AN INVESTIGATION INTO THE VALUE OF THE SCHOOL READINESS PROGRAMME OFFERED BY THE RECEPTION CLASS.

BY

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I hereby declare that this is my own work, both in conception and execution and that the opinions expressed or conclusions reached are not to be regarded as reflecting the views of the abovementioned persons or institutions.

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ABSTRACT

In this research an attempt was made at establishing the value of the Reception Class programme. Bridging the gap between home and school has received a lot of attention in the past decade and although numerous suggestions have been put forward, a pattern of hit-or-miss has developed. This research aims to present a suggestion of successful entry into the formal phase of education for every child, regardless of colour, at a much lower cost for both authorities and parents. In an attempt to determine the success of the Reception Class programme, three measures were used: the First Grade Screening Test (AGS), the HSRC Test for 5-6 year olds and as a qualitative measure a questionnaire completed by the class one teachers of the school where the Reception children entered the formal phase of education in 1990. Results of these tests showed that the Reception Class programme was the most successful in achieving a high level of school readiness and on all three measures these pupils did significantly better than their peers who had attended pre-primary schools, crèches, day-care centres and those who had come straight from home. An analysis of test items showed that the Reception Class pupils had excelled in areas involving concentration and listening skills, fine muscle control and application of knowledge. The HSRC Test for 5-6 year olds showed evidence of well developed problem solving skills and a sound knowledge of mathematical language. Although the sample as such was found to be sufficient, a limitation of this study is the fact that all four the Reception Classes could not have been included in this research.

To the pre-schoolers of the RSA - may this serve to ensure a smooth start to your formal education.

"So long as the young generation is, and continues to be, well brought up, our ship of state will have a fair voyage; otherwise the consequences are better left unspoken".

Plato

"If the state is to be preserved it must take care of the young, control their education in a state system independent of the whims of parents and the power of wealth and place their training in the hands of teachers more competent and more responsible than the poor schoolmaster and pedagogue".

Plato

RESEARCH ASSUMPTIONS

1. *The nature of the Reception Class Programme is likely to exercise significant influence on the level of school readiness.*

2. *Some form of pre-school training is likely to reflect favourable comparison with the average school readiness scores.*

3. *The mean scores emanating from some form of pre-school education are not expected to be equivalent to the mean scores ensuing from no pre-school experience.*

EXPLANATORY NOTES/DEFINITIONS

It is felt that certain words, concepts and phrases need explaining to ensure that their meaning in this research is clear.

1.1 SCHOOL READINESS -

Numerous definitions of school readiness have seen the light, probably due to the increased interest, worldwide, in pre-basic education. This term encompasses a large variety of skills, all of which will enable the child who is entering primary education to cope with the challenges of the formal learning phase. Downing and Thackray (1975) see the term "readiness" as referring to a stage when a child can enter formal learning and benefit from the teaching without any emotional strain involved. Readiness has been defined by Reber (1985 p.614) as

> **"a position of preparedness in whch an organism is set to act or to respond".**

Fabian (1985 p.17) feels that the term pre-supposes the attaining of a general state of development which should enhance scholastic progress. Clark and Cheyne (1979) point out that "readiness" will vary from one educational institution to another and that the expectations of teachers will be the actual turning point.

Ausabel, Sullivan and Ives (1980 p.63) define readiness as

> **"... a cumulative developmental product reflecting the influence of all prior genic effects, all prior incidental experience, and all prior learning on cognitive patterning and the growth of capacities"**

Numerous other definitions could certainly be found, but for the purpose of this research the emphasis is not so much on the prediction of <u>progress</u> as on the <u>smooth start</u>: children should be assisted in every way to enable them to have pleasurable memories of early formal education.

Progress and achievement is not as important as enjoyment and the latter seems to be the starting point in a wheel which includes progress and achievement.

"Maturity" has often been confused with "readiness" - many parents also have the strange idea that age sorts - the "ready" from the "unready" with a strong undertone of seven, as a magic number, bringing about a change in general cognitive ability - hence a tendency in Natal to keep children out of school so as to reach 7 and automatic "readiness".

1.2 FORMAL EDUCATION

For the purpose of this research, "formal education" is seen as opposite to "incidental learning" - as is found in the home, neighbourhood or pre-primary schools.

> "Formal education takes place in a planned way at recognised institutions such as schools, colleges, technikons, universities etc. (HSRC 1981 p.91)

Formal education will refer to "class one" - the term used in Natal for the first class in the junior primary school.

1.3 RECEPTION CLASSES -

This term is only used in Natal as these classes are the brainchild of the Natal Education Department who followed the recommendations of the de Lange Commission and, in an attempt to achieve school readiness in areas which were both pre-primary and culturally deprived, attached pre-school classes to existing junior primary and primary schools. As an experiment, four of these classes were started in 1983: two at Afrikaans and two at English schools. The two Afrikaans classes were started at

primary schools, while the two English classes were started at junior primary schools. As the outcome of this research could be affected by the detail of Reception Classes per se, it must be added that the two junior primary schools have female principals while the primary schools have male principals.

In the draft guide to this experiment the Natal Education Department expressed its concern about the fact that pre-school education had come within the reach of a privileged group, while this opportunity was often denied where it was most needed - hence the introduction of this new concept called "Reception Classes".

The purpose of Reception Classes is explained in detail (p.1 Guide to the experiment) -

"1.3 In a sense the purpose of these Reception Classes coincides with that of the established Pre-Primary schools, but there are some important and significant differences. In particular, there is a shift in emphasis.

1.4 The approach in the Reception Class is one of diagnosis i.e. of identifying deficiencies in the child's educational background, due largely to a "deprived" environment, and the consequent provision of a suitable programme of enrichment and development to enable the child to mature and adjust within the given short span of time (one year or less) in order to become "school ready".

1.5 Reception Classes must not be confused with Remedial Classes as the former are essentially concerned with the preparation for an initial programme of formally structured Primary

Education, while the latter are concerned with the problems arising from participation in such a programme itself".

These Reception Classes were started at schools with the available classroom space and in areas where pre-primary education was either non-existant or out of reach due to economical considerations. All Reception Classes made use of the official pre-primary syllabus. (Annexure 3.). Further discussion on the success or failure of the classes will follow in the chapters on Conclusions and Suggestions for further study.

1.4 BRIDGING PERIOD -

In the report on Provision of Education in RSA, the underlying assumption was that school readiness was a pre-requisite to a successful school career. Musgrove (1979) contends that pre-basic education should be compulsory as some skills or abilities must have been acquired by a certain age as thereafter they will never be mastered, or be very poorly mastered. Home can no longer be seen as the place offering an opportunity for mastering these skills - the social changes and different focus of society could possibly be contributing factors, but the focal point should be the child and how he will cope within the educational system.

1.4.1

A bridging period can be seen as an opportunity for the child to make the transition between home and school, or informal and formal learning, at his own pace - arriving at the point where the structured morning in formal education poses no threat, but a challenge. The importance of the bridging year is evident: the smoother the start to formal learning, the more positive the approach

to formal education. Children have an innate desire to please, and when they are confident and secure in what they are doing, they will enjoy the satisfaction of a task well done.

1.4.2 The bridging period offers the opportunity for detecting weaknesses in specific areas and this can lead to early intervention. Fabian (1985) feels that preventive and enriching programmes should be introduced to pre-school children during the bridging year and these should meet their needs, - or at least the needs of most of them. Almy (1975) claims that no matter how comprehensive a pre-basic programme is, it can only be as good as the teachers who implement it.

1.4.3 A bridging year is very much a time of preparation for the future and each child should be taken from his/her individual level and progress towards formal education, facilitated by the teacher with the child dictating the pace. This does not in any way imply an unstructured morning with unlimited free choice, but rather an advancement from the general to the more specific. The teacher, familiar with the expectations of the formal phase, is thus working towards and aiming at getting the pupils equipped for formal learning - i.e. the bridging period should culminate in school readiness.

1.4.4 To derive the maximum benefit from the bridging period, the child should progress from the known to the unknown, i.e. from play to work. Free choice of activity doesn't receive prime emphasis in the syllabus of formal education, and the bridging period is the ideal time for a shift in emphasis. The teacher can monitor the progress of

her charges during the bridging period and determine to what extent they can cope with more formal activities. Children with a longer concentration span can be extended, while others can slowly be introduced to activities geared to their concentration level - until all children reach the level where they can "work" for a time span equivalent to that they will meet up with in formal education. Thus the real beauty of the bridging period is its flexibility and resultant lack of strain on the child.

1.4.5 Bereiter and Engelmann (1966) found the pre-school learning period to be the best time to provide higher quality education. The bridging period should therefore not only focus on the development of "the whole child" - which is highly commendable - but not very pratical within the time span. This bridging period (1 year) does not require an unfocused educational programme, as this tends to ignore the fact that there is a world outside. Bereiter and Engelmann (1966 p.14) sees the traditional nursery school as sadly lacking in achieving school readiness per se as "the emphasis is on experience rather than the achievement of specific goals" and there is "no ordered sequence to keep the child working to the upper limit of his abilities". As schools are seen as the uniform means of educating all children (Bereiter and Engelmann 1966 p.24) the deprived child will have to make up his deficit more quickly as learning deficiencies have been found to have accumulative properties. Disadvantaged children have been found to be more retarded in areas which receive top priority in formal educational settings (p.24) but they lack the learning and not

the fundamental capacity to learn - hence a more organised period is suggested.

1.4.6 Bereiter and Engelmann (1966 p.58) found that intensive instruction did not produce excessive stress or anxiety in children - it was ineffective teaching that led to confused and disheartened attitudes:

> **"An unstructured, play-type nursery school may lead the child to like nursery school, but since it does not include school-type learning activities, it cannot foster any attitudes, positive or negative, towards them. It may, in fact, give the child an unrealistic conception of school that will make him more likely to respond negatively to his first encounters with academic learning in elementary school" (Bereiter and Engelmann (1966 p.60).**

Goodenough (1926) found that training of pre-schoolers resulted in a marked improvement in their drawings which was not directly attributed to their powers of observation, but to the fact that "coaching" was involved. A follow-up study showed that they had maintained the head-start.

1.4.7 In this research the bridging period is the Reception Class year - not only the bridging between home and school, but also the bridging of pre-primary and junior primary as the Reception Class programme is "more formal" - due mainly to the environment. Being part of the junior primary/primary location encompasses rules to minimise the disturbance of the neighbours, bells to indicate the end of periods, assemblies, swimming galas, sports days and the sharing of facilities within given time limits - all this adding to the "formal character" of the bridging year researched in this dissertation.

THE PROBLEM

This research is concerned with and interested in the educational value of the present diverse field of pre-school centres. Post-war South Africa has become very aware of the pre-school child and his/her needs. The history of crèches and day-care centres, day-care mothers and nursery schools will be discussed in a following chapter, as well as the pros and cons of all these institutions. It will suffice now to point out that the pre-school centres tend to be either custodial or educational.

1. The past decade witnessed a marked interest in school readiness as a pre-requisite for progress in the subsequent formal phase of education. Various overseas studies pointed out that cognitive skills had to be sufficiently developed and intellectual stimulation was needed to ensure a smooth start to formal education. In the HSRC Report on Pre-Primary Education in the RSA, Reilly and Hofmeyr (1981 p3) state:

> **"It is universally accepted today that the effectiveness of formal education on the child's total development into an independent, responsible and functional adult is dependent, in the first instance, on a particular fundamental pre-requisite referred to as school readiness. Without a particular, positive attitude towards formal education which is characteristic of school readiness, it is doubtful whether favourable progress will be made at school".**

and

> **"The young child's achievement of school readiness is an absolute pre-requisite for successful education which forms the basis of a country's progress and peaceful existence!**

Blank, Rose and Berlin (1978) point out that schooling is so highly valued in society that the general feeling is "the earlier the better".

3.2 Pre-school centres with preparation for formal education as their aim proved their point without a doubt - as numerous longitudinal studies clearly showed. Until very recently the educational value of pre-primary schools was accepted, to the point where these centres received monetary support from Central Government and provincial education authorities. Each Education Department laid down its own laws and aided and abetted pre-schools without making pre-school education compulsory. While the economic climate was favourable, pre-school education ran smoothly: parents could afford the fees and children received stimulation from a well-structured programme. In many cases (in the area where this research was done) working parents could also afford after-care for their off-spring.

3.3 Day-care centres and crèches have, up to recently, filled a different need: that of custody and care of children of working parents. This care was aimed at satisfying physical and even social needs, but did not include any form of informal education. The marked interest in school readiness resulted in an exodus to school readiness programmes and the crèches and day-care centres stood to lose so much that a "school readiness programme" was introduced overnight - without the expertise of qualified pre-school teachers.

3.4 The present situation in Natal sees a severe cut-back in pre-primary teaching staff - due to a shortage in funds. It is obvious that this valuable phase of education cannot be abandoned - that would be a step in the wrong direction and detrimental to the future of this country. Privatization could hardly be the answer: where are the funds to come from? The programmes offered by crèches and day-care centres are better than nothing but the educational value is more than just extremely limited - due to the absence of trained expertise. It has become

imperative to find the least costly and educationally most effective way of handling this pre-school dilemma.

3.5 The rationale for the present research is to supply evidence that the Reception Class programme and situation provide the optimum opportunity for children to attain the level of readiness required for a smooth and enjoyable start to formal education - the focus being on "educationally effective" as well as "cost effective".

PURPOSE OF THIS STUDY

It has become abundantly clear that children cannot enter the formal educational phase without some form of pre-school education or stimulation. This was pointed out by the findings of the de Lange Commission at the end of the 70's and clearly spelt out in the White Paper, which was tabled in July 1981. The conclusion of the de Lange Commission did not exclude any race or colour, but pointed out very emphatically that education provision in the R.S.A. demanded a bridging year to tide the 5/6 year old over the gap between home and school.

In the "Report of the Main Committee of the HSRC Investigation into Education" (p.27 3.3.1) it is said that:

> **"Since school readiness is a pre-requisite for success at school, especially during the initial period of education, and because environmental deprivation is the main reason for children not being ready for school at the normal school going age, the following arguments are advanced in the support of the provision of education at pre-school level for the divergent needs of young children in different circumstances".**
>
> This is further explained -
>
> **"1. Environmental deprivation is prevalent among all population groups and is on the increase since more mothers with small children are finding it necessary to work because of economic pressure and other factors.**
>
> **"2. The situation of some groups is more problematic than that of others because their children have not had an adequate preparation for formal education. Special and <u>timely</u> assistance at this stage is imperative because it is difficult to make up lost ground once children have fallen behind".**

It is further stated in this Report that the high drop out and failure rates resulting from an "unready" start, lead to manpower shortage and added expenditure which in turn places an added burden on the government and the full circle is completed when, to the individual, it leads to loss of human dignity. School readiness and the subsequent confidence, in many ways,

provides a readiness for life, and isn't just limited to the initial introduction to formal education.

The HSRC's Report concludes it's findings with:

> **"Although the above arguments indicate that there is a justified demand for pre-basic education, it is a well-known fact that at present this demand is nowhere near to being satisfied. None of the present systems of education provides a programme, accessible to all, spanning the period from pre-school to compulsory education".**

In her conclusions on her research into "Purposeful intervention during a bridging period between Pre-primary and Primary School", Fabian (1985) claims that recommendations for a bridging year, to promote school readiness, have been proposed and it is now up to educationists and psychologists to devise appropriate programmes to implement during this critical phase.

The Natal Education Department came up with a new concept in pre-school education in 1983 and it is felt that this innovative thought on their part, has in fact produced what both the HSRC and Fabian might have visualized. This research is aimed at determining the extent to which Reception Class education meets the criteria for pre-school education.

CRITERIA FOR PRE-SCHOOL PROGRAMMES -

It stands to reason that any proposed pre-school programme will have to comply to certain criteria, and in the R.S.A. the ultimate programme will have to achieve equally for all race groups across the board, while bearing in mind that cultural differences do exist and should be catered for - hence school readiness could become a very complex issue.

The following are seen as criteria with which any new programme should comply:

1. An economically viable proposition.

1.1 It is of the utmost importance that any proposed pre-school programme should be within the reach (economically) of the entire pre-school population. Ideally the year, prior to the commencement of formal schooling, should be compulsory, to all children turning 5/6 during the course of the year. School fees across the board should be within the reach of the community. It is foreseen that this could be calculated on a sliding scale.

1.2 School fees comprise but one section/portion of the monetary input into pre-school education. No educational programme can run without the necessary physical amenities.

To make pre-school education economically viable, use should be made of existing facilities and empty classrooms at existing schools are seen as possibilities to keeping the overheads as low as possible.

1.3 The third leg in the economical triangle involving pre-school education is the salaries of teachers. Pre-school education should be available to all children and not only the privileged layer whose parents can afford the services of well-qualified teachers. Almy (1975) believes that any early childhood programme is only as good as the teachers who implement it. It seems that parents and educational authorities could hardly share responsibility in this field, but input must definitely be had from both.

2. SCHOOL READINESS -

Another very important criterium for any educational pre-school programme involves the level of school readiness it can achieve within a year. As school readiness will be discussed at length, it will not be discussed in great detail now. It will be sufficient to say that school readiness here is seen as both preventive and enriching, in immediate and in long-term goals. Fabian (p.62) states:

> " One must take into account the fact that any education should be a preparation for the future and that one must also attend to the present needs and interests of the children".

School readiness tests prove beyond a doubt that there isn't any one test to surpass all others and that across the spectrum various skills are in fact tested. According to Fabian (p.76) the emphasis and focus is currently ... "...directed at perceptual motor development as outlined for pre-schools by the Transvaal Provincial Authorities". In Natal the emphasis covers all language related skills as well. It is felt that the following (Fabian 1985 p.78) paints the picture:

> "Firstly, opportunities must be sought to assist all pre-school children to realise their innate potential and be adequately prepared to meet the demands of their future formal education. Secondly, a pre-school programme which provides conditions for optimum stimulating social experiences, language enrichment and training in readiness skills is necessary".

It is evident that different view points of school readiness will have different criteria, but the best judges of the readiness level will undoubtedly be the teachers in the formal phase. These will be the people to determine just how well the pre-schooler fits the bill of his/her formal environment. To achieve this "required level of readiness",

pre-school teachers will have to liaise very closely with their colleagues in the formal phase to ascertain whether "supply" meets "demand".

According to Bereiter and Engelmann (1966 p.58) the **"initial encounter with school-type learning is likely to have far-reaching effects on the child's attitude towards school. First encounters should be successful, rewarding and reasonably free from pain. Shorter periods of instruction could help as well as flexibility of the programme," and (p.60) "an unstructured, play-type nursery school may lead the child to like nursery school, but since it does not include school-type learning activities, it cannot foster any attitudes, positive or negative, towards them. It may in fact give the child an unrealistic conception of school that will make him more likely to respond negatively to his first encounters with academic learning in elementary school".** Any school readiness programme competing in the field of "ideal programme" should be both flexible and structured to gradually bridge the gap between informal and formal education.

3. PHYSICAL AND MENTAL HEALTH

Children who are physically healthy have the natural resources for development. Poor nutrition and the resultant poor health hamper natural development. Physical disabilities, ill health, obesity, stunted growth, cronic ailments, poor sleeping pattern have a significant correlation with learning difficulties. These are difficulties that children can overcome with assistance, but once left could result in an accumulative backlog. Children's special needs must be identified as early as possible, and intervention can follow. This involves the accessibility of medical/health services, in the form of regular check-ups.

Learning problems are manifested in symptoms like hyperactivity, perceptual - motor impairments, emotional liability, general co-ordination deficits, attention disorders, impulsivity, memory and reasoning disorders and specific learning disabilities. These symptoms, when identified prior to formal education, can and should receive the necessary attention and a pre-school programme should include the availability of psychological assistance. It stands to reason that a well-trained teacher will be in the position to detect these deficits and co-operate with professional therapists to the advantage of the child. By the same token giftedness can be recognised and the necessary

amendments made to facilitate further development.

4. SUMMARY -

In a study of "Pre-primary Education in R.S.A." Reilly and Hofmeyr (p.3) stated:

> **"It is universally accepted today that the effectiveness of formal education on the child's total development into an independent, responsible and functional adult is dependent, in the first instance, on a particular fundamental pre-requisite referred to as school readiness. Without a particular positive attitude towards formal education which is characteristic of school readiness, it is doubtful whether favourable progress will be made at school".**

This being the case, every child, irrespective of colour or race, should have access to this pre-school experience. This should be available to all pre-schoolers in the year prior to the entrance into formal education. A programme successfully achieving school readiness for as many as possible must also be an economically viable proposition and preferably compulsory.

This research proposes to investigate the possibility of the Reception Class Programme as being the programme with the qualities required to make pre-school education a reality and well within reach of as many children as possible.

DIVERSITY OF PRE-SCHOOL CENTRES

This overview of the pre-school spectrum is aimed at highlighting the availability of pre-school care (in this particular area) and the educational stimulation offered. (The information was gained from interviews with the various managers/ principals or people in charge).

1 SOCIAL ENVIRONMENT

This research was carried out in a white lower middle class suburb of Durban. The following characteristics were identified:

1.1 lower to middle income group;

1.2 education level of parents did not, on average, reach the level of completed secondary education;

1.3 very few professional people reside in the community;

1.4 majority of parents are employed by South African Transport Services;

1.5 there has been an influx of younger married couples into this area over the past 10 years, due mainly to the availability of cheaper housing - in the form of simplexes and duplexes. The latter have mushroomed as a result of the subdivision of many older properties as well as the demolition of uninhabitable old homes;

1.6 the population in this area was found to be mainly under the age of 30;

1.7 most families consist of the parents and two children;

1.8 the percentage of broken homes was not above the normal - according to Durban Child Welfare - but there is concern that the income is not spent where priority should dictate and that the parental level of education hampers the cultural development of the children;

1.9 interest in education and educational institutions is very limited.

2. PRE-SCHOOL CARE AND EDUCATION

2.1 AFRICAN WOMEN -

Working parent(s) in this area seem to have a lot of faith in the ability of black servants to look after their off-spring. In most cases these employees seemed to justify the trust put in them, but these children received no educational stimulation. The wage of the employer invariably determines the quality of the employee and in quite a few cases the maid could hardly communicate in English. This form of pre-school care can only be described as custodial.

2.2 MOTHERS, GRANDMOTHERS AND/OR OTHER RELATIVES -

In this research only 5 children were found to be in this category. Traditionally this is seen as the ideal situation: mother (or relative) supplying the basic education and stimulation. It has, however, become imperative that children receive not only

early childhood care but also early childhood education to facilitate development. Almy (1973 p.14) claims:

> **"Since babies and young children are so dependent on adults, the nurturance or guidance function is essential. Nevertheless, even at these early ages, children need in a sense to be taught as well as cared for. Their learning is inextricably interwoven in their exchanges with the caretaker!**
>
> **Non-working mothers replace, to a certain extent, the servant and the question arises whether the time spent with the child would in fact be quality time. Grandmothers (or relatives) might supply the loving care, but it is doubtful whether the educational needs of the child can be met".**

2.3 DAY-CARE MOTHERS -

2.3.1 It was found that only 3 day-care mothers operated in this area, and in all three cases the quality of the care was very good. These mothers were interested in what they were doing and they endeavoured to augment development by presenting the children with educational equipment and toys.

2.3.2 As these day-care mothers had schoolgoing children of their own, their charges were exposed to a wider social scene.

2.3.3 It was disappointing to discover that the "day-care mother" is not a consistent phenomenon in this area: the initial enthusiasm of these mothers dwindles, mainly because of parents

abusing the arrangement. (Two of the three mothers were terminating their services at the end of the year.) The remaining "day-care mother" complained that parents were inconsiderate and left her to look after their children long "after supper time" without any prior arrangement.

2.4 CRèCHES

2.4.1 Although there is a demand for this kind of facility in this area, very few exist. At the time of this research, only three operating crèches could be found.

2.4.2 Crèches in this area were found to cater for the age group 18 months to 6 years with an after school-care included.

2.4.3 Crèches are run on a profit-making basis and their focus up to ± 5 years ago was the physical care of their charges.

2.4.4 At the time of writing one crèche claimed to be making ends meet comfortably, one was receiving assistance from a local churchgroup and the other was seriously considering closing down.

2.4.5 All three crèches have become very aware of the emphasis on school readiness and have made some effort towards offering stimulation to their charges. The main stumbling block is the lack of funds to

employ at least one qualified teacher. Children are therefore left to experiment with creative equipment such as paints, crayons and pencils without the stimulation of a trained teacher.

2.4.6 One of the crèches enlisted the assistance of the local branch at Natal Pre-Primary Teachers' Association and improved on their "readiness programme", but has become very formal in their approach - to the point of tuition in formal writing.

2.4.7 It seems that in order to maintain their enrolment they have ventured beyond the custodial function.

2.5 PRE-PRIMARY SCHOOLS

2.5.1 This area can boast but one registered pre-primary school: this centre can accommodate ± 125 3-6 year olds.

2.5.2 Registered pre-primary schools are provincially controlled: the teaching staff is employed by the Natal Education Department and a parent body is responsible for maintaining the buildings and premises and acquiring toys and equipment.

2.5.3 Pre-primary schools are educational in their approach and children only attend school for 4 hours daily (normally 8-12 noon).

2.5.4 The programme offered is geared towards culminating in school readiness after 3 years i.e. a slow but stimulating process which will allow the child leeway to do his/her own discovering within a stimulating environment. (Very much a Piagetian-approach).

2.5.5 This programme is subjected to regular scrutiny by advisors from the education department and thus high educational standards are upheld.

(Pre-primary schools and their origin/history will be discussed in detail in the chapter on the development of pre-school education in Natal).

2.6 RECEPTION CLASSES -

2.6.1 The area where this research was done has two Reception Classes: one in each of the official languages.

2.6.2 Reception Classes are part of a formal phase of education i.e. part of a junior or primary school but follow the same syllabus as the pre-primary schools.

2.6.3 Empty classrooms are utilised and the overheads are therefore kept very low.

2.6.4 Reception Class fees are determined by the Natal Education Department and are kept low as the main aim is not to show a profit, but to expose as many children

as possible to a readiness programme. Paragraph 1.2 of the "Guide to the experiment with Reception Classes" reads as follows:

> "1.2 The Department is concerned about the fact that children in need of preparation for the primary school, are often denied the opportunity through sheer circumstances, and has therefore embarked upon an experiment in an effort to bridge the gap between the home and the school, by the introduction of a new concept: Reception Classes for 5 year-olds at certain established Junior Primary and Primary Schools".

2.6.5 Reception Classes are geared towards one age group, are education orientated, and are within the financial reach of this area.

2.6.6 Due to the experimental nature of this project a pupil intake of 48 has been stipulated.

3. CONCLUSIONS -

It must, in conclusion, be pointed out that all pre-school facilities are shared by both language groups but that the only pre-primary school in the area is registered as an English school. Almy (1975) in an overview of early childhood education and care in California sees the necessity for the emergence of a new role - that of the early childhood educator. The child who is to become tomorrow's citizen needs more than just custody, he needs

assistance and guidance to cope with present - day realities. Almy (1975) quotes senator Walter Mondale from an address on "Day Care: Education or custody" - (Almy 1975, p1)

> **"We have a chance to build a truly creative program for early childhood development for all children. But we could also squander this opportunity and institutionalize, by default, an elaborate system of baby sitting for the poor".**

The diversity of the pre-school field in the area of research and the socio-economic background, make senator Mondale's words prophetic ones. The question here is definitely: are the needs of the pre-schoolers being met? Bereiter and Engelmann (1966) developed several programmes to make up the deficit experienced by disadvantaged children. They see disadvantaged children as being in the position of "lagging behind" and in order to catch up, they must progress at a faster - than - normal rate. They find an overall enrichment programme acceptable even commendable but they are concerned about the time factor: in their experience the disadvantaged child does not catch up, the exact opposite is true: a "cumulative deficit" is the result.

The pre-school period seems to be the ideal time to provide high quality education. The pre-school movement in Natal has well and truly established itself - the main question now is: how to get the most out of it for the pre-schooler.

EDUCATION IN THE REPUBLIC OF SOUTH AFRICA

1. HISTORICAL OVERVIEW

Every country has its own distinctive system of education, which is the culmination of various determining factors and each system aims at supplying that which the specific nation requires. Educational systems can never be static and can never claim to have reached a point where further change is ruled out - as the needs change, the educational system should change to keep the young prepared for their future.

Continuous change in education implies continuous rejuvenation and puts pressure on the educator as facilitator to be aware of changes within society. The aim of the educational process is preparing the child for the wider spectrum of life and the more easily the child slots into the adult world, the better the aims of education have been attained.

1.2 The South African educational system has its roots the European systems of education and the traditional Western Education, but because a new country added new challenges, the teacher could not religiously stick to that which had comprised the educational system in Europe, but (Behr, 1978 p.1)

> **"the educational system that evolved in South Africa was shaped largely by the first Europeans who settled here from abroad and their subsequent history".**

1.3 The early colonists who settled in the Cape, were very religious and also very set on their freedom. The religious standards of the early colonists

pivoted around membership of the church and social ostrecism was the result of failing to obtain membership. The coveted membership implied a degree of literacy - to read the Bible - and therefore some form of education. Jan van Riebeeck, in trying to establish a suitable half-way station to India, neglected schooling for white children, but started a school for slave children in 1658. This had limited success as the language of the Dutch colonists posed a problem for the slave children and in 1663 the idea of civilising the slaves was abandoned. It was decided that a school should be started where the slave - children could learn from other cultures. Thus the first school started: seventeen pupils of which twelve were European/white one Hottentot and four slave children. The numbers increased but the so-called "teacher" developed drinking problems and a new "teacher" had to be found. These "teachers" were not qualified academically, but had a respected job elsewhere within society e.g. comforter of the sick. The first "Kindergarten" was established by Sagje Keijsers. It was a virtual impossibility to find trained teachers, and the children suffered from an interrupted education and a succession of teachers who fell prey to alcoholic abuse. Children showed little sign of motivation and the slaves were rewarded with tobacco and liquor when they worked well in the school. In 1676 the Governor was pressurised by the community to abandon the idea of mixed education and to separate pupils on the basis of colour as the slave children could not keep up and it was felt that the white children suffered while marking time. The better pupils amongst the slave children were allowed to continue their schooling with the white children. In 1665 commissioner Van Rheede paid an extended visit to

the Cape of Good Hope and put the slave children back into education by appointing Jan Pasqual and Margaret, both coloureds, to be in charge of their education. It was stipulated that no white children would be allowed to attend the slave schools. Slave children under the age of 12 were separated from the older ones and the younger ones received "soete koek" when learning well. (Coetzee, 1975). Two years later, in 1687, Jan Pasqual was found guilty of serious misconduct and replaced as teacher. This seemed to be very much the pattern of education following the initial settling of whites in this country. A further problem hinged on the leadership: whenever their was a change of governor, the schooling suffered.

1.4 While still in the Cape, use could be made of so-called "teachers" who would mainly comprise adventurous students looking for temporary employment. These were often described as "adventurers and charlatans" but they managed to get sufficient teaching done to ensure that children didn't grow up completely illiterate.

1.5 The colonists, so set on their freedom, fell into a habit of moving boundaries to suit themselves. The French settlers were so concerned about the education of their children that they were negotiating for schools and teachers even before they had found proper shelter. The Dutch government was sympathetic but insisted that the French colonists were introduced to the Dutch language. Paul Roux, the French teacher, was replaced by Jacob de Groot who was fluent in both Dutch and French and his school, established in Drakenstein, served its purpose as far as the locals were concerned, but the boundaries kept shifting and the school became out of the reach of the farming community.

1.6 Once the schools had been left behind, the family was forced to become self-sufficient: a unit where the father was seen as the teacher and ruler of his family. In cases where the father had had a fair amount of education, the children could benefit from his knowledge, but very often the father had had limited education and the education of the children suffered.

The Dutch government was aware of this lack of education and offered the services of their "civil servants". These officials were temporarily relieved of their duties to help educate the children of farmers. The farmers entered into a contract with these officials and their duties did not only include teaching. They had to assist with the farm work as well and were seen as slightly above the level of the labourers. The salary was a pittance, but they received food and accommodation and tobacco and were allowed to add to their income by "moonlighting" - mostly as taylors.

1.7 De Chavonnes, appointed as governor in 1714, promulgated the first Ordinance in Education. This decreed that no "teacher" could be appointed unless he had been interviewed by the Governor and his Board. A suitable candidate had to be able to recite and quote large sections from the Bible as well as suitable prayers, and parts of the catechism book. This knowledge had to be imparted to his charges. He was also responsible for accompanying his pupils to church and to question them at length on the content of the sermon. The teacher had to separate boys from girls in the classroom and children had to be seated according to achievement. The teacher kept a register and pinned a set of rules outside the door. Holidays were virtually

non-existent: Wednesday and Saturdays were half-days and public holidays were accepted as "free-days" - other than that, no recess. The teacher was responsible for collecting the school fees, which comprised his salary. This Ordinance was aimed at excluding the "unwanted element" from education.

Following the Ordinance of De Chavonnes, a couple of public schools were established in the Cape. Where religion was still of prime importance, reading and writing were now included as being very valuable to society. Teachers had to be able to instruct their pupils in mathematics and singing. Although approximately 30 teachers were allowed to establish public schools, it was found that there were usually about 4-8 in operation. These schools often had as many as 136 pupils each, but the community was set on keeping the numbers as low as possible to ensure that teachers did not get sufficient funds to enable them to leave education.

1.8 After it was found that orphans and the children of poor parents were receiving no education, the church board was commissioned to see to these neglected children. It was not uncommon for children to be forcefully removed from their homes and then kept in the care of the church. These children were divided into three age groups: the very young were placed in foster homes as they needed basic training. The next age group could be useful and were placed with families where they could share the labour and chores while attending a church school at no charge. The third group comprised the young boys who had completed their schooling and was now ready to join some form of sevice or "work". These young men were placed, under a five-year contract, as an apprentice

to a qualified tradesman. As many of these church school pupils could not see their future in a trade, they were sent, as teachers, to the farm schools.

1.9 During an inspection of the boundaries of the Cape of Good Hope in 1743, Baron van Imhoff became aware of the serious shortage of teachers in these area. Farmers did not seem to mind moving into the wild and the Baron became concerned that they might be lost to civilisation. He insisted that the Church should follow these farmers and that the Church should accept responsibility for the education of these children. Churches were built to serve as large a community as possible and the Church Boards had to interview prospective teachers - hence the Church became, once more, very involved in education.

1.10 The 19th century saw a rapid increase in the white population and the need arose for a specific system in education. The Cape of Good Hope changed hands and the new English government was far too involved in politics, to spare even a thought for education. Schools, public as well as private, since the Middle Ages, had been seen as ideally coming from the Church. Both Protestants and Catholics were satisfied with education in the Cape as this was still totally Bible-centred. With the arrival of De Mist from Holland, governor Janssens was instructed to assume the responsibility for education on behalf of the government. Church boards would be replaced by the Governor himself, aided by four councillors. De Mist, in an effort to put education on a sound footing, undertook an extensive journey to as many of the remote districts as possible. In September 1804 he had carefully formulated a new dispensation in education which would benefit all

races and all levels of society. He saw education as the responsibility of the government and not the Church. De Mist, far ahead of his time, introduced an educational system which would not have been easy to implement, but which set a sound foundation for education in the nineteenth century.

1.11 With an English government once more in control, the ideals of De Mist were both modified and implemented. Governor Caledon became the "Supreme Director of the School Committee" and recommendations were received from various schools and committees, but the financial implications were impossible to meet. In an attempt to save education, his successor Cradock, tried to get the Church to control schools - once more. This worked well as a temporary saving grace.

1.12 With Cradock's term of office, the Dutch regime came to and end. The English language was propagated as the language indispensable to a future in civil service or government service and teachers, willing to teach English or through medium of English, received additional remuneration.

1.13 The arrival of Lord Charles Somerset and the British settlers brought an influx of Britons to South Africa. Amidst serious opposition, Somerset was determined to Anglicize the country and introduced English public schools which were totally state-subsidised and free to everybody. Dutch teachers were replaced by Englishmen of superior class and English became the only official language. This was not happily accepted by the Dutch, but some schools provided education in both languages and flourished as the colonists were eager to be introduced to a second language, but not at the

expense of their mother language. This gave rise to parents opting for private schools: where public schools came to a halt between 1830 and 1839, private schools increased from 39 to 94 within the same period. Lord Somerset tried hard to promote education as a government responsibility and appointed an impartial official, the Superintendent-General of Education (1839) and aided the establishment of schools in the Cape, Natal and the Boer Republics.

1.14 Education in larger towns was adapted to the needs of the community, but the scattered, extended rural communities posed problems. Itinerant teachers became a necessity and one-man schools followed. These were later changed to schools with hostels where children attended as weekly boarders.

1.15 The discovery of gold and diamonds led to rural communities being transformed into urban communities and once more education was subjected to vast changes including secondary education, and later technical and vocational.

1.16 The Watermeyer Commission (1863) disclosed that education was still very much Bible centred and that reading, writing and arithmetic were sorely neglected. They recommended extended Government aid to all schools on a "£ for £" system, which indicated that State input should be on a par with community input.

1.17 The Muir-regime started with the arrival of Thomas Muir, from Scotland, in 1892. He saw the entire educational system as sadly lacking organisation and structure - a well organised department of education being the first step towards better education. He

was in favour of school districts and school boards and saw education as the birth-right of every child and it should therefore be compulsory. After reorganising the administrative side of education, Muir gave his full attention to making the actual teaching worthwhile. He appointed inspectors to each school board district and in his own words (as in Coetzee, 1975 p.80)

> **"The ideal official is he who inspects because he wishes to know how to help ... towards the attainment of the best educational ends!"**

Muir recommended intensive educational surveys to determine how many children could be reached and how many were actually part of the system. Unfortunately politics once more proved to be detrimental to education when the Anglo-Boer War interrupted schooling in the Cape Colony.

1.18 The Transvaal and Free State had, to a certain extent, followed the educational system that was producing good results in the Cape, but being more sparsely populated, the Boer Republics had to contend with problems such as distance and the shortage of teaching staff. The discovery of gold led to an influx of people to the Reef and a certain favourable spin-off to education.

1.19 By 1924 the various provinces had drifted so far apart in educational policies that a need arose for the Union Board of Education to bring the divergent systems into line. This was found to be totally unacceptable and no merger ensued.

1.20 The present situation seems reminiscent of what has been happening: education in each of the provinces

seem to fit the bill where practised, and the provinces are loath to give up their specific system. Although progress has been made towards unification of at least syllabi, the various systems are still worlds apart.

2. EDUCATION IN NATAL

2.1 Although settlers like Farewell and Fynn had been trading in the areas now known as Durban and Pinetown since 1824, there was no thought spared for education until 1835 when the settlers in Port Natal decided to establish a town and to set aside some land for the education of the children. According to Article XV of the Regulations it was decided (Steenkamp 1941, p.16)

> **"That a convenient site be selected in the township for a free school, and that two thousand acres of land be reserved for its purpose, and that the said land be reserved on the right bank of the Umlaas River, at the foot of Munyabi".**

2.2 Shortly after this declaration contingents of Boers arrived in Durban and the Zulus started raiding and killing. Education went by the board as the settlers had to contend with warring impis. In 1845 Natal was annexed by the British Government and became a colony of England. The Boers withdrew to Pietermaritzburg. The Republic of Natal was proclaimed and divided into three main sections: Pietermaritzburg, Weenen and Port Natal. This stabilised conditions and education could receive the necessary attention.

2.3 Up to this point in history, the traders hadn't concerned themselves with education, but the English

settlers had made use of American missionaries and had included some "natives" into the system. The Boers, very set on religious education, concentrated on the reading of the Bible and left the education of the children to the mothers. "School" was normally at night, as the taming of the new country meant that everybody had to share in the farm labours and chores. Writing was poor and little time was spent on developing this skill. Arithmetic was very basic: plus minus and multiplication, but as writing posed a problem, mental arithmetic was encouraged.

2.4 Between 1845 and 1856 education was placed under the authority of the Lieutenant-Governor of Natal and thus under the jurisdiction of the Cape Colony. Johann Marquard was appointed principal of the first public or model school in Pietermaritzburg and a School Commission was formed to run the school and to make recommendations on education.

2.5 The first public school proved to be very successful and as the principal was perfectly bilingual, both Dutch and English children attended the school. The school had approximately 90 pupils per year.

2.6 Durban soon followed suit and a public school was built. This was open to all races and William Nesbitt was appointed as teacher. Up to the time of the establishment of this school, children of the settlers in Durban received sporadic instruction in reading and writing from David Lindley at a small school on the banks of the Umlaas River.

2.7 The School Commission of 1849 set the scene for education in Natal and to this day remnants of their suggestions and recommendations are found in our

educational system. Primary education received a considerable amount of attention as this was seen as the basis of sound education later. Dutch was taught on request only and English was considered the only official language - mother tongue education was never dwelled upon. Further to this they recommended training for teachers and two so-called "Model Schools" were built to introduce would-be teachers into the practicalities of the teaching profession. Teachers would no longer be paid from school fees as this did not result in a fixed income for a teacher: instead it was recommended that teachers be graded and that good teachers be paid more and it was up to the Governor to instruct the Treasurer to pay the teachers from the revenue received. The Governor was also responsible for obtaining books for the teachers to work from and had to institute a Permanent Board of Education to constantly review the educational scene in Natal.

2.8 Governor Scott, in 1859, impressed on the Cape authorities, that Natal, as a colony of England, should be receiving sufficient aid to keep education on a healthy footing. A committee was appointed to assist the Governor of Natal and on their recommendation School Committees were appointed in various districts to supervise the day-to-day running of schools. These committees had the power to determine school fees and parents who paid were allowed to vote in elections. (In the case of a rich man paying for several children - not his own - he was given a vote for each child he had paid for and this put the rich in a position of power when electing School Committees - a very coveted position). This system of School Committee alleviated the pressure on the Government of the Colony and is indicative of the democratic views of

Natal.

2.9 Further to the recommendations of School Commission and the Board of Education, School Committees would not exceed 5 members and should more members be needed, the Board of Education had to approve such a request. School Committees were powerful institutions and could hire and fire teachers as they saw fit.

2.10 It was clear that a Superintendent of Education was needed as a co-ordinator and Dr Mann was appointed. During his term of office there was a 600% increase of schools within a decade and these were classified under:

* state
* state-aided
* private

He was concerned about education in rural areas where a system of transitory schools was in operation. These schools seemed to have an average life span of 6 months. He insisted on state aid for these schools, in the hope that that would extend their existence. He propagated centralisation of education and saw School Committees as useful, but stressed that these committees shouldn't be given too much power as they were hardly in the position to judge teachers, when they weren't trained in that profession. He insisted on registers in schools and by being in constant contact with schools throughout the Colony, evolved an educational system which was unique, but appropriate to the people it was serving. He found that climatic conditions had to be observed in determining hours of education.

2.11 Dr Mann realised the desperate need for books in the Colony and started a book depot where books from England were kept for distribution to schools. Once books had been provided to schools, Dr Mann introduced an examination system. It was felt that routine inspections carried out by the Inspector were insufficient in determining

1. How much teachers were putting into education; and
2. how much children were getting from it.

Competition was seen as healthy motivation and bursaries were promised to hard working pupils. The Cambridge Board of Education admitted Natal to the Examination System of Cambridge from 1871.

2.12 Certain distinctive characteristics marked the Mann - regime:

2.12.1 Religious education was treated very casually - Bible reading was compulsory but no specific denomination was propagated.

2.12.2 Regular visits to schools by Inspectors of Education.

2.12.3 Regular, competitive salaries for teachers was advocated.

2.12.4 Dutch was slowly and unobstrusively phased out and replaced by English.

2.12.5 Boys and girls were separated in class and on the playground and separate schools were built.

2.12.6 Government aid was made available to School Committees who had to use this towards creating facilities to facilitate education.

2.13 Brooks, Mann's successor, sowed the seeds of compulsory education for all children, but this didn't materialise due to the discovery of diamonds and the subsequent "movement towards money" on the diamond fields. Although primary education showed a rapid increase in numbers, the secondary schools showed a very static picture. Grants-in-aid were to be paid on examination results - the so-called "Capitation Grants".

2.14 1877 Saw the first Education Act - Act 15 of 1877: "To make provision for Primary or Elementary Education in the Colony of Natal". This Act was the first attempt to structure education in Natal. Act 16 of 1877 followed, and pertained to secondary education. All state-aided schools were placed under the authority of the Board of Education. This Board consisted of 10 members, three of whom were elected as executives. The executive, having been in office for the longest period of time, would automatically become the chairman of the Board. The Board of Education had considerable authority and was responsible for a "healthy financial position" in each school in the Colony. Other than that, the Board met once a month to discuss appointments of principals and teachers, Government grants, examinations, set books and syllabi, holidays etc. A Superintendent - inspector of Education was demoted to Inspector and in this position had to report to the Board of Education.

2.15 Education in Natal had become very organised and systemised and even corporal punishment had been addressed: the principal was the only member of the school's teaching personnel who could give the culprit a good "dusting" and records had to be kept of such canings.

2.16 Primary or elementary education showed progress under this new centralised system, but high school or secondary education was suspect and a very high "drop out" rate existed. This was soon addressed by the Council of Education and districts with too many struggling little schools had to amalgamate. These schools and principals were then appointed by the Lieutenant-General and the schools became state-subsidised. School fees had to be paid by parents, but poor children could attend at a rate of 10c (1/-) per month.

2.17 The Council of Education set high standards for teachers in their efforts to get education on a sound footing. As early as 1884 teachers were prohibited from taking any political stance in public - a regulation that is applicable to this day. Another ruling of similar long-standing is that the principal had to complete confidential reports on each teacher. These had to reach the Council of Education before the end of each school year. Prospective teachers did an apprenticeship of 4 months at schools and then sat for an examination and could be allowed to enter the teaching profession at the discretion of the Superintendent of Education and the Council of Education. "Moonlighting" was prohibited as early as 1886 and it was recommended that teachers' salaries were increased and be made more competitive in relation to "outside" employment.

2.18 The Council of Education was in operation for 15 years and did excellent work. Education in Natal had become organised and was thriving. In 1893 Natal became an independent province and a Director of Education was appointed. He was responsible for education in Natal and was directly accountable to the Minister of Education. The Director was the top of the educational pyramid in Natal and was assisted by the Department of Education.

2.19 The Union of South Africa, in 1910, was followed by Provincial Boards of Administration. Act 5 of 1910 reinstated "Advisory School Committees" - in an advisory capacity only, and it seemed difficult to determine whether this was a curse or a blessing as the initial 17 committees seemed to be permanenetly overstepping their "advisory mark".

2.20 The Education Act 5 of 1910 determined that primary or elementary education be compulsory. Compulsory school-going age was set as 6-16. Stationery was supplied by the Department of Education and this brought education within the reach of every family.

2.21 As most of the teaching corps of Natal had to be "imported", it was decided that the training of teachers had become important and in September 1908 the first Teachers' Training College was started in Pietermaritzburg. Within the next 10 years 450 teachers had been trained in Natal and Durban. In 1910 the University College of Natal was established in Pietermaritsburg and affiliated to the University of the Cape of Good Hope - today known as the University of South Africa. In 1922 the Univeristy College of Natal opened a Durban branch, known as Howard College, largely donated by T B Davis, in

memory to his son, Howard, who was killed in World War I.

2.22 This was the situation of Education in Natal at the end of the first three decades of the twentieth century. Natal continued to build, on the foundations of 1877 and in the 1940's became aware of the needs of pre-school children and their need for stimulated supervision. Nursery schools were given grants-in-aid and inspected by officials from the Natal Education Department.

2.23 By 1941 Natal boasted of:

86 primary and 16 secondary English medium schools

4 primary and 2 secondary Afrikaans medium schools

28 primary and 10 secondary parallel medium schools

The biggest problem seemed to be the recruiting of teaching staff and married women and pensioners often kept schools going.

PRE-PRIMARY EDUCATION

1. TERMINOLOGY

1.1 The term "pre-primary" replaced "nursery school" (in Natal in 1975 - officially), and indicates education for 3-6 year olds.

1.2 "Kindergarten" was derived from the name used by Froebel in 1837 - he envisaged a garden or place of equanimity where children could grow in knowledge. Although this term is presently seen as referring to a pre-school class attached to a junior school, "the term infant school or kindergarten has until quite recently been used in South Africa to denote that part of primary education that embraces the first two years of a child's formal instruction". (Behr 1978, p.37) This is particularly true of the Cape Province.

1.3 "Nursery School" is the most frequently used term, indicating pre-school education/care. In Natal this term developed an unsavoury connotation as unregistered care centres laid claim to being "nursery schools", while employing unqualified teaching staff. In July 1956 Dr McConkey, the Director of Education in Natal, was requested by a deputation from the Natal Nursery School Association to lay down "definite and uniform" standards for all nursery schools. The Association submittted a draft of such standards as were found desirable Legislation against the unauthorised use of "nursery school" was requested. In April 1957 the report from the National Health Services Commission stated that "The Nursery School is an off-shoot of the modern conception of education. Its approach is educational rather than custodial ...."

The "nursery school" field expanded beyond all expectation (1947 - 4 schools, 1961 17 schools). In 1972 the Natal Education Department received the confirmation from Central Government that the provinces were responsible for nursery schools and with the change-over from government-aided schools to provincial nursery schools, a change in name was accepted and the "nursery schools" became "pre-primary" schools.

2. HISTORY OF NURSERY SCHOOLS IN SOUTH AFRICA

2.1 The Nursery School movement was the brainchild of welfare organisations and only came into being during the course of the 1930's. The country was in the throes of an economic depression and working mothers were desperate in their search of child care facilities.

2.2 The first nursery schools were established in Cape Town, Johannesburg and Pretoria with grants from municipalities and charitable organisations.

2.3 1934 saw the National Conference on pre-school education and a request for state support to place nursery schools on a more satisfactory footing. Five years later the Nursery School Association of South Africa was established - one of the founders being Dr Ruth Arndt, who felt that this Association should have the interest of all pre-schoolers at heart, irrespective of race or class. Their objectives were spelt out in their handbook, which also contained "standard and practical information for the establishment of nursery schools". (Third Edition, 1972). The Association exercised its influence in laying a sound foundation for nursery

school education and went to great lengths to update their handbook to keep up with a changing educational world.

2.4 In the foreword to the third edition, Prof. B F Nel stated that "the need for nursery schools is so strongly felt today, especially in larger cities ...", "... and in this century of industrial, technical, economic and social revolution, nursery schools are of the greatest significance not only - and especially - as educational institutions but also as re-educative or pedotherapeutic institutions" (1972).

2.5 The Wilks Commission in their report on education in Natal, did not feel that nursery schools should receive a subsidy from the State, but that use should be made of classrooms attached to infant schools. This Commission also recommended mother tongue instruction, but agreed that parents had the final say.

2.6 The de Villiers Commission was "unequivocally in favour of a system of pre-school education supported by the State". The four provinces, as from 1945, received compensation from the State Treasury Department for expenses incurred by nursery schools (grant-in-aid) and were further compensated for the erection of nursery schools.

2.7 Nursery schools were not included in the four phase system of schooling in South Africa and the demand for pre-school care was such that welfare organisations and private institutions still had to be involved in establishing nursery schools.

2.8 A new policy for nursery school education was announced in 1967 in the National Education Policy Act No. 39 of 1967: nursery school education for white children would become the responsibility of the four provincial administrations and thus be under the control of the various Directors of Education. Nursery school education was not compulsory, but should be available to all children between the ages of 3 and 6 years. Private organisations could establish nursery schools, but registration, with the Education Department, was compulsory. No certificate was permanent: it was subjected to periodic inspections of buildings, staff, equipment, enrolment and the educational programme.

2.9 The Ordinance (no. 17 of 1969) defined pre-school education as - (Behr 1988, p.5)

> "education provided for the purpose of promoting the harmonious development of the infant in respect of his spiritual, physical, and intellectual welfare, as well as his social, aesthetic, moral and religious moulding".

2.10 The four Administrators were given the power to establish and maintain nursery schools in areas where they were warranted and where the enrolment did not drop below 20. Fees were compulsory and determined by the Administrator. It was an offence to operate without being registered with the relevant provincial education department.

2.11 Nursery school education was not compulsory, and parents were held responsible for fees. Provincial "control" of nursery schools did not prevent many an institution to make a good profit at th expense of the parents, while the so-called "educational

programme" was left to untrained teachers. The registration of nursery schools went a long way towards setting standards and ensuring that parents received better pre-school care for their children.

2.12 As nursery schools were mushrooming all over the country there was an urgent need for qualified teachers. The universities of Pretoria and South Africa introduced three-year diploma courses, as well as one-year post-graduate courses. Some teachers training colleges introduced an added fourth-year to the three-year diploma - thus a year for specialising in pre-basic education was provided. (HSRC Report No. In 13, 1970).

3. NURSERY SCHOOLS IN NATAL

3.1 The period July 1956 to September 1963 sees the official beginning of nursery schools in Natal (according to the archives of the Natal Education Department). Before this nursery schools were very much in the hands of welfare organisations and private entrepreneurs who saw child care as a form of income. The emancipation of the mother in the family had its after effects in Natal and like the rest of the country Natal tried to control pre-basic care. The Natal Nursery School Association Liaison Committee met with Dr McConkey, the Director of Education in Natal. The minutes of this meeting reflects, in the files of the Natal Education Department, as the founding of European nursery schools.

3.2 At this meeting in Pietermaritzburg, the Director was requested that the per capita grant be increased or the salaries of teachers be paid - that would be

in approved posts. This was not acceptable as "it would invite the opening of too many nursery schools by too many organisations which wanted to influence children at this age". (File NED 1/P/1). The quarterly grants continued but an increased rate followed shortly.

3.2.1 The delegation further requested a more definite and uniform set of standards to be embodied in a Provincial Regulation so that schools knew what to aspire to. Mr Emary (one of the delegates from Durban) had a draft of standards which had been approved by the Nursery School Association of Natal and met with the approval of the Nursery School Association of South Africa. It was strongly felt that existing institutions couldn't be forced to comply with the new set of standards but should be "banned" from using the name "Nursery School" unless they registered with the Natal Education Department - in which case all the requirements had been met.

3.2.2 The protection of the name "Nursery School" had become very important and Mr Humphrey-Jones (from Durban) inquired about the possibility of legislation against the unauthorised use of the term.

3.2.3 There were several requests concerning other race groups, but as this dissertation is focusing on white pre-school only, that part will be omitted. An increased grant-in-aid, based on numbers, was accepted. Schools could qualify for an A certificate in which case a per capita grant of £20 per annum was received.

3.2.4 Teachers or staff members were entitled to become contributors towards the Natal Education Department Pension Scheme.

3.2.5 The Natal Education Department stated unequivocally that registered nursery schools were non-profit making and established exclusively for pre-school children. Once school going age had been reached, children had to attend public schools.

3.3 In 1956 it was decided that the average attendance per annum would determine the grant-in-aid and that this would still be paid quarterly at a per capita rate of £10 (±R20).

3.4 Nursery schools mushroomed in Durban and Pietermaritzburg and the feeling became stronger that Central Government should be solely responsible for nursery schools.

3.5 The National Health Services Commission stated in a report (1955 - 57) that:

> **"The nursery school is an off-shoot of the modern conception of Education. Its approach is <u>educational</u> rather than custodial ....."**

3.6 Space for nursery schools was very limited and local authorities and welfare organisations battled to find suitable accommodation. In a meeting with the Director of Education it was suggested that where the circumstances demand, use should be made of infant or junior schools and nursery schools attached to these schools.

3.7 In 1959 Miss A E Walter and Miss C M Coetzer (Natal Inspectresses of Infant Work) expressed concern about the inadequate salaries of trained nursery school teachers.

3.8 In 1967, in a memorandum to the Bureau of Statistics, the following schools were listed as nursery schools registered with the Natal Education Department.

DURBAN

Clair Ellis Brown
Clarence Road
Davida
Eleanor Frank
Glenridge
Harrington Thorn
Ilana
Montpelier
Pandora
Sharona
Tree Tops
Woodlands

PIETERMARITZBURG

Jacaranda
Oribi
Three Oaks

REST OF NATAL

Cowies Hill
Pixieland
Kammaland
Port Shepstone
Westville

3.9 Nancy Lawrence, subject Inspectress: Infant Teaching and Farm Schools, insisted that **"All qualified Nursery School teachers employed in institutions for the care of pre-school children should be paid according to the scales of other qualified teachers and their years of service should be recognised"**

and

"Wherever necessary public Nursery Schools should be established and maintained".

This was followed by an investigation by the Natal Education Department into Pre-Primary Education and it was found that there was a shortage of more than 300 teachers and that children were at the losing end. Teachers were entering primary schools as a result of salary scales, pension schemes and medical aid schemes. Between 1970 and 1971 teachers salaries were subsidised with R100 and the following two years that was increased to R120. In many cases teachers worked for the subsidy as that was all that could be afforded.

3.10 As early as 1969 a memorandum was tabled at the Administrators Conference, suggesting that "Reception Classes be attached to Infant Schools - one year prior to school admission". There was a strong feeling that the children with the greatest need for nursery education - those from culturally deprived homes - may be excluded from the advantages of a stimulating and enriched nursery school environment.

3.11 The 4 October 1969 - in a policy statement as regards to Nursery School Education, - the Director of Education stated that Reception Classes would be primarily for

a) promotion of school readiness and for children who according to tests are not yet ready, but are eligible for admission into junior school; and

b) bridging the gap between home and school.

3.12 In March 1970 the Nursery School phase entered an era of fast movement with the availability of funds for suitable accommodation on a R for R basis, and the introduction of a three-year diploma in nursery school teaching. This was followed by the increase in salary subsidies for nursery school teaching staff.

3.13 In October 1973 Mrs I Noel was asked to draw up a comprehensive memorandum on the position of nursery schools in Natal, and in 1975 this was tabled. She identified four types of nursery schools.

1. provincial nursery schools
2. government-aided nursery schools
3. provincial-controlled nursery schools
4. private nursery schools

At the same time it was decided that nursery schools within these four categories differed largely from care centres and that a change in name (Pre-Primary) would put everybody in the picture as to where pre-schoolers could and should be placed. The "nursery school" was changed to "Pre-primary" and it was decided that:

"1. Pre-primary education shall not be compulsory.

2. Pre-primary education shall not be free.

3. **That the Natal Education Department shall not be obliged to establish schools or take over private schools",**

but the Director of Education, Mr P R T Nel proposed that:

"1. All teaching staff be employed and paid by the Natal Education Department, and that

2. buildings and maintenance of buildings be the responsibility of the school committees".

3.13.1 In that year R400,000 was paid out in building grants to pre-primary schools. It was further suggested that schools determined fees on the income of parents. e.g.

Parents below R3,000 income per annum should pay R6 per pupil per term;

Above R3,000 but below R5,000 - R15 and above R5,000 - R21 per term.

3.13.2 A principal shall be appointed to every registered pre-primary school by the proprietor and this had to be approved by the Director of Education. A school had to have 23 children to merit the appointment of a principal, 24-45 - principal plus 1 teacher; 111-120 - principal plus 5 teachers.

3.13.3 Pre-primary schools had to operate for 190 school days and no school day should have less than 4 hours of teacher - involvement.

3.13.4 Supplies could not be obtained from Central Provincial Stores.

3.13.5 Department of Psychological Services will assist where necessary.

3.14 Teachers, wishing to become permanent employees, had to comply with the following requirements:

i) South African Citizen

ii) Good character

iii) Declared by the Director as free from any mental or physical disease or defect or infirmity.

iv) Must submit evidence of academic and professional qualifications, satisfactory to the Director.

3.14.1 The salary structure for permanent teachers was -

M+1	R2 220 x 210 -
M+2	R2 430 x 210
M+3	R3 060 x 210
M+4	R3 690 x 210

3.14.2 At this stage Natal boasted 51 registered pre-primary schools, accommodating 3 099 pre-schoolers. The grant/subsidy for buildings were increased to R40 000 on a R for R basis.

3.15 Pre-primary education had become a well established informal phase within Natal education and it was generally accepted that school- readiness was its main objective, although no direct instruction or formal teaching was permitted. In order to establish some form of uniformity, much time was spent by the inspectress, Mrs I Noel in getting

schools together and giving guidelines as to what was expected. Much emphasis was placed on record keeping and incidental learning. Piaget was accepted as role-model for the teachers: create a stimulating environment for the pupils and observe. These observations had to be written down in considerable detail.

3.16 Pre-primary education in Natal was certainly very advanced and in many ways Natal can be seen as leaders in the pre-school field. Pre-primary schools differ vastly in approach, but in character they are educational and not custodial.

Since 1975, when pre-primary teachers joined the ranks of their colleagues as employees of the Natal Education Department, this group of teachers has been known by the other phases in the educational field as "entusiastic and dedicated". As a group they isolated themselves and concentrated on the task in hand.

4. RECEPTION CLASSES

As has been explained, this was a direct off-shoot from the de Lange Commission's report on education. Reception Classes, as seen by the Natal Education Department, had a pre-school colour, but did not venture into the same target area and was therefore not on a competitive basis with or a threat to pre-primary schools.

4.1 Financially Reception Classes were not envisaged as a threat: an initial R6 000 per school was allocated for equipment and thereafter the schools received a "slightly increased monetary allocation to provide for further requirements". Two qualified

teachers per school would incur a further expense of R579,100 - but all fees (R50 per term per pupil) had to be sent to the Natal Education Department.

4.2 Initially it was thought that these Reception Classes would subsequently be introduced into other schools, depending of course on the success of the experiment and the needs of other schools.

4.3 The rationale behind these classes did not include interfering in the waiting lists of other schools: **"these classes were only to be established in areas with a need for them, that is, areas where available pre-primary facilities cannot cater for the demand".** (Mr W van Rooyen, Director of Education).

4.4 The four Reception Classes made excellent progress and pretty soon schools were clamouring to have similar classes, and the Natal Education Department was inundated with requests for this type of pre-school education. This reply (June 1985) was the standard reply to similar requests:

> **"Until greater clarity is obtained about financing of pre-primary education by the government, this Department unfortunately cannot see its way clear to creating any new provincially controlled/subsidised pre-primary schools or any new Reception Classes at existing primary schools".**

4.5 As the economic squeeze continued, and some pre-primary staff made redundant or posts withdrawn without negotiation, the Reception Classes rocked from a very successful experiment to a luxury that the Education Department's budget could not afford.

4.6 Inspite of its success, the Director of Education, Mr A Olmesdahl, informed principals of schools with Reception Classes that this experiment will come to an end at the end of 1990, and that these teachers will no longer be employed by the Department of Education in their capacity as Reception Class teachers. They could apply for alternate teaching posts, but will not receive preferential treatment. (Most other pre-primaries would lose, at the most, one teacher).

4.7 Parent committees, or Management Councils, could continue the phase, but could expect no assistance from the Natal Education Department: Reception Classes form part of pre-basic education and is not compulsory, hence no support. Principals and teachers alike regret the decision of the Department to dissolve Reception Classes as something so worthwhile should be extended and not discontinued. Furthermore it is felt that Reception Classes should be treated on a par with pre-primary schools: a gradual reduction in staff. Urgent requests by teachers and parents and even the School Psychological Clinic couldn't produce a stay of execution.

4.8 The opening of the Reception Classes and the Natal Education Department's instruction of "identification of problems" led to a syllabus on school readiness. This excellent document was later, after implementation in the Reception Classes, distributed to all pre-primary schools for use in their pre-school classes (or top Groups).

Reception started in the 2nd week of March 1983 and in November of that year the 4 schools were informed that:

* children/pupils admitted had to turn 5 before the 30 June;
* schools no longer had to wait for pre-primaries in the areas to fill their schools i.e. prospective pupils no longer came from waiting lists of other schools and;
* prospective pupils were no longer required to have been enrolled at pre-primary schools for the last 6 months.
* applicants for the following year could be interviewed as from September and;
* advertisements in the local press had to be submitted to the Natal Education Department for approval;
* two Reception Classes to a school with 24 pupils to a class;
* at the discretion of the District Inspector these numbers could be brought down to 20, but never less;
* fees would be annually reviewed, but kept as low as possible;
* children admitted at the beginning of every year i.e. the new intake, had to be admitted in groups over a period of 3 weeks, (this will be referred to again in the next chapter).
* no further Reception Classes will be established in 1984.

Inspite of considerable interest in the project and considerable success especially in the case of the two English classes (the reason for this will be discussed in the following chapter) the Natal Education Department did not open any more Reception Classes. All requests were turned down with:

"The Department is awaiting a decision from the Central Government with regards to the provision of the "Bridging Year" (21/02/86)"

Following the Report of the de Lange Commission, Natal received visitors from other provinces to observe the Reception Classes in operation. In a letter of thanks to the Director of Education of Natal, Dr H A Mocke, of the Department of Education and Training, wrote the following:

"Die besoek was vir ons van uiters groot belang omdat ons hopelik binnekort self die brug-periode sal moet invoer om ons leerlinge skoolgereed te maak.

Ons was beindruk met die pragtige beplanning, deeglike voorbereiding, goeie organisasie en effektiwiteit by al die punte waar ons besoek afgelê het. Die wyse waarop die kinders reageer, was die beste aanduiding van die besondere effektiwiteit en sukses wat u behaal".

(1086/09/02)

In the same year Mr W van Rooyen, then Director of Education, was once more approached by officials as to how to reply to the increased inquiries into the extention of Reception Classes to other schools. His reply:

"Please advise them that this is out of the question at present. We are awaiting Government policy on pre-primary education".

In 1987 the school readiness syllabus which, up to then had been confidential, was accepted as an "approved policy document" and was introduced in all pre-primary schools. (This document will be discussed in the Chapter on Possible Causes of the Results and **ANNEXURE** 3).

Numerous requests for the extention of the Reception Class project were being received, as well as a request for a third class, at the school's expense (the NED had to pay a teacher only), but these requests were turned down with a plea of poverty.

In a reply to The Grange's third consecutive appeal for a Reception Class, the Deputy Directory of Education, Mr Deane, said: (5/4/3/4)

> **"While fully acknowledging the educational benefits derived from pre-primary schooling, the Department is unfortunately unable to consider any increase in its financial commitment to this non-compulsory school phase. No new provincially controlled pre-primary schools or Reception Classes at government schools can be created at this stage".**

In cases where the junior teachers found it impossible to commence formal teaching before July of that year due to the children's total lack of basic skills, the Deputy Director suggested that the teaching staff be involved in "**some sort of voluntary school readiness programme .... to be run during the 4th term, possibly on two afternoons a week as an extra-mural involvement by teachers**".

In November 1989, inspite of the success of this project, the Reception Classes were informed that the experiment had now come to an end. As parents had already been notified that their children had been accepted, for the following year a stay of execution was granted until December 1990. The four schools were further notified that should the parents wish to continue these classes, the Management Councils must accept full responsibility for the private financing of these classes. As these classes were originally introduced in these

areas for exactly the opposite reasons, it seemed that this was in fact defeating the whole purpose of exercise.

THE RATIONALE FOR PRE-SCHOOL EDUCATION

1. INTRODUCTION

1.1 To the uniniated the entire pre-school emphasis must seem totally over-exaggerated and blown out of proportion. Pre-school education has been spot-lit by the press and eager campaigners have made their voices heard to encourage the powers - that - be to introduce a "compulsory" form of pre-school training, but success has avoided the cause up to now.

1.2 In the educational field it is accepted that, for a child to reap the full benefit of formal education, a certain level of "school readiness" much have been achieved. Children need specific learning experiences before formal, structured "teaching" can take place. Although there was a strong movement towards "the-school-ready-for-the-child-and-not-the-child-ready-for-the-school" in the 1970's, the 1980's and the financial squeeze on education showed that children now had to be in possession of some "basics" as education is costly and the slow process of "getting-ready-in-your-own-good-time" not viable. The school can to some extent be ready for the child, but it has become pie in the sky to expect schools to facilitate readiness and simultaneously provide formal education.

1.3 The variety of pre-basic educational institutions and the consequent variety of readiness levels, complicate the initial introduction of children into the formal phase of education. Bloom and Davies (1965 p.10) claim,

"What is needed to solve our current as well as future crises in education is a system of compensatory education which can prevent or overcome earlier deficiencies in the development of each individual ... It is a type of education which should help socially disadvantaged students without reducing the quality of education for those who are progressing satisfactorily under existing educational conditions".

Children have basic needs and there is unanimous agreement that these basic needs should be satisfied to set the stage for the more direct learning or higher-level functioning to take place. Children do not come to school equally prepared for learning and pre-basic education and purposeful intervention can limit the discrepancies in readiness levels, and ensure a more "equal start!"

The home environment is the child's only significant contributor towards physical, emotional, social and intellectual maturity. Children from stimulating homes are motivated and rewarded and the desired responses are continually reinforced. Motivated children find pleasure in learning. Bloom, Davies and Hess (1965 p.16) feel that "all later learning is likely to be influenced by the very basic learning which has taken place by the age of 5 or 6". Gesell (1925) contends that a child's mind will never advance or progress as rapidly as in those formative pre-school years.

Not all children are fortunate enough to be subjected to stimulating homes and concerned, caring parents. Pre-school education is more freely available to children from good homes, as solicitous parents will make provision for some form of pre-basic education. Bloom, Davies and Hess (1965 p.15) have found that:

> **"The size of the family, the concern of the parents with the basic necessities of life, the low level of educational development of the parents, the frequent absence of a male parent, and the lack of a great deal of interaction between adults and children all conspire to reduce the stimulation, language development and intellectual development of children".**

Children from disadvantaged homes cannot utilize the opportunities offered by primary schools. Studies in the U.S.A. have proved that methods and materials used to enhance teaching in conventional schools for normal, average children, have had no effect on disadvantaged children. The children lack particular learning experiences and are linguistically backward and therefore experience gaps between the task and the maturity or readiness for the task. In the R.S.A., as in the rest of the Western World, school practices cannot overcome the initial differences - instead, what has started as small differences, show tendencies to become cumulative deficits, leaving the disadvantaged child with an ever-increasing gap. This is the start of a vicious circle: the child shows very little initial progress and has difficulty coping and getting positive feedback from the the adult and becomes more alienated from the school programme. The child turns to his peers for rewards and becomes even further alienated from the learning process. Bloom, Davis and Hess (1965 p.22) claim that:

> **"The first three years of the elementary school are critical. If learning is not successful in these years, the entire educational career of the child is seriously jeopardized".**

Continuous failure can be more damaging than the actual failure at school. The child's self image can be permanently scarred and with that his

attitude towards his environment. The cumulative deficit of the child should be arrested in his pre-school years and this can only be done as intervention by qualified teachers in the pre-school situation.

Continual reference to "disadvantaged" children may raise the question: are all South African children disadvantaged? The answer is no (not yet) but the tendency is towards children becoming disadvantaged due to the present financial situation in the country. Any average dispersion curve will show that merely 25% of a country's entire child-population will be in an advantageous position, 50% will be fairly average, while the other 25% will be very disadvantaged; 75% can surely claim the same privileges as the fortunate 25%? Where homes cannot provide, it is up to the schools (and government) to facilitate basic learning by creating an opportunity for "quality" pre-school training/learning. The basic problem constitutes creating an environment where each child can proceed from his/her own level and without the pressures of formal learning to a level where he/she can eventually learn as well as other children and under similar conditions.

In "Found: Long-term gains from Early Intervention", Bernard Brown (1978 p.11) summarises the situation in the USA, but the country could well have been the RSA:

> **"In the intense competition for this nation's resources the priority for children faces dwindling support. At a time when teenage crime and delinquency is at the highest in our history and the reading level of the poor in public schools is at an all time low, the suspicion is**

increasing that if Americans do not outright dislike their children at least they ignore them".

The very same applies to South Africans: money is made available for everything, but Pre-school education is facing execution, and this while it is merely assisting the parent in providing the child with the basic skills needed to ensure a smooth start in elementary education.

The point has been made that pre-basic education does not replace parental input, but supplements it. Children need quality education from the start and with a home-school partnership, the child will be the beneficiary.

The rationale for pre-basic reducation i.e. pre-schools can be summarised as:

* providing a programme resulting in school readiness.
* identifying "at risk" children
* initiating preventative measures to avert cumulative deficits.

2. SCHOOL READINESS -

2.1 This has certainly become a very frequently used word in education, and indicates adequate preparation for school. Various definitions can be given, but as a definition has already been given in "Explanatory Notes/Glossary" it will suffice, at this point, to quote Downing and Thackeray (1975 p):

"readiness" for any kind of learning is defined as the stage in development when, either through maturation or through previous learning, or both, the child can learn easily and profitably".

2.2 According to Clark and Cheyne (1979) the concept of readiness varies from country to cuntry and time to time and even from school to school. Readiness within a particular institution such as a school is often based on the expectations of the teachers and this could have been influenced by what has been offered, on entrance, by the majority of children.

Rose and Berlin (1978) sees "readiness" as the possession of a number of complex skills being the prerequisite to cope with the demands of the teaching/learning situation. Reilly and Hofmeyr (Report 0-167) add to this that:

> **"without a particular positive attitude towards formal education which is characteristic of school readiness, it is doubtful whether favourable progress will be made at school".**

2.3 School readiness hinges heavily on the upbringing and informal education a child received from birth and leaves him with the basic skills which are the foundation of learning. Inadequate school readiness is, according to the HSRC reports, primarily caused by environmental deprivation. Biesheuvel (1943 p. 80-81) claims that:

> **"those levels of development at which subtler environmental influences might provide further stimuli for growth, will never be reached" in deprived environments.**

Feuerstein (1979 - 1981) has found that environmental deprivation or cultural deprivation can affect the adaptive capacities of a child. The child, through the lack of intervention of a significant person such as a parent, becomes alienated from this in that skills and habits are

not initiated by transmission processes. Feuerstein (1979 p.39):

> **"Alientation is reflected in a disruption of intergenerational transmisison and mediational processes".**

2.4 The child who has not achieved the required level of readiness, normally becomes a dropout. In todays world progress at school is seen as the universal criterion for the child's successful development towards independence. According to UNESCO's International Conference on Public Education, in Geneva (1961 : 75) "even under the best conditions parents can no longer meet, on their own, all the educational needs of the young child".

The aim of pre-basic education should be the optimal development of the young child's potential, culminating in school readiness.

2.5 Nowhere in any discussion of the term "school" or the functions of the school has it ever been stated that a school per se is responsible for the readiness of a child to start the formal learning process. Simon and Taylor (1981 p.118) state that "... the major purpose of education is to help the young to understand and participate in their own society". Jarolimek (1981) sees the functions of the school as being: training of the mind, teaching of the basics, adjusting learning to fit society, problem solving and critical thinking, teaching for social change and education for self-actualisation". To enter this learning phase, certain skills are required - a prerequisite, in fact.

3. PRIME CONSTITUENTS OF SCHOOL READINESS

The prime constituents of school readiness are:
Physical development
Social development
Emotional development
and Cognitive development

3.1 PHYSICAL DEVELOPMENT

Many important human activities are dependent upon the co-ordination of muscular movements. Motor performances are not always innate: basic patterns of movement must be learned and taught as the individual's self-maintenance depends upon these movements. At pre-school age children learn movements and motor acts that will be utilised in future learning situations.

3.1.1 Physical development is seen as basic to other development: organising the body in space is fundamental to the child's view of himself within his environment. The success with which large motor activities are executed can determine the child's self-esteem as well as his acceptability to his peers.

Todd and Heffernan (1970 p.255) found that:

> **"especially during the pre-school years when children are so physically active, a child's feeling about himself is tied in with his physical skills. Not only does a child build feelings of self-confidence in connection with his physical activities, but he also improves his ability to get along with other children. Using a limited number of pieces of equipment involves taking turns and sharing".**

Physical activity will further develop persistence and the awareness of limiting criteria.

3.1.2 Motor skills have importance to the individual as it leads to independence and are essential to daily living and survival.

3.1.3 Three dimensions in motor performance have been distinguished: fine/large
continuous discrete and
open loop/closed loop.

3.1.4 While large motor activities often involve the movement of the whole body, fine muscle control involve activities of the wrist and fingers, which require extreme precision. Fine motor skills involve more repetition to attain perfection than gross motor activities. Fine muscle control, therefore, would involve preplanning and direct intervening in the form of mediating by an experienced adult.

3.1.5 Gagne (1977 p.208) says "**a discrete motor task is typically one in which a particular movement is made in response to a particular external stimulus**".

In contrast a continuous task requires the individual to assess his movements continually and change movements to the stimuli. Where discrete motor movements would be very straight forward, continuous movements would be more complicated and therefore require more careful thought.

Feuerstein (1979) found that specific impairments hampering cognitive growth included lack of spatial organisation and the impaired need for accuracy and precision.

3.1.6 Closed-loop motor activities involve large, continuous movements that continue without any input from continued stimuli. Open loop activities are practically more useful and largely influenced by external stimuli e.g. writing that appears on paper will immediately give the writer feedback on how successful the movements are.

3.1.7 Learning of skills typically progress through certain stages - from incompetence to precision. Learning physical skills do not involve observation only: motor skills require experimenting and repetition to reach smooth execution. It is obvious that elementary skills will precede sophisticated skills as there are simple tasks or activities that must be mastered before complex activities can be attempted. Gagnè (1977 p.219) sees the most obvious feature of learning a skill, to be practice. With practice greater precision can be attained.

> **"Practice is necessary because only by repeating the essential movements can the learner be provided with the cues that regulate the motor-performance".**

3.1.8 Useful motor skills are often complex as they may be a combination of a number of part-skills. In learning finer motor skills

a child would have to learn part-skills first by separate practicing. New skills could require new basic skills and could have very little in common with any previously taught skills: a child must therefore be taught to assess each new skill on its own merits and not to expect links between skills.

3.1.9 Motor movements are often triggered by verbal instructions: these serve as cues to the movement and can assist in defining what is expected of a child. Similarly pictures are used to motivate movement and separate pictures can indicate the sequence of the movement. Children observing a demonstration of motor activity by an expert, are motivated into following the example and thus acquire the skill.

3.1.10 The educational implications of motor activities must by now be obvious, but it must be added that physical development cannot take place in isolation: understanding and comprehension form an integral part of physical development, i.e. physical development is closely linked with cognitive development. Remediation of physical development should be completed before the child starts formal education as the school will build on the learned or acquired skills.

3.1.11 Bloom, Davis and Hess (1965) point out that no child could or should be expected to learn under conditions that will nullify the

efforts of the teacher e.g. hunger, fatigue, disease, or impaired bodily functions. Bloom, Davis and Hess (1965 p.9) found that:

> **"The adequate meeting of the basic needs merely sets the stage for the more direct attack on the problem of learning in the group".**

Maslows hierarchy of needs confirms this.

3.1.12 Large and small muscle development in the pre-schooler depend on the environment. The child observes and practices and experiments. Play is an integral component of education and involves self-teaching. The availability of a variety of raw materials will stimulate further experimenting and thus further practice. Cohen and Rudolph (1977) found that play leads to discovery and Piaget saw this discovery as basic to the learning process involving assimilation and accommodation. The development of co-ordination and manipulative skills depend on the accessibility of appropriate equipment and it comes more naturally in a play situation where informal learning can take place. Adelman and Taylor (1983) found that the characteristics manifested in persons with learning problems included poor co-ordination.

3.1.13 Co-ordination or the lack of co-ordination can detrimentally affect the child's future as tests of mental ability often include drawings. Goodenough (1926 p.80) concludes that:

> "drawings afford a means for the study of mental growth which is of value both to the practical educator and the psychologist".

Clark and Cheyne (1979 p.51) found that:

> "the tests concerned with drawing and copying of shapes and figures and visual short-term memory are the ones where the nursery school effect was significant".

3.1.14 In conclusion: Reilly and Hofmeyr (HSRC) in their publication on "Pre-primary Education in the RSA - fundamental reasons for the need for pre-primary Education" define school readiness as:

> "The concept of school readiness implies that a child's physical and psychological development, including his general attitude, is such that in accordance with his own abilities he is able and willing to understand, accept, tackle, carry out and complete the task demanded by formal education and that this approach to tasks is maintained so that perceptible progress is made".

To this is added that the child "should be physically healthy, large and small muscle co-ordination and eye-hand co-ordination should be sufficiently well-developed".

3.2 SOCIAL DEVELOPMENT

Pre-school educational philosophy revolves around basic tenets:

the uniqueness of each child;
change coming through growth;
growth follows orderly sequences;
all aspects of development are inter related;

behaviour is motivated by both extrinsic and intrinsic factors;
that cognitive development must be nurtured and that there are critical periods in development.

3.2.1 The chronological age group 2-5 years is seen as a critical period in the development of a child. On entering the world, the child is part of a small unit - the family. Interaction is limited to a relatively small number of people. This is the start of the process of socialisation.

3.2.2 "Social learning" (as seen by Bandura) is a process of modelling behaviour and entails interaction with both adults and peers. Within the critical growth period prior to entering formal education, the child needs to build knowledge of himself and his environment. By the age of 5 a child is expected to have sufficient knowledge of his social surroundings to interact in acceptable ways.

3.2.3 The HSRC research on pre-primary education sees one of the components of school readiness as being "sufficiently independent to venture into an expanding social world". Learning and development occur meaningfully as complimenting components and through creating a "small world" the child learns, through interaction in the form of play, how to handle himself and his environment. Where the child has been the centre of the family unit, the wider social environment brings about the change from egocentricity to the acceptance of the equal importance of others.

3.2.4 Interaction with adults outside the family unit has advantages for the child:

an opportunity to test his acquired knowledge;

a "second opinion" on community values;

a role model in addition to the family role model.

In short, the horizons are broadened.

3.2.5 Interaction with his peer group puts pressure on the child to conform to the rules of the group. Simon and Taylor (198 , p.118) say:

> "...that the major purpose of education is to help the young to understand and participate in their own society". They continue to say (p.121) that "...the young and immature need to be assisted towards the achievement of autonomy".

3.2.6 Jarolimek (1981 p.7):

> "It is often said that schools mirror the society in which they are found. What this means is that the major values and concerns of the society are reflected in schools".

Children in a "miniature society" learn the basic rules and the adaptibility required for accepting changes. Children spending their first period of critical development within the confinements of limited social environment such as the home, have limited social experience and find sharing and change difficult concepts.

3.2.7 Lack of social interaction limits the childs concept of himself within society and thus his self concept. The distinct disadvantage that follows is the lack of confidence which manifests in unplanned, impulsive behaviour.

3.2.8 A further negative result of limited social interaction is limited language experience. The significance of language development will be discussed under "Cognitive Development", but it is obvious that language stimulates language development and that a limited social environment will result in limited use of language and thus further development is impaired.

3.2.9 Fabian (1985) sees communication as a critical strategy for competence within the classroom as it affects school interaction. Group learning/teaching is an integral part of elementary education. Luria and Vygotsky (1934) claim that the higher mental functions of children are formed during the interaction with the environment and specifically through hearing adult speech. Socially withdrawn children receive very little peer or adult stimulation.

3.2.10 Play, the joyous work of childhood, is seen as an activity that satisfies many needs. Children in our society are passively entertained and the role of play as part of social development has become a very low profile activity. Cohen and Rudolph (1977 p.103) have found that:

> **"Play is a totally integrating experience and one that must be taken seriously" and (p.118)**
>
> **"Children take what they are ready for from their environment, absorb it, and then give it back through play in the form they best understand".**

Learning through play is something that comes naturally and children deserve the opportunity to discover and explore prior to their entering formal education.

3.2.11 Play at pre-school level not only leads to discovery, but builds the bridge to social relations, and thus broadens social perspectives. Within a pre-primary environment, play becomes purposeful as it becomes the facade for the development of a multitude of skills. At pre-school level teachers enhance learning through play by subjecting children to stimulating "play centres". Pre-school education can never replace the good, stimulating home, but very few parents are in the position to offer their off-spring the selection of social stimuli that they can enjoy at a pre-school.

3.2.12 Play encourages creativity and imaginative use of equipment. Play creates the opportunity to play out real life roles and experiences. Through play children can express their pressing needs, release unacceptable impulses and work out problems while experimenting with various solutions. The interaction with other children often brings the knowledge that others-are-having

-to-cope-with-the-same-problems and this builds confidence. Symbolic play, according to Cohen and Rudolph (1977 p.113)

> **"enables children to transform the world, as it were, in a manner they find self-satisfying because it fits their level of understanding at a given point of their experience".**

3.2.13. The role of play material cannot be underestimated: it enhances imaginative play and offers wider exposure to cognitive experiences. Effective group play need continued adult guidance as all areas needs to be explored. The cognitive value of play will be further discussed under "Cognitive Development"

3.2.14 In conclusion it can be said that social interaction is essential to the child; sharing actions and ideas with other children gives the child a growing understanding of his world and himself.

3.3 EMOTIONAL DEVELOPMENT

Emotional development is closely linked to social development, and therefore is often described as "socio-emotional" development. The childs' initial introduction to the world is through the mother and throughout his development the mother plays a very important role in his emotional equilibrium. The child's attitude to his surroundings depends on the child's image of himself. Acceptance, interest and encouragement from the mother, initially, and later the family as a unit, is the feedback the child

needs to develop his self-concept and confidence. Lubber, in a study on "The home and family environment and its impact on school achievement" in the Cape Peninsula (May 1988) found that:

> **"the rise of the nuclear family has increased the importance of the mother as a key determiner of early development".**

Various researchers in RSA and overseas have found that all development of the child is closely related to the mother's level of education and that this in turn was a predictor of the child's success in elementary school and a key determinor of his socio-emotional stability.

Skuy, Shmukler and Westaway in a study on "Relationships among cognitive and socio-emotional measures of pre-school and primary school functioning" (Johannesburg 1985) found that **"pre-school socio-emotional functioning has more affect on academic achievement than later socio-emotional functioning, and its major effect seems to lie in the reading achievement area".**

3.3.1 Social learning is considered to be one of the most important aspects of early childhood education. Although the home is and should always be the ideal place for the child to experience a limited social environment within his first 5 years, the reality of society has long outstripped that: working mothers do no longer provide that gradual introduction into a greater social world and it is left to daycare mothers and other care centres to see to the child's social-emotional development. A pre-school experience would offer the child

the opportunity to informally interact within a limited social environment and thus an extention to the family environment is provided.

3.3.2 Prescott (1983) found that emotions played a significant role in inhibiting or enhancing learning and that socially withdrawn children didn't make the same progress as their socially-outgoing counterparts due to the lack of peer group stimulation. Emotional development is closely related to positive (or negative) self-image, and this concept of himself is based, by the child, on this perception of his acceptance by his immediate social environment. A child who has not attained a level of self-control and independence is seen as "at risk" in the formal learning situation: a learning situation makes demands on a child and confidence is needed to cope with the contingencies in the environment. Emotional stability ensures adjustment and coping skills to restore the equilibrium. Confident children delight in the challenge of new experiences and success will always stimulate more confidence and thus sustain interest.

3.3.3 Emotional development is a pre-requisite for organising and utilising space. A confident child can make the most of opportunities and physical amenities at his disposal. New materials can be explored and horizons broadened when the immediate environment doesn't pose a threat. Within the pre-school environment where the key-note is

informality, the child can develop emotionally and become confident without the pressures of formal learning. Within the limited environment a child can learn to organize himself in space and understand how space is organised around him. Continued positive reinforcement within a small group provides the confidence of behaviour within a larger group.

3.3.4 As emotional development is one of the pre-requisites for cognitive development, it is essential that children, even within our nuclear families, be given the opportunity to develop to the point where the formal learning situation becomes a challenge and not a threat.

3.3.5 One of the biggest stumbling blocks in the process of emotional development of children these days, and the consequent progress at school, is the cultural difference between home and school.

Poulton and James (1975 p.3) talk about the existence of differences between the "existing educational climate" prevailing in schools and the one presented to the child at home. These relationships in education can be in conflict and have the potential for conflict between home and school. The HSRC report on provision of education in the RSA claims that environmental deprivation has become a major cause of school readiness not being achieved. Feuerstein (1979) defined culturally deprived as (p.39).

"... has become alienated from its own culture."

Alienation is seen by Feuerstein as a disruption in the process of intergenerational transmission and thus the individual does not have the cultural confidence of a specific culture. Feuerstein continues to say that **"such deprivation may strongly affect the adaptive capacities of the individual since he is devoid of the learning skills and habits that are produced by transmission processes".**

3.3.6 A child who has an emotional deficit on entering school may well find the dispararities between home and school a further hinderance in the learning process as he will lack the ability to make adjustments. The school, so based on culture and, with the church, the most important cultural institution, is often misaligned with the family experiencing socio-economic instability and this has a detrimental effect on the child's self-image.

3.3.7 It has been claimed that the school should re-assess its approach to formal education and thus be "ready" for the child, and not the child for the school. It is very difficult for the schools to break a "cycle of deprivation" which exist only in the lower middle- to -lower-classes. As the other social strata are not (generally) culturally deprived, it would seem that schools would be expected to cater

differently for different levels of cultural deprivation. Influencing teachers cannot be expected to reduce the gap between school and home. Although teachers are sensitive to the social (and moral) climate of the homes of their pupils and try to take each child from his/her level of development, the school is still what society expects it to be: the infrastructure to produce what is needed for the continued existence of society at large. Educational objectives are set up and maintained by the society it serves, and these objectives have evolved over time. Poulton and James (1975 p.23) found that:

> **"Strategies designed to deal with the misalignment of schools' and families' values are inevitably concentrated in the pre-school and infant years ... because of the still considerable influence of parents in the childs' development at that stage and because the formal agencies are under the least pressure from academic requirements".**

Studies of the South African educational scene point to conscious intervention on the pre-basic phase as being a pre-requisite for emotional development of children. Coopersmith (1987 - Journal of NFER vol. 29 2.) says "the concept of self-esteem has profound practical significance for both teachers and applied psychologists. It is defined by Coopersmith (1967 p.4 - 5) as -

> **"the evaluation which the individual makes and customarily maintains with regard to himself - it espresses an attitude of approval or disapproval and indicates the extent to which an**

individual believes himself to be capable, significant, successful and worthy!"

3.4 COGNITIVE DEVELOPMENT

Of the four areas involved in school readiness assessment, cognitive development seems to bear the heaviest burden: researchers are ademant that a certain level of "potential" is needed for a child to benefit from the learning experience created by schools, but where this "potential" was previously seen as "given" and therefore a static asset which some have and some don't, the feeling or belief has changed to an acceptance of the fact that "situational variables" may be responsible for the apparent lack of "potential". Cognitive development is seen as a process that can be stimulated by the environment and significant others, and a deficiency in this process is the result of a lack of opportunity to experience and not necessarily a deficiency hereditarily acquired. Feuerstein sees the basis of impaired cognitive functioning as "inadequate and insufficient mediation in learning experiences" and genetic endowment is not given as the main cause of limited progress due to limited cognitive functioning. Piaget saw learning as "assimilation and accommodation" - a continuous process of experience where the mind obtains information, adapt old patterns of thought and accept new patterns through a process of adjustment. In Piagets' view this process of acquiring knowledge progresses through a series of stages which follow a sequence. People move through these at different rates, but the following is based on the previous and complex cognitive functioning cannot take place without the stages of simple cognitive functioning having been completed - or "equilibrium" being

reached. Piagets' cognitive development is based on his theory that learning is an active process of discovery. Bruner, like PIaget, sees cognitive development as a process involving a series of changes, but Bruner emphasises language as essential to the learning experience: language must be part of t interaction between experience and cognitive developmer

The cognitive aspects of school readiness or learning readiness include: linguistic skills, perceptual skills and the subsequent application of knowledge.

3.4.1 Linguistic Skills

Language development in children is remarkable in that it develops, within 3-4 years, from inarticulate sound to structured complex speech. Establishing effective verbal communication is a pre-requisite for school readiness: children lacking language skills will have difficulty following a flow of words in the formal learning situation as there are too many variables to contend with. Within the formal school system the child is expected to comprehend instructions and carry them out and make himself understood.

Vygotsky maintains that language skills are required at the pre-basic educational level and that these skills, and other higher mental functions, are formed in the course of the childs' initial interaction with his social environment, specifically in interaction with an adult. Language develops through imitation, feedback,

modelling and repetition. The more facilitative the environment, the better the child masters linguistic skills.

Bereiter and Engelmann (1966 p.28) say the **"Lack of verbal learning is the outstanding characteristics of culturally deprived children".**

They found that disadvantaged children could master the language involved in the satisfying of their daily needs, social as well as material, but that language used in transmitting information could not come easily, i.e. the cognitive uses of language posed a problem. Clark and Cheyne (1979) found that the importance of pre-primary education lies in the interaction between adult and child and the subsequent promotion of communicative competence.

Blank, Rose and Berlin (1978 p.18) give the following Scale of Abstraction for pre-school Discourse.

1. Matching perception > reporting and responding to salient information.

2. Selective analysis of perception > reporting and responding to delineated and less salient cues.

3. Recording perception > using language to restructure perceptual input and inhibit predisposing responses.

4. Reasoning about perception > using language to predict, reflect on and integrate areas and relationships.

Cohen and Rudolp (1977 p.77) claim that **"Language is so related to experience, to thinking, to evaluation of self and others that it can be influenced by many factors".** A rich language environment in early childhood is an environment rich in experience supported by freely flowing language that defines, lables, questions, analysis, synthesises and compares these experiences.

Human progress is said to progress from physical activity to mental power: children need basic language skills before reading skills can develop. Language development is dependent upon environmental stimuli and reading readiness follows. Reading readiness involves:

neurological development;
cognitive awareness;
social maturity; and
language power.

Antecedent experiences such as these are important. Cohen and Rudolph (1977 p.296) found that:

> **"Complex tasks are almost always preceeded by activities that look very different from the end result, but without which the desired learning does not occur".**

As TV seems to rule the present generation of children, passivity hampers language development, and added and planned language experiences must be provided to complement the level of language development. Reading readiness require certain strengths:

- graphic knowledge i.e. scribbles, designs pictures, signs, prints - whichever system is used in the recording of spoken language.

- awareness of language structure, syntax and grammatical errors.

- awareness of phonemes and sounds.

Cohen and Rudolph (1977 p.308) say that:

> "Kindergarten is a time for supportive help toward developing the language power, perceptual differentiation, emotional stability and sound physical skills of all children as a most important contribution towards their future academic success."

According to Myklebust (1971) learning disability is dependent on deficiencies in one or more of the following areas:

auditory comprehension
spoken language
orientation
motor co-ordination
personal-social behaviour

Spoken language per se involves

- vocabulary
- grammar and sentence structure
- word recall and expressive use of language
- story telling and relating ideas logically and coherently; and
- formulating ideas on specific topics i.e. the ability to organize material and express ideas.

By the age of 5 the child has acquired practically all the speech forms used by adults. Todd and Hefferman found that the progress in speech and language development is largely determined by what the child hears and the opportunity he has to practice his verbal competence. They feel that language development constitutes a great argument in favour of pre-school education: children can be exposed to qualitative and quantitative language learning experiences in adult company and be permitted to participate in conversations.

Other skills involved in reading include: memory, sequencing, following directions, anticipating the outcome and evaluation of what has been read. All these higher mental functions depend very heavily on the initial introduction of the child to the spoken language and his enjoyment of literature. A stimulating home will provide books and children will be exposed not only to the written word, but to a completely new

world of fantasy. Although the library can complement the home's supply of literature, every child should possess a few books of his own, even in the pre-reading age, as the child needs to learn at an early age how to treat books. At the same time the pictures seen repeatedly stimulate interest through familiarity. It has been found by various researchers that disadvantaged homes lack not only language stimulation, but the means of developing language related skills. Children may be able to hear, but don't listen. Comprehension of the meaning of words is fundamental to understanding, but if children are not included in interaction with adults and not made aware of the meaning of words, are not expected to follow instructions and act upon the spoken word, higher level language usage is not developed. Feuerstein found that limited vocabulary, although characteristic of the culturally disadvantaged child, did not have to be a permanent incapacitating factor: a mediated learning experience can provide the child with the missing verbal tools. At the pre-school level the language deficiency can be corrected by exposing the child to a rich, language - stimulating environment where both formal and informal learning can take place. Bereiter and Engelmann have had success with direct instruction to overcome the deficits, i.e. a radical departure from the conventional early childhood education. They found that accelerated learning was necessary as the language deficit could become an accumulative deficit, and as time was a limiting factor, only intensive

instruction could overcome the backlog: (p.58 - Teaching disadvantaged children in pre-school 1966)

> **"It is not the teacing itself that produces excessive stress, but only ineffective teaching which presented the child with tasks beyond his capabilities."**
>
> and
>
> **"As it is, the disadvantaged child will have to encounter teaching at some time, and if he is without the necessary competencies, he is sure to experience crippling stress and anxiety at that time".**

Disadvantaged children seem to be retarded in the areas that count most in the formal educational setting, and although they might not lack the fundemental capacity to learn there is a lag to overcome prior to their emerging from school with the same skills as their more privileged counterparts. It is a myth to think that disadvantaged children could suddenly blossom forth - learning does not occur without sufficient cause.

3.4.2 PERCEPTUAL SKILLS

Perceptual skills involve the manner in which things are perceived and include the following: reception, association, memory (and sequential memory) and the integration of physical units into a complete picture. According to Feuerstein (1980 p.76).

> **"What characterises the blurredness (of perception) is a poverty of details or their lack of clarity, a poor quality of sharpness, an imprecise definition of**

> **borders, and an incompleteness of the data necessary for proper distinction and description".**

The child's lack of perception is seen as an under developed skill: he doesn't spend sufficient time on the perception of the stimuli and doesn't persist in perception - persistence will improve accuracy, i.e. perceptual inadequacy is the result of no pressing need, in the child, for focusing on the stimulus and investing time on the perception of the object. As the child has other pressing needs a higher mental function like accurate perception fades in importance.

Lezak (1983 p.24) sees perception as:

> **"the active processing of the continuous torrent of sensation from all the sense modalities".**

Perceptual skills, to her, include such activities as awareness, recognition, discrimination, patterning and orientation. It is clear that within our school system all these higher mental activities are closely related to I.Q. or "potential" and although there is continuous talk of mental ability not being a set "given", within the school system, experience has led to a firm belief in the opposite: children are labelled and classified and that is end of the story. Once labelled a child has no way of reversing the process. If on top of the labelling the child also displays retarded progress, mainstream education is not for

him. Intelligence, in the South African educational system, remains a meaningful concept and refers to a level of proficiency, shared by most pupils, to perform or execute given tasks. Add memory to these higher mental functions, and the disadvantaged child faces an educational future that is bleak. The disadvantaged child normally shows no deficiency in short term memory, but long-term memory is normally at fault due to an attitude of passivity.

Feuerstein (1982) found that disadvantaged children did not see remembering as part of them and did not seem to think that they had any control over their memory - i.e. extrinsic locus of control. Children with a memory deficiency and the resultant inability to combine units of information, display a narrow mental field. On all intelligence tests in use in our educational system, retarded perfomers will show up as being intellectually deficient, and the low cognitive performance is immediately accepted as irreversible. While Bereiter, Engelmann and many others see intervention as the means of reversing the performance, Feuerstein does not limit intervention to the pre-school years. Most researchers have "the-sooner-the-better" attitude: there is a strong feeling that deficits are accumulative and lead to an insurmountable backlog.

Bereiter and Engelmann (1966) feel that "time limitations" nullify enrichment strategies in overcoming deficiencies due to deprivation, and emphasise the importance of focusing on academic objectives.

3.4.3 APPLICATION OF KNOWLEDGE

Application of knowledge involve skills closely related to perceptual skills: developmentalists see logical thought as proceeding through well defined stages and the lack of inference is based on the inability to perceive relationships. Bryant (1984) links the lack of inferential thought to memory skills being underdeveloped Lezak (1985 p.30) defines thinking as:

> **"any mental operation that relates two or more bits of information explicitly or implicitly. A host of complex cognitive functions is subsumed under the rubric of thinking, such as computation, reasoning, judgement, concept formation, abstracting and generalizing, ordering, organising and planning".**

Bereiter and Engelmann (1966) found that disadvantaged children were specially retarded in their ability to reason logically but added that children didn't lack the raw ability to reason but the fundamental skills. Feuerstein (1979) found that socio-culturally disadvantaged children displayed an "episodic grasp" of reality and that problem-solving was met with a total lack of interest. Logical thought,

displaying application of knowledge, was found to be unplanned and unsystematic and problem solving was approached in haste and an answer supplied before the problem had been properly defined. Reflective thinking, according to Feuerstein, must be evoked and it is normally triggered by a disequilibrium or perplexity in the mind. **"Impulsive exploratory behaviour is not the result of an incapacity to attend (concentration lack) but the result of inadequate exploratory skills".** (Feuerstein 1979 p.62). Once more the lack of these skills will reflect as vastly depressed I.Q. scores on I.Q. tests and Feuerstein and Bereiter and Engelmann and others have found that the depression of scores is as many as 10 I.Q. pionts..

3.4.4 CONCLUSION

Children lacking cognitive skills have been found to have limited concentration, impulsive behaviour and attention seeking tendencies. They are at a distinct disadvantage in their motivation to perform tasks and produce of their best. They become both irritable and irritating in a formal learning situation and finds disruptive behaviour the easiest way of coping with an environment in which they have very little interest. The overt behaviour of these children is often accepted as indicative of poor potential ability, and thus give rise to misleading conclusions. If, like Feuerstein, we see the individual's learning potential to be

his capacity to become modified by a learning process, it has become obvious that mediated learning should take place. In the case of children within our educational system, who are not privileged enough to have a Feuerstein in the wings, waiting for them at some later stage, it would be better to be exposed to mediated learning prior to formal instruction. Deficient cognitive functions can be ascertained and the deficiency remedied and a "readiness for response" created prior to the child starting a process of learning where lack of interest and the narrowness of his mental field will earn him a label.

Adelman and Taylor (1983 p.168) claim that:

> **"There is no way to know what people are capable of unless they want to show us their best. If a person is motivated to learn something he or she can often do much more than anyone would have thought possible".**

RESEARCH METHOD

1. SUBJECTS

This research was conducted in one of the four Reception Classes in Natal. The Natal Education Department stipulated the size of these classes: not more than 48, but in two of the schools the numbers could drop to 42. The Reception Class in this research comprised of 48 children all of which were exposed to the Reception programme for the entire year. It must be added that 39 of these children had been on the waiting list for 4 years and the other 9 on the waiting list for 3 years. Of the 48 children in the Reception group, only 8 had had previous pre-primary experience and 6 had attended a créche before enrolling at the Reception Class. The remaining 24 pupils had come straight from home.

The second group, here referred to as "Pre-primary", consisted of 28 children. These children had attended pre-primary schools for 3 years (in the case of 25 of these pupils) and 3 pupils had attended for 2 years.

The third group, or "No pre-school" group consisted of 22 pupils - 13 of whom had attended playschools, créches and daycare centres and 9 had been left at home in the care of a black servant.

1.2 All subjects (98 children) were in the age group that could start formal education in 1990, i.e. 5 years and 6 months to 6 years and 5 months.

1.3 In the Reception Group 26 boys had enrolled, and 22 girls. This number was stable throughout the year as no children left or were replaced.

The pre-primary group consisted of 15 boys and 13 girls and the "No pre-school" group consisted of 6 boys and 16 girls.

1.4 Although parents were encouraged and reminded to assist in the attempt to test as many of the 98 children as possible on all three the measures, only 15 subjects from each group could be found with no missing data. Although a bigger sample would have been preferable, it was felt that this sample was adequate as approximately 50% of the children were involved and this could be sufficient to test the hypotheses.

2. MATERIALS

For the purpose of this research use was made of the First Grade Screening Test (AGS), the Group Test for 5 and 6 year olds (HRSC) and a questionnaire for teachers involved in class one teaching in 1990 at the school the majority of Reception Class pupils would attend.

2.1 FIRST GRADE SCREENING TEST (AGS)

This test is in frequent use in Natal schools as it is quick to administer and straightforward to score. This is an American standardised test and was developed for the screening of potential first grade pupils in an attempt to identify pupils who would be in need of individual assistance to make satisfactory progress in their first grade experience. The FGST presents norms at two levels: end-of-pre-school and beginning-of-formal-learning. This, together with percentiles for new scores, give a comprehensive overview of the pupil and his potential to cope with

the formal phase of education. The cutting score is 15 and the highest possible raw score is 29.

In addition to the screening functions, the FGST scores are seen as useful in the initial instructional grouping of pupils as scores can serve as guidelines for grouping. Since the test was designed to be used for the prediction of difficulty in the first grade, emphasis has been placed on the evidence of predictive validity; two different types of criterion measures were used:

- teacher ratings of readiness and
- standardised achievement tests.

The reliability of the FGST has been studied, using a test-retest model and inter-scorer reliability was assessed by involving different teachers in scoring. Use was made of the product-moment co-efficient between scores. The standard error of measurement was found to be 1.88.

This test is very language directed and although the language tested is slightly American in colour, it was felt that it was an objective test of language and equally unfamiliar to all the children. A learning situation is created within the test as pupils are tested on their ability to remember and acquire language. Listening and the level of development of listening skills are very important in this test and it was felt that this was a very valuable component of the readiness scenario.

2.2 GROUP TEST FOR 5 AND 6 YEARS OLDS (HSRC)

This test has been standardised for South African pupils at the request of the various education departments. School readiness per se is a difficult

concept and this test was based on the assumption that mental aptitude and the level of its development will determine progress at school. Efforts were also made to measure the social emotional and motor maturity of school beginners. The abilities tested in this measure are accepted as normally distributed throughout the population.

The score distribution on this test is normalised by converting the score to percentile ranks and then to standard deviation units. The IQ score is calculated by the conversion of standard deviation units into IQ equivalents on a scale with the mean as 100 and a standard deviation of 17 (and not according to the Binet formula $(IQ = \frac{MA}{CA} \times 100)$)

Raw scores in this test total 50 and six sub-tests are used, each of which range from easy to complex.

The reliability index of this test was calculated according to the Kuder-Richardson Formula 21 and the manual includes a table showing reliability, error of measurement and standard deviation. The standard error of measurement is 3,1 in raw scores and 5,1 in IQ scores.

This test was chosen as there is a strong tendency to be maths orientated and an emphasis on problem-solving skills.

2.3 TEACHERS' QUESTIONNAIRE (See Annexure 1)

This research is interested in the initial settling down of class one pupils and their immediate reaction on entering the formal learning situation. It is felt that this initial approach to formal learning is

very important for the child and determines his future in education: a traumatic start is felt to have an impact for many school years to come, while a positive happy approach leads to positive feedback from the environment and a foundation of success to be built on.

Different school cultures harbour different expectations: teachers' expectations determine the success of the pupils' initial experience, and different schools focus on different aspects of readiness. Discipline, for example, may mean absolute obedience to some teachers while another school could feel that it entails listening skills and the ability to negotiate.

A questionnaire, as a qualitative measure, was designed with the purpose of establishing how the teachers rated the level of the children's readiness for formal education. A matrix was designed to facilitate the collection of data without being too time-consuming. This is based on the teachers' observations during and at the end of the pupils' first week at school.

The matrix is scored on a 5-point scale with 5 indicating the highest possible score. The categories of the matrix are across the top and the childrens' names in the left column. The various categories are: first day behaviour, settling in after one week, attitude towards work and the subsequent ability to carry out instructions, attitude towards teacher and peers and the confidence with which the child approached this learning situation. (A detailed description of each category can be found in Annexure 1).

3. PROCEDURE

All pupils entering class one, in the school where this research was done, are tested on the FGST during November of the year prior to their entering class one. This testing takes place in groups and is spread over 4 days. As this suited this research, these arrangements were adhered to. The itinerant remedial teacher tested the Reception Group, the Pre-primary Group and No Pre-school group. All prospective class one pupils were invited (in groups) to spend a morning in the Reception area and the visitors were given time to adjust to the environment, while 12 Reception children were tested in one of the classrooms used by the Reception pupils. After approximately two hours the visitors were tested.

Parents of all the pupils involved were notified that their children were being tested again on the HSRC test on the Monday prior to their first day at school in 1990. Various factors lead to the attendance at this test being somewhat poorer, but this, unfortunately, was the only reasonable time that could be found before the school readiness levels were "contaminated" by formal learning. As the remedial teacher was not available to administer this test and no other accredited tester could be found, the testing was done by the researcher. This was by no means ideal as it is seen to be advantageous to the Reception pupils who is familiar with the tester. As most of the two other groups had been observed by the researcher, it was felt that these groups weren't totally unfamiliar with the tester. No outsiders re-scored the tests, but they were re-checked by the tester after a time lapse of 2 days. The instructions in the manuals were strictly adhered to, and the raw data was fed into a computer for analysis.

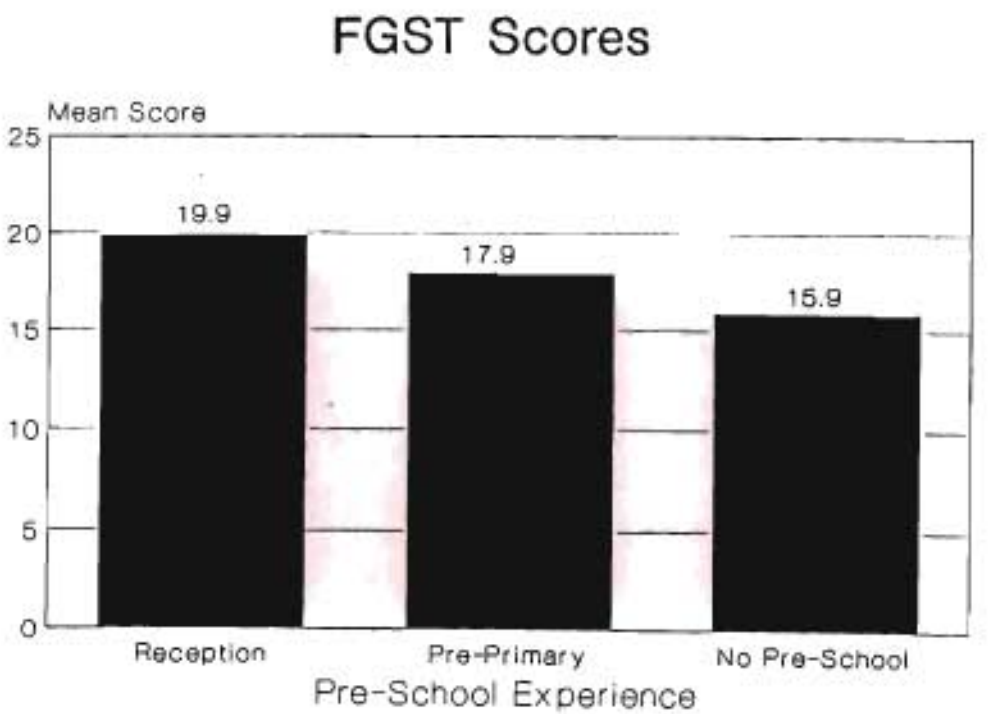
The class one teachers were presented with the questionnaires and all the category were discussed and explained. They were requested to be as objective as possible. As they were not familiar with the Reception pupils - seeing that they never did any teaching in this phase - it was felt that their ratings would be reliable. The teachers completed the matrices at the end of the pupils' first week at school and the raw data was compiled by the researcher and checked by a teacher who had nothing to do with either phase.

A time-span of 7 weeks separated the first two tests and the questionnaire was completed after a further week which was seen as sufficient for the measures not to influence each other. The HSRC was expected to produce slightly better results as children who had had no formal experience of carrying out instructions were expected to have benefitted from having done the FGST, and thus being exposed to some form of graphic representation of their "knowledge" or readiness.

RESULTS

A histogram was compiled for each measure and separate analyses of co-variance (with subjects' age and subject's sex entered as co-variates) were used to examine the influence of pre-school experience on each of the outcome measures (i.e. FGST scores, HSRC scores and teachers' questionnaire scores). Raw data can be examined in Annexure 2.

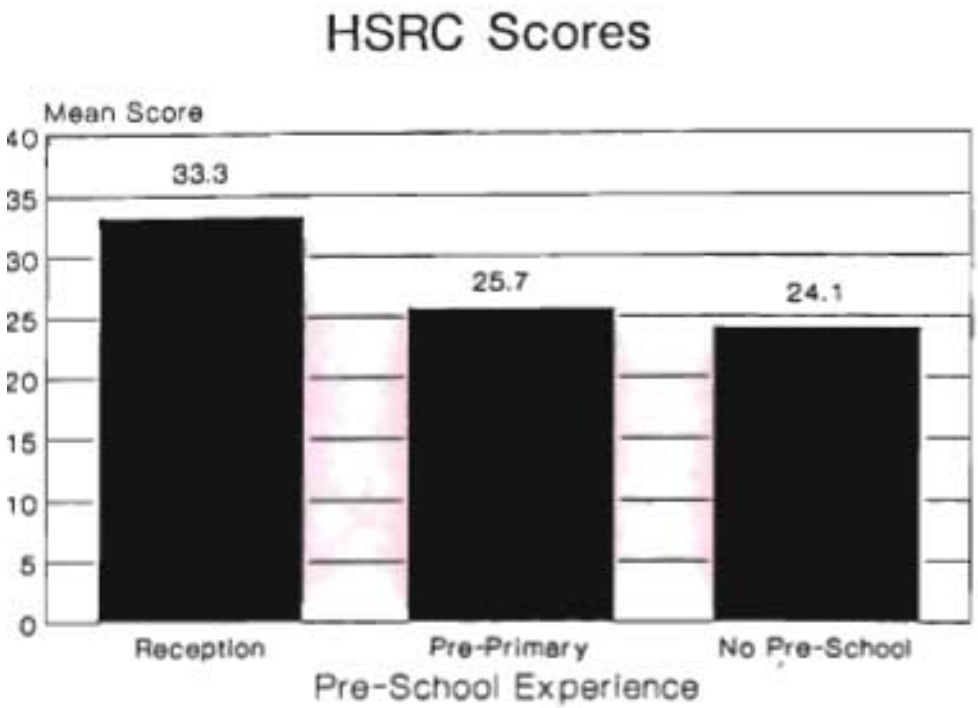
Fig. 1



INFLUENCE OF PRE-SCHOOL EXPERIENCE ON FGST SCORES

For the FGST scores, there were significant main effects for pre-school experiences F (2, 40) = 4.44, $p < 0.02$. (See Fig. 1). Post hoc analysis revealed that Reception Class subjects scored significantly higher on the FGST than subjects who had no formal pre-school education, F (1, 28) = 12.02, $p < 0.02$. The FGST scores for the Reception Class subjects did not differ significantly from those obtained by the Pre-Primary subjects. (F (1, 28) = 1.92, $p < 0.17$), and the FGST scores for the Pre-Primary subjects did not differ significantly from those obtained by the No Formal Pre-School subjects (F (1, 28) = 1.92, $p < 0.18$).

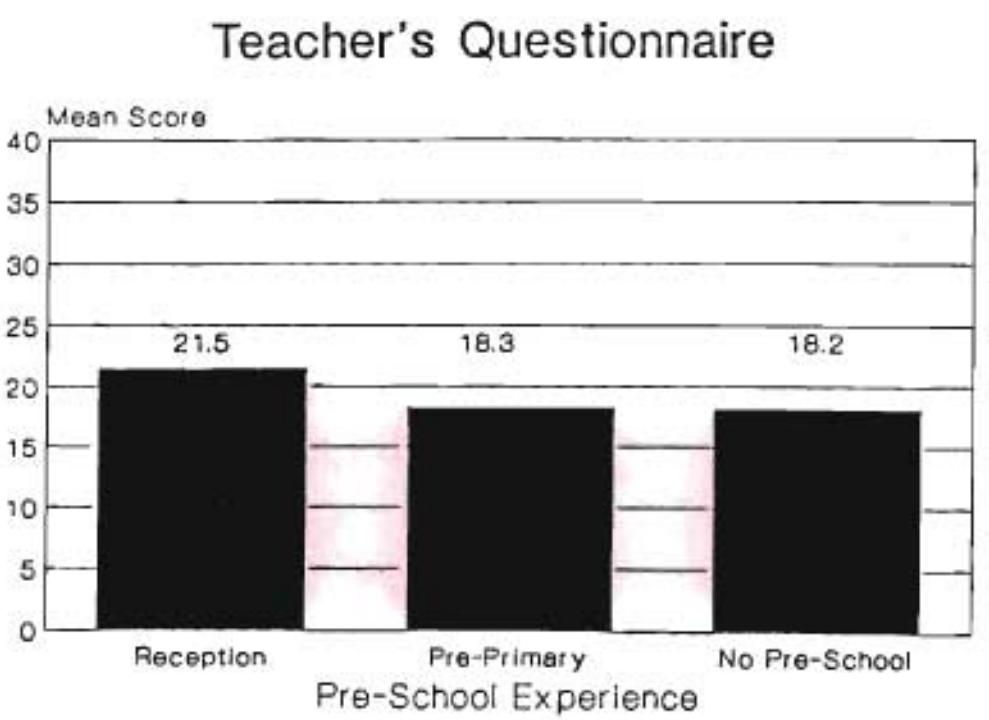
Fig. 2



INFLUENCE OF PRE-SCHOOL EXPERIENCE ON HSRC SCORES

For the HSRC scores, there were significant main effects for pre-school experience, F (2, 40) = 5.73, $p < 0.01$. (See Fig. 2). Post hoc analysis revealed that Reception Class subjects scores on the HSRC were significantly higher than those obtained by both the Pre-Primary sample (F (1, 28) = 11.23, $p < 0.01$) and the No Formal Pre-School sample (F (1, 28) = , $p < 0.01$). The HSRC scores for the Pre-Primary and the No Formal Pre-School subjects did not differ significantly (F (1, 28) = 0.26, $p < 0.62$).

Fig. 3.



INFLUENCE OF PRE-SCHOOL EXPERIENCE ON TEACHER'S EVALUATION

For the teacher's evaluation, there were significant main effects for pre-school experience, F (2, 40) = 3.76, $p < 0.05$. (See Fig. 3). **Post hoc** analysis revealed that Reception Class subject's evaluations were significantly more positive than those obtained by both Pre-Primary subjects (F (1, 28) = 6.83, $p < 0.02$) and No Formal Pre-School subjects (F (1, 28) = 6.35, $p < 0.02$). Teacher's evaluations for the Pre-Primary and the No Formal Pre-School subjects did not differ significantly (F (1,28) = 0.002, $p < 0.96$).

Table 1. Mean scores obtained by three samples on measures of school readiness.

Sample	Mean Score		
	FGST	HSRC	QUES
Reception Class	19.9	33.3	21.5
Pre-Primary	17.9	25.7	18.3
No Formal Pre-School	15.9	24.1	18.2

INFLUENCE OF THE COVARIATE ON OUTCOME MEASURES

Subject's age and subject's sex were not found to exert a significant influence on any of the dependent measures. There was, however, a small (although non-significant) trend for males to score higher than female on the HSRC ($p < 0.08$).

DISCUSSION

INTRODUCTION

The results of all three measures show a tendency for the Reception pupils to be more ready for formal education than their peers. It was felt that an item analysis of each outcome measure would shed more light on the results.

1. FGST

As has been discussed previously, this test is more language oriented and results show that there is a difference in scores achieved by the three groups: Reception results do not differ significantly from Pre-primary results, but differ significantly from No Pre-School results. A closer examination of the tests showed that the stronger areas in this test for Reception pupils were those areas requiring the subjects to follow instructions. One item demanding the instruction being issued once only was completed very successfully by most Reception pupils. Pre-primary subjects showed an uncertain pattern in this area, while No Pre-School pupils had very limited success. Items involving small muscle control posed no problem to the Reception pupils, showed various levels of competency in Pre-Primary pupils and were found to be a weak area for the No Pre-School subjects.

Four items designed to establish the subject's image of himself were found to be questionable: the child is expected to be the figure who presents as confident and outgoing in the picture, but in the Reception and Pre-primary groups pupils displayed an amazing self-evaluation. In both these groups pupils

were found who did not choose the confident child in the picture to be most like themselves and when questioned on this they could in each case give a very plausible explanation for their choice - an explanation which clearly showed their knowledge of themselves - and the acceptance and awareness of "deficits". This pointed to a maturity beyond their age. The No pre-school group, on questioning, displayed a tendency to have opted for what to them looked like a nice activity to indulge in and of the 22 tested, only 3 pupils seemed to have understood the instructions correctly.

This test, although not seen as beyond the concentration limit of this age group, was regarded by both the Pre-Primary and No Pre-School groups as too long and as interfering with their freeplay. Within the testing situation they showed an impatience to get on with this and did not give of their best. The Reception group was found to have a positive approach to "work" and seemed very willing to discuss the test situation. On leaving the room after the test, Reception pupils enquired about more "work" and when told they would have to find something else to do, there was an influx into the creative area where various worksheets were available. Very few Pre-primary pupils made use of this opportunity and a few little girls from the No Pre-School group showed an interest. When questioned on their willingness to work inside the girls were unanimous in stating that the "boys were too rough outside".

Reception subjects excelled at items involving confidence: they did not hesitate to produce bold, detailed drawings of themselves and even used their pencils to colour darker areas. Their drawings were

not only detailed but imaginative and busy. The tester remarked on a tendency by both the Pre-primary and No Pre-school pupils to be more interested in the "tools" that the test.

1.2 HSRC

This test was chosen as a measure of the mathematical skills of the pre-schoolers and a possible indication of the level of development of problem-solving skills - as more than rote counting is involved in maths readiness. The significantly lower mean scores of the Pre-primary group and the No Pre-school group warranted examination of items. Items involving a high level of development in perceptual skills were found to be weak areas for Pre-primary and No Pre-school subjects. The Reception group was found to have a clear idea of how to use their mathematical skills and were, as a group, very successful in computations involving the solving of problems. A possible reason for this could have been their knowledge of mathematical language - longer than, more than, the same as, together etc.

Questions involving instructions that could be repeated were generally better attempted than those without any repetition of instructions. The test item involving a maze proved to be the weakest item of the Pre-primary and No Pre-school groups: without exception the latter group could not get past the first section of the maze, and then became frustrated and drew lines straight through the following mazes. There was a strong tendency towards drawing the lines over and over in an attempt to find a way out of the maze and this seems to indicate an inability to see the maze as a whole and a further inability for the

eyes-span to precede the hand movement, in short very poor eye-hand co-ordination. Although the Pre-primary group had slightly more success than the previous group, only two subjects reached the end of the maze, but there was no overall correct score in this group. In the Reception Group 4 children had a faultless run of the maze and every subject achieved some success. Their approach to this question was interesting in that not one of these subjects attempted this question without first looking at the page and quite a few made an attempt at finding their way through the maze by letting their fingers trace the possible routes; as soon as the possibilities had been exhausted, the pencil was used to indicate the successful route. This was thought to be a very mature way to solve the problem.

The last item in this test involved repeating a completed picture on a dotted area comprising a similar number of dots. A practice example was completed by everybody and the test assistants gave individual coaching to ensure that all subjects understood. The picture involving the joining of dots to imitate a given picture was then completed and all subjects seemed motivated into attempting to give of their best, and there was considerable success all round. As the items became progressively more difficult, the motivation seemed to dwindle and it became obvious that the Pre-primary and No Pre-school subjects had lost interest. The latter group found this item very frustrating and could not join dots with a fairly straight line - in most cases the pencils jerked past the dots and the pressure on the pencil was such that the incorrect line could not be erased - thus leaving very untidy work. An item analysis showed that only one third of the group

could complete one of the five sub-items in this test with a fair amount of success.

The two test assistants were asked to observe all subjects carefully during this test and to report noticeable difficulty with this item or noticeable ease when completing this item. (The subjects were unknown to them and their observations were accepted as objective). Subjects who seemed to enjoy the challenge of this item comprised mainly pupils from the Reception Group - every subject in this group managed to complete all the sub-items - although not with equal success: only 8 subjects managed a full score. None of the Pre-primary or No Pre-school subjects managed a full score and this item was observed as causing most subjects in these groups considerable stress. Again hand-eye co-ordination seemed poorly developed. Reception subjects were reported to have attacked this item with confidence and some with obvious enjoyment.

The scores on this test showed a bigger discrepancy between Reception subjects and their peers (than the FGST) and this leads to the conclusion that the Reception Class experience resulted in a high level of mathematical readiness. As the HSRC test is considerably longer than the FGST it can further be concluded that the Reception subjects, on the whole, displayed a longer concentration span than their peers. This is seen to be closely linked to experience and thus repeated exercises involving concentrating on tasks, and completing set tasks, all of which is adult oriented. It was interesting to note that during this test only the obviously immature children showed a tendency to play with the pencils and page through the tests - something that was reported to have caused considerable distraction during the FGST.

It is assumed that this no longer presented a problem as subjects had all been exposed to these "tools" before and parents had been advised, after the first testing situation, to make equipment in the form of pencils and paper available to their children.

3. TEACHERS' QUESTIONNAIRE

The teachers' questionnaire was the qualitative measure in this research and the outcome of this is seen as an indication of how well the children fitted into formal education. Teachers have certain expectations and the whole pre-school education scene has contributed towards forming teachers' expectations. Where children, prior to the rise is pre-school education, were expected to have acquired basic skills at home, the pre-school scene has lead to expectations of these skills being more refined and the children capable of listening and carrying out instructions. Junior primary teachers have been advised to limit their readiness programme during the first terms as this field had been covered by the pre-schools. Children who had had no pre-school experience can be identified during the readiness test and grouping and subsequent group teaching was thought to solve the problem. It was, therefore, hypothesized that the two groups who had been exposed to some form of pre-school experience would present a higher score on the teachers' questionnaire than the group who had had no pre-school experience. The mean scores on the three groups showed virtually no difference in the scores of the Pre-primary subjects and the subjects who had had no pre-school experience, while the Reception subjects had a considerably higher mean score. (Table 1, p.114)

An item analysis revealed that the teachers found the Reception subjects to have acquired a high level of willingness to listen and a very positive approach towards carrying out instructions. The Reception subjects were also confident in their new environment which was within expectations as these children have been exposed to the "new" environment and although they were not known to the teachers, the teachers were familiar to them. Their familiarity with the environment is seen as the main cause of their initial success in the formal learning phase.

4. In summary it must be concluded that Reception subjects had achieved higher mean scores mainly because of their pre-school experience and their exposure to the Reception Class programme, i.e. the syllabus and the venue are seen as the main reasons why the Reception pupils achieved a higher readiness level than their peers.

DISCUSSION OF THE POSSIBLE CAUSES OF THE RESULTS

1. THE SYLLABUS

The school readiness programme implemented by Reception Classes was based on the syllabus contained in Annexure . The teachers found this document extremely valuable and although a bit long, very stimulating. The activities suggested in the guide are practical and once implemented give rise to numerous similar activities. The teachers never felt "tied down", but had enough scope to expand their own creativity. In this way the syllabus never became boring.

The syllabus is Piagetian in its approach and is geared towards building cognition through experience and children, exposed to a stimulating environment, can build their own knowledge. In Natal, all pre-primary schools must expose their pupils to three basic learning centres - in the form of "tables" or "corners": nature table,interest table and cognitive table.

1.1 THE NATURE TABLE

Here children are made aware of their environment and specific aspects are highlighted e.g. "brown in nature" would aim at an awareness of the colour within the natural environment: sand, rocks, shells, animals etc. and children are encouraged to contribute. It has always been the aim, (where possible), to have "something alive" on this table - in this case it could be shongololos or earwigs - and thus give the children the opportunity to observe these creatures. It was found by the Reception Class teachers, that due to a very unstimulating home environment, this important learning centre was not

used as intended and a concerted effort was made to get the children to the nature table and thus the "incidental learning" was converted into "instruction". Once the children had got into the habit of visiting the nature table, they could be relied upon to visit this centre on their own. It was found that a stimulating environment did not automatically lead to the increase in vocabulary and knowledge - direct instruction became an important part of this process.

There was also a very strong tendency to show abhorrence to whatever was on this table in the line of "creep-crawlies". It was decided to link the school readiness activities to the nature table and this proved to be a very fruitful exercise: children could then "use" what was on the table in their discussions and subsequent activities and this made them feel more at home with the "creepies" and the "crawlies".

1.2 THE INTEREST TABLE

This table was aimed at vocabulary enrichment and an extension of the Nature Table i.e. the usefulness of for e.g. grass would be highlighted and the relevant vocabulary introduced. Again it was found that children from unstimulating homes did not care to take a second look at this table and a formal time was created when the vocabulary was introduced and during the course of the morning this was reinforced by the teachers.

1.3 THE COGNITIVE TABLE

This learning centre, containing games and activities related to the theme, posed the biggest problem: children had never been introduced to activities like sorting and matching and showed a tendency to destroy what they could not understand. The teachers used the freeplay time to take small groups to this table and taught the skills required. Although the syllabus is excellent, only children from good, stimulating homes will benefit from it without direct, formal instruction as certain basic skills are a pre-requisite. Once the children had mastered these basic skills, the cognitive table proved to be a favourite spot first thing in the morning and the activities could be changed more often and be increasingly more complex. As Feuerstein so rightly observed

> **"Cognitive modifiability is a deliberate programme of intervention to facilitate the generation of continuous growth by rendering the organism receptive and sensitive to external and internal sources of stimulation"**
>
> **and**
>
> **"Exposure produces changes in the organism that affect its behavioural repertoire and its cognitive orientation; these changes in turn affects its interaction with the environment, even when the environment itself remains constant and stable".**
>
> (Feuerstein 1980 p9 & 15).

1.4 MUSIC

The introduction of music into the Reception Programme was initially regarded as rediculous by the children, but they soon forgot their reticence and moved to the music and discovered many possibilities about themselves through movement. The body and its movements became an extension of self and the control

of the body created a lot of interest. Through dramatization they learned to make the most of sound and percussion enhanced listening skills which were found to be very poorly developed. "Music time" was soon greeted and treated without any inhibition by the Reception pupils and undeveloped skills could be developed without creating a specific awareness of the learning situation. (It was found that the children soon became aware of the fact that they were lacking in skills and then resisted modification because of embarrassment. Music proved to be an absolute invaluable help to overcome this resistance).

1.5 LITERATURE

Exposure to literature was another area that was sadly lacking and even the most basic nursery rhymes were found to have been taught in a very warped fashion. The children had to be taught to listen and this proved to be an extremely arduous task. The teachers limited any form of story or discussion to five minutes (initially) and then slowly added to this as the children became more ready and willing to listen. Although children were all within the range of 5-6 years, 4 years 6 months - 5 years 6 months, most of these children had the concentration span of 3 year olds and the entire first term was spent on short little stories, told with the aid of very colourful pictures or puppets - these aids were big and bold with very little detail. As from the second term, there was a marked improvement in concentration span and a marked improvement in interest in story time. Successful stories became the topic of discussion during the freeplay time and the teachers often retold stories during the course of the morning. Old traditional stories were totally unknown and soon became the theme of fantasy play.

Literature and poetry were soon found to stimulate vocabulary, specially in cases where the humour was found to be at their developmental level.

The books, available on the shelves, were abused until the story had been told or read - then the book became a "known quantity" and was treated with more respect. Book education became part of the daily routine and some books were "re-read" by the children who indulged in dramatization and pretended to be the teacher.

1.6 OUTDOOR PLAY

All outdoor play was initially rough and uncontrolled and it was noticeable that the children did not know how to use outdoor equipment. The first week (after the staggered intake over 5 days) was spent with the children, explaining exactly what the rules of freeplay entailed. The teachers were amazed at how the children needed firm handling to control their actions. Once a firm set of rules had been established, the children enjoyed their new-found security and rules were seldom transgressed. The tendency to throw caution to the winds was overcome and with firm teacher guidance, the children became more safety conscious and pushing (for example) never happened on the jungle gym again. Rules became a point of interest and children wanted to know what the rules of each new piece of equipment or new activity entailed: they seemed to enjoy the fact that some demands were made on their memories and demands were made on their actions within the social structure and the teachers were again amazed at the equanimity with which the rules were accepted. It led to a lot of initial discussion and excitement: their knowledge was checked against the rules and a transgressor immediately became a social outcast. It

was decided that the rules gave them security and when a casual enquiry was made about rules and their existence in the home environment, it became very clear that some rules existed, but that these rules were not consistently in use and therefore lost their value and were regarded with contempt or totally disregarded. When asked about the "school rules" the children displayed a maturity beyond their years and declared school rules a necessity for smooth socialising and imperative to safety!

1.7 LANGUAGE ENRICHMENT

Although language enrichment is very much part of the syllabus, it was found that the language deficit was such that an added effort had to be made to modify this: freeplay was curtailed for some children and they were subjected to a short period of fairly direct instruction in the use of language - involving one of the three "tables" or a discussion of the story they had had the previous day. This direct instruction included repeating the sentences after the teacher to improve both pronunciation and sentence structure. It took a while before the children realised that what they were offering did not correspond with what the teachers expected. It was then decided to spend some time on intensively training the auditory skills and this proved to have the desired effect. Although presented as games, listening skills were soon part of the freeplay time: e.g. no child could go to freeplay before giving the "password" - clapping their names and the peers became the "judges". After a bit of practice the ears became attuned to this exercise and the "judges" became hypercritical. Similar games were introduced and quite a few music lessons were spent on the same type of exercise. Within approximately 6 months the children were "listening" and they found the language

instruction lessons far more beneficial and definitely more of a challenge.

1.8 CONCLUSION

In conclusion it can be said that the syllabus proved to be an excellent point of departure, but that direct instruction had to be brought into what has always been regarded as "informal education". The pre-school protagonists have always been concerned about their "protègès" becoming co-opted into preparation for the grades and not just the development of a desire to learn. These ideals are no doubt, aimed at the children from good, sound homes, stimulating havens of interest and encouragement. Excessive emphasis on cognitive training has been named amongst the causes of school failure and some uneducated parents still assume that teaching children the alphabet will improve intellectual growth. Somewhere between these two extremes there is an opportunity for assisting children to overcome their deficits and get ready for the learning situation.

It must be stressed that although this programme is certainly more formal that that of the normal pre-primary, no direct instruction in reading or arithmetic was ever ventured upon. Writing was handled differently: when a child was ready to combine his skills into writing, he was assisted in approaching this exercise: he was then shown the exact formation of letters he would meet up with in Class one. This might sound very formal, but no child was ever pushed or pressurised into writing - the child dictated the amount of "teaching" he required. Formal writing exercises were never introduced, but a child who was, for example, trying to copy his name, was shown the correct formation of the letters. At the same time parents were

discouraged to teach the children to write in capitals. Incidental teaching of reading occurred: when a child tried to read the name tag on the nature table, he was told what the word was, and very often the child would draw a picture of the fruit or flower and copy the name - and read it (correctly) to the teacher without any formal instruction.

Biesheuvel (1943, p.80) says:

> **"It appears that inadequate environmental stimulation may reduce the IQ absolutely. A poor home environment not only retards the rate of development of innate intelligence, but also brings it to a close at an earlier age than would normally have been the case. Those levels of development at which subtler environmental influences might provide further stimuli for growth will never be reached".**

This syllabus can, and as the outcome of this research proved, did reverse the ill effects of an unstimulating home environment.

2. THE VENUE

The teachers involved in this research felt very strongly that the fact that the Reception Class operated on the same premises as the junior primary phase led to it being so successful. Demographically it meant that the two cultures shared the same physical amenities. This immediately meant that the noise level, so typical of the pre-school phase, had to be lowered and that the pre-schoolers had to spare a thought for their peers involved in formal learning. This in itself is very important: the Reception pupils became aware of the fact that they were part of a bigger environment and not the end result of a small environment.

The rules that applied in formal education, were also observed in Reception:

- the first bell meant assembly and quiet behaviour was expected from everybody;

- everybody is expected to walk in lines and stay behind the one in fron;

- all children have to listen to prayers, join in the singing etc. and remember the messages to be taken home;

- the hall, the piano and percussion instruments are shared by all, thus a specific time is set aside for Reception's use of the hall and if free playtime is interrupted for this, so be it;

- tea-time means a break for everybody and the Reception Class pupils have to share the playing field with the formal phase and thus also await their turn on the apparatus;

- after break the formal phase has a "silent reading time" of approximately 15 minutes when Reception pupils re-capped yesterday's story or listened to a new story or looked at books - a quiet time;

- galas and sports days involve everybody and the Reception pupils are cheered as enthusiastically as the other pupils.

All this, the teachers felt, made the Reception pupils feel at home and the formal phase of education became "the-next-step-up" and not "big school" as an unknown quantity. The bigger environment never posed a problem but introduced a sense of belonging. Older brothers and sisters have added to the sense of belonging and although

the initial thought was for Reception pupils' safety in amongst the bigger children, it was soon apparent that there was a considerable amount of "mothering" all round and acceptance of the fact that these pupils were smaller and deserved to be treated slightly differently.

In conclusion it must be added that parents could be "trained" during this pre-school year as they too shared a school with parents of older children and it was found that these parents became enthusiastically involved in school activities and very supportive of their children.

IMPLICATIONS OF THE RESULTS

The results of this research show very clearly that the Reception programme is the most beneficial to pre-schoolers and that this could be the answer to the school readiness dilemma in South Africa. It has become apparent that children are in need of some form of pre-school experience and a compulsory year prior to entering formal education would fit the bill. This is also in line with the recommendations of the de Lange Commission and as virtually all schools now have vacant classromms it seems that there really are no further hurdles to negotiate. The very expensive form of pre-school education which is still receiving departmental support at present can be replaced by Reception Classes at all junior primary and primary schools at less cost to the authorities.

The pending abolition of the Group Areas Act is another good reason why Reception education should be expanded: all cultures should be given time in which to achieve a certain level of school readiness and the Reception programme has proved that a year is sufficient. This is seen as the ideal age for the different cultures to be integrated and this is the ideal phase to enter the educational system.

Pre-primary schools presently in operation have always been centres of pre-school education for the affluent and this situation is fast becoming unacceptable: all children deserve the opportunity to achieve school readiness, not only the ones who have the financial advantage of affluent parents. Pre-primary schools can still offer education to priveledged 3 and 4 year olds, but as this research proved beyond a doubt that pre-primary attendance did not lead to a smooth entrance into formal education, the educational benefits derived do not merit the heavy financial commitment.

In conclusion it can be said that seeing that this experiment of the Natal Education Department has been proved to have been extremely successful, it stands to reason that it should be continued and expanded - in our economic climate a viable proposition such as Reception Class education cannot be discontinued: there simply is not an acceptable argument for its termination.

LIMITATIONS

The Natal Education Department established four Reception Classes in Natal on experimental basis: two in Durban and two in Pietermaritzburg. It was humanly not possible to conduct similar research in the other three Reception Classes to determine whether similar results had been achieved. Two of these Reception Classes operated through medium of English and by word of mouth it was established that these had been very successful. Ideally both should have been subjected to the same battery of tests. Both these classes had operated as part of junior primary schools under female principals. The two Afrikaans Reception Classes were established at primary schools under male principals. A limitation of this research is the fact that only one class had been involved in this study. It would have been more valid a result if similar data could have been collected from all four the schools and then compared.

A limitation as far as the actual testing of subjects goes is the fact that the researcher administered the HSRC test and thus the Reception group could have been given the edge over their peers as the subjects were familiar with the tester.

The size of the sample could have been bigger and thus have made more data available - ideally the entire group of 98 should have comprised the sample.

RECOMMENDATIONS

It is recommended that all the Reception Classes be included in further research, examining achievement on a longer battery of tests.

Although data has been collated on previous Reception Class pupils and their school records subsequent to leaving the junior primary phase, very little is known about the further progress (or otherwise) of these pupils as there has been no attempt made to scientifically determine whether their initial advantage over their peers has been maintained. It would be an interesting exercise and valuable research if an annual inquiry could be made into the scholastic achievements of these pupils.

ANNEXURE 1.

TEACHER'S QUESTIONNAIRE

This research is interested in the initial settling down of Cli pupils and their immediate reaction to the formal learning situation. The matrix has been designed to facilitate the collection of data without being too time-consuming. It is based on the observations made by the classroom teacher during, and at the end of, the pupils' first week at school. Your co-operation and assistance is most sincerely appreciated.

KEY TO SCORING -

1. The matrix must be scored on a 5-point scale - 5 indicating the highest possible score e.g. a 5 consigned to the first column of the matrix would mean that the child had absolutely no problem accepting his/her new environment and complied with every possible expectation the class teacher had. A 1-score would indicate that the pupil was very upset, cried for the mother, refused to settle down and was thoroughly miserable in the new environment.

2. The categories of the matrix are across the top and the names of the pupils in the left-hand column.

3. The categories are the following -

   I First Day Behaviour

   This is seen as complying with or deviating from the expectations of the class teacher i.e. what would you want/like/prefer the child to don on the first day at school.

   II Settling-in After 1 Week

   This must again meet with the expectations of the class teacher: what behaviour would you like to see after the first week of formal schooling has been completed.

   III Attitude Towards Works (Instructions)

   This category endeavours to determine how the child accepts instructions, how carefully he listens, and how he executes the task, i.e. an overview of his ability to physically and mentally cope with formal education.

   (e.g. if the child can concentrate, listen and carry out the instruction, it could merit a 5-score, but if you appreciate some creative input from him/her, you might feel that extra effort and positive attitude will be required before a 5-score can be allocated.)

IV **Attitude Towards Teacher and Peers -**

This involves a simple, overall assessment of the child's acceptance, or rejection, of his/her immediate social environment within the bigger school setting.

(e.g. if the child is perfectly happy within the class and willing to respond, but withdraws on the playing field, this could still merit a 5-score).

V **Confidence**

This last category looks at the child's attitude towards school in general - e.g. a confident child would enjoy the challenge of the formal situation, make friends, chat freely and exhibit all-round pleasure and enjoyment.

Thank you for your co-operation. The results and outcome of this research will be available to you in due course.

Mrs Benjamin

NAME OF PUPIL	I FIRST DAY BEHAVIOUR	II SETTLING-IN (after 1 week)	III ATTITUDE TOWARDS WORK - (instructions)	IV ATTITUDE TOWARDS TEACHER & PEERS	V CONFIDENCE
JEAN B					
STEPHEN B					
ANTONIO C					
DILYN-JOHN C					
JACO H					
DAVID H-M					
TYRONE L					
JONATHAN L					
MICHAEL O					
BRENT W					
KELLY B					
JACQUALINE B					
LAURIANN C					
SAMANTHA L					
MICHELLE M-J					
TAMRYN McK					
CARRYN P					
CHARLENE v d B					
LEONIE v B					

Mrs Jackson

NAME OF PUPIL	FIRST DAY BEHAVIOUR	SETTLING-IN (after 1 week)	ATTITUDE TOWARDS WORK - (instructions)	ATTITUDE TOWARDS TEACHER & PEERS	CONFIDENCE
ALISTER B					
BRUCE B					
CHRISTOPHER C					
SEAN G					
JASON G					
DEAN E					
BYRON H					
BYRON J					
WARREN J					
DEAN K					
BEVIN L					
CLYDE M					
CLAYTON M					
JUSTIN M					
WARREN M					
BRYANN R					
JASON R					
RYNO T					
CINDY C					
TARA C					
ROXANNE J-L					
NATALIE J					
ANDREA M					
TARRYN M					
TARRYN-ANNE P					
NATALIE P					

Mrs Madgin

NAME OF PUPIL	FIRST DAY BEHAVIOUR	SETTLING-IN (after 1 week)	ATTITUDE TOWARDS WORK - (instructions)	ATTITUDE TOWARDS TEACHER & PEERS	CONFIDENCE
DYLAN F					
TERENCE G					
BRUCE J					
GARY M					
LIONEL P					
GARETH S					
CLINTON S					
GORDON T					
WADE v S					
BRONWYN B					
NATASHA C					
TAMARA C					
DAYLE-ANNE D					
BRIDGET D					
CERRIE-ANN G					
ROBYN K					
BIANCA K					
CANDICE Mc					
ASHLEIGH R					
BEVERLY S					
NATASHA v L					
JANINE W					
CANDICE W					
FELICIA W					

Miss Freer

NAME OF PUPIL	FIRST DAY BEHAVIOUR	SETTLING-IN (after 1 week)	ATTITUDE TOWARDS WORK - (instructions)	ATTITUDE TOWARDS TEACHER & PEERS	CONFIDENCE
DEVON B					
CRAIG C					
HEATH-ROY C					
DYLAN H					
RICHARD H					
DUNCAN McD					
BRENT M					
LEVI N					
GIAN-MARCO S					
SHANE T					
SHELDON T					
JARRED v R					
GARETH V					
HEATHER B					
LAURA B					
MADELINE B					
JODI C					
TARRYN G					
JO-ANNE G					
LAUREN K					
JENNIFER L					
CANDICE McL					
THERESA O'G					
CARMEN P					
NICOLE S					
CANDICE W					

ANNEXURE 2.

RAW DATA

Group	FGST	HSRC	Ques	Sex	Age
1	26	36	25	1	71
1	24	40	25	2	69
1	22	39	25	2	70
1	21	26	21	2	69
1	21	33	25	2	77
1	21	25	22	1	67
1	20	37	20	2	68
1	19	24	19	1	68
1	19	39	25	2	70
1	18	39	20	1	77
1	18	27	14	1	70
1	18	39	21	2	70
1	18	35	20	2	76
1	17	36	21	1	70
1	16	24	20	2	67
2	26	30	19	1	78
2	25	35	15	1	76
2	22	34	16	2	77
2	21	27	24	1	72
2	21	20	17	1	67
2	20	30	19	1	71
2	19	21	19	1	76
2	17	28	18	1	68
2	17	22	22	1	72
2	16	32	20	1	76
2	15	24	23	1	72
2	13	11	11	1	79
2	13	24	16	2	74
2	12	24	22	1	72
2	12	23	14	2	68
3	21	34	21	2	77
3	19	14	12	2	71
3	19	38	15	2	66
3	19	27	24	2	70
3	18	38	20	2	76
3	18	32	21	1	69
3	17	14	18	1	78
3	16	23	19	2	66
3	16	33	21	1	71
3	16	33	24	2	75
3	14	13	17	1	66
3	14	26	16	1	67
3	13	17	17	2	66
3	10	9	10	1	70
3	8	10	19	2	73

LEARNING THROUGH ACTIVITY

(A School Readiness Programme for 5 - 6 year olds in the Pre-Primary Reception Class)

GLOBAL AIMS:

On completion of this programme **the child** should have:

1. developed a positive self-concept and image of himself as a learner, with a positive attitude to school, participating actively in his own learning.
2. developed adequate fine and gross motor skills necessary for formal learning
3. developed adequate emotional and social skills for functioning as a group member
4. developed keen sensory perceptions
5. developed achievement motivation
6. entered the concrete operational period in most areas of cognitive development

In order to achieve these aims **the teacher** should:

1. create a warm, caring environment, where she is aware of each child's need
2. provide planned learning experiences which expose the child progressively to the relationships and concepts necessary for formal learning to occur.
3. stimulate and encourage individuality, creativity and sound social relationships
4. stress achievement motivation
5. continuously assess and record levels of development throughout the programme

The teacher has a specific role to play rather than a set task to perform. In this programme all the activities planned for the children should lead to the growth and development of language. The key to this approach is "experiential learning" stimulated by the teacher's verbalising and questioning, leading to concept formation and problem solving, and finally to symbolic representation.

GENERAL OBJECTIVES

The following objectives may be used as a check-list to assess the child's overall "school-readiness".

Can the child:

- conform to requests and demands from authority figures
- complete a set task which is within his capabilities
- work independently of others where necessary
- show application, concentration and motivation to do a task well in a variety of situations
- use his own initiative
- accept challenges and attempt new activities
- be self-reliant
- show acceptance of success and failure with emotional equilibrium
- control his behaviour within reason
- co-operate in small and large group situations, thus displaying active participation
- give and take, and does he show a reasonable decline in ego-centrism
- display adequate gross motor co-ordination with no outstanding weaknesses
- display adequate fine motor co-ordination
- demonstrate adequate hand-eye and foot-eye co-ordination
- demonstrate a definite left or right dominance
- display adequate perceptual and cognitive skills
- understand what is required of him in order to achieve success in his tasks.

The success of the programme depens on the teacher's knowledge and understanding of the child's "levels of operation". (As defined by Piaget)

1. In learning about and dealing with their environment all children function initially on:

   (i) the motor level

   (ii) the verbal level

   (iii) the level of symbolic representation.

2. The teacher must be constantly aware and able to identify the level on which individual children are operating in order to be able to plan and present activities which will extend the children and lead to more complex interaction with materials, and the formation of abstract concepts.

I THE PHYSICAL MOTOR LEVEL

At this stage the child is involved physically with his environment and three stages are identified.

1. **The child uses his own body to experience and construct concepts:** i.e. he "gets the feel" through his own body e.g. in and out of a room or jumping up and down. When this concept has been assimilated, through bodily movement, the child is ready for the second stage.

2. **The child uses his body and objects to experience the concept:** e.g. he climbs in and out of a box or up and down a ladder. He is still involved in physical bodily movement but he is also involved with an object **in relation to his own body.** When he has mastered this concept he moves on to the third stage.

3. **The child uses an object/s together with other objects to experience the concept:** e.g. he places a toy animal in or out of a pen, or moves a toy car along a road. He is no longer directly using his body to experience a concept but is manipulating objects in his environment to understand the concepts to which he has been exposed.

II THE VERBAL LEVEL

1. At this stage the verbalisation and interpretation of actions plays a vital role. The teacher verbalises and provides a verbal stimulus and encourages the child to respond both physically and verbally e.g. "go and climb up the jungle gym and come down the slide".

2. The child responds by verbalising: before he does it (e.g. "I am going to climb up the ladder") or as he performs the action. ("I am going up the ladder") or he interprets it just after completion. ("I went up the ladder"). Finally he interprets his actions from memory - the next day or at news time. "I went up the ladder this morning". This is a more complex construct because time has lapsed between completion of the task and the verbal discussion.

3. The child spontaneously verbalises about an action or event without verbal stimulus from the teacher.

III THE LEVEL OF SYMBOLIC REPRESENTATION

This is the final level of operation as applied to this programme and is the start of the concrete operational period. At the pre-primary level symbolic representation takes a graphic form.

The teacher who is familiar with these developmental levels will ensure that the children experience the concepts progressively, through the stages described above. It should be borne in mind that all development is integrated and does not occur in isolation.

PLEASE NOTE:

1. The basic activities suggested in Column 3 of the programme are intended as a guide and are in no way prescriptive. The teacher is expected to extend and develop her own activities and aids.

2. The basic activities have been designed progressively to meet specific objectives. Therefore, activities developed by the teacher must be selected with the specific objectives in mind.

3. The activities should be seen as an interrelated web of relationships. The levels have been isolated for the teacher's convenience in planning the activities.

OUTLINE OF THE PROGRAMME

1. General Orientation

2. Concept of Self

   (i) Body Image
   (ii) Laterality
   (iii) Midline
   (iv) Senses - including Sound and Texture

3. Family Relationships

   (i) Families at Home
   (ii) Families at Work

4. Exploration of Attributes

   (i) Colour
   (ii) Shape

5. Spatial Relationships

   (i) Language of Space (including positions in space)
   (ii) Child's own body in space
   (iii) Midline
   (iv) Left/Right Orientation
   (v) Directionality
   (vi) Different spatial viewpoints
   (vii) Distances apart (Separation)
   (viii) Symbolic representation of spatial relationships in drawings, pictures etc.

6. Exploration of Relationships

(i) Size
(ii) Length
(iii) Height
(iv) Mass
(v) Volume
(vi) Capacity

7. Exploration of Mathematical Concepts and Relationships

(i) The Language of Mathematical concepts
(ii) Relationships
(iii) Classification
(iv) 1 - 1 Correspondence
(v) Seriation
(vi) Experience of Numbers (towards number)
(vii) Counting experiences (say number etc.)
(viii) Ordering

8. Temporal Relationships

(i) Time of Day
(ii) Sequence of Time
(iii) Days
(iv) Months
(v) Seasons
(vi) Holidays
(vii) Speed
(viii) Position

9. Consolidation (combination and refinement of cognitive skills including):

(i) Memory training
(ii) Problem solving
(iii) Closure
(iv) Figure/ground
(v) Gestalt
(vi) Constancy of shape
(vii) Classification
(viii) Development of imagination
(ix) Auditory training
(x) Language extension
(xi) Sequencing
(xii) Matching

UNIT 1 : GENERAL ORIENTATION

GLOBAL AIM: To integrate the child into the more structured environment of the reception class. To develop the appropriate social and language skills required for formal learning.

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to: - hold a crayon and paintbrush correctly - manipulate scissors - follow simple instructions - take turns - share equipment - share the teacher's attention	I. General Orientation	The activities in this section will depend on on the specific needs of each group. Familiarising the child with the educational games and their rules. Introducing the child to the "group teaching" approach.	Puzzles, construction toys: Games, perception apparatus. Sense-training toys etc. Creative activity materials as per equipment list. Senso-pathic media. The music programme. The developmental play programmes. The Language programme.	± 1-3 weeks

UNIT 2 : CONCEPT OF SELF

GLOBAL AIM: To develop the child's understanding of himself as a unique individual and to build up his sense of self-worth and achievement as the basis for confident learning.

The acquisition of a positive "self-concept" The ability to make a graphic representation of himself, which approximates a degree or reality.	II.	The "Self-concept" Knowledge about "me" What I am, how I look, how I feel about myself and how others accept me.	Any activities related to exploring the child's appearance. Making self-portrait. Responding to verbal cues. Verbalising and describing his appearance.	Full length mirror Colour photograph of each child. Game: "Simon Says".	± 1 week
- the ability to: - (express an) awareness of body and body parts. - name body parts - locate body parts - understand functions of body parts - co-ordinate the visual and tactile movement.	1. 1.1 1.2 1.3 1.4	Concept of body image Language relating to body image Body parts Function of the body parts Hand-eye and foot-eye co-ordination	Instruct the child to On instruction the child ° Locates and names body parts on himself ° Child locates and names body parts on cardboard figure. One child in the group outlines another. The rest of the group paints in the parts of the body, naming them as they do so. Cut out and mount on wall. ° Children suggest function of body parts	Full lenth mirror Fizzog Body Imagery Game Face puzzle Boy puzzle Girl puzzle Ethnic face and body puzzles Large body puzzle Face it Jumbolino Large charts - illustrating boy/girl Child-size jointed cardboard figure with body parts in proportion. "Dan the funny man" Clay	± 2-3 weeks

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
		° Children enact major functions e.g. kicking, clapping etc.	Crayons Paint Paper	
		° Children use clay to model a figure in action.	Developmental play ring "Do this - do that" game	
		° Children make "My book Book about Me".	Body image cards. (Self-corrective).	
		° Children discuss apperance, noting differences.	"Fill in missing parts" game.	
		° Throwing, catching, kicking, cutting, threading activities.	Bean bags, balls, skittles, baskets, etc.	
		° Any activities involving movements on both sides of the body- (together - separately alternately)	Link up with Developmental Play programme	± 1 week
The ability to: - to understand that the body has two sides. (At this stage awareness of two sides is all that is required).	2. Laterality - the concept that the is bilaterally symmetrical and has two sides which function in a variety of ways.	Movements are executed with eyes open - then closed Balance Beam activities	Walking beams	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA		CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
			Stepping Stones Game	Developmental Play programme	
- to grasp the relationships between the two sides.	2.1	The components of the two systems. two ears, two arms etc.	Any activities involving crossing the midline.	Chalk board circle	
		(The words "Left" & "right" are **not** used at this stage).	Any activities crossing the midline and learning a visual trace.		
	2.2	Exploration of gravity with body parts.			
	2.3	The concept of the midline as "zero" of the origin of movement.			
The ability to:					
- locate sensory organs	3.	The five senses and their functions	° Child locates and names sensory organs on himself/on a partner/on a doll/a puzzle/a picture. Then he draws them	Large charts 1 for each sense	± 5 weeks
- understand function of sensory organs		° Sight - Eyes		Mirrors Puzzles (face)	
- describe characteristics of sensory organs		° Hearing - ears			
		° Touch - hands/skin fingers	° Child looks at himself in mirror and draws what he sees, with emphasis on sensory organs.	Craypas Paper Dominoes-texture	
- use sensory organs in recognition and discrimination		° Taste - mouth/lips tongue			
		° Smell - nose			

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA		CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- identify objects that can be perceived through the different senses	3.1	The language of the senses. The organs of the 5 senses.	Activities related to identifying various foods by taste/smell/feel ° Child makes a print of his hands and feet and cuts them out.	"Face-it" game Fingerpaint Scissors Cards/dominoes/lotto matching organs to stimulies Covered tray of suitable articles. Smelling cannisters	
The ability to: - notice changes in stimuli - to co-ordinate his body and limbs in relation to his sense of organs. - identify what can be perceived through each sense modality.	3.2 3.3 3.4	The knowledge that hands work together as a pair in support of each other in various degrees of unity. The use of hands and eyes as a team. Extension of the modalities e.g. **Ears** Shapes of ears of different animals **Noses** Animal noses/ eg trunk	Child makes a book of the sense organs and what they perceive. "Kim's Game" Sight - making glasses Adaptaion of Kim's Game for smelling and touch - any activities related to feeling textures. In a group of 6 a child shakes die and selects appropriate card eg. die shows picture of mouth the child selects picture card of ice-cream posts in relevant box.	Posting game: 6 or more cards for each sense. Die showing hand, mouth, eye, nose, ear and face. - Flannel/board of "Making faces Kit" Songs eg. "Little Peter Rabbit", Finger rhymes. Projector-hand shadows. Texture "bridges" Centres of Interest Wall charts.	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	Skin Different skin coverings/ hair/hide/ scales/etc. **Mouth** adaptation to feeding eg. fish/birds/ buck/carni- vores etc. **Fingers** Point/pinch/ pick up/etc. **Hands** Hold/shake/ feel, clap etc.	Paint finger nails "Lipstick" activity - kissing paper and drawing face around imprint of lips. Fill in the missing parts in blank faces with only one modality on the faces as a guide. Fitting on different sized gloves, socks etc.		
The ability to - recognise familiar sounds out of context - match sounds - discriminate gross and fine differences in pitch, volume and tone - estimate sources of sound.	4. The Attribute of Sound	Children identify sounds A "listening walk" Children match instruction to sounds. Once child is sent out of room. Article is hidden. Children hum loudly or softly as child moves closer or further away from article.	Tape of familiar sounds Games with water cannisters Tape of percussion music Article hidden in room Musical stories Hearing cannisters Post box game of "Soft-loud" sound pictures	± 2 weeks

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA		CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
			Children respond to pitch and tone of music using various body movements.	Integrate with music programmes.	
			Children lie on floor with eyes closed. Teacher plays tambourine and children point in direction of sound.	Tambourine	
			1 Child in centre of ring with eyes closed. Children pass bells around ring behind backs On signal child in centre points to location of bells.	Bells	
The ability to: - differentiate between a variety of textures - identify familiar objects by touch only	5.	The Attribute of Texture	Children touch picture and describe feel.	Large texture pictures. Feeling bag	± 1 week
			Children match textures	Texture dominoes	
			Children feel and identify objects.	Texture box Tactile bridges	
			Children select pairs by touch alone.	Two bags filled with identical objects.	

UNIT 3: FAMILY RELATIONSHIPS

GLOBAL AIM: To establish awareness of himself as a social being in a web of social relationships.

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA		CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to: - identify himself as member of a family group - name family members - discriminate between the sexes in roles, clothing etc.	1.	The concept of a family and related language What is family? Parents Siblings Grandparents My Relatives Clothes Sex Roles My Friends Animal Families - Related vocabulary of all the above aspects.	Child draws his family Child cuts out and pastes magazine pictures to represent his family Child sorts clothing into categories Child divides paper in half He draws members of family on left-hand side of page and selects and cuts out a related picture to be pasted on the right-hand side of the page.	Family inset board puzzle Photograph album of the family Kate and Tom Kit "Happy Families" game Family lotto Paper Crayons Magazine pictures (suitably selected) Scissors Glue Suitable clothing for sorting Dan's clothes His, Hers and Theirs cards - suitable cards illustrating the possessions unique and common to the sexes.	3-4 weeks

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- to name the rooms in his home and their furnishings. - to describe his environment his family, himself - to differentiate the occupations of people and their sex roles	2. Families at home Activities at home The house and rooms Dwellings The Garden/My Town/ My School/Our Pets The house the rooms Animal homes	Draw picture of "your home" Child cuts out magazine pictures of articles in the kitchen/bedroom etc. and sorts and pastes these into "rooms". Ditto for the garden Building houses with Lego blocks, Tinker Toy, etc.	Wall paper book, pictures of different rooms in the Pictures of types of dwellings, animal and human Puzzles Mia Casa	
	3. Families at work Occupations Sex roles Special clothing People who help us The policeman	 Activities sorting/ drawing clothing. Matching clothing to work activity	The Centre of Interest Themes: of people who help us "People at Work" puzzles Pre-reading Workshop	
The ability: - to name the characteristics of the occupations - to discriminate the clothing worn by various occupations	The baker The nurse The doctor The dentist The garbage collector The postman The fireman The traffic policeman Servants	"People who help us" visit the school in rotation and talk to children Story compiled by the children about eg. "Our visit to the dentist/ hospital/fire station the florist, the	Section Leggo shops Self-corrective cut cards of tools and trades Occupation puzzles Pre-reading Workshop	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	The teacher The farmer The soldier etc. Animals that help us: e.g. chickens	hairdresser etc. Baking to link with Baker. Flower arranging to link with florist etc.		
- to understand various cultural concepts relating to his country.	4. Games we play (Recreations) The food we eat/ things we eat with Money The telephone etc.			

UNIT 4: EXPLORATION OF ATTRIBUTES

GLOBAL AIM: To stimulate and encourage the child to compare one object to another so that the attributes of shape and colour are made significant.

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to: - recognise and name basic colours - discriminate similarities and differences in colour - understand principles of colour mixing - sort and match colours	1. The concept of Colour Red Yellow Blue Green Purple Orange Brown Black White Pink Grey Intensity of Colour 1.1 Colour related to objects 1.2 Creative use of colour 1.3 Colour in the home 1.4 Colour in nature	Children identify colour of objects and name other objects of the same colour Child selects correct crayon and draws an eg. green ball Each child is given a disc and finds an object of the same colour in the classroom. A child is the "seeker" he is given 1 coloured disc. The other children are given 2 discs each and hide them in each hand. The seeker approaches each child in turn and collects discs of his colour from them.	Colour towers Colour Balloons Girocolour Kaleidoshape Sechsmaster Shapes Game Learning to reason Attribute blocks Faber and Formen Colourama Graded peg board Puzzles (see list) Duck game Construction game (see list) Laces and Beads Octons Simex Rondi Coloredo Large "colour" illustrations showing different objects of the same colour, eg. green: tent, trees, knitting, frog, leaves, grasshopper.	± 3 weeks

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA		CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
			Children experiment with paint and make prints of resulting colours.		
			Activities involving colour sorting and matching.	Paper Crayons	
			Activities relating to mixing eg. string pulling straw blowing, finger painting.	"colour hunting" Coloured discs in a variety of colours.	
			Colour collage using creative materials	Colour dominoes	
			Threading beads to match a pattern.	Hide and Seek Colour discs. Colourless finger paint and shakers containing primary colours.	
The ability to: - perceive and name shapes - discriminate similarities and differences in shape (using visual and tactile modalities)	2.	The concept of Shape N.B. each shape is to be taught separately in the order given below.	Children handle apparatus which is relevant eg. Sechsmeister (Use similar activities for each shape) Teacher presents shape, introduces name and discusses characteristics.	Large Wall Charts depicting different shapes Construction games (see list) Puzzles Kaleidoshape Sechmester Shapes Games Learning to reason	3 weeks

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	2.1 A circle A semi-Circle A Sphere	Children identify circular objects in a room	Circle cut out of heavy cardboard	
		Children identify circles in picture.	Articles in room with circular shape.	
		Children draw around circular template, cut it out and make a picture using it.	Large illustrations showing circles Template, crayons	
		Children draw circle, colour it in and cut it out. Using wool they make a bunch of balloons.	Scissors, cardboard, craypas Shape dominoes	
		Extension activities include semi-circle and sphere eg., make a "pom-pom".	Paper plates or circles cut out of card with holes punched around edge. Wool. Needles.	
	2.2 A Square A cube	Children fold paper into 4 squares - draw 2 different objects in designated sqaures eg. draw flower in top left-hand square.	Square paper Crayons	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	3. **A Rectangle** A Cube	Fold sqaure into 2 rectangles cut paper in half. Children then stick rectangles onto a large piece of paper in a creative collage.	Sqaure patterned paper eg. wallpaper Scissors, glue, large piece of paper.	
	4. **A Triangle** A cone	Fold square into half and cut into 2 triangles, children paste 1 triangle onto paper and create a picture of clown with triangular hat.	Sqaure paper, scissors, Crayons, glue, paper	
	5. **An Oval** An Egg	Children decorate blown eggs.	Eggs, crayons	
	6. Different shapes eg. squiggles, spirals, etc.	Children create different shapes. Activities using "concentrix" apparatus. Children fish for shapes using magnets. Children create shapes in groups eg. 3-form triangle. Shapes created with elastic bands on nail boards. In pairs children outline shapes on each other's backs.	Finger paint Pipe cleaners Shape dominoes Shapes cut from masonite for sorting Magentic fishing game cardboard shapes	

UNIT 5: SPATIAL RELATIONSHIPS

GLOBAL AIM: To establish awareness of spatial orientation and direction within himself

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to: - understand and use the terminology of spatial orientation correctly.	The Language of Space 1. near/far under/over in front of/behind next to/away from in between/on top of inside/outside above/below etc.	Child complete an obstacle course following the teachers' verbal instructions Children describe verbally position of objects on wall pictures, puzzles and on Begrippentaal apparatus.	Constructive Games Opposites Differex Concept diagram Shau/Genau/Shape up Puzzles "Begrippentaal" Pre-reading workshop kit.	
	2. The child's own body in space. Carrying out instructions using the "language" above.	Child pastes box onto paper and draws an object in relation to it, according to the instructions, eg. next to the box.	Outdoor equipment. (Drums) Zulucraft equipment	
- cross the lateral	3. Midline - revision	Any activity involving movement across the midline eg. Paint horizontal lines on paper from left to right. "Circle" chalk board activities and any activities where the movement leaves a visual trace.	Flannelboard pictures Series of pictures depicting a seal and one or more balls - ie. seal on top of ball Cardboard box, paper, glue, kokos	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- demonstrate smooth L-R land and eye - to distinguish between his left side and his right by interpreting the feeling between the two sides - control the identified side of his body independently of his other side.	4. Left/Right orientation using words "left" and "right"	Child names pictures in order, moving eyes from left to right without moving his head. Children trace the trails on left - right charts Children traced the trails on left-right Children draw a similar picture (with one animal and its home)	Large Wall Charts - Eight simple picture cards side by side Left-right puzzles Left-right charts with wool Large illustrations depicting animals on left, their homes on the right, linked by sandpaper trails Large paper, kokis, paint, Chalk board Begrippentaal	
The child's ability to: - project his laterality on the environment through movement, description and graphic representation	5. The concept of Directionality	Children physically follow a route of arrows around the classroom, or garden, on completion they verbally describe the route. Children draw a simple map of the classroom (bird's eye view) (by 4th term)	Arrows Paper, crayons	
- perceive and verbalise relationships between objects.	6. Different spatial viewpoints	Making 3 dimensional constructions.	Development play programme	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	7. Distances apart and the	Activities which will graphically represent positional relationships between various objects.	Farm animals and buildings Road maps and cars Noah's Ark and animals Begrippentaal	
	8. Symbolic representation of spatial relationships ie. drawings, pictures etc. verbalisation.	Illustrating concepts in a "story book" made up by themselves.	Pre-reading Workshop Kit	

UNIT 6 : EXPLORATION OF RELATIONSHIPS
SIZE, LENGTH, HEIGHT, MASS, VOLUME, CAPACITY

GLOBAL AIMS: To provide experiences which will lead to and understanding of the concept of size as an essential attribute of all material. To provide measuring activities which will lead to the more refined concepts of length, height, mass, etc.

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to: - see the relationship between 2 similar objects of different size. - use correct terminology - understand the changing relationships which occur because size is relative. - to understand and demonstrate that size is relative. - to seriate objects in order size.	1. The concept of size: The language of size: - big/small - fat/thin - wide/narrow - thick/thin etc. 1.1 The concept that size is relative 1.2 The changing vocabulury of size and the use of comparatives eg. big, bigger, biggest etc. 1.3 The concept that objects can be classified by grouping to size. 1.4 The concept that size is measurable	Children experiment to establish differences in size - with themselves and then with objects. Children sort and match cards according to size. Children compare sizes of hands/feet/shoes/ gloves etc. Children divide page in half and cut out two similar objects of differing size and paste one on each half of page to show big/small Children model a fat and thin person. Children sort and match belts of different widths. Children jump over the space between two ropes a wide and narrow river. Teacher lights candles of varying thickness. Children observe them burning and discuss.	Boxes of various sizes Size cards eg. apples or balls on firm cardboard Concentrix Shoes/gloves/socks etc. of varying sizes. Magazine pictures Scissors, glue, paper Pyramid toys Nesting boxes Play dough Blocks, Tinker toy Construction toys Belts Ropes Two candles of the same length. 1 thick and 1 thin Woollen plaits of varying lengths.	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
		Children make sandwiches and discuss thick and thin ones.	Slices of bread and margarine.	
		Children match thick, thin plaits round cardboard faces.	Graded peg board Graded acre inset	
		Children in groups sort belts, ribbons of varying widths and match these to silhouette board.	puzzle (trucks) Rolf tile puzzle Graded jigsaw (elephants) Construction Games Concept diagram Begrippentaal	
The ability to: - see the relationship between 2 similar objects of different lengths. - understand that length represents the horizontal plane. - use correct terminology.	2. The Concept of length, - The Language of length long/short longer/longest etc. 2.1 The varying relationships for length are explored as for "size" above.	Children paste wool onto paper, using correct terminology. Children divide paper in half and draw a long picture on one side and a short picture on the other, eg. short snake/ short snake. Children build long/ short/shorter "roads" with blocks. Children build long/ short Lego strips, tall/low towers.	Glue. Piece of wool. Blocks - Tinker Toy etc. Construction Toys Paper. Crayons Construction Games Blocks Concept diagram. Paper plates, brown, black, yellow wool. Lego	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- see the relationship between 2 similar objects of different height. - understand that height represents the vertical plane. - use correct terminology.	3. The concept of height - language of height tall/short high/low etc. 3.1 The varying relationships for height are explored as for "size" above.	Children draw own silhouettes, then cut out and seriate along the wall. Teacher marks each child's height on a wall chart. Children compare and discuss. Child makes a tall-short candle using waste materials eg. toilet rolls. Children match cards of height relationships.	Height chart Blocks Tinker Toy Carlton rolls, toilet rolls, glue, crepe paper, scissors. Begrippentaal High/low cards (Self-corrective cut) Construction games Concept Diagram	
The ability to: - see the relationship between 2 similar objects of different mass ie. perceive differences in mass kinaesthetically and observe differences in mass using a scale. - use correct terminology.	4. The concept of Mass and the language of Mass. 4.1 The various relationships are explored as for "size" above.	Children hold bags of sand in outstreched palms and discover properties of mass. Children weigh objects using balancing scales. Children compare objects of differing mass by holding in each hand. Discuss. Children weigh each other and fill in mass on a wall graph.	Scales Objects Bags of sand Histogram wall chart showing mass.	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- understand that empty/ full are absolute terms. - demonstrate this concept in a practical manner. - estimate similarities and differences in volume. - use correct terminology.	5. The concepts of Volume and Capacity. The language of Volume. full/empty more/less deep/shallow etc. 5.1 The relationships are explored as for "size" above.	Activities filling different containers with water and sand. Children experience and discuss their findings. Children paste bottles onto large piece of paper and colour in to represent full and empty Verbalising activities using wall and picture charts to consolidate concepts.	Jugs, containers, litre measures, coloured water. Bottle shapes cut out of paper, large piece of paper, glue, crayons. Concept Diagram Begrippentaal. Puzzles Wall charts Pre-reading Workshop	

UNIT 7 : EXPLORATION OF MATHEMATICAL CONCEPTS AND RELATIONSHIPS

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to - sort and match according to number - group items distinguishing differences or likeness on the basis of one or more common characteristics - understand correspondence up to 6, with appropriate verbal symbols. - classify and sort according to number in a set.	1. The Language of Mathematics : quantity words and comparative words eg. like-unlike, equal to, big/less, more/ smaller than/little the same, different etc. 2. The concept of relationships between objects. Differences between objects. Likeness between objects. 3. Classification - according to concrete visible characteristics eg. colour, shape, size etc. 4. 1-1 correspondence (up to 6)	Activities revising all previous concepts of size/height, etc. with a bias on mathematical relationships and concepts. Sorting into categories, handling objects - then graphically representing them. Pictures of clothing for each season sorted into groups. Discuss reasons for identifying in a certain way. Sorting mixed containers eg. will hold water - will not hold water. Let children choose and sort. Discuss reasons for choices. Activities related to grouping according to attributes and characteristics previously dealt with in the	Sets of items that have the attribute being dealt with eg. wide/narrow ribbons, short/long socks. Begrippentaal Concepts Diagram Speeltuin Sets of pictures of clothing for all Season puzzles. Sequence strips. Assortment of glass, vase, funnel, bowl, sieve, sponge, plastic bag, paper bag, basket spoon, fork etc. Froebel animals, people etc. Beads Sechsmeister Large wall charts illustrating individual numbers (1-6 eg. wheels on vehicles, tricycle 3 wheels etc.) Furry animals Sorting cards - minimum six per number.	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	4.1 Matching objects 4.2 Matching "as many as: 4.3 Matching pairs eg. animals to the food they eat.	programme eg. soft, hard, shapes, animals, colour etc. Teacher presents relevant wall chart and children discuss. Find similar examples environment. Matching shapes on flannelboard Children sort cards which match the concept. Matching clothes pegged on a wash line. In small groups children select the correct number of hats to establish 1-1 correspondence. Setting tables Children illustrate number stories.	Hats, aprons Cups and plates for setting places at table. Flannelboard/shapes, colours/pictures. Stories, paint, paper Domino natura Hi-ho cherry Duck game 3 to match Jumbolino Construction games (see list) The Games	
The ability - to understand that objects are permanent even if they cannot be seen at the moment.	5. Identify and constancy of objects 5.1 Permanence of elements eg. water/ice/ steam.	Activities hiding an object and finding. Experiments with water ice, steam.	Beaker and beads Suitable equipment for the experimental activities.	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- to understand that an object retains identity	5.2 Permanence of objects eg. sun, moon.	Activities which emphasize the disappearance and re-appearance of phenomena eg. sun, moon, stars, rain, seasons, wind, etc.	Suitable books, wall charts. Pre-reading Workshop	
	5.3 Permanence of objects that change their appearance and attributes.	Activities, using for eg. eggs - which can be raw, boiled, fried, scrambled but still remain egg.		
- understanding irreversible changes as a result of action taken. - describe a sequence of changes in an element	5.4 Noticing and labelling the changes in a process of action eg. making scrambled eggs "First we do this, next we do ... etc."	Making popcorn A potato can grow, peeled, be boiled, mashed, fried, etc. yet still remain "potato". Repetitive verbalisation of the action eg. "Look what I'm doing now".		
- realise the numbers can be arranged in a fixed interval serial order. - compared and order objects and materials according to a particular dimension eg. size, quality or quantity.	6. The concept of Seriation - seriation 6.1 The language of seriation - shortest to longest, largest to smallest etc.	Children arrange bottles in increasing or decreasing order - any items that can be seriated to size, height, any dimension selected by teacher.	Beads in bottles Family inset board Concept Diagram Seriation puzzles Crayons Paper with circles drawn on it ie.: Nesting boxes/baskets/ cups. Concentrix apparatus	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	6.2 Spatial ordering First, next, last. Eventually according to position.	Children order beads/ blocks/mosaics in a row. A small group of children run a race. The others identify 1st., 2nd and 3rd placed. Draw a picture of the race.	Russian nesting dolls Paper, craypas	
	6.3 Ordering events, eg. sequence of getting dressed, eating a meal etc.	Activities with Tom & Kate models. Any other activities involving ordering and position.	Begrippentaal Tom & Kate Charts	
	6.4 Ordering with words of relative size eg. longer/shorter, fatter/thinner, bigger/smaller.	Activities where the child chooses between two different lengths eg. 2 pieces of string. "Which one is longer?" etc.		
	6.5 Ordering to quantity and number.	Arranging same sized containers with increasing quantities eg. water levels in jars, increasing number of beads in a jar, eg. 1 bead, 2 beads, 3 beads etc.		

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to: - use small number words with meaning - count by rote up to 10 - relate a number word to a quantity up to 6. - do tally counting up to 6 - use the language of the relationships in conservation - abstract numbers up to 6 - conserve substance and number	7. Experience of numbers 7.1 Small number words - one, another one, two etc. Understanding the oneness of one, twoness of two etc. 7.2 Beginning rote counting ie. recite numbers in the right order. Concept of "what comes next". 7.3 Concept of "How many?" Tally counting. Appropriate responses up to 6. Matching number words to a set of objects one by one to find a value for the group. 8. Conservation 8.1 The Language of conservation the same, how many, like this, as much as, more, less, etc.	Activities leading to an understanding, of number eg. "give me a bead," now give me "another bead". When above is understood "two" may be introduced etc. Games and rhymes where sensory input matches. Counting objects in a well spaced row. Counting and transferring from one container to another. Finally counting a jumbled group. Children use tally counting to establish whether a group has more/less/same as another. Children experiment with pegs, arranging them in various combinations and comparing sets by mapping. Rote counting is revised frequently in activities. Final stage is tally counting.	Number rhymes, songs and finger plays. "Peter plays with two hammers" etc. Counting games and rhymes. Games using Speeltuin. Pegs (6) per child) Peg-boards Skittles "Begrippentaal" Puzzles Beads, blocks, pegs, crayons, Froebel counters. Clay, water, jars etc. Concepts Diagram	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	8.2 Transforming - by merely changing the appearance of an object eg. Ball of clay. Water in different jars. Arrangement of objects.	Modelling the same quantity into different shapes. Activities using only 3 objects eg. row of 3 beads. Teacher asks "how many?" Then spreads row out - repeats question - "How many?" when "three" replied to both the proceeds to ask if the row is "still the same?" - Responds appropriately to "No - Yes" replies etc. until child grasps that **same number** implies **same quantity.** Activities similar to above, using beads and jars to consolidate concept.	Attribute shapes and circles. Peg boards Lego blocks and base Blocks Beads and jars Froebel Sorters Pre-reading Workshop - talking pictures	
	8.3 Abstraction of numbers up to 6.	Activities checking abstraction of number up to 6 eg. which bottle has 4 beads? Can you find another with the same number? How many beads in that bottle? (Pointing to another).		

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	8.4 Transforming by adding or subtracting from a quantity. Extend to quantity and number by using beads in jars.	Two identifcal jars with water. Pour same out of one. "Is there less?" "Are they still the same" etc. Reversing the process by adding.		
	8.5 Abstraction of small numbers against conflicting cues.	Activities using small objects in different configuration eg. 4 Lego blocks in a tower or spread out in a train. A set bunched together in a triangle or spread out in a larger square. A set of beads on flat plate or in a narrow tube. Teachers asks appropriate questions. Initially only the same objects are used in a set eg. all beads, all blocks, all marbles etc. At a later stage these may be combined. Activities leading up to Piaget's conservation principles and then consolidating.		

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	8.6 Consolidating of abstraction and transforming of quantities by using mapping and tally counting.	Activities on the following example: Teacher lays out row of 5 red blocks. Asks "how many are there?" After correct response, offers blue pile and instructs "Give me the same number of blue blocks". Child use mapping and then tally counting. **2nd Stage** "And now make it so that you have more", then "less". Activities are repeated in various game forms eg. animals in pen, cars on road, apples on tree etc.	Various materials - beads, blocks, discs, Froebel figures/animals etc. Noah's Ark Farm yard and animals Cars on roads etc.	

UNIT 8 : TEMPORAL RELATIONSHIPS

GLOBAL AIM: To create an understanding of the natural sequence of time in the child's environment through an awareness of the beginning and end of time intervals in the ordering of events in relation to the child himself.

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to- - understand the natural sequence of time and the beginning and end of time intervals. - express an awareness of the natural sequence of day and night. - represent time verbally and graphically as a sequence of events. - use correct terminology - graphically represent time as a sequence of activities. - understand time by relating to concrete representations. The Clock.	1. Time of day 1.1 Sequence of day/ night/morning/evening etc. 1.2 The language of time. Today/yesterday/ tomorrow/early/late/ a short while/soon/ long ago etc. 1.3 Sequence of events and time at home/ school. 1.4 The language of time orientation events eg. bed time, breakfast time, school time, playtime, snack time, etc. 2. Sequence of timing. This morning/tonight last night nearly - never, now - not now, just now, first, next, last, everyday, all day.	Pictures of day and night. Children discuss similarities and differences in the two scenes, eg. light, dark, clothing, activity/ sleeping etc. Children discuss the day as a sequence of events. Activities related to the time of day. Getting-up time. Tidy up time, breakfast time. Children divide into smaller groups, choose a time of day/and activity at home and illustrate it. Teacher writes underneath each picture. These pictures are then displayed in the correct sequence - the order decided by the children.	Two wall pictures of a scene, one depicting day, the other night. Paint, paper, etc. Two child characters - Kate & Tom - cardboard figures with appropriate clothing and wall charts. Puzzles showing activities/seasons. Sequence pictures Rolf sequence tiles Sequence inset puzzles	± 2 weeks

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- name days of the week in the correct sequence. - Name important months for the year eg. the month of birth.	2.1 Measuring time on hour glass, clock, stop watch. How these are used daily. 2.2 Observations of physical changes occurring within time limits, eg. growing beans. Changes in height from babyhood. 3. Days. The concept of a week. 3.1 What is a day? Names of days The weekend. 4. The months and concept of a year. 4.1 The calendar - a measure of passing days.	Children make a book of events in the day. Children run/clap in response to instruction to start and stop. "It is time to start" "It is time to stop etc. Children make and draw own sequence cards. Children in pairs illustrating an event at school. Teacher writes underneath eg. snack time, wash time. Children arrange these in the correct sequence Experiences with timing mechanisms. Children make a "Time" scrap book cutting out magazine pictures, illustrations, daily events in relation to "time.	Link up with Developmental Play and Music Rings Link up with Centres of Interest. Poems, stories, songs, using days and months. Pictures depicting each day of the week. Large wall calendar (teacher made) weekly. A calendar of seasons (pictorial) A calendar of events (pictorial) Large wall calendar Wall charts and graphs of mass, height to illustrate changes and "time".	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to: - express an awareness of the natural sequence of the seasons. - name and describe the natural characteristics of the seasons and their effect on man.	4.2 The names of the months 4.3 Important days/events in the year: Christmas, Republic Day, Easter day, etc. with the appropriate symbols, eg. Christmas tree, flag, easter eggs etc. 5. The Seasons and their names. 5.1 Observation of seasonal changes as year progresses. 5.2 Participation in special experiences and events which emphasise these as a series of recurring events. 5.3 Weather related to Season.	Children are made aware of their "special month" as their birthday comes around. Picture on calendar. Special album of family photo's. Activities linking time to age. Activities related to experiences in the environment eg. fruit ripening, eggs hatching into chickens, etc. The children are made aware of the seasons as the year progresses. After discussing characteristics of the seasons the children each draw an associated article of clothing for a season. The chart is then displayed with the related pictures. Seasons are associated with growing plants. Marking special days/ events on a wall calendar e.g. Activities which emphasize seasonal changes	Photograph album "My about Me" and "How I change as I grow" Photo's of grandparents. A circular chart depicting the season. Weather chart. Kate & Tom's clothing for the seasons and the weather. Centres of interest and nature tables and displays. Pre-reading Workshop Charts. Collections of objects linked to seasonal changes eg. pods, seeds, guards, Spring-budding branches,	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
		and special events eg. Harvest Festival. Sorting of fruits, seeds, leaves. Visit to a farm, park, gardens.	flowring bulbs. Silk worms, etc.	
		Making a book of a visit to, or the observations on a nature walk. Activities which emphasise participation eg. smelling blossoms, feeling new leaves.	Photographic record taken on nature walk - to compare for eg. the same tree in spring, summer, autumn, winter.	
The ability to-	7. Speed and Rate	Children respond to music varying speeds.	Music rings Stories Paper	
- demonstrate an understanding of the concept of time through movement.	7.1 The language of speed Fast/slow. Comparatives. How fast? How slow -	Children scribble on paper according to speed of music.	Music Crayons Egg timers	
- identify differences and similarities in speed auditorially	7.2 How animals move	Activities which experiment with objects moving at different rates of speed - cars, rolling balls and games, using these concepts:	Centres of interest Traffic puzzles Bean bags, balls Skittles Wall charts Spinning tops, pin wheels gyroscope	
- the ability to understand the relation between time and rate.	7.3 Observation of moving objects - cars, planes, steam roller, trains,	Verbal reinforcement	Toys that move on wheels	
		Games where the rate can be varied eg. follow my leader, running, ball rolling.	Toys that rolling balls, spools, ball bearings, rods.	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
		Song sung slowly or fast	rings.	
	8. Position related to speed	Instruments which are played at varying tempos	Things that drip or flow eg. water/startch/paint/ glue/oil/silver sand etc.	
	8.1 Language of position- first/second/third/ last etc.	Simple games racing against time.	Large apparatus which provides moving expe- riences - drums, swings, wielie-walie.	
			Link up with Develop- mental Play.	

UNIT 9 : CONSOLIDATION

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
The ability to- - recall the main facts as well as the sequence of a story. - recall 3 consecutive instructions and carry them out - recall and then repeat a series of: handclaps unrelated words notes making a muscial phrase - recall a specific set of objects no longer visible - recall and describe details of a visual stimulus no longer visible - recall a sequence of events performed actively, inferring the ability to mentally represent these events.	1. Memory Training and sequencing	These activities are self-explanatory. See specific objectives Kim's game Recounting excursions Recalling activities	Learning to reason Colorama Junior memory Como crece Lottino Begrippentaal Concepts diagram What's in a square Pictures of simple problems eg. split water, broken glass, fire, etc.	± 6 weeks

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- use logical, reversible reasoning as against transductive reasoning.	2. Problem solving	Set everyday problems for the children to solve, eg. How do you get out of a locked room? Discuss causes and consequences of possible actions, eg. breaking a window may be dangerous.	Immediate Environment	
The ability to- - use available resources in order to solve a problem. - assess the possible causes and consequences of an action. - make inferences using available information.	A variety of simple problems eg. "how can I reach an object that is too high?	Children make inferences using the presented material	Large detailed illustration, eg. road safety pictures.	
- perceive the whole when presented with an incomplete form.	3. Perception Closure - visual	Teacher extracts a picture slowly from envelope, encouraging children to identify object.	Large simple pictures in envelopes.	
		Child fills in missing details.	Incomplete outline of person.	
	- auditory	Teacher claps sequence She then repeats part of the sequence and the children complete it.		

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA		CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
	4.	Figure/ground perception (Visual and auditory)	Children find a pre-selected object in a details picture.	Large detailed illustration. Re-Reading Workshop	
- discriminate between figure and ground in a 2 dimensional and 3 dimensional scene			Children find a specific object in a toy box.	Toy box	
- distinguish specific sounds against a background of noise.			Children play and identify instruments. Taped music is then presented, children respond when a specific instrument is heard.	Percussion instruments Taped music - Differex Shau Genau Shape Up	
The ability to-					
- perceive the whole within the pattern of its assembled parts	5.	Gestalt	Children construct a manniken using the various pieces. These are pasted onto paper. Fizzog 200 cards Kitten cards Plateful puzzle	Cardboard shapes representing the parts of the body, paper, glue	
- recognise forms and symbols in the environment regardless of size or angle from which they are perceived.	6.	Constancy of Shape	Children match objects	Dominoes depicting objects from different angles, eg. Geominoes Symmetrix Begrippentaal	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- classify according to: one attribute two attributes function	7. Classification	Children first group objects according to specified attributes - then match and sort cards.	Objects Cards Section Lotto Shops "Mia Casa" Concept diagram	
- express thoughts, ideas and feelings verbally, graphically and physically in an imaginative manner.	8. Development of imagination	A group story Children, guided and stimulated by the teacher, make up a story which the teacher writes down. The children illustrate the story and make a book. They then dramatise the story.	Paper Paints	
The ability to- - make fine discriminations between phonetic sounds. - analyse and synthesize sound patterns.	9. Auditory Training	Teacher selects phonetic sound eg. "S" - children identify all toys beginning with sound.	Large detailed illustration eg. Toyshop Pre-Reading Workshop Charts.	
The ability to- - use grammatically correct language. - respond in full sentences.	10. Language extension	These activities are self-explanatory. See Specific objectives. Extensive use of "Story Books" made by the children.	Reading Readiness Kit as per equipment list.	

SPECIFIC OBJECTIVES/ EVALUATION CRITERIA	CONTENT	BASIC ACTIVITY GUIDE	AIDS AND EDUCATIONAL APPARATUS	APPROX. TIME ALLOC.
- use language fluently and expressively.				
- write his name - state his address and telephone number.	11. Social training	The teacher evaluates how the child writes his name, taking particular note of letter formation.		
- find his way around the Junior Primary School		The child says his name, address and telephone number. He verbally describes his house, then draws a pictures of it.	Tape Paper Kokis	
		The children are taken on a guided tour of the school (over a number of of days).	"Treasure Hunt" Small objects eg. pencils, sweets.	

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