY SUBTEST

GROUPS						
	A and B	A and C	A and D	B and C	B and D	C and D
Mean Scores	3,80 4,20	3,80 3,74	3,80 2,60	4,20 3,74	4,20 2,60	3,74 2,60
t Values	1,19	0,14	3,96	2,45	5,41	4,67
Level of Significance	p>0,05	p>0,05	p<0,001	p<0,05	p<0,001	p<0,001

The pattern of the previous tests is repeated in the Similarity test, with the three-groups which had attended preschool performing significantly better than the group without this experience. However, there is one additional feature. The departmental bridging module group's mean score is significantly greater than that of the community-run class group.

5.2.4 SCHOOL READINESS SUBTEST: DIFFERENCE

The distribution of the scores of the subgroups on the Difference subtest is shown in Table 5.5 (a).

TABLE 5.5 (a)

A COMPARISON OF THE PERFORMANCES OF PUPILS OF VARYING PRE-SCHOOL EXPERIENCE ON THE DIFFERENCE SUBTEST

	GROUP			
	A Registered Private Pre- Primary Schools	B Departmental Bridging Module Classes	C Community-Run Readiness Classes	D Non Pre- Schoolers
Number of Pupils	30	50	50	40
Maximum Mark	5	5	5	5
Highest Score	5	5	5	5
Lowest Score	0	0	1	0
Mean Score	3,53	4,08	3,66	2,13
Standard deviation	1,38	0,94	1,12	1,51

The tests thus far, appear to become progressively more difficult. The mean percentage scores of all groups in this Difference test are lower than in previous subtests. The highest mean score was again that of the bridging module group which had 4,08 (81,6 %). The lowest mean score of 2,13 (42,6 %) was that of the "no preschool" group. The registered pre-primary school group scored a mean of 3,53 (70,6 %) and the community-run class group scored 3,66 (73,2 %).

Results of the t-test on the differences between the mean scores of the subgroups are given in Table 5.5 (b).

TABLE 5.5 (b)

VALUES OF t FOR DIFFERENCES BETWEEN THE MEANS OF GROUPS
A, B, C AND D FOR THE DIFFERENCE SUBTEST

GROUPS

	A and B	A and C	A and D	B and C	B and D	C and D
Mean Scores	3,53 4,08	3,53 3,66	3,53 2,13	4,18 3,66	4,08 2,13	3,66 2,13
t Values	1,53	0,67	3,43	2,06	6,14	4,68
Level of signifi- cance	p>0,05	p>0,05	p<0,01	p<0,05	p<0,001	p<0,001

The results of the Difference subtest are similar to those of the previous tests. All three groups that had attended pre-school classes performed significantly better than the group which had not attended such classes. Also, the departmental bridging module group scored significantly higher than the community-run class group, as was the case in the preceding Similarity subtest.

5.2.5 SCHOOL READINESS SUBTEST: BODY AWARENESS

Table 5.6 (a) shows the performance of the subgroups on the Body Awareness subtest.

TABLE 5.6 (a)

A COMPARISON OF THE PERFORMANCES OF PUPILS OF VARYING PRE-SCHOOL EXPERIENCES ON THE BODY AWARENESS SUBTEST

	GROUP			
	A Registered Private Pre- Primary Schools	B Departmental Bridging Module Classes	C Community-Run Readiness Classes	D Non Pre- Schoolers
Number of Pupils	30	50	50	40
Maximum Mark	5	5	5	5
Highest Score	5	5	5	5
Lowest Score	0	4	1	0
Mean Score	4,35	4,78	4,30	3,58
Standard deviation	0,79	0,39	0,97	1,27

Body awareness is a high scoring test with all groups, except the "no preschool" experience group, scoring over 85 %. The pupils with no preschool experience scored a mean of 3,58 (71,6 %). The top group was, again, the departmental bridging module group with a mean of 4,78 (95,6 %).

A more stringent statistical analysis of the scores is given in Table 5.6 (b).

TABLE 5.6 (b)

VALUES OF t FOR DIFFERENCES BETWEEN THE MEANS OF GROUPS
A, B, C AND D FOR THE BODY AWARENESS SUBTEST

GROUPS

	A and B	A and C	A and D	B and C	B and D	C and D
Mean Scores	4,35 4,78	4,35 4,30	4,35 3,58	4,78 4,30	4,78 3,58	4,30 3,58
t Values	2,48	0,45	2,48	3,48	5,70	3,40
Level of Significance	$p < 0,05$	$p > 0,05$	$p < 0,05$	$p < 0,001$	$p < 0,001$	$p < 0,01$

Two distinct features are revealed. Firstly, the previous regular pattern of pupils with no preschool experience performing significantly worse than the three groups with preschool experience, is maintained. Secondly, the departmental bridging module group's mean score is significantly higher than those of the registered pre-primary pupils and the community-run class group.

5.2.6 SCHOOL READINESS SUBTEST: HEAD-EYE CO-ORDINATION

The distribution of the scores of the four subgroups on the Head Eye Co-ordination subtest is displayed in Table 5.7 (a).

TABLE 5.7 (a)

A COMPARISON OF THE PERFORMANCES OF PUPILS OF VARYING PRE-SCHOOL EXPERIENCES ON THE HEAD-EYE CO-ORDINATION SUBTEST

	GROUP			
	A Registered Private Pre- Primary Schools	B Departmental Bridging Module Classes	C Community-Run Readiness Classes	D Non Pre- Schoolers
Number of Pupils	30	50	50	40
Maximum Mark	4	4	4	4
Highest Score	4	4	4	4
Lowest Score	0,5	0	0	0
Mean Score	3,31	3,23	2,81	1,94
Standard deviation	0,81	0,86	1,02	1,25

For the first time the departmental bridging module group failed to obtain the highest mean score. The group that excelled in the Head-Eye co-ordination subtest was the registered pre-primary group with a mean score of 3,31 (83 %). The departmental bridging module group scored 3,23 (81 %), followed by the community-run group with 70 %, and the group with no preschool education a low 48,5 %.

Significance levels based on the t-test for mean differences of the four subgroups appear in Table 5.7 (b).

TABLE 5.7 (b)

VALUES OF t FOR DIFFERENCES BETWEEN THE MEANS OF GROUPS
A, B, C AND D FOR THE HEAD-EYE CO-ORDINATION SUBTEST

GROUPS						
	A and B	A and C	A and D	B and C	B and D	C and D
Mean Scores	3,31 3,23	3,31 2,67	3,31 1,94	3,23 2,81	3,23 1,94	2,81 1,94
t Values	0,01	2,83	6,30	2,36	5,80	3,15
Level of Significance	$p > 0,05$	$p < 0,01$	$p < 0,001$	$p < 0,05$	$p < 0,001$	$p < 0,01$

Rather familiar patterns are revealed by the t-tests.

- (a) The groups with preschool experience have performed significantly better than the "no preschool" group.
- (b) Of the three groups with preschool education, both the registered pre-primary group and the bridging module group had significantly higher scores than the pupils from the community-run classes.

5.2.7 SCHOOL READINESS TEST A: TOTAL SCORES

The performances of the four groups of pupils on the School Readiness Test A as a whole are analysed next.

TABLE 5.8 (a)

A COMPARISON OF THE PERFORMANCES OF PUPILS OF VARYING PRE-SCHOOL EXPERIENCES ON THE TOTAL SCORES FOR SCHOOL READINESS TEST A

	GROUP			
	A Registered Private Pre- Primary Schools	B Departmental Bridging Module Classes	C Community-Run Readiness Classes	D Non Pre- Schoolers
Number of Pupils	30	50	50	40
Maximum Mark	28	28	28	28
Highest Score	28	28	28	28
Lowest Score	16	16	7	4
Mean Score	23,47	24,93	22,71	16,31
Standard deviation	3,60	2,39	4,14	6,43

As expected the departmental bridging module group obtained the highest mean score of 24,93 (89,0 %). The registered pre-primary group scored 23,47 (83,8 %). The pattern of scores in the previous tests was maintained by those pupils with no pre-school education. This group finished with the lowest mean score of 16,31 (58,3 %).

A more rigorous statistical analysis of the scores of the subgroups for the School Readiness subtest A is given in Table 5.8 (b).

TABLE 5.8 (b)

VALUES OF t FOR DIFFERENCES BETWEEN THE MEANS OF GROUPS
A, B, C AND D FOR THE TOTAL SCORES ON SCHOOL READINESS TEST

A

GROUPS

	A and B	A and C	A and D	B and C	B and D	C and D
Mean Scores	23,47 24,93	23,47 22,71	23,47 16,31	24,93 16,31	24,93 16,31	22,71 16,31
t Values	1,76	0,70	5,18	3,33	7,79	5,44
Level of Significance	$p>0,05$	$p>0,05$	0,001	0,01	0,001	0,001

The performances of the four groups on the total for the School Readiness Test A confirm the hypothesis that the earlier sub-tests had indicated. The three groups with preschool education performed significantly better than the group with no preschool education. The mean performance of the bridging module group is significantly superior to that of the community-run group and superior, but not significantly so, to that of the registered pre-primary group.

5.2.8 INTERACTION BETWEEN INDEPENDENT VARIABLES:
TYPE OF PRESCHOOL BACKGROUND AND SEX
(SCHOOL READINESS TEST A)

In order to determine whether there were any interactions between the variables, Type of preschool and Sex, a 2 X 2 factorial analysis of variance was conducted. Since this design calls for equal numbers in each group, it was decided to equalize the groups, using the group with the lowest number as the base. Scores were eliminated from the other groups by a random procedure advocated by Sommer and Sommer (1986:230). Each of the groups compared had thirty children. A summary of the data used in the analysis is presented in Table 5.9 and the analysis of variance results are summarised in Table 5.10.

TABLE 5.9

SUMMARY: COMPOSITE MASTER SHEET - SCHOOL READINESS TEST A

TYPE OF SCHOOLING :	<div style="text-align: center;">A1</div> <div style="display: flex; justify-content: space-around;"> B1 B2 </div>		<div style="text-align: center;">A2</div> <div style="display: flex; justify-content: space-around;"> B1 B2 </div>		<div style="text-align: center;">A3</div> <div style="display: flex; justify-content: space-around;"> B1 B2 </div>		<div style="text-align: center;">A4</div> <div style="display: flex; justify-content: space-around;"> B1 B2 </div>	
SEX :								
N :	15	15	15	15	15	15	15	15
\bar{X} :	23,33	23,67	25,47	25,13	22,87	23,67	16,6	17,53
<div style="display: flex; justify-content: space-between;"> <div> A1: registered private pre-primary schools A2: departmental bridging module classes A3: community-run pre-primary classes A4: pupils who had had no preschool education </div> <div> B1: Boys B2: Girls </div> </div>								

TABLE 5.10

ANALYSIS OF VARIANCE BASED ON THE SCHOOL READINESS TEST A SCORES
OF PUPILS FROM FOUR DIFFERENT TYPES OF PRESCHOOL BACKGROUND

SOURCE OF VARIATION	SUM OF SQUARES	D.F	MEAN SQUARE	F.RATIO	P
A : TYPE OF PRESCHOOL BACKGROUND	1162,833	3	387,611	22,939	>0,05
B : SEX	5,633	1	5,633	0,333	>0,05
AxB : TYPE OF PRESCHOOL BACKGROUND X SEX	7,367	3	2,456	0,145	>0,05
ERROR: WITHIN GROUP	1892,533	112	16,898		

The data in Table 10 shows that there are no significant interactions between the two independent variables: type of preschool background and sex. All the null hypotheses are, therefore, accepted and the main effects of factors A and B do not have to be qualified. The effects of these factors do not depend on each other.

5.2.9 SUMMARY OF PUPIL PERFORMANCE IN SCHOOL

READINESS TEST A

The researcher analysed the performance of Class i pupils in the six subtests of the School Readiness Test A and in the test as a whole.

In five of the six subtests, the departmental bridging module group scored the highest marks. The exception was the Head-eye co-ordination test where the registered private pre-primary group performed best. In every subtest the group with no pre-primary education scored significantly lower marks than other groups. Further, amongst the agencies engaged in pre-primary education, the departmental bridging module group scored significantly higher than the community-run readiness group in three of the six subtests. For the school readiness tests as a whole, the mean scores, in descending order, for the four groups were departmental bridging module group 89,0 %; registered private pre-primary group 83,8 %; community-run readiness group 81,1 %, and those with no preschool education 58,3 %.

The results in this Chapter reveal a consensus among Class i teachers that pre-primary education be made available on a much larger scale. They believe that existing school

departmental bridging module classes are relatively most successful, followed by the private pre-primary schools, and community-run classes.

Results of School Readiness Test A taken by pupils entering Class i indicate clearly that pupils who had attended school readiness classes performed significantly better than those who had not. The analysis of the test results confirm the teachers' rating of the relative effectiveness of the current pre-primary education programmes.

5.3 TEACHERS' OPINIONS ABOUT THE EFFECTIVENESS OF SCHOOL READINESS TEST A AS AN INSTRUMENT FOR MEASURING SCHOOL READINESS

In this section of the questionnaire teachers were required to evaluate the effectiveness of the School Readiness Test A used by the Education Department. Questions related to the effectiveness of the test, the degree of difficulty of the subtests, teachers' overall satisfaction with the test, and changes they feel are necessary for improving the test.

Teachers, many of whom have known and used the test for several years, gave their views about the effectiveness of the following subtests in School Readiness Test A for

measuring school readiness:

- (i) Jig-saw puzzles
- (ii) Sorting
- (iii) Similarity
- (iv) Difference
- (v) Body Awareness
- (vi) Head-Eye Co-ordination

These subtests were described in Chapter Three. In the tables that follow, viz., Table 5.11; Table 5.18 and Table 5.19, the ratings were weighted as follows:

Very high, 1; High, 2; Moderate, 3; and so on. The calculations of the weighted means and mean ranks are shown in Appendix E. A distribution of the responses of the teachers in the sample is given in Table 5.11.

TABLE 5.11
RATINGS OF THE EFFECTIVENESS OF THE SIX SUBTESTS IN
MEASURING SCHOOL READINESS

SUB-TESTS	VERY HIGH	HIGH	MODE- RATE	LOW	VERY LOW	CAN'T SAY	TOTAL	\bar{X}	MEAN RANK
Jig-saw puzzles	4	15	13	2	0	1	35	2,38	2
Sorting	3	17	11	3	0	1	35	2,41	3
Similarity	1	11	20	2	0	1	35	2,68	5
Difference	1	9	21	3	0	1	35	2,76	6
Body Awareness	1	14	17	1	1	1	35	2,62	4
Head-Eye Co- ordination	2	13	16	2	1	1	35	2,35	1

Class i teachers generally appeared to have confidence in the effectiveness of the sub-tests comprising the School Readiness Test A. A very small percentage of teachers rated one or the other test as "low" or "very low". On the other hand, a small number rated the tests as very effective.

Subtests which the teachers regarded as having high effectiveness were the Head-Eye Co-ordination (rank 1); Jig-saw puzzles (rank 2); and Sorting (rank 3). The remaining three, namely, Body Awareness (rank 4), Similarity

(rank 5) and Difference (rank 6) were considered to have mainly moderate to high effectiveness.

Chi-square computations showing the relationship between teachers' subtest ratings and their age category are given in the tables below:

TABLE 5.12
JIG-SAW PUZZLES

AGE CATEGORY	VERY HIGH TO HIGH	MODERATE TO VERY LOW	TOTAL
Younger Teachers	12 (63 %)	7 (37 %)	19 (100 %)
Older Teachers	7 (47 %)	8 (53 %)	15 (100 %)
Total	19	15	34

$$X^2 = 0,925$$

$$df = 1$$

$$p > 0,05$$

TABLE 5.13
SORTING

AGE CATEGORY	VERY HIGH TO HIGH	MODERATE TO VERY LOW	TOTAL
Younger Teachers	12 (60 %)	8 (40 %)	20 (100 %)
Older Teachers	8 (57 %)	6 (43 %)	14 (100 %)
Total	20	14	34

$$X^2 = 0,028$$

$$df = 1$$

$$p > 0,05$$

TABLE 5.14

SIMILARITY

AGE CATEGORY	VERY HIGH TO HIGH	MODERATE TO VERY LOW	TOTAL
Younger Teachers	7 (37 %)	12 (63 %)	19 (100 %)
Older Teachers	5 (33 %)	10 (67 %)	15 (100 %)
Total	12	22	34

$$x^2 = 0,045$$

$$df = 1$$

$$p > 0,05$$

TABLE 5.15

DIFFERENCE

AGE CATEGORY	VERY HIGH TO HIGH	MODERATE TO VERY LOW	TOTAL
Younger Teachers	5 (25 %)	15 (75 %)	20 (100 %)
Older Teachers	5 (33 %)	10 (67 %)	15 (100 %)
Total	10	25	35

$$x^2 = 0,292$$

$$df = 1$$

$$p > 0,05$$

TABLE 5.16

BODY AWARENESS

AGE CATEGORY	VERY HIGH TO HIGH	MODERATE TO VERY LOW	TOTAL
Younger Teachers	9 (47 %)	10 (53 %)	19 (100 %)
Older Teachers	6 (40 %)	9 (60 %)	15 (100 %)
Total	15	19	34

$$x^2 = 0,185$$

$$df = 1$$

$$p > 0,05$$

TABLE 5.17
HEAD-EYE CO-ORDINATION

AGE CATEGORY	VERY HIGH TO HIGH	MODERATE TO VERY LOW	TOTAL
Younger Teachers	7 (37 %)	12 (63 %)	19 (100 %)
Older Teachers	8 (53 %)	7 (47 %)	15 (100 %)
Total	15	19	34

$$\chi^2 = 0,925$$

$$df = 1$$

$$p > 0,05$$

Teachers who indicated that they were not sure of their response were left out of the computations. It will be noticed that none of the results are significant, indicating that there is insufficient evidence in each case to reject the null hypothesis of independence.

5.3.1 TEACHERS' RATINGS OF SUBTESTS OF SCHOOL READINESS

TEST A IN TERMS OF DIFFICULTY EXPERIENCED BY PUPILS

Teachers were asked to rate, from their experience, the degree of difficulty pupils generally experience with each of the subtests of School Readiness Test A. The distribution of their responses is given in Table 5.18.

TABLE 5.18
TEACHERS' RATINGS OF SUBTESTS OF SCHOOL READINESS TEST A
IN TERMS OF DIFFICULTY EXPERIENCED BY PUPILS

SUB-TESTS	VERY HIGH	HIGH	MODE- RATE	LOW	VERY LOW	CAN'T SAY	TOTAL	\bar{X}	MEAN RANK
Jig-saw puzzles	0	2	16	11	4	2	35	3,52	6
Sorting	0	5	14	10	4	2	35	3,39	4
Similarity	0	9	19	3	-	3	35	2,88	2
Difference	3	11	11	5	1	4	35	2,68	1
Body Awareness	0	5	11	13	4	2	35	3,48	5
Head-Eye Co- ordination	0	7	18	7	1	2	35	3,06	3

Two subtests in which pupils encountered greater difficulty than others, were 'Difference' ($\bar{X} = 2,68$) and ranked 1 and 'Similarity' ($\bar{X} = 2,88$) ranked 2. Head-Eye Coordination was assessed as being moderately difficult ($\bar{X} = 3,06$) and ranked 3 while the remaining subtests were regarded as being moderate to low in difficulty. Generally, no subtest was evaluated as "very high" or "very low" in difficulty.

5.3.2 EXTENT OF TEACHERS' SATISFACTION WITH SCHOOL READINESS TEST A

The extent to which teachers were satisfied overall with School Readiness Test A for measuring school readiness is given in Table 5.19.

TABLE 5.19
TEACHERS' OVERALL SATISFACTION WITH SCHOOL READINESS TEST
A FOR MEASURING SCHOOL READINESS

	VERY HIGH	HIGH	MODE- RATE	LOW	VERY LOW	CAN'T SAY	TOTAL	\bar{X}
No	1	4	21	5	1	3	35	3,03
%	2,86	11,43	60	14,28	2,86	8,57	100	

A mean overall satisfaction rating of 3,03 indicates that teachers were moderately satisfied with School Readiness Test A as an instrument for measuring school readiness. This was also the considered opinion of 21 teachers (60 %).

Five of the respondents rated the test as "highly" or "very highly" satisfactory. Six teachers did not have confidence in the test and rated it as "low" or "very low".

5.3.3 PASS RATES OF PUPILS ON SCHOOL READINESS TEST A

Class i teachers were required to state the number of pupils who passed School Readiness Test A at the first attempt and the number of failing students who passed School Readiness Test B, subsequently.

Of the 955 boys and girls in the 35 classes in the population, 805 (84,3 %) passed School Readiness Test A at the first attempt. The pass rate was 83,9 % (390 out of 465) for boys, and 84,7 % (415 out of 490) for girls. In individual schools the pass rate for boys ranged from 38 % to 100 %, for girls from 37 % to 100 %, and for the total from 38 % to 100 %.

Of the failing students attempting School Readiness Test B, 58 boys and 64 girls passed, giving a total of 122 additional pupils passing the readiness test and increasing the total pass rate to 97,1 %. The failure rates for the entrance test, i.e., School Readiness Tests A and B for the sample in the study are 2,9 % for the total, 3,7 % for boys and 2,2 % for girls.

The final pass rates for all pupils taking the readiness test is very high (97,1 %). While the girls (97,8 %) have a slightly higher pass rate than boys (96,3 %), the dif-

ference is not significant.

5.3.4 CHANGES RECOMMENDED TO SCHOOL READINESS TEST A

Teachers were asked if they would recommend changes to the School Readiness Test A.

Eleven teachers (31,43 %) recommended some change or other while twenty-four (68,57 %) did not recommend any change. The difference in the responses between those answering "yes" to changes and those answering "no", is significant ($\chi^2 = 4,85$; $df = 1$; $p < 0,05$).

Some of the changes that were suggested included the following:

- (1) The test should be broadened in scope to include more examples of a concrete nature. Some examples in the Similarity and Difference subtests in particular were somewhat abstract and difficult to follow. Table 4.19 shows that pupils found these subtests relatively more problematic.
- (2) There is a need to include items that are more relevant to the children's experiences and ones that they would find more stimulating. More items relat-

ing to the conceptualization of numbers, differentiation between numbers, and more hand and eye co-ordination activities need to be brought in.

- (3) The tests should be reviewed periodically to ensure that they remain relevant and up to date.

Although these tests are used to group pupils initially, it needs to be noted that in many cases teachers reported that they sometimes had to change the composition of these groups fairly soon because of the pupils' subsequent performances.

The implications of the results, presented in Chapters Four and Five, form are discussed matter of the next chapter.

CHAPTER SIX

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter discusses the findings of this study, presents the conclusions that were drawn, and offers a set of recommendations that could help improve existing situations and conditions relating to children's readiness for formal instruction.

Research efforts in the second half of this century have added considerably to our knowledge of the nature of child development. Moreover, increasingly, psychologists and educators are pooling their resources and expertise in their search for effective preschool programmes for young children. Such programmes have considerable potential for ameliorating a variety of later academic, health, and social problems experienced by children. Adequate child care also enables teenage mothers to complete their education and provides relief to parents under intense stress. As for the children themselves, they benefit from the physical care, the enriched opportunities for play both indoors and out, the companionship of other children and the presence of understanding adults which preschool

education often provides. Children need opportunities to get to know people outside their own family circle and to form some relationships which are less close and emotionally charged.

The reader will recall that the intention of this study was to evaluate the effectiveness of current school readiness programmes for Indian children. Concurrently, the research attempted to identify problem areas in preschool education so that preventive and remedial measures could be taken.

Specific objectives of the research included establishing the extent to which pupils who enter Class i are ready for formal instruction; the subject areas in which pupils entering Class i experience difficulty; the specific problems in respect of each subject area; the ways in which pre-primary teachers can assist in overcoming these problems; the effectiveness of available school readiness programmes; the effectiveness of school readiness tests in current use; the pass rates of pupils entering Class i on these tests; significant differences (if any) in the pass rates; and the correlation between teachers' perceptions and empirical evidence of the effectiveness of the different school readiness programmes.

Teachers' perceptions were obtained through a questionnaire which was completed by Class I teachers in Indian schools. The School Readiness Test A yielded information relating to the four sets of pupils who participated in this study, viz., those who, in the previous year, had either attended a registered private pre-primary school, or a Departmental bridging module class, or a community-run readiness class. The fourth group of pupils had not attended any formal preschool centre.

The material presented in this chapter is a synthesis of data obtained from the present research, a review of the relevant literature, discussions with educators, colleagues and other knowledgeable people, as well as personal experiences and first-hand observations.

6.2 DISCUSSION AND CONCLUSIONS

6.2.1 DATA PERTAINING TO TEACHERS IN THE SAMPLE

A large majority of Junior Primary Indian teachers are young and have qualified recently. They are, therefore, likely to be more conversant with recent theory and practice relating to Junior Primary teaching compared to their

older colleagues. Almost three-quarters (74,29 %) of the teachers in the sample are married and most of them, presumably, are mothers. It would, therefore, not be unreasonable to assume that they have a good understanding of children, including their behaviour and needs. All these are positive features in any educational context. In addition, all the teachers in the sample were professionally qualified - a characteristic typical of Indian education - and over 85 % of them were experienced Junior Primary teachers. Factors such as these inspire confidence in one and, consequently, the responses given by these teachers merit serious consideration.

6.2.2 PUPIL READINESS

Class i teachers generally agreed that there were considerable differences in pupil readiness among the children entering Class i. These differences which relate to preparation, attitudes, language skills and thinking processes, make heavy demands on a teacher's resources. She has to cope with an entire class of children who are at different stages of maturation and readiness. Many of them are subjected to pressures to learn material for which they are not ready. This initial failure in school is often the beginning of a long series of school failures.

Pre-primary teachers point out that a great deal of their efforts are directed towards countering the adverse effects of homes with low levels of parent education, unsatisfactory living arrangements, lack of essential amenities and poor interaction between parents and children. Ramphal (1972:176) in his study on school readiness found that a significantly greater proportion of children from middle class homes were ready for school than children from lower class ones.

It is worth noting at this point that a good readiness programme is not aimed at removing individual differences among pupils, but at seeing that each child has experiences that will remove blocks to learning. Thus, a good readiness programme would not involve all the children doing the same things for equal periods of time. This would be ignoring the known facts about individual differences. When planning a readiness programme, schools and teachers must be prepared to adjust to the child's needs and meet him/her where he/she is. It may be necessary to make adjustments in methodology and syllabus content. Schools and teachers must not expect the child to adjust to a programme that is foreign to his present needs and past experiences.

6.2.3 CURRICULUM

The earlier a child's educational needs are identified the greater is the chance for effective intervention. This is probably one important reason why progressive educators and philosophers have spoken and written about the benefits of preschool education for many years. Research has shown that cognitive and language skills assume special importance in the school readiness curriculum (Singh 1987:160). Bloom (1964) has suggested that 17 % of educational growth takes place between four and six years of age and therefore, preschooling can have far reaching consequences on the child's general learning pattern. During this period children also generally develop constructive attitudes towards tasks and integrate these with a sense of personal value and feelings of security in social relationships.

It is not suprising that pupils in this study experienced more difficulties with English and mathematics than in other subjects. What aggravates pupils' problems is the low educational level of their parents, whose influence on school performance is significant (Entwistle and Hayduk, 1988).

Specific shortcomings in Class i pupils that pre-primary

teachers can concentrate on to improve school readiness, were suggested by the Class i teachers participating in this study. In the area of Art education pupils should be discouraged from drawing "stick figures". Instead, they should draw human figures and use shapes in creating designs.

All preschool programmes should also emphasize language development since poor language usage has often been identified as a major cause of poor achievement in Class i. This is particularly important in the infant school where reading and writing are beginning to be established. Children from disadvantaged home backgrounds particularly are relatively slow in developing language skills necessary for effective performance in the formal learning setting. Teachers report that language problems of children entering Class i include poor speech articulation, deficient listening skills and an impoverished background of stories and nursery rhymes. Researchers such as Bernstein (1961) and Deutsch (1966) argue that thought is dependent on language. They state that some working class children have insufficient encouragement, example, and stimulus in the situations of their daily lives to build up a language which is rich and wide-ranging in vocabulary, is a tool for categorisation and generalisation and which

develops concepts of time, space and contingency. The argument leads to the conclusion that since development in communication begins in the earliest years, one way in which the consequences of social deprivation can be overcome is to provide richer experience as soon as children are ready for preschool education.

Comments from teachers indicate that they consider reading to be a very important subject that needs to be emphasized in school readiness programmes. Much of the young child's future progress is dependent on reading ability. Pringle, Butler and Davie (1966) found that children who acquired basic reading skills before coming to formal school, performed better than children who had not.

More plays and sketches should be included so that the children learn to converse freely and confidently. Stimulating oral discussions assist vocabulary development. This is important since oral language is the main teaching medium. During this preschool period the child is highly motivated by his desire to learn to become himself, to express himself, and to develop an interest in others. Children who are emotionally immature or disturbed in the reception class may make such a poor start in the mastery of basic scholastic skills that they find it difficult to recover, while those who, for reasons of

intellectual or physical immaturity or disadvantaged background, find school learning a burden even in the early stages, may develop adjustment problems as a consequence. There is justification, therefore, for attaching increasing importance to the prevention of emotional and behavioural problems through early detection, careful diagnosis and appropriate action through the collaboration of home and school.

As far as Environmental Studies is concerned the potential of the environment to inform pupils is neglected during preschool years. Pre-primary teachers and parents need to teach children to appreciate and protect natural resources. For their growth and development, preschoolers must be given opportunities to interact with the environment. This provides them with exploratory learning activities that compensate for the restrictive influence of disadvantaged homes (Getzels, 1975:9).

Preschool years also present children with an ideal opportunity to develop basic concepts of number and class which form the basis for mathematical and logical thinking. Class i teachers emphasise that mathematics should be presented inductively using practical methods to introduce various concepts. Preschool teachers need to become more aware of this.

Class i teachers also criticise their preschool colleagues who use formal teaching methods. Preschool educators, on the other hand, point out that often there is too abrupt a transition to rigid and formal teaching methods when children enter Class i. It is important to find an appropriate compromise in this regard.

It is essential for education officials, pre-primary teachers, and parents to heed the observations made by infant teachers if the quality of preschool education is to be improved and the transition from informal to formal learning is to be a relatively smooth one. Society benefits economically and otherwise by investing in healthy child development. Preschool learning experiences provide an important foundation for much of later learning (Short, 1992:240).

6.2.4 PRE-PRIMARY EDUCATION

Teachers generally agree that preschool provision on a substantial scale is highly desirable especially where it is needed to compensate for social deprivation. Gajadhur (1990:152) notes that factors affecting school readiness include poor housing, low income and low educational level of parents. This is the environment with which the child is most closely and continuously in contact, particularly

during the early formative years. The personality of the parents, their views and practices on how children should be reared, the principles by which they themselves live, the stability of the home and its cultural and ethical standards, the bonds of affection between the members of the family, are all of decisive importance in the way children develop. The modern family with its restricted living space is often unable to give children all they need for adequate physical and psychological development.

There was also consensus among the teachers in the sample that preschool education is necessary for the child to become socially, physically and emotionally ready for school. Despite the overriding importance of the home and cultural milieu, the school also has a role to play in personality development. The child's personality is still in a very formative state when he/she enters primary school. His/her relationship with teachers and fellow-pupils can do much to build up or destroy confidence, create an interest or a distaste for learning, develop or smother potentialities, make or mar ethical standards of conduct, and correct or aggravate temperamental and other disabilities. While the main role of the school is to foster cognitive growth, its contribution to personality development is by no means negligible. Programmes and curricula for countering deprivation must take account of

this aspect. The child is prepared in pre-primary classes for formal work and also learns readiness concepts, developing hand-eye co-ordination, muscular dexterity, and social skills. Hence a basis is laid for the total development of the child.

According to the teachers an effective school readiness programme must not only help the child physically and intellectually but should also cater for individual differences and the growth of a healthy self-concept. Research has shown that there is a correlation between self-concept and scholastic performance. Rayborn (1993:56) found that self concept was a good predictor of academic achievement in children.

Research also shows that the earliest periods of development are rapid and intensive (Bloom, 1981:71-72). The challenge facing Class i teachers is one of reconciling this potential for development with the many individual differences children bring to school.

As for the extent to which pre-primary schools/classes fulfill their objective of optimal development of the young childrens' potential, the majority of the teachers felt that this was being achieved to a moderate degree among the children they teach. Relative superiority was

reported in the performance of these pupils who had had preschool experience compared with those who had not. Ramphal (1972:176) drew a similar conclusion from his research, namely, that Indian children who had been exposed to preschool education displayed greater school readiness than others. In her study Gajadhur (1990:156) also concluded that Indian children who had attended pre-primary classes performed significantly better than pupils with no preschool education.

Of the various agencies preparing preschool children for Class i, Junior primary teachers in this study considered the Departmental Bridging module classes as being the most effective. Registered private pre-primary schools came second, and community-run classes were rated third.

6.2.5 SCHOOL READINESS TEST A

Teachers generally appeared to have confidence in the validity of the six subtests comprising the school readiness test administered to Class i pupils on entry. "Jig-saw Puzzles", "Sorting", and "Head-Eye Co-ordination" were three subtests regarded as being particularly successful indicators of readiness. The "Similarity", "Difference", and "Body Awareness" subtests were considered to have moderate to high effectiveness.

Teacher satisfaction with the school readiness test is vindicated by the results. The pass rate in Test A was high. Of the 955 boys and girls in the 35 classes in the population 794 (85 %) passed test A at the first attempt and a further 122 at the second attempt, giving a final pass rate of 96 %.

The considerable advantages of pre-primary education are clearly evident from the school readiness test results. All three groups of pupils who had had some form of preschool education gained higher mean scores on the readiness test than did the group which had had no such experience.

The school readiness tests revealed that among those pupils who had attended pre-primary classes, the departmental bridging module group was superior to the others. In fact the results of this group were significantly better than those of the community-run classes.

Teachers' ratings of the efficacy of the three educational agencies offering pre-primary education are departmental bridging module classes first ($X = 1,46$), registered private pre-primary school a close second ($X = 1,66$), and community-run readiness classes a distant third ($X = 2,89$). The measured scores of pupils from the three

school readiness class groups on the School Readiness Test A yield ranks which are identical to those of the teachers' ratings above. First, came the bridging module class (\bar{X} = 24,47), second the registered pre-primary school (\bar{X} = 23,47) and third, the community-run readiness classes (\bar{X} = 22,71). Test evidence thus confirms teachers' perceptions.

There are many possible reasons for the superiority of the bridging module programme (BMC) over the other two, and for the greater success of private pre-primary schools (PPS) compared to the community-run classes (CRC). Some of these are discussed below.

One important factor appears to be teacher qualification. All BMC's have qualified Junior Primary teachers while only principals of PPS's have some teaching qualification. CRC teachers are generally unqualified. Knowledge of theory and practice related to teaching children appears to be a crucial ingredient.

The quality of buildings and classrooms used is another factor. BMC pupils have their own classrooms in Departmental schools while PPS operate in community halls,

old school buildings or warehouses, and churches. CRC's use classrooms in Departmental schools vacated by Junior Primary classes.

Teaching times and the number of teaching hours per week are different for different groups. Both the BMC and PPS have approximately four-hour sessions during the first half of the day while the CRC have a two-hour session after midday. Children, presumably, are mentally and physically more alert and receptive in the morning session.

Class size is another important variable. BMC's have a maximum enrolment of 25 while the other two often exceed this number.

The programmes followed by each group also differ. The BMC programmes are designed by the Education Department while the PPS and CRC use programmes designed by private, non-governmental organisations.

Administration of BMC is undertaken by the House of Delegates. The organisation and administration of the PPS and CRC fall under private/community organisations and religious bodies.

It is clear from the above that the BMC's have distinct advantages over both the PPS and CRC and these make it possible for them to provide a superior environmental and educational programme for promoting school readiness. The PPS, while not being able to match the BMC, are however, measurably superior to the CRC.

There is a general consensus among formal class teachers that bridging module classes should be made compulsory for all pupils. Some of the teachers also felt that to minimise or eradicate some of the problems in Class i, pre-primary teachers should work closely with Class i teachers, exchanging ideas, sharing problems, and working out possible solutions.

Perhaps the main challenge facing formal education is to develop in disadvantaged children both the ability and motivation to use elaborated language to facilitate learning and thinking. However, any educational programme with such aims should take into account the language patterns that characterise sub-cultures of deprived children. Linguists stress that the language forms used by children from disadvantaged backgrounds are often adequate for normal communication purposes within their sub-cultures and should not be denigrated by the school.

6.3 RECOMMENDATIONS

Out of this research project several issues calling for attention have become apparent. Some recommendations follow.

6.3.1 PRE-PRIMARY EDUCATIONAL PROVISION

- (a) The state and educational authorities should make pre-primary education facilities readily available to all children in South Africa. This is particularly important in the case of those who come from disadvantaged communities. Material disadvantages limit access to education and also make it more difficult for children to benefit from it.
- (b) Since the Departmental bridging module classes appear to offer the most effective school readiness programme, these classes should be established more extensively.
- (c) Steps should be taken to formulate a comprehensive, well-considered public educational policy relating to preschool education in South Africa. There is a need to halt the development of a haphazard array of relatively ineffective services in this field. The time

has come to stop viewing preschool merely as a downward extension of the Class i programme. This period of schooling is important in its own right.

- (d) Preschools need well trained and properly qualified staff who have a good understanding of the development and needs of young children.
- (e) This study shows that preschool education benefits children. It is, therefore, recommended that pre-primary education should become an integral part of our education system. Our present four-phase system of school education would then become a five-phase system. Good readiness programmes help children, especially those from disadvantaged backgrounds, to develop those skills and abilities that are of fundamental importance in formal learning. Teachers in the study sample reported that preschools also prepare children for primary education physically, socially and emotionally.
- (f) To cater for young children whose mothers are in employment, pre-primary education should be extended to include children ranging in age from three to six years.

- (g) There is an urgent need for state intervention, through broad social and economic reforms, so that the quality of life amongst those in the lower socio-economic levels can be improved. It is necessary to break the vicious cycle of poverty and deprivation that threatens one generation after another. The quality of home background experiences plays a crucial role in a child's all-round development, especially during the preschool years. In the first few years of life, the family climate has a strong influence on emotional, social, and cognitive development and may, to some extent, counteract the disadvantages of poverty. Early childcare services combined with health, nutrition and education are essential for several million pre-school children in South Africa who are at risk. Many of these children are beginning their lives at a time of rapid social change and widespread poverty.
- (h) More research is required in the area of childhood education. Key issues, relating to variables to be measured and the construction of reliable measuring instruments for children, have to be addressed within the South African context.

6.3.2 RESOURCES AND SUPPORT SERVICES

- (a) The private sector has an important role to play in early child care, especially if it is the employer of mothers. Creches, with trained personnel to cater for the children's needs, should be established on business and factory premises on a wide scale.
- (b) Community organizations should assume greater responsibility for the provision and organization of pre-primary education. They need to pool their resources and work together in a more co-ordinated way, both amongst themselves and when liaising with pre-primary schools, social workers, education departments, parents, medical clinics and others, to improve the quality of preschool education and services.
- (c) Since children are a nation's most important resource it is incumbent upon the State, in particular, to assist parents in the education and raising of young children. Resources need to be increased and facilities improved at existing pre-primary education agencies. Both state and non-governmental funding should be available for this purpose.

- (d) The emphasis in proposed new educational plans for South Africa is on non-formal education. This should be seen as an opportunity for improving literacy, numeracy, child rearing skills and health practices, especially in disadvantaged families and communities. In this way the educational potential of these homes can be enhanced.
- (e) The presence of counsellors in secondary schools and of remedial teachers is commendable as it addresses the needs of pupils in the formal school setting. Similar resources, appropriate for younger children, should be made available in preschools.

6.3.3 THE ENVIRONMENT AS RESOURCE

- (a) Many teachers point out that the potential of the environment as an educational resource for young children is not being fully exploited. Pre-primary schools can do more to compensate for deprivations in the home by taking children out on excursions and guided tours to places of interest, and by providing new opportunities for the observation of natural and 'man-made' phenomena in the neighbourhood.

Children learn a great deal about the world around them when they are encouraged to touch, to listen, to construct, to choose, to feel, to talk and to explore in the company of other children.

- (b) It is important for the preschool to maintain continuity with the home to facilitate the educational process. One way of doing this is by ensuring that preschool programmes are drawn from the child's experiences in his/her home and in the district.

6.3.4 TEACHING, TESTING AND THE CURRICULUM

- (a) Colleges of education and universities should offer appropriate teacher training programmes for preschool teachers. These programmes should be based on the most recent research findings relating to early child development and elementary education.
- (b) Inservice courses, seminars and workshops jointly involving education officials, junior primary and pre-primary teachers should be organised regularly so that all of them can keep abreast of the most recent research findings and innovative teaching methods and curricula. Such meetings would also provide opportunities for discussing and solving common problems.

There should be a smooth transition from the pre-school to the formal school setting.

- (c) The Departmental School Readiness Test A for Class i entrants is generally acceptable to junior primary teachers. However, like all other psychological tests, it needs to be revised and restandardised periodically so that its reliability and validity remain acceptably high.

6.4 CONCLUDING REMARKS

Preschool research projects, provided they are well designed and executed, give one a good insight into the needs of children within the context of a particular community. Such an understanding should lead to appropriate educational and social action, especially in the case of children who are considered "at risk". This study has shown that the attainment of school readiness is important for success at school. Another important finding has been that the programmes and practices of some kinds of pre-school are more successful than those of others.

The current situation in South Africa calls for an immediate expansion of pre-school facilities, especially for the large majority of children from disadvantaged sectors

of our society. Cultural and material deprivation in the child's home background has adverse effects upon his/her development in the school setting, especially in the area of language and related skills. Teachers face serious difficulties in the teaching-learning situation because of the limited language powers and impoverished linguistic background of a significant proportion of children under their charge. It is important, therefore, that those authorities responsible for education at a material level should respond quickly and positively to the recommendations made in this and other similar reports on pre-school education.

Indeed, the community at large needs to acknowledge the stresses that are placed on infant school teachers through having to cope with the needs of a large number of different children who are at a vulnerable stage of their development. There is a good case for closer participation by traditional educators in the whole fabric of social services for children and their families, as well as for a greater degree of professional and community involvement in the structure and operation of schools.

Austin (1976) correctly points out that the value of pre-primary education for subsequent schooling cannot be over-emphasized. There are no particular formulas, of course,

for helping disadvantaged youngsters who tend to find school life difficult, unpleasant or meaningless. However, enough knowledge and experience has been accumulated to identify those practices and approaches that work better than others.

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APPENDIX A

QUESTIONNAIRE TO JUNIOR PRIMARY CLASS i TEACHERS

You are requested to kindly complete the accompanying questionnaire for a research study on the Effectiveness of current preschool education programmes with special reference to childrens' readiness for formal schooling.

You do not have to write or sign your name on the questionnaire. You are assured that the information you provide will be treated with the strictest confidentiality.

You are requested to furnish the required answers either by indicating the answer with a cross (X) , or by writing as directed. If you are not able to reach a decision on a particular item, go on to the next item. Come back later to attend to those items you have missed. Please state what you honestly feel as this is essential to the relevance and validity of the research findings.

Thank you for your assistance.

D SINGH

QUESTIONNAIRE TO JUNIOR PRIMARY CLASS i TEACHERS

Indicate your answer to items by means of a cross (X) in the appropriate block. Some items require written answers/suggestions/recommendations/comments.

1. YOUR PERSONAL PARTICULARS

1.1 Sex

Male	
Female	

1.2 Age (years)

Under 20	20-29	30-39	40-49	50-59	60+

1.3 Marital Status

Single	Married	Widowed	Divorced	Separated	Other

1.4 Academic Qualifications

Lower than Sen. Cert/ Matric	Married Sen. Cert/ Matric	Degree Course	B. Degree	Higher Degree

1.5 Professional Qualifications

Name(s)	NTD	JPED	HED-Primary	Other (Specify)
Duration of Courses				

1.6 Teaching Experience (years)

0-5	6-10	11-15	16-20	21-25	26+

1.7 Experience as Junior Primary Teacher (years)

0-5	6-10	11-15	16-20	21-25	26+

2. PUPIL READINESS FOR CLASS i

2.1 How would you assess, in general terms, readiness among pupils entering Class i in the following areas?

	Very High	High	Moderate	Low	Very Low	Can't Say
Social Readiness						
Emotional Readiness						
Physical Readiness						
Aesthetic Readiness						

2.2 To what extent are the Class i entrants ready in terms of the following developmental parameters?

	Very High	High	Moderate	Low	Very Low	Can't Say
Observation						
Memorisation						
Environmental Awareness						

2.3 What is the degree of readiness of Class i entrants in the following aspects of English?

	Very High	High	Moderate	Low	Very Low	Can't Say
Speak						
Read						
Write						
Overall						

2.4(a) How large is the difference between the type of language used by Class i entrants at home and at school?

Very Large	Large	Moderate	Small	Nil	Can't Say

2.4(b) Comment on your response to question 2.4(a).

2.5 How would you describe the Class i entrants' level of readiness in the following aspects of Mathematics?

	Very High	High	Moderate	Low	Very Low	Can't Say
number concepts						
place value						
counting						
size and shape						
quantity						
addition/ subtraction						

2.6 In your estimate what percentage of children coming to Class i are:

fully ready (for formal work)	%
moderately ready	%
slightly ready	%
not ready at all	%
	100%

2.7 (a) Would you describe the characteristic behaviour of children entering Class i as:

Impulsive	Restrained	Other (Specify)

2.7(b) Comment on your response to question 2.7(a).

2.8 (a) Who of the following are the Class i entrants' role models?

Parents	Teachers	Fellow Pupils	Others (Specify)

2.9 (a) In your opinion, are children's home environments different from the school environment?

In most cases	In many cases	In some cases	In a few cases	Never	Can't Say

2.9 (b) Comment on your response to question 2.10 (a).

3. CURRICULUM

3.1 Rank the following subjects in order of difficulty experienced by Class i pupils. Write "1" for the most difficult; "2" for the next most difficult;; and "6" for the least difficult.

Art	English	Environmental Studies	Maths	Music	Writing

3.2 Briefly list the major problems (if any) experienced in the teaching/learning of each of the following:

ART

ENGLISH

ENVIRONMENTAL STUDIES

MATHS

MUSIC

WRITING

4. PRE-PRIMARY SCHOOLS/CLASSES

4.1 (a) Is pre-primary education necessary for children before they enter Class i?

Definitely Yes	Generally Yes	Generally No	Definitely No

4.1 (b) Give reasons for your response to question 6.1 (a).

4.2 Three pre-primary educational institutions offer programmes to children before they enter Class i - registered private pre-primary schools, departmental bridging module classes and community-run readiness classes on school premises.

4.2 (a) To what extent are the above pre-primary schools/ classes fulfilling their objective of optimal development of the young childrens' potential culminating in school readiness?

Very High	High	Moderate	Low	Very Low	Nil

4.2 (b) Give reasons for your response to question 4.2 (a).

4.3 From your experience with children in Class i who have attended pre-primary schools/classes, rate the efficacy of these educational agencies (or those you are familiar with) "1" for the best; "2" for the second best and "3" for the third best.

Registered private pre-primary schools	
Departmental bridging module classes	
Community-run readiness classes	

4.4 List specific curricular shortcomings in Class i pupils that pre-primary schools/classes can attempt to rectify.

ART

ENGLISH

ENVIRONMENTAL STUDIES

MATHS

MUSIC

WRITING

4.5 List specific shortcomings in pupils entering Class i
that pre-primary teachers can attempt to rectify.

SOCIAL AND EMOTIONAL READINESS

PHYSICAL READINESS

5. SCHOOL READINESS TESTS

5. How would you rate the effectiveness of the following six subtests in School Readiness Test A that measures school readiness?

SUBTESTS	Very High	High	Moderate	Low	Very Low	Can't Say
Jig-Saw puzzle						
Sorting						
Similarity						
Difference						
Body Awareness						
Head-Eye Coordination						

5.2 How would you rate the difficulty experienced by
pupils with the six subtests of School Readiness
Test A:

SUBTESTS	Very High	High	Moderate	Low	Very Low	Can't Say
Jig-Saw puzzle						
Sorting						
Similarity						
Difference						
Body Awareness						
Head-Eye Coordination						

5.3 To what extent are you satisfied with School Readiness
Test A.

Very High	High	Moderate	Low	Very Low	Can't Say

5.4 How many pupils are Boys Girls Total
there in your Class?

How many pupils
passed School Readiness
Test A at the
first attempt?

Boys Girls Total

How many failing
pupils passed
School Readiness Test
B?

Boys Girls Total

How many pupils have
not yet passed School
Readiness Test
A or B?

Boys Girls Total

5.5 (a) Would you recommend changes to the
school test used (Test A)?

Yes	No
<input type="text"/>	<input type="text"/>

5.5 (b) If yes, then briefly describe the changes, with
reasons.

APPENDIX B:
LETTER TO THE EDUCATION DEPARTMENT SEEKING PERMISSION TO
CONDUCT RESEARCH

Reference No.: 10960317

Grove-End Secondary School

P O Box 55

MOUNT EDGECOMBE

21 August 1991

The Acting Chief Executive Director

Administration: House of Delegates

Department of Education and Culture

Private Bag X54323

DURBAN

4000

Sir

PERMISSION TO CONDUCT RESEARCH

I am a registered M.degree student in the Faculty of Education at the University of Durban-Westville. My topic is: "The effectiveness of current preschool education programmes with special reference to children's readiness for formal schooling".

Because of the increasing importance attached to pre-primary education, registered subsidized private pre-primary schools, bridging module readiness classes in departmental schools, and school readiness classes conducted by local communities in departmental school premises offer preschool educational services.

All three agencies have the same major goal in mind: optimal development of young children's potential, culminating in school readiness. However, they differ in terms of accepted criteria for attaining the desired quality of educational services.

It is the intention of the researcher to answer some important questions relating to effectiveness of the more important current programmes. Through random sampling, four sub-samples will be drawn as follows in the Greater Durban area:

Sub-Sample A: pupils who attended registered private pre-primary schools.

Sub-Sample B: pupils who attended departmental bridging module classes.

Sub-Sample C: pupils who attended community-run readiness classes.

Sub-Sample D: pupils who had had no preschool education.

The performances of these sub-samples in the Departmental School Readiness Test A administered upon entry to Class i as well as pupils' scores during Class i will be analyzed, compared and the differences tested for significance.

Questionnaires will be administered to a sample of Junior Primary Class i teachers in the Greater Durban area asking for comments and responses relating to academic issues about pupils entering Class i.

The writer seeks your kind permission to:

- (a) obtain from randomly selected primary schools in the Greater Durban Area the scores (symbols) of selected pupils in Class i in the School Readiness Test A given on entry to Class i and scores in subsequent tests by these pupils for each sub-sample ie. A, B, C and D.
- (b) administer a questionnaire to Junior Primary Class i teachers in the Greater Durban area.

A copy of the questionnaire is attached.

Yours faithfully

D SINGH

APPENDIX C

SCHOOL READINESS TEST SCORE SHEET

SCHOOL NO: _____

CLASS 1 : _____

READINESS ASSESSMENT

		Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	TOTAL
		Jig Saw Puzzle	Sorting	The Same	Different	Body Awareness	Hand and eye- Co-ord.	
TOTAL		6	3	5	5	5	4	28
Group	Pupil							
A: Registered Private Pre-prim. School	1 (M)							
	2 (F)							
B: Depart- mental Bridging Module Classes	1 (M)							
	2 (F)							
C: Community Run- Pre-prim. Classes	1 (M)							
	2 (F)							
D: No pre-prim. education	1 (M)							
	2 (F)							

APPENDIX D

BRIEF NOTES ON SOME STATISTICAL TESTS USED IN THIS REPORT

a. The 2 X 2 Chi-square test

The 2 X 2 Chi-square test is a statistical test with one degree of freedom: $(r-1)(c-1) = (2-1)(2-1) = 1$. Whenever the theoretical sampling distribution of chi-square is used with 1 df, Yates's correction for continuity should be used (Shavelson, 1981:540). This can be accomplished by subtracting 0,5 from the observed frequency whenever it exceeds the expected frequency; and adding 0,5 to the observed frequency whenever it is less than the expected frequency.

b. Analysis of Variance (ANOVA)

ANOVA is a statistical procedure to test whether groups of scores differ from each other. The principle is that if the scores are not being influenced in different ways, the variation (variance) of scores within each group will allow us to predict how much variation there will be between the means of the groups. If it turns out that the group means vary more than expected, we conclude that the groups differ (and have therefore been influenced in different ways).

Several different sources of influence can be tested within a single ANOVA design, and the complex relationship or interactions between them can be analysed. (Shavelson, 1981; Dayton, 1970; and Winer, 1971).

APPENDIX E

CALCULATION OF WEIGHTED MEAN FOR DEGREE OF SOCIAL READINESS
OF PUPILS IN CLASS i (TABLE 4.1)

	Very High	High	Moderate	Low	Very Low
Weights	1	2	3	4	5
Frequency	0	11	23	0	0

$$\begin{aligned}\text{Weighted Scores (sum)} &= (1 \times 0) + (2 \times 11) + (3 \times 23) + (4 \times 0) + (5 \times 0) \\ &= 0 + 22 + 69 + 0 + 0 \\ &= 91\end{aligned}$$

$$\text{Number of respondents} = 34$$

$$\begin{aligned}\text{Weighted Mean} &= 91 \div 34 \\ &= 2,68\end{aligned}$$

The weighted mean calculated for the other parameters were Emotional Readiness 2,85; Physical Readiness 2,79 and Aesthetic Readiness 3,72. The lowest mean i.e. 2,68 for Social Readiness is given a rank of 1; the second lowest, i.e. 2,79 for Physical Readiness is ranked 2; Emotional Readiness ($\bar{X} = 2,79$) is ranked 3 and Aesthetic Readiness ($\bar{X} = 3,72$) is ranked 4.

APPENDIX F

COMPOSITE CHI-SQUARE TABLE: TEACHING EXPERIENCE

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

TABLE NO	VARIABLE	SPLITS	χ^2 VALUE	S/NS
2.1	Social Readiness	Less Experienced vs More Experienced Teachers	0,120	NS
2.1	Emotional Readiness	Less Experienced vs More Experienced Teachers	0,471	NS
2.1	Physical Readiness	Less Experienced vs More Experienced Teachers	0,765	NS
2.1	Aesthetic Readiness	Less Experienced vs More Experienced Teachers	0,358	NS
2.2	Observation	Less Experienced vs More Experienced Teachers	0,091	NS
2.2	Memorization	Less Experienced vs More Experienced Teachers	0,120	NS
2.2	Environmental Awareness	Less Experienced vs More Experienced Teachers	0,003	NS

COMPOSITE CHI-SQUARE TABLE: TEACHING EXPERIENCE (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

2.3	Speak	Less Experienced vs More Experienced Teachers	0,127	NS
2.3	Read	Less Experienced vs More Experienced Teachers	0,843	NS
2.3	Write	Less Experienced vs More Experienced Teachers	0,493	NS
2.3	Overall	Less Experienced vs More Experienced Teachers	0,626	NS
2.4	Difference language: home and school	Less Experienced vs More Experienced Teachers	1,052	NS

COMPOSITE CHI-SQUARE TABLE: TEACHING EXPERIENCE (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

2.5	Number concepts	Less Experienced vs More Experienced Teachers	1,700	NS
2.5	Place value	Less Experienced vs More Experienced Teachers	1,569	NS
2.5	Counting	Less Experienced vs More Experienced Teachers	1,054	NS
2.5	Size and Shape	Less Experienced vs More Experienced Teachers	1,604	NS
2.5	Quantity	Less Experienced vs More Experienced Teachers	1,570	NS
2.5	Addition/ Subtraction	Less Experienced vs More Experienced Teachers	1,829	NS
2.6	Fully Ready	Less Experienced vs More Experienced Teachers	1,732	NS
2.6	Moderately Ready	Less Experienced vs More Experienced Teachers	1,033	NS

COMPOSITE CHI-SQUARE TABLE: TEACHING EXPERIENCE(CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

2.6	Slightly Ready	Less Experienced vs More Experienced Teachers	0,628	NS
2.6	Not Ready at all	Less Experienced vs More Experienced Teachers	0,764	NS
2.9	Social Experience	Less Experienced vs More Experienced Teachers	1,546	NS
4.2	Extent pre-primary classes fulfilling objectives	Less Experienced vs More Experienced Teachers	0,054	NS
5.1	The effectiveness of subtests in measuring School Readiness			

COMPOSITE CHI-SQUARE TABLE: TEACHING EXPERIENCE (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

5.1	Jig-saw puzzle	Less Experienced vs More Experienced Teachers	0,097	NS
5.1	Sorting	Less Experienced vs More Experienced Teachers	0,123	NS
5.1	Similarity	Less Experienced vs More Experienced Teachers	0,735	NS
5.1	Difference	Less Experienced vs More Experienced Teachers	0,036	NS
5.1	Body Awareness	Less Experienced vs More Experienced Teachers	0,199	NS
5.1	Head-Eye Coordination	Less Experienced vs More Experienced Teachers	0,340	NS
5.2	Difficulty experienced by pupils in subtests			
5.2	Sorting	Less Experienced vs More Experienced Teachers	0,296	NS

COMPOSITE CHI-SQUARE TABLE: TEACHING EXPERIENCE(CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

5.2	Similarity	Less Experienced vs More Experienced Teachers	.487	NS
5.2	Difference	Less Experienced vs More Experienced Teachers	.140	NS
5.2	Body Awareness	Less Experienced vs More Experienced Teachers	.296	NS
5.2	Head-Eye Coordination	Less Experienced vs More Experienced Teachers	.755	NS
5.3	Teachers' satisfaction with Test A for measuring School Readiness	Less Experienced vs More Experienced Teachers	.349	NS

COMPOSITE CHI-SQUARE TABLE: MARITAL STATUS

df = 1 in each case

x = significant at 5 percent level (s)

NS = Not significant

TABLE NO	VARIABLE	SPLITS	X ² VALUE	S/NS
2.1	Social Readiness	Married vs Unmarried Teachers	0,001	NS
2.1	Emotional Readiness	Married vs Unmarried Teachers	0,015	NS
2.1	Physical Readiness	Married vs Unmarried Teachers	2,136	NS
2.1	Aesthetic Readiness	Married vs Unmarried Teachers	0,017	NS
2.2	Observation	Married vs Unmarried Teachers	0,114	NS
2.2	Memorization	Married vs Unmarried Teachers	0,125	NS
2.2	Environmental Awareness	Married vs Unmarried Teachers	2,519	NS

COMPOSITE CHI-SQUARE TABLE: MARITAL STATUS (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

2.3	Speak	Married vs Unmarried Teachers	0,007	NS
2.3	Read	Married vs Unmarried Teachers	0,843	NS
2.3	Write	Married vs Unmarried Teachers	1,432	NS
2.3	Overall	Married vs Unmarried Teachers	0,993	NS
2.4	Difference language: home and school	Married vs Unmarried Teachers	0,207	NS
2.5	Number Con- cepts	Married vs Unmarried Teachers	0,006	NS
2.5	Place Value	Married vs Unmarried Teachers	1,138	NS

COMPOSITE CHI-SQUARE TABLE: MARITAL STATUS (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

2.5	Counting	Married vs Unmarried Teachers	1,587	NS
2.5	Size and Shape	Married vs Unmarried Teachers	0,099	NS
2.5	Quantity	Married vs Unmarried Teachers	0,360	NS
2.5	Addition/ Subtraction	Married vs Unmarried Teachers	0,888	NS
2.6	Fully Ready	Married vs Unmarried Teachers	0,310	NS
2.6	Moderately Ready	Married vs Unmarried Teachers	0,100	NS
2.6	Slightly Ready	Married vs Unmarried Teachers	1,235	NS
2.6	Not Ready at all	Married vs Unmarried Teachers	1,126	NS
2.9	Social Ex- perience	Married vs Unmarried Teachers	1,223	NS

COMPOSITE CHI-SQUARE TABLE: MARITAL STATUS (CONTINUED)

df = 1 in each case

x = significant at 5 percent level

NS = Not significant

4.2	Is pre- primary edu- cation nec- essary?	Married vs Unmarried Teachers	0,100	NS
5.1	The effectiveness of subtests in measuring school readiness			
5.1	Jig-saw puzzle	Married vs Unmarried Teachers	0,001	NS
5.1	Sorting	Married vs Unmarried Teachers	3,283	NS
5.1	Similarity	Married vs Unmarried Teachers	0,127	NS
5.1	Difference	Married vs Unmarried Teachers	0,449	NS

COMPOSITE CHI-SQUARE TABLE: MARITAL STATUS (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

5.1	Body Awareness	Married vs Unmarried Teachers	0,147	NS
5.1	Head-Eye Coordination	Married vs Unmarried Teachers	0,577	NS
5.2	Difficulty experienced by pupils with subtests			
5.2	Jig-saw puzzle	Married vs Unmarried Teachers	0,039	NS
5.2	Sorting	Married vs Unmarried Teachers	0,005	NS
5.2	Similarity	Married vs Unmarried Teachers	0,051	NS
5.2	Difference	Married vs Unmarried Teachers	0,013	NS

COMPOSITE CHI-SQUARE TABLE: MARITAL STATUS (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

5.2	Body Aware- ness	Married vs Unmarried Teachers	0,471	NS
5.2	Head-Eye Co- ordination	Married vs Unmarried Teachers	0,157	NS
5.3	Teachers' satisfaction with Test A for measuring School Read- iness	Married vs Unmarried Teachers	0,012	NS

APPENDIX F

COMPOSITE CHI-SQUARE TABLE: AGE

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

TABLE NO	VARIABLE	SPLITS	X ² VALUE	S/NS
2.1	Social Readiness	Younger vs Older Teachers	0,123	NS
2.1	Emotional Readiness	Younger vs Older Teachers	0,071	NS
2.1	Physical Readiness	Younger vs Older Teachers	0,08	NS
2.1	Aesthetic Readiness	Younger vs Older Teachers	0,931	NS
2.2	Observation	Younger vs Older Teachers	0,001	NS
2.2	Memorization	Younger vs Older Teachers	0,928	NS
2.2	Environmental Awareness	Younger vs Older Teachers	0,102	NS
2.3	Speak	Younger vs Older Teachers	0,186	NS
2.3	Read	Younger vs Older Teachers	0,803	NS
2.3	Write	Younger vs Older Teachers	0,721	NS
2.3	Overall	Younger vs Older Teachers	0,591	NS

COMPOSITE CHI-SQUARE TABLE: AGE (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

2.4	Difference language: home and school	Younger vs Older Teachers	0.258	NS
2.5	Number Con- cepts	Younger vs Older Teachers	0.064	NS
2.5	Place Values	Younger vs Older Teachers	0.056	NS
2.5	Counting	Younger vs Older Teachers	0.344	NS
2.5	Size and shape	Younger vs Older Teachers	0.258	NS
2.5	Quantity	Younger vs Older Teachers	0.344	NS
2.5	Addition/ Subtraction	Younger vs Older Teachers	0.633	NS

COMPOSITE CHI-SQUARE TABLE: AGE (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

2.6	Fully Ready	Younger vs Older Teachers	0,258	NS
2.6	Moderately Ready	Younger vs Older Teachers	0,729	NS
2.6	Slightly Ready	Younger vs Older Teachers	0,033	NS
2.6	Not Ready at all	Younger vs Older Teachers	0,686	NS
2.9 (a)	Social Experience	Younger vs Older Teachers	0,037	NS
4.2 (a)	Extent to pre-primary fulfilling objectives	Younger vs Older Teachers	0,019	NS

COMPOSITE CHI-SQUARE TABLE: AGE (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

5.1	The effectiveness of subtests in measuring school readiness			
5.1	Jig-saw puzzle	Younger vs Older Teachers	0,925	NS
5.1	Sorting	Younger vs Older Teachers	0,028	NS
5.1	Similarity	Younger vs Older Teachers	0,045	NS
5.1	Difference	Younger vs Older Teachers	0,292	NS
5.1	Body Awareness	Younger vs Older Teachers	0,185	NS
5.1	Head-Eye Coordination	Younger vs Older Teachers	0,925	NS

COMPOSITE CHI-SQUARE TABLE: AGE (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

5.2	Difficulty experienced by pupils with subtests			
5.2	Jig-saw puzzle	Younger vs Older Teachers	0,100	NS
5.2	Sorting	Younger vs Older Teachers	0,014	NS
5.2	Similarity	Younger vs Older Teachers	0,276	NS
5.2	Difference	Younger vs Older Teachers	0,55	
5.2	Body Awareness	Younger vs Older Teachers	0,071	NS
5.2	Head-Eye Coordination	Younger vs Older Teachers	0,024	NS

COMPOSITE CHI-SQUARE TABLE: AGE (CONTINUED)

df = 1 in each case

x = significant at 5 percent level(s)

NS = Not significant

5.3	Teachers' satisfaction with Test A for measuring School Readiness	Younger vs Older Teachers	0,410	NS
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APPENDIX G

DATA FOR THE COMPUTATION OF THE ANALYSIS OF VARIANCE OF THE
RAW SCORES OF 120 CHILDREN FROM THE FOUR GROUPS ON THE RCPM

<div>A1</div> <div>B1B2</div>		<div>A2</div> <div>B1B2</div>		<div>A3</div> <div>B1B2</div>		<div>A4</div> <div>B1B2</div>		
8	9	9	9	7	8	8	8	
8	9	8	9	9	9	8	7	
8	8	8	8	8	8	6	8	
9	8	9	9	8	9	6	8	
8	8	8	7	8	8	8	6	
8	9	8	8	9	8	7	8	
8	9	8	8	8	8	8	9	
9	8	9	8	8	8	9	7	
8	9	8	9	9	9	8	8	
8	8	8	8	8	9	6	8	
8	8	9	8	8	8	8	7	
9	8	9	8	8	9	7	7	
8	9	9	8	8	8	9	8	
8	8	8	9	9	8	8	9	
9	9	8	9	8	8	7	8	
ΣX	122	127	126	125	123	125	113	116
\bar{X}	8,13	8,47	8,4	8,33	8,2	8,33	7,53	7,73

A1 = registered private pre-primary schools

A2 = departmental bridging module classes

A3 = community-run pre-primary classes

A4 = non-preschoolers

B1 = Boys

B2 = Girls

APPENDIX G

DATA FOR THE COMPUTATION OF THE ANALYSIS OF VARIANCE OF THE RAW SCORES OF 120 CHILDREN FROM THE FOUR GROUPS ON THE SCHOOL READINESS TEST A

A1		A2		A3		A4	
B1	B2	B1	B2	B1	B2	B1	B2
19	24	25	28	21	26	21	19
25	26	27	23	27	22	9	5
24	26	26	26	26	26	21	23
16	20	28	27	27	13	19	16
19	27	25	21	18	24	21	21
23	20	24	28	22	26	9	10
24	25	28	24	24	22	19	21
27	25	26	22	24	24	18	19
27	27	24	28	23	25	13	6
24	22	24	25	24	19	16	19
27	26	22	26	16	25	9	15
27	20	25	28	24	25	10	25
24	25	26	26	25	25	22	21
16	16	24	24	24	25	28	16
28	26	28	21	18	28	14	27
ΣX 350	355	382	377	343	355	249	263
\bar{X} 23,33	23,67	25,47	25,13	22,87	23,67	16,6	17,53

A1 = registered private pre-primary schools

A2 = departmental bridging module classes

A3 = community-run pre-primary classes

A4 = non-preschoolers

B1 = Boys

B2 = Girls