A STRUCTURED PRE-PRIMARY SCHOOL PROGRAMME AS A BRIDGE BETWEEN PRE-PRIMARY AND PRIMARY SCHOOL

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A Dissertation submitted to the Faculty of Education, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the de of Master of Education.

Johannesburg
1985

DECLARATION

I hereby declare that this dissertation is my own work, and has not been submitted or incorporated in another dissertation or thesis for any other degree.

B.R. Fabian

ACKNOWLEDGEMENTS

I express my gratitude to the following people for the assistance which they have given me in the preparation of this dissertation:

Prof. Mervyn Skuy, my supervisor, for his expert guidance, suggestions, encouragement and support.

The supervisors, teachers and children of the following schools:

Emmarentia Hebrew Nursery School,
Northcliff Hebrew Nursery School,
Randburg Hebrew Nursery School,
and Chester Road Hebrew Nursery School,

who made it possible for me to carry out my research.

My family who, through their enduring patience and support, gave me the opportunity to work on this project.

Anne Koen, for the overtime she spent in order to complete the clerical aspects.

My dear friend, Wendy Solomon, for her company during testing and marking.

Margaret Westaway, who helped with the computerization of the statistics.

ABSTRACT

> "Learning proceedes motivation creating a zone of potential development".
>
> L.S. Vygotsky

This statement prior to the current research project serves as its impetus.

At the beginning of [illegible], the present researcher, as a private school principal, was faced with the problem of accommodating a 'Special' group of children. These children had been anticipating enrolment into Grade I, but the law had been changed and they were not allowed to commence their formal education until the following year. Most of them had been exposed to a pre-school education for two to three years and their parents did not want them to remain in the same educational environment.

To meet their cognitive, social, emotional and long-term needs a special programme was devised. This had to be an extension of the nursery school syllabus, but could not incorporate learning skills reserved for the first grade. Thus one of the first pre-grade classes in the Transvaal was started. The programme devised for these children covered many of the concepts incorporated in this dissertation. The progress of these children was easy to follow as most of them remained at the same institution for their primary school education. On the basis of observation and performance the children in that group appeared to derive much benefit from the special pre-school experience. However, at that stage, the programme design and its effectiveness were not subjected to scientific evaluation.

Therefore, an empirical study with appropriate modification, taking into account subsequent research and knowledge, was indicated. Through force of circumstances which, in retrospect, has proved beneficial to the research design, the present project was only initiated in 1983.

A structured pre-school programme was devised to prepare or make children 'ready' for school, with due consideration being paid to the feasibility of implementation and adequate sampling. Four Nursery Schools accommodating children from similar socio-economic environments were selected for the experiment. The children were randomly divided into experimental, placebo and control groups and the projected initiated. All children were assessed prior to intervention measures, i.e. shortly after commencement of Nursery School, at the end of that year, and then again three months after starting their primary school careers.

The culmination of the research study was reached when the results were scientifically analyzed and it was shown that the children who had been exposed to the programme benefited significantly as a result of their experience. Implications arising from this research project suggest that similar programmes should be available for all children before commencement of formal learning.

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CHAPTER 1

INTRODUCTION

1.1. The nature of the problem

The latter part of the twentieth century is heralding an increase in computer-based education and a society in which much thinking will be done by electronic brains (computers). Of increased importance will be education for pleasure. The way to live with rapid change is to be educated for it. Toffler (1970) pointed out that the only insurance against future shock is to be educated for a changing future. Naisbitt (1984) believes that we are living in the time of 'parenthesis' (p. 49), the time between eras. He states, "The time of the parenthesis is a time of change and questioning". In writing about major trends taking place in American society, Naisbitt refers to the 'information trend' as a reality. "In this literacy-itensive society, when we need basic reading and writing skills more than ever before, our education system is turning out an increasingly inferior product. The generation graduating from high school today is the first generation in American history to graduate less skilled than its parents. Estimates of the number of functional illiterates in the U.S.A. range from 18 million to 64 million".

The reality of the child's world is constructed by the institutions of the society. In most civilized societies education has been institutionalized. The mores, the group wisdom of the society, is transmitted by formal educational patterns. The school provides its pupils with a world outlook. Richards (1982) points out that change in both objectives and approaches in education will be the product of the new technology. The major impact is the displacement of printed information storage and retrieval systems by electronic means. The advantages speak for themselves, but it is all the more necessary to educate children, not only to survive in a techno'ogical world with all its ramifications, but also to facilitate their cognitive, social and emotional growth. This can be accomplished by ensuring achievement at school. Feuerstein (1979 - p.6) states "The importance of adequate cognitive functioning is probably greater today than ever because it is a pre-requisite for adaptation. It is even more important when the individual's cultural environment is marked by discontinuity that imposes multiple stresses on him to adapt to new situations. The world reduces the relevance and feasibility of an individual's current adjustment and leaves him without the performed ways to adapt that were previously offered to him by his culture."

A child's first failure at learning tasks often only occurs after a few years at school. Problems, however, may commence with the start of formal learning, due to a lack of general school readiness or inability to cope with demands in a specific area of cognitive or behavioural functioning. It is often the support system of the school and the fact that young under-achievers are given the benefit of the doubt which allows these children to proceed to the next grade.

Reilly (1983: 9 - 14) has tabulated the pass rate of South African children over a period of four years, based on reports from different governmental departments. These tables show a steady decline in school success for all race groups.

Research in South Africa by the Human Sciences Research Council (H.S.R.C.) and at the Rand Afrikaans University (RAU), is cited by Du Plessis (1981, p.12). These investigations have established that the accelerated failure rate amongst all population groups is because a large percentage of grade I children are not cognitively, socially or emotionally ready for school when they enrol. Du Plessis refers to an H.S.R.C. newsletter which states that more than 100 000 White pupils and several hundred thousand Black, Coloured and Indian pupils commenced their formal schooling in the Republic of South Africa in 1980. He states that "thousands of these children will eventually leave school without matriculating, because they will not have succeeded in overcoming all the obstacles along the way. One of the first obstacles is that of school readiness when entering school for the first time". It therefore appears that the timely anticipation and avoidance of under achievement and failure could contribute to the successful progress of these children with its ultimate benefit for the productivity of the country. This calls for greater investment in pre-primary education in the Republic of South Africa. The starting point will have to be a restructuring of the pre-school curriculum to meet the requirements of first grade readiness concepts. This could be done within a 'bridging year' prior to school entry.

The issue of school readiness is not a phenomenon confined to the Republic of South Africa as will be discussed in the next section of this chapter. However, in other Western countries, e.g. the United States of America and Britain, the critical needs of children, as regards school preparation, are generally catered for in what are commonly called 'kindergarten classes.'

1.2. A brief history and controversial views with regard to the problem

1.2.1. The concept of 'kindergarten learning'

The original 'kindergarten' was started in 1837 by Frederick Froebel in Germany and then transplanted to the U.S.A. in 1856 by Mrs. Carl Shurtz, a student of Froebel. Studies were conducted in German. The curriculum included free play, considered important for self-development, special games and songs, which served to enhance learning; construction with materials that had symbolic meaning as well as manipulative value and practice at various tasks, especially gardening and nature study, which Froebel considered uplifting.

Cohen and Rudolph, (1977) show how the Froebelian kindergarten combined a religious philosophy of striving for Unity of Man with God, and with a belief in the purity of the child's spirit as an inner force for development. An important component was creativity.

Until the 1960's the Froebelian kindergarten remained the vogue in the U.S.A. During the 60's, however, the sociological problems of the country as a whole stimulated forces within and outside the world of education, to seek causes for the devastating 'drop out' of society and failure in schools. The 'drop out' syndrome affected a large segment of the nation's children. Technological advancement made employment increasingly dependent on skills associated with school training. It was recognized that if changes in attitudes and skills related to school learning were to take place, all children and families had to be reached as soon as possible. Educational changes that were long overdue could not proceed fast enough.

The focus shifted to early learning, the pre-school years and particularly the 'kindergarten' phase. Thus the 'kindergarten', previously separated from the problems arising at school, was jolted out of its complacency. New demands were being made on kindergartens in keeping with new knowledge regarding early learning. The kindergarten was under pressure from all sides to change with the times.

The work of psychologists and researchers influenced the growth of early childhood education. Operation Headstart, conceived in the U.S.A. in 1964, arose essentially in an effort to halt the cycle of educational retardation of children from low income groups. The Plowden Report in the U.K. (1967), and reports emanating form New Zealand and Australia in the 1970's, recognized the significance of sound early education as a pre-requisite for school achievement. Bloom (1964), Deutch (1964), Hess and Shipman (1965 and Fowler (1980) supported and confirmed the importance of environmental factors upon the early development of the child. Findings by these researchers demonstrate the poor prospect for children who are environmentally deprived. They lack the language for concept and cognitive development which precedes successful progress at school. Lack of progress results in a low self-concept. Work in this field demonstrates the forceful impact of exogenous factors on the learning experience of the child, highlighting the fact that children, especially the disadvantaged need relevant experiences at pre-school level.

Another developmental trend is related to the stress placed on intellectual development. Piaget, with his clear cut theory of cognitive growth had the greatest impact on the changes of emphasis. Hohman, Banet & Weikart (1979) presented a framework of educational practices derived from both theory and practice largely based on Piagetian assumptions. Their Ypsilante Perry pre-school project increased in dimension from the original premise of teaching disadvantaged children to catering for the needs of all pre-schoolers. Most important, the emphasis on pre-academic activities was replaced by an emphasis on the strengths of each child. This was a decisive re-orientation. The pre-occupation with deficits was replaced with a focus on the child's interest and assets. Thus the idea of representation, crucial in Piagetian theory, served as a basis for building the links to traditional academic exercises in reading and mathematics. The most significant charge was the devolution of responsibility for initiating learning experience from the teacher alone, to the child and teacher together. This tendency has been elaborated upon by Reid & Hresco (1981).

Thus, the early years of life were recognized as crucially significant regarding intellectual development. Fowler (1980) believes that systematic attention to cognitive learning in the early years is as vital for healthy development as is general care. Fowler's data support his contention that early intellectual stimulation results in superior intellectual achievement that is maintained in the elementary educational years and will not have negative personality effects.

Perret Clermont (1980) considers that cognitive development should be studied in the context of social interaction and introduces a psycho-sociological conception of intelligence. She concludes that this should form the basis of early childhood learning.

Joan Tamburinni, principal lecturer in education at the Roehampton Institute of Higher Education in Britain, is cited by Richards (1982, p.98) "Dichotomies, such as 'academic pre-schools' and 'shared child-rearing pre-schools' are seen as over simplistic and unhelpful". She contends that young children's intellectual functioning can be facilitated by tutorial intervention, which does not deny the importance of children exploring and playing with materials in their own way at their own time. An active not passive role for the teacher is implied. This should be based on clear intentions and on professional knowledge, not only of child development, but of the kinds of skills and concepts that are educationally powerful and within the understanding of the pre-school child.

A further development which seems to be becoming more prevalent, but not without contention, is the identification of children who are 'at risk' for future learning at pre-school level. A learning disability is generally recognized as being the discrepancy between academic achievement and potential. However, when a pre-school child is identified as 'at risk' the learning disability has not yet occurred and, more significantly, may never occur. The predictive validity is thus low and an inappropriate label may stigmatize the child. Rosenthal & Jacobson (1968) cited the problems related to early identification and the effects of teacher expectancy. They saw the latter as a possible self-fulfilling prophesy. However, research shows that the identification of children with possible learning problems at an early age can be advantageous. Consequently, this aspect will be discussed in a subsequent section of this chapter with relevant reference to current findings.

Suffice to say, at this stage, that Van der Eyken (1977) argues that the nursery school ethos does not place the emphasis where it belongs - on educational needs and Bruner (1980) believes that the first object of any act of learning, over and beyond the pleasure it may give, is that it should serve us in the future.

1.2.2. The current situation and provision in the Republic of South Africa for children in the year prior to the commencement of formal education

Currently in South Africa there is a dichotomy between traditional nursery school education and formal Grade I teaching.

Governing bodies of certain private schools have recognized the need for a 'bridging year' for some time and have independently established what are commonly referred to as 'Grade 0 classes'. (The present writer feels the term 'Grade 0' has a negative concept, i.e. 'Grade nothing' . The tendency is for each Grade 0 teacher to formulate her own curriculum of studies in consultation with the principal of that school. The success of each class very much depends on the knowledge and skill of particular individuals.

There is, as yet, no carefully structured, nationally recognized programme for all population groups, which pays attention to 'school readiness' factors. Matters such as language enrichment, learning attitudes, social awareness and emotional development, cognitive growth and the prevention of learning problems are often overlooked when devising specific schemes of work for selected groups of young children.

In the revised Transvaal Education Manual of 1981, under the General Policy, there are detailed rules regarding regulations. Within this guideline is mentioned the fact that each nursery school should plan it's own programme.

This is positive in that it allows the staff freedom of expression when designing activities for pre-school institutions. However, it also means that as long as these institutions meet basic health and maintenance requirements, the education of the children will be dependent upon the skill and knowledge of the staff members concerned.

Under the existing school age regulations, the calendar dictates when a child may enter primary school for the first time. At present the regulation stipulates that a child must turn six years before 30th June of that year. For many children it will therefore be a matter of days whether they are admitted, or whether they need to spend a further year in the pre-school environment. The pre-primary school is thus faced with the onerous task of catering for children aged between 4 years 6 months and 6 years 5 months during the final nursery school year. There may even be older children who have been kept back an extra year in the same group.

The crucial question is therefore whether the present system of nursery school structure can cater for the needs of all these children as individuals in terms of what Joan Hendrick (1980) refers to as the development of the 'whole child'.

1.2.3. The Role of the Pre-Primary School

The pre-primary school is intended to provide a suitable environment in which adults, other than the parents, can assist with the broad education of the child. This does not imply that the role of the parent as educator should be usurped in any way, but rather that it should be complemented. Even under optimum conditions parents need the support of knowledgable educationalists if the children are to develop favourably. Reilly (1983,p.6) states "the distinguishing characteristic of the pre-primary schools education as compared with the average family situation is the educational programme and the way it is implemented. Pre-Primary school education is concerned with providing a specifically designed concrete environment with a particular structure and content in order to create a developmentally appropriate experiential world for the young child". This obviously implies that each child must be challenged via planned educational tasks which will promote cognitive, social and emotional growth. The nursery school teacher, with her specialization, should be the person best able to provide the environment most suitable for optimum development. Pre-primary education should fulfil this need

The period spent by a child at a pre-primary school (usually two or three years) is designed to promote learning in accordance with the requirements of children at a particular point in time. As stated by Phillips & Williams (1983, p.255) "Children vary greatly in readiness for full-time schooling. The maturity of children within a year's intake contributes to initial adjustment to school". At the same time they recognize that "learning skill has a very important influence upon future academic success" (p.257). Thus, the vital period prior to school commencement should be utilized with maximum benefit for every child.

The White Paper, released by the South African Department of National Education, November 1983, which outlines educational recommendations for the future, describes pre-primary education as follows :

> i) Pre-basic education begins at birth and ends when the learner enters basic education at the age of about six to seven years. The trend is for the pre-basic education to become more and more institutionalized in creches (0 to 3 years) and nursery schools (3 to 6 years). It is a mistake to see an essential difference between what is said to be the care focus of the creche and the educational focus of the nursery school. In both cases education invariably takes place in informal situations and programmes, and to the extent that learning occurs, various educational aims are realized.
>
> ii) In the context of the recommendations, the objectives of pre-basic education are narrowed to the formative upbringing of the child to enable him to derive full benefit later from the more formalized basic education. Within this general educational goal there is the specific aim of making the child ready for school.

The question of what constitutes 'readiness' for school and the matter of programming to meet the needs of children who are 'ready' or 'unready' for formal learning are contencious issues. The different schools of thought and curricula models will be dealt with in Chapters II and IV.

Another aspect involving the function of the pre-primary school in preparing the child for school is the preparation for future success. If we want to ensure that children will have successful experiences in the first grade, it is necessary to identify the skills needed to achieve in that setting. Wallace & McLoughlin (1979) maintain that it is possible to identify a general sequence of skills in reading, computation, handwriting, etc. These skill sequences, while particularly useful for remedial purposes, should also have an influence on the content of readiness programmes. This therefore suggests that the concept of remedial education in terms of special techniques which can be employed to obviate learning problems at pre-school level should be investigated.

1.2.4. The need for purposeful intervention during a bridging period between Pre-Primary and Primary School

An extension of the attendance at pre-primary school and the provision of any educational readiness programme would appear to be a solution for both the immature child and the one who is excluded from school attendance by the age reulations.

When considering the need for a bridging year one must evaluate the goal of this concept which is to adequately prepare children for school.

Musgrove (1979) contends that early education should be compulsory because some abilities are never, or poorly, acquired if they are not learned by a particular age or at a specially critical stage of growing up.

The work of Piaget has dominated the psychology of intellectual development for several decades. According to his theory, the thinking of pre-school children is mainly in terms of limitations imposed by cognitive development. Tamburrini (1981), however, holds that there are specific contexts in which a child can and will think at a higher level than he does on standard Piagetian tasks.

Light (1979) maintains that while evidence suggests the need for children to have ample opportunity to explore and play with materials in their own way and in their own time, it would be wrong to conclude that all the adult needs to do is provide appropriate materials and then to adopt only a supervisory role. He feels that differences in children's social experience are associated with differences in their intellectual functioning. He therefore contends that nursery school teachers should adopt an active, rather than a passive role with respect to the cognitive domain.

Golomb & Cornelius (1977) found that children tutored for play performed better on Piagetian tests than children in the control group. Shmukler & Naveh (1980) also showed that it is possible to increase the level of imaginative play in pre-school children through purposeful adult intervention. They stated that with disadvantaged children, in particular, the effects were so powerful "that they were still marked weeks later and were reflected in the children's spontaneous play long after the intervention ended" (p.102, S.A. Ty [illegible] Siel 1980 - 13/34). They concluded that purposeful intervention results in a number of educational benefits, including dramatic increases in imaginative play with concomitant cognitive and affective benefits. This is to some extent borne out by the findings of Sylva, Roy & Painter (1980). They studied aspects of children's play, viz. its cognitive complexity and the degree of concentration shown by the children. Cognitive complexity was examined in terms of the sequential organization and elaboration in a bout of play - a 'bout' being a sequence of activities having a coherent thread. It was found that there was an upward shift in the complexity of play associated with adult interaction of any kind, but particularly when the interaction involved the adult actively teaching in a structured format.

They conclude that the effect of adult interaction on the quality of children's make-believe play has cognitive outcomes. It is then suggested that nursery school teachers need to do more than to provide a rich range of materials with which to generate and direct activities. They must interact in a purposeful way with the direct intention of enhancing cognitive development.

Tamburinni (1982) believes that the teacher's task is three-fold. She needs to diagnose a child's intentions, to elaborate on them in some way that has cognitive potential and to ensure that the child understands the teacher's intentions. She maintains that each of these three components in an interaction require considerable knowledge and skill on the part of the teacher and a specially designed teaching programme.

Following the evaluation of pupil progress in the early school years, Bennet (1976) suggests a careful and clear structuring of activities together with a curriculum which emphasizes cognitive content. He maintains that this is the key to enhanced academic progress. Feuerstein (1979) and his colleagues have devised novel and highly successful approaches for assessing what an individual can learn rather than following the tradition of assessing what he has learned. They proved that intervention - even in adolescence - is not too late. This intervention is in respect of assisting children to learn. The great impact of environmental factors in the teaching situation is stressed.

It thus appears that a specific structure in pre-school planning is both advantageous and necessary. This would embrace direct intervention on the part of teachers who would be working towards the achievement of specific goals. If we were to look at specific goals one would have to set expectations upon certain assumptions regarding the pre-school child. This would have to be based upon the 'normal' sequence of development in relevant areas such as motor, language and social and emotional aspects of performance and behaviour. Wedell (1981) emphasizes the fact that the 'normal' sequences have been set out in child development texts and in the numerous developmental rating scales. In this context, the concern is of what children might actually be expected to achieve, rather than with items of standardized tests, where the main purpose is to offer a means of differentiating between children. This supports the view of Feuerstein.

Expectations for school-age children are usually presented in their general form in terms of curriculum aims. Such aims refer to the broad range of achievement, behaviour and understanding of what a society expects of the children within it. In a study by Skuy, Shmukler & Clark in the South African Journal of Education (1983, 3 (2) 1) on the Extended Validation of the Myklebust Pupil Rating Scale, school achievement is seen "as the learning and use of strategies of increasingly effective functioning in the school environment, and ultimately in the world at large".

If this is the case, it seems pertinent to specify functions which are critical for subsequent learning, which could be assessed and implemented in a practical way in the pre-school period. This notion suggests an ordered environment and specific planning. The need was recognized when the Human Research Council instituted an investigation into the education system in the Republic of South Africa. It was found that greater investment in pre-primary education was essential.

1.3. Recommendations and Decisions by the Government of the Republic of South Africa

In the White Paper released on 23 November 1983, by the Department of National Education based on the H.S.R.C. investigation, the following general principles and decisions are significant:

- Equal opportunities for education, including equal standards in education, for every inhabitant, irrespective of race, creed, colour or sex, should be available.

- Based on need and continuing research curriculum models should be devised and implemented at all levels of education. These levels, or phases, encompass basic education (offered at primary schools), post-basic education (offered at secondary schools, universities, technikons, etc.) and pre-basic education (offered as a bridging year at primary or at pre-primary schools).

The recognition that school readiness is a pre-condition for a successful school career, particularly during basic education, and that environmental deprivation is the major reasons why school readiness is not achieved in time. If the chronological age is too inflexibly defined and applied without taking school readiness or other factors into account, this may lead to poor progress at school. It states, under Guidelines for Modular Educational Structure (4.6.1 "The situation points to a need for conscious intervention in the pre-basic phase". The Government also accepts that the bridging period should be given high priority because this affects the efficiency of all further education. The concept of the Bridging Period is outlined in the Paper (4.6.2).

i) Aim
This period is aimed at the achievement of school readiness by as many children as possible before formal education begins.

ii) Nature
Development from a playing attitude to a scholastically working attitude.

iii) Location
Mainly at primary schools.

iv) Duration
From one to two years. At the age of five years (reached during the first half of the year) the bridging period may be entered voluntarily. At the age of six years, reached in the first half of the year, entry is compulsory. Should the child be school ready, his basic education begins, otherwise he enters the bridging programme. At the age of seven entry into basic education becomes compulsory.

v) Compulsory

In practice this recommendation should be applied in a differentiated way depending on local needs and the manpower available.

vi) Costs

This education is provided 'free'. ('Free' does not mean entirely free.

vii) Creches and Nursery Schools

It is not realistic in terms of cost and manpower to recommend comprehensive provisions of the institutions at State expense. What is recommended is that, in addition to the institutions of private welfare orgnanisations, there should be limited development of such institutions on the initiative of the Department, but restricted to areas where the needs of small children are the greatest. More comprehensive provision in the pre-basic phase may be considered in due course after implementation of the proposed bridging period.

1.4. Conclusions drawn from the above-stated problem

In terms of the Government mandate and previous research into early education, certain basic principles are evident :-

1.4.1. A compulsory bridging/transition period of learning for all children regardless of race, creed or sex will provide an opportunity of catering to their needs in terms of initial school readiness and adjustment. This should promote the acquisition of skills regarded as essential for later learning.

1.4.2. All pre-school educational services should be co-ordinated under a statutory body with delegated services to cater for the requirements of all young children from all socio-economic groups. This is based on the assumption that school readiness is an absolute pre-requisite for successful academic progress and advancement.

1.4.3. Pre-primary education in the Republic of South Africa is a major concern of educators. It should, therefore, necessitate greater financial investment in research towards this end. Clarification is required regarding the notion of school readiness, the learning disabilities which inhibit initial school adjustment and subsequent progress, and the feasibility and design of an appropriate curriculum to meet the needs of all children, thereby reducing 'risk' factors regarding the future learning outcomes.

1.4.4. Intervention strategies should thus be carefully examined and devised.

In this study the writer will attempt to clarify and shed more light on the issues raised in this Chapter.

Chapter II describes significant factors in early learning, examining the notion of school readiness and whether it can be enhanced. Chapter III deals with the question of learning problems. Chapter IV considers curriculum models and programme issues. The method of the present study is detailed in Chapter V. Chapter VI contains the programme, Chapter VII embraces the results, and Chapter VIII provides the conclusion to this study, including the limitations and proposals for further research.

Viewed as a whole, this study is an attempt to provide the foundations of a curriculum which will promote school readiness and prevent avoidable learning problems from arising at the outset by the utilization of specific techniques. This should reduce the failure rate at primary school and obviate the demoralizing effect of 'labelling' children as 'learning disabled.

CHAPTER II

THE CONCEPT

2.1. Interpretation of School Readiness viz-a-viz Maturity

School readiness pre-supposes that a child has reached a general state of development which should facilitate progress at school. However, opinion as to what constitutes 'readiness' and how it can be promoted is varied.

School readiness is a global concept in that it reflects the development of complicated combinations of attributes, both innate and acquired. These attributes encompass physical, cognitive, social and motivational dimensions.

Psychological literature is abundant with divergent conceptions of the term 'readiness' and over the years a core of commonly accepted meanings of the term have emerged. Reilly (1983, p.3) states, "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". In a paper read by Dr. M. Grove at a symposium of School Readiness, Unisa (1981), she stated, "With the right guidance and with reasonable freedom, the normal child can learn in his way what should be learned at each stage of his development. If he is provided with the best possible environment, his natural desire for learning will give him all the motivation that he needs". In practice, school readiness is commonly viewed as a function of chronological age. This is because chronological age is generally used as a criterion for school entrance. This presumption assumes that school readiness is simply a matter of maturation and will be attained through natural development as a matter of course at the chronological age of approximately 6 years. However, a concept of readiness based upon chronological age alone implies that children generally manifest similar maturation rates and share common experiences that prepare them for formal schooling. In actuality, growth and development, rather than age per se, must be considered together with environmental factors which will either promote or retard 'readiness'. Children mature (genetically) at different rates. Therefore, even if one were to take maturation as the only criterion, age would not be a legitimate criterion of readiness. So, readiness is an individual matter from that point of view. In addition, development depends not only on maturation, but on learning, etc.

Ausubel (1959) indicates that the term 'maturation' should legitimately be reserved for changes which occur as a function of genetic influence in the absence of specific practice experiences. 'Readiness', however, includes both a child's repertoire of motivational responses and learned skills as well as his constitutional status. Readiness for a particular activity such as school tasks, is an individual factor. It is this idea that has led to a concern for readiness to be viewed as 'behaviour' rather than chronological age alone.

Reilly (1983,p.3) maintains "School readiness is often also described in terms of school maturity, which refers to level of physical and neurological growth that serves as the basis for explanation and experience through which the child continually realizes and develops his potential so as to achieve progressively higher levels of development". The importance of adult intervention is stressed as this stabilizes the child making him secure. This will then provide a "general preparedness and attitude towards work which is manifest as school readiness". Reilly therefore also stresses the significance of environmental factors.

2.2. Critical Aspects and Elements of School-readiness

Psychologists generally tend to subscribe to the principle of 'critical periods' in human development. A critical period is one of maximum susceptibility to certain environmental influences, a period beyond which behaviour is generally believed to be difficult to modify.

While the reversibility of modifying influences or of their lack during the critical period is a subject of controversy, there is consensus on the ease of modifying behaviour in the predisposed direction during this period.

Evidence exists that the critical period for the promotion of learning readiness is the early formative years which, in the human organism, is usually before the age of six. Gesell (1925) believed that it is unlikely that the child's mind, character and spirit will ever advance as rapidly as in this formative pre-school period of growth.

An intensive study of general school readiness based upon behaviour assesssment was conducted by Frances Ilg and Louise Ames of the Gesell Institute (Ilg & Ames - 1965). These workers feel that decisions concerning school readiness should be made with accurate knowledge of every child's developmental level - not only his age, his physical maturity, or even his measurable intelligence level alone. They demonstrate an approach to school readiness more specific than that which considers only general intelligence and/or chronological age.

On the physiological side, Hebb's (1949) work on the neuro-physiological basis of intellectual growth has emphasized that importance of early sensory experience, 'reception inputs', in the formation of the so-called cell assemblies which constitute the basis for later information processing capability. Bloom's (1964) analysis of data related to the stability of achievement in which he suggested that since about 17% of growth in academic achievement takes place between the ages of four and six, nursery school and kindergarten could have far reaching consequences on the child's general learning pattern. Learning readiness, a phenomenon resembling Harlow's (1949) 'learning set' and Getzel's (1966) 'codes for future learning', implies the existence of certain cognitive and psychomotor skills and certain personality characteristics. Ausubel (1958), Tyler (1964) and Gagne (1965) suggest that educational readiness may be considered not in terms of school generally or of broad subject matter, but in terms of specific requirements that vary with teaching methods and learning material.

Wedell & Raybould (1976) held that the concept of school readiness ascribes an overriding influence to the process of maturation within the child. They ascertain that since maturation is viewed as a constant developmental trend determining the emerging abilities of behaviour of the child, this view consequently calls for a procedure that can establish whether children have arrived at the entry requirements specified by a given school system. They feel that such a view is more positive. The Plowden Report (1967), for example, stresses that it is not only possible, but also desirable, for the school to be responsive to the needs of those children who do not meet normal expectations, particularly at the age of school entry.

The research of these writers was concerned with the early identification of children 'at risk' for future learning, but they acknowledge that little progress has been made in the development of early identification procedures. This, in turn, would imply that it is more meaningful to programme for the success of all children rather than to identify possible failure. The stress is, therefore, on preventative measures.

Ross (1976) suggests that an ability to learn effectively stems from the child's ability to sustain selective attention and that a maturational lag could impede progress. It seems that from this standpoint the consideration of readiness factors would be dependent upon narrowing the lag.

Further research by Wedell (1981) has led him to propose that when considering the concept of school readiness one should not view it in terms of predictability, but rather base opinion on the use of sequences of educational objectives. The sequence of objectives used to monitor the child's acquisition of basic educational attainment should serve the teacher as a means of tracing the child's performance back to establish a starting point for modifying teaching methods. Thus it appears that, in his opinion, if a child is 'unready' for school causation, emerges as part of an instructional mismatch.

One can therefore deduce that 'school readiness' is a debatable issue. It is a global concept centred around constituents of development in various areas of functioning as well as matters relating to teacher expectations. It cannot be considered in a vacuum, but with respect to the particular environment in which the child will be required to perform.

2.3. The Prime Constituents of School-readiness

2.3.1. Physical development

Learning readiness involves appropriate physical growth, motor development and sensory refinement. In order to cope with the basic school tasks of reading, writing and mathematics which themselves require manifold abilities certain basic developmental levels must be evident.

The child requires good vision in order to see without strain and to cope with the many visual requirements of reading and perceiving shapes and forms, discriminating symbols and signs, figure ground perception, etc. His hearing has to be good if the child is to carry out verbal instructions and be able to discriminate sounds. With weak eyesight, a hearing loss, or any other impairment of sensory input the child will lose out on environmental stimulation, and consequently develop more slowly in certain areas. The child's first contact with language is receptive. An incorrect perception of speech will invariably lead to poor articulation. Difficulty with auditory discrimination could apprehend comprehension, communication and socialization. Basic to all the cognitive aspects of learning readiness would thus be sensory stimulation which is essential for perception, concept formation, language and thinking. Another important aspect of early cognitive development is curiosity, both perceptual and epistemic. According to Berlyne

(1960) there is a distinction between perceptual curiosity and epistemic curiosity. Perceptual curiosity is reduced by exposure to appropriate stimuli, while epistemic curiosity motivates the quest for knowledge and is relieved when knowledge is procured. Bruner proposes that curiosity stems from intrinsic motivation.

One can therefore surmize that promoting readiness is initially dependent on adequate sensory functioning and stimulation. Physical factors would embrace appropriate physical growth and motor development. While the potential for such development is determined by maturational factors, evidence exists that readiness can be influenced by environment factors. (This concept will be enlarged upon later on). Physical disabilities such as ill health, stunted growth, obesity, chronic ailments, poor sleeping patterns, etc. are known to be significant correlates of later learning difficulties, as outlined by Bakara (1970). Motor control involves co-ordination and in this respect hand/eye co-ordination is most important for school readiness. Reading and writing involves hand and eye movements and the integration of these two functions. Reading readiness implies a large degree of maturity of eye movements. A child who is ready to read must be able to follow a line of writing with the eye. Visual motor integration is emphasized as of major importance in school readiness. A child with gross motor problems will have difficulty in physical activities while one with fine motor problems might struggle with writing, cutting, pasting and all pencil and paper work. General motor dysfunctions such as disturbances in laterality and right/left discrimination are also related to later academic functioning.

Du Plessis (1981, p.12) mentions that left/right discrimination, laterality, dominance, the ability to cross the midline and awareness of position-in-space are all relevant to learning to read, write and make calculations. "A child who cannot differentiate between left or right will have difficulty knowing from which side to read or write or distinguish between tens and units in mathematics. If he has difficulty differentiating between above and below, he will struggle with addition and subtraction. If his dominance is unsettled, he will probably struggle with position in space and have many reversals in his reading and writing".

Promoting the psychomotor aspects of learning readiness would therefore involve appropriate training and the preventing of defective development in the abovementioned skills.

[illegible] Cognitive aspects of learning readiness

The 1960's heralded the Decade of Early Childhood Education. Interest in the young child was sparked off by the exciting idea that early human development is plastic and can be altered significantly. In particular, the notion that mental growth is cumulative and that later development of intelligence depends in part upon early intellectual stimulation led to the emergence of a cognitive emphasis in early education, emphasis that attracted educational psychologists to the scene. The educational psychologists attacked the 'child development' based type of nursery school programme and argued for a systematic, structured approach to cognitive development.

Piaget (1954), with his comprehensive theory of cognitive development, maintains that cognitive growth depends on a process of model formation, i.e. the formation of rules and strategies for coping with the environment. He believes that for the proper cognitive growth to occur, the young child must be exposed to a variety of stimuli and that the cognitive growth of children who have been deprived of sensory stimulation for any reason will be arrested, possibly irreversibly so. He sees enviromental factors as being of prime importance.

With a young child it is difficult to separate memory and attention from intelligence. If he is to read, for example, he must be able to understand the purpose of reading, as well as what is said to him, to reason, solve simple problems and to speak in sentences, answer questions, follow directions, classify according to shape, size and colour, remember and pay attention.

The essential elements of cognitive functioning are the activities involved in perceiving and conceptualizing. These activities include selective attention to environmental stimuli, (important for arousing sensations) - discrimination and classification itself.

Du Plessis (1981) elaborates on these facts. He believes, following Piaget, that learning is influenced very much by the quality, clarity and organization the child already possesses. Meaningful learning can take place only if the child can relate new knowledge to what he already knows. If he cannot relate it and thereby make it meaningful, he might not remember the facts. Du Plessis (p.13) stresses that it is imperative that a child should already have a reasonable knowledge when entering school, if he is to benefit maximally by the new stimulation. He stresses features which could be significant to include : the ability to differentiate and reproduce visual and sound images, abstract conceptualization, concentration, auditory and visual memory and an understanding of number concepts.

It is obvious here that it is difficult to separate cognitive, physical and language aspects. Perception is linked with the physical status of the sensory organs as much as with the intellectual ability to interpret sensory input correctly. With regard to scholastic progress it is equally difficult to separate cognitive functioning and language ability. The ability to judge and the drawing of conclusions that are indispensible for school learning must be established; categorical laws and the laws of cause and effect must be understood. Language is essential to the functioning of these intellectual processes. It would also be useless to have developed a concept and be unable to communicate this knowledge to others. Language aids perception and provides the means for reviewing knowledge. Therefore, promoting learning readiness involves fostering the capacity for naming, labelling, communicating, questioning and using language meaningfully.

2.3.3. The significance of language development and school readiness

Language functions have social and emotional implications because a child has to apply these within a peer group situation and he has to function verbally at the level of the majority in the group. Language itself is of prime importance but is inexorably wound up with a dependence upon other factors.

The child needs the receptive language development which will enable him to understand and comprehend instructions and carry them out. He must also make himself understood. Thus a well developed vocabulary and a wide general knowledge acquired via language is essential if he is to benefit from school learning.

Piaget (1926) believes that the mechanics of speech and language develop with maturation in ordered stages, as do other cognitive processes. Luria (1966) considers that there is an interdependence between the functions of thinking and speech, and he stresses the importance of the influence of language and thought. He and Vygotsky (1934) consider that the higher mental functions, complex perception, intelligent memorization, voluntary attention and logical thinking are formed in the course of the child's social environment and specifically with hearing adult speech. Language is the basis of human interaction and the instrument of thought, personal expression and social communication. With young children it involves imitation, feedback, modelling opportunities, and experiences. Wiig & Semel (1976) have outlined the relationship of cognitive and linguistic growth as a matter of 'cognitive semantic processing'. Their premise is that language ability is interwoven with other developmental procedures.

Macrae (1966) has described the skill development in cognition and social [illegible] in different stages. He perceives intuitive thought leading to increased social interaction which, in turn, leads to better verbal skills which then facilitates more advanced concept formation. Erikson (1959) supports the contention that the improvement of language skills is essential for expanding children's fields of activity and imagination. Bruner (1966), Crystal (1976), Bloom & Lahey (1978) and also amongst the proponents of cognitive approaches to learning. They see language as a mode of communication and for them language is inextricably bound up with the cognitive development of the child. If this is the case, language and cognition are interdependent which suggests that language improvement should directly influence cognitive growth. Bloom and Lahey also stress that comprehension proceeds production. They therefore maintain that for language to develop, the environment needs to be reasonably facilitative. As stated earlier, environmental factors can enhance learning. Therefore, an early learning environment should provide for the potential which the young child has for learning.

The concept of language as a psychological phenomenon is also receiving increased attention. Dorothea McCarthy (1954) postulates that the child's early linguistic environment is the most important external factor affecting the rate of language development. She introduces (1951) introduces the idea of 'latent learning' which takes place incidentally during reading, in conversation, or from observation. Then it is applied effectively when it is required, despite the absence of systematic study. She believes that teachers use this ability of their pupils by introducing, early on, ideas which will facilitate acquisition of more difficult concepts, principles and skills that come later.

Jerome Bruner (1966) hypothesizes that any subject can be taught to any child virtually at any age in some form. He feels that the enrichment of a child's language experience is one of the principle objectives of education. His cognitive theory reiterates that knowledge is organized and structured. Language constitutes a tool and instrument which enables the learner to comprehend order in his environment as well as constituting a means which assists learning. Bruner thus maintains that language is the key to cognitive development and that it provides a means, not only for representing experience, but also for transforming it. Once the child has succeeded in internalizing language as a cognitive instrument, it becomes possible for him to represent and systematically transform the regularities of experience with far greater flexibility and power than before. He stresses that stimulation in the environment is important. He concludes that it is always the schooling variable that makes qualitative differences in direction of growth. Language is the basis of all subjects. To make language learning pleasurable, enrichment activities to increase the level of language usage should, ideally, begin long before formal schooling commences.

Vygotsky (1962) supported the notions of latent learning potential with special emphasis on the significance of language. His theory focuses on four fundamental issues, viz.:-

i) How language facilitates the thinking process.

ii) How social language may constrain and limit internal mental activity.

iii) How we are able to translate the results of our thinking processes into a form that can be understood by others.

iv) How we are able to decode other people's language to arrive at the thoughts they are trying to express.

Vygotsky maintains then that instruction does not begin at school. The child's spontaneous concepts are probably a product of pre-school instruction. Bruner is explicit in describing sequential emergence of three modes of development. Piaget sees language unfolding as a matter of course, yet he believes the course of linguistic development can be accelerated through appropriate input and instruction. Bruner believes that certain properties of cognition are made possible because of language, e.g. overcoming dependency on perceptual attributes. Chomsky (1975) believes that the general features of a language structure reflect, not so much the course of one's experiences, but rather the general character of one's capacity to acquire knowledge via linguistic competency. He believes that man's unique genetic ability to acquire language is revealed only when the child receives adequate linguistic competency.

Perret-Clermont (1981) holds that with the acquisition of language in the symbolic and intuitive periods, new social relations occur which enrich and transform the thought of the individual. This appears to suggest that language stimulation leading to an improvement in verbal facility would benefit the child both socially and cognitively.

Wood (1981) investigated children's communication and examined forces which affects their development to communicate effectively, which is an essential pre-requisite for coping at school. At the output level she stresses that children's communication is a result of intrapersonal and interpersonal forces. It is stressed that children need communication strategies with which they can deal with critical situations they encounter. The linguistically competent child is capable of communicating affection, hostility and anger to the adults important in his life. This cannot develop without an understanding, healthy atmosphere in which the child can comfortably express these feelings.

Effective communication is thus a critical strategy for classroom competence and the ability to communicate effectively a critical component of language development needed for school interaction.

Strickland (1969, p.49) emphasizes that language development is closely related to other aspects of the child's growth, but that it can be motivated and guided by adults. She states that some children who never become adept in the handling of language are linguistically handicapped all of their lives. Furthermore, she believes that language and personality development are as closely related in children as are language and mental development. The child for whom language skills present problems may feel inadequate and ineffective. Success in mastering linguistic skills opens the way to many types of satisfying experiences or makes possible, satisfactory social, emotional and mental development.

Wedell & Raybould (1976) cite research findings at U.C.L.A. by Keogh (1973). They show that clear and significant differences in some aspects of children's performances were related to the schools attended. Differences amongst schools were greatest in verbally weighted measures than on those tasks which involved traditional school behaviour. One can surmise from this that the schools which stress verbal facility have more children who perform with greater efficiency. Therefore, language efficiency in all its forms of expression is a necessity for progress at school in that it constitutes the basis for symbolic representation and cognitive processing. It provides the tool for communication in all its forms and for healthy effective development. If this is the case, it seems essential to promote language skills during the course of pre-school education.

2.3.4. Environmental Factors

Research on the culturally deprived children by Stanley (1972), Reilly (1983), Feuerstein (1979), etc., as cited earlier, has thrown some light on how such deprivation operates to make the child 'unready' for formal schooling. Environmental deprivation refers to the circumstances prevailing in a community where the economic, social and cultural factors are totally inadequate for the development of the young child's potential. The terms 'cultural deprivation' or 'cultural disadvantaged' usually refers to a depletion or inadequacy of those essential background experiences that promote the readiness for learning. The deprived child's physical conditions are often lacking, thus hampering his performance by lack of energy. He also lacks the experience in which the development of cognitive abilities are based, while the language development essential for concept development is poor. In the homes of culturally deprived children there is little educational tradition and hence little knowledge about the school and its expectations. Both parents may be forced to work and spend little time in direct interactions with their children. The short time spent in such interactions tends to be unproductive because parents usually lack the skills to effectively foster the cognitive development which will help their children in school. There may be overcrowding and noise and the conflicting scarcity and intensity of the stimulus input tends to produce defective attention skills in the child. Moreover, concrete apparatus such as educational toys which help develop concepts are not readily available or are not used effectively in promoting learning. The environmentally deprived child is therefore very vulnerable to failure, which results in a poor self-concept. The uninspiring and limited existence of the adults in his community suppresses and stifles his expectations and hopes for the future.

Feuerstein (1979) states that "there is overwhelming evidence of the great impact of environment on the individual's development and manifest level of functioning". In stressing the irrelevance of traditional psychometric approaches to the assessment of children he states that "environment background affects not only the content matter to which individuals can make reference, but also his cognitive style, and to a very large extent his cognitive structure" (1979, p.29). Feuerstein then deduces that the reasons for failure may be best explained in terms of structural characteristics which may not necessarily reflect the capacity of the individual and makes a distinction between cultural differences and cultural deprivation.

"Cultural deprivation refers to an extrinsic criterion by which the culture of certain ethnic groups is considered as depriving their members, thereby negatively affecting their cognitive capacities" (p.39). His argument is that such deprivation may strongly affect the adaptive capacities of the individual since he is devoid of the learning set [illegible] processes.

An analysis of Feuerstein's theory appears to indicate that cultural deprivation is likely to affect a child's progress at school. Should this in fact be the case, then it seems pertinent to attempt to stimulate children by means of such pre-school programming to offset any possible environment deprivation. For children who are not culturally deprived enrichment programming can therefore only prove beneficial.

It has also been found that a 'restricted communication code' (Bernstein, 1961) which is stereotyped, condensed and lacking in the exactness needed for precise conceptualization and differentiation and a rigidity [illegible] Shipman, 1965) that operates in terms of status and role expectation rather than in personal terms, as well as a non-verbal maternal teaching style which does not define the task for the child and which does not provide access for problem solving, are all characteristics of the underprivileged home which undermine the child's readiness for school. Ausubel (1958) points out that an inadequate culture has irrevocably adverse effects on the development of verbal and non-verbal intelligence. Once a child has fallen behind it is extremely difficult for him to catch up again. The anticipation of this probable lag, a characteristic of environmental deprivation, is important so that timely intervention can be planned. Deutch (1964) finds that the backlog shows a cumulative tendency and this aspect is confirmed by Bereiter & Engelman's (1966) finding that the environmentally deprived child's characteristic lag of approximately one year at the age of five increases to a lag of four years at secondary school level, particularly with regard to language and reading skills.

Krogman (1956, p.38) has described a syndrome of feelings and attitudes which the majority of culturally deprived children display, as follows - "Both the family climate and experience tend to induce a feeling of alienation; their self-concept is low; they question their own worth, fear being challenged, have a desire to cling to the familiar, and have many feelings of guilt and shame; there is limited trust in adults; they tend to respond with trigger-like reactions, are hyperactive, and have generally a low standard of conduct; and they usually show apathy and a lack of responsiveness. It is difficult for them to form meaningful relationships".

These tendencies, then, tend to translate themselves into a negative attitude towards school, teachers and achievement. Both Bakara (1970) and Reilly (1983) state that social issues are also at stake. "Cultural deprivation is manifested in difficulty in delaying gratification and in the freer use of violence in solving conflicts than is permissible in the school situation" (Bakara 1983, p.5). "What often appears to arouse the environmentally deprived youth whose manpower potential is poorly developed, is the appeal of the political agitator. Concerned only with immediate gratification he is suddenly confronted with a 'future' cause to support, to 'work' for, and he can thus become willing dynamite in the hands of the political agitator through revolt and terror" (Reilly 1983, p.5). Thus when these emotional difficulties are compounded by cognitive shortcomings, a condition which could be described as 'failure to survive' could be engendered and this might defy remediation. Should this condition occur and not be remedied or halted in the formative years before the age of six, then the chances of ever achieving readiness are considerably reduced for the child.

Any social milieu catering for the needs of pre-schoolers, in particular in terms of readiness for schooling must try and foster positive and supportive environmental encounters. Schaffer & Schaffer (1982) in writing about children and stress show that a child with a learning disability often encounters an unsupportive and threatening environment and a stressful life experience emerges.

Children having difficulty with expressive and receptive language are most impaired, since language is not only critical to higher cognitive functioning, but also mediates thought, self-control and behaviour. When language is deficient, communication with adults and peers breaks down, resulting in social difficulties and rejection. The children feel inadequate in comparison to their peers and generally experience school as stressful. If a child does not cope at school, he may become labeled as 'learning disabled'. Focus is often on the child's faults. Children become demoralized in the face of failure. Such children need a supportive environment which includes encouragement of appropriate social interaction and social skills in order to prepare them for the social aspects of formal schooling.

2.3.5. Social and emotional dimensions

Writings by Bakara (1970), Wedell & Raybould (1976) and Schaffer & Schaffer (1982) show that the personality correlates of academic performance indicate some of the more important characteristics which, in order to promote learning readiness should be fostered by environmental manipulation as far as it is possible to do so. They mention things like excessive shyness, fearfulness, overdependence on the mother, lack of confidence, lack of control over emotions leading to tantrums and anger outbursts, unwillingness or inability to adjust to other children. The Bullock Report (1975, p.256) states that "among children in general there is known to be a very large number of events, circumstances and characteristics which are correlated with educational attainments". It seems that the development of personality factors can be influenced by the child's background experience involving the family structure, the child-rearing and socialization techniques and the general environment of his particular culture. A child who is 'ready' for school is able to exercise self-control and independence and is also able to take basic care of himself without the presence of his mother. He is interested in the world around him and able to cope with others. A lack of security in the educational situation can hamper the stabilization of a child's attitudes and initiative with the result that school readiness may be delayed. Some children may be afraid to move away from the security of their homes due to the overprotection of their parents. This could also retard initial adjustment to school.

Research often points to the detrimental effects of commencing formal schooling prematurely and the majority of the studies suggest that emotional and social levels of maturity should be evaluated first.

Du Plessis (1981) stresses the importance of concentration, perseverance and emotional control, but the main emphasis is placed on the child's self-concept, acceptance of school discipline, the ability to conform and a willingness to share the attention of the teacher. Grove stated "trying to teach a pupil to read and write before he is emotionally ready to do so often results in a serious setback in his desire to learn" (RAU, 1981).

For many children kindergarten can be a strategic emotional experience as well as a strategic intellectual one. There is a tremendous sense of security in understanding what goes on around us. The kindergarten teacher making the reality around the children more comprehensible is making a contribution to mental health. A teacher concerned with mental health has a golden opportunity in the kindergarten not to hasten the repressing of emotional responses earlier than ever, but to help the children become aware of feelings, their own and others. The children can also be guided towards techniques of social behaviour that preserve the honesty of their feelings, but also take into account of people's feelings. Young children have feelings that they bring to their learning, and kindergarten is a time for supportive help to develop emotional stability needed for the knocks they might encounter at primary school.

There are a variety of theoretical positions regarding the affective development of children. Strain and Cook (1976) noted that educators were becoming increasingly aware of the need for instructional strategies to obviate delayed or deviant social-emotional behaviour. They stress the significance of affective educational intervention.

Over the century new thoughts and ideas have continued to emphasize the relevance of social-emotional criteria of school readiness. Thorndike

(1906) observed that not only is the guidance of social and emotional development a major concern to educators, but educators must try to obtain an emotional commitment in students to maximize cognitive and intellectual growth. Sandiford (1936) made a more direct contribution to educational thought in this area by writing that the influence of emotion is so strong that one can hardly understand human behaviour without understanding the accompanying affective states. He refers to the 'motivational push' of the emotions. Prescott (1938) concluded that emotions play a significant role in inhibiting or enhancing learning. He noted the value of directing the scientific and applied resources of education to the training of emotions.

Although Throndike, Sandiford and Prescott wrote their respective treatises many years ago, they were in agreement with modern thought that the educational institution ought justifiably place more emphasis on the socio-emotional guidance of children. Beatty (1969) referred to emotions as "the missing link in education" and Lyon (1977), p.21) argued that the educational institution is responsible for what he terms 'intellectual half men'. He sees this as the result of placing total emphasis on academic and intellectual development of children to the exclusion of social-emotional considerations. He maintains that when this exists children will realize only half of their full human potential. Borich (1971) advanced the position that social-emotional development seems to have more impact than cognitive development in determining the success of failure, adaptation or maladaptation in school as well as in society at large.

Skuy et al (1983) provide research evidence of these points. Their findings stress the relevance of socio-emotional variables in the educational process. Their subjects were rated by teachers on the Myklebust Pupil Rating Scale in various phases. Personal-social behaviour was the subscale of the MPRS which, as compared with the other subscales, was consistently most predictive. Their sample of 272 first-grade children was followed up with retesting 208 of the original subjects. Using an Adaptive Behaviour Scale developed for this study a varimax factor analysis resulted in two factors "characterized as social competence and coping or problem-solving behaviour" (1983, p.36). They found that internal consistency was generally high. In their discussion (p.98) they state that "a noteworthy finding in the follow-up was the fact that performance of the MPhs, administered at the beginning of the first grade, had a very significant bearing on socio-emotional functioning in the second grade.

Certain commentators noted that socially withdrawn children were likely to be low achievers at school. Boney (1971) and Buswell (1953) said that they exhibited learning difficulties. Amidan & Hoffman (1966) as well as Strain & Cook (1976) emphasized the fact that socially withdrawn children receive little peer stimulation, which may explain their typically depressed academic performance levels. Moreover, emotional development is closely linked to a positive or negative self-image. Thus, when considering socio-emotional readiness it seems necessary to take into account experiences which may help or hinder coping ability.

If the emotional development of children is of paramount concern, question of motivation must arise. It seems that learning style is an aspect of pupil behaviour that may be modified. Positive attitudes generate motivation to learn, a key concept in readiness to apply oneself to tasks at hand. Adelman & Taylor (1983, p.37) state; "A given student's success or failure in school is a function of the interaction between the individual's motivational and developmental status and specific classroom situational factors encountered", and they explore how the learning environment in schools may be a causal determinant of many learning and behaviour problems. They emphasize that every teacher must be concerned about 'motivational readiness'. They, furthermore, stress intrinsic motivation which stems from curiosity and a desire to feel competent and self-determining. Wedell & Raybould (1976) believe that readiness is an inter-actional concept which depends on the readiness of the school to accommodate the child.

2.4. The assesssment of school-readiness

It has been shown that for a child to reach an adequate stage of readiness for school, several criteria are essential. They encompass physical, cognitive, motor and sensory development, linguistic proficiency, social/emotional factors and the readiness to cope with the contingencies of his environment.

To date, the general criterion of school admission has been based on chronological age. In terms of White Paper recommendations, as already outlined, chronological age, as the sole criterion of school readiness should be viewed with caution. Instead, new measures to assess readiness for learning, should be investigated. Detecting problems before a child commences school should not primarily be for diagnostic purposes, but for early intervention. Ideally, the nature of the treatment should have maximal transfer to later learning abilities. However, the early detection of potential learning problems is very difficult because of the complication of selecting target variables, i.e. specific skills. As Wallace & McLoughlin (1979, p.399) state; "Faced with screening large numbers of children, we need to identify highly predic[illegible] and meaningful information. The early detection of learning disa[illegible] is very complicated. To focus attention on singular aspec[illegible]evelopment is microscopic". They stress the significance of situational analysis as a preventative measure. Phillips & Williams (1983) take this concept a step further. They note that screening for school readiness does not always provide a model for teaching and for differential attention to pupils in schools. It therefore seems more pertinent to examine the behaviour directly related to school-age under-achievement and programme accordingly.

An assessment to establish whether he is ready for school or not implies that if a child is deemed 'not ready' it means he is 'at risk' for learning, i.e. potential learning problems exist. If this is the case, they should be identified and intervention measures should be commenced at pre-school level. On the other hand, it may be that the child is 'at risk' simply because his needs are not being met. Thus the question of early assessment has been given much attention in recent years and there is now a move away from the traditional psychometric approach to measurement.

Individual needs are becoming the major focus of attention. An intensive study of general school readiness based upon behaviour assessment (versus age cataloguing) was conducted by Frances Ilg and

Louis Ames of the Gesell Institute (Ilg & Ames 1965). These workers believe that decisions concerning school readiness should be made with accurate knowledge of every child's developmental level - not only his age, his physical maturity, or even his measurable intelligence level alone.

This belief extended to the notion of using developmental data to individualize instruction as a basis for judging the child's 'readiness' for promotion to higher levels of formal school experience. A result of this line of investigation was the construction of a developmental examination suitable for 5 to 10 years of age. Evans (1971) cites validity data submitted by the Gesell Institute which included measurements from a longitudinal study of 52 children. On the basis of chronological age all the children were judged 'ready' by school standards, although roughly half of the sample was judged 'unready' or of 'questionable readiness' on the basis of examination performance. The predictions made for children at kindergarten entrance were checked against school performance 6 years later. The correlation between 6th grade school performance and readiness test performance of these children was .74 - a strong positive relationship. By comparison, a relationship of only .54 was found between kindergarten IQ level and 6th grade performance. These results have been taken as evidence that better predictions of school success are possible using the readiness battery than are likely using intelligence scales. Moreover, Ilg & Ames found that all children initially judged 'unready' at age 5 (17% of the original kindergarten group, were either in the lowest grade achievement group or had failed a grade and were operating in the 5th grade group.

Thus Ilg & Ames demonstrated an approach to school readiness more specific than that which considers only general intelligence and/or chronological age.

The Warnock Report (1978) refers to special educational need and refers to three categories in the prescriptive sense. These are the need for the provision of special means of access to the curriculum, the need for provision of special and modified curriculum and the need for particular attention to the social and emotional climate in which education takes place.

On analysing this report, Wedell (1981) holds that a child's 'special need' can be thought of in terms of the gap between what a child is able to do now and what might be expected of him at his chronological age. Such an age reference might be of doubtful relevance in the case of children who are at their age expectation in one or a few areas, but above their age expectation in most other areas of achievement.

It would thus appear that screening devises are only of value if they can identify needs by predicting future performance so that a child's specific needs can be met in the pre-school educational situation. Generally, screening procedures demand a degree of sophistication by the users and should be used with discretion. Bailey (1981) believes that a criticism of standard testing procedure with pre-schoolers is that it is generally a one-time approach to assessment and this provides a limited view of the individual's abilities. Extended validations of the Myklebust Pupil Rating Scale assess the value of teacher ratings as compared with traditional psychometric testing. Skuy, Shmukler & Clark reported in the S.A. Journal of Education (1983) "the accuracy, parsimony and value of teacher ratings as compared with psychometric testing have been demonstrated in the areas of school readiness and early learning" (1983, p.32). Their study investigated the concurrent and predictive validity of the Myklebust Pupil Rating Scale (MPRS) in a South African sample of 272 children over a period of three years. The results supported the usefulness of the MPRS as one basis for assessment and teaching of your children. It also represented the first attempt to validate the MPRS in relation to criteria of socio-emotional functioning. They state (1983, p.95); "Findings underlined the socio-emotional variables in the educational process, and indicated the value of the MPRS in assessing this aspect of a child's educational functioning". Together with Fuerstein's (1979) rationale for assessing potential, rather than current performance, a positive argument can be put forward that preventative measures by means of programming for school readiness is a valid and viable alternative to assessing 'school readiness' through a single evaluation.

Despite the mounting evidence in support of teacher ratings and programming for general and individual children's needs as opposed to psychometric testing, many different screening devices for school readiness are still the vogue world-wide.

Gates McGinitie (1968) and the Metropolitan Readiness Tests (1976) are measures which are frequently used. However, as certain of the items are culture bound and need revision for the South African population groups, new techniques are under constant revision. The most recent screening test in the Republic of South Africa is described in the HSRC newsletter, 'Compass' - April 1984. The screening test is known as SETT (School Readiness Evaluation by Trained Teachers) - (HSRC 1984). The SETT comprises three scales, viz. an Intellectual or Language and General Development scale, a Physical and Motor Development scale and a Social and Emotional Development scale.

The final form of the SETT consists of 12 items per scale and the administration time is approximately 20 minutes per child. The intellectual scale of the SETT make provision for evaluating the ability of beginners to respond to instructions and benefit from the help given during a structured situation. The SETT battery is administered by teachers who, it is hoped, will become less dependent on school psychologists who are not always readily available when needed.

The scores on the abbreviated scales of the SETT (the items of each of the three SETT scales are divided into two abbreviated scales with six items each) can also be used to pinpoint possible problems. The general idea of SETT screening is to make a timely discovery of deficits as well as areas of possible stronger functioning. The underlying rationale is that an individual can learn to compensate for a deficit by making full use of the areas of stronger functionings. A teacher who is aware of the possibilities of each child can manipulate her teaching effort in a dynamic way to reach out to the child before educational failure is experienced. "It is hoped that thr a deficit by making full use of the areas of stronger functionings. A teacher who is aware of the possibilities of each child can manipulate her teaching effort in a dynamic way to reach out to the child before educational failure is experienced. "It is hoped that the teacher will be stimulated to build the self-image of the child. However, it is admitted that there is still a long way to go and much will have to be sacrificed to reach this utopia" (Joubert - Compass, April 1984, p.2.).

Despite their apparent simplicity, screening procedures demand a degree of sophistication by the users. In line with this view there is a trend away from early screening measures to assess 'potential problems'. Lindsay (1980) mentions a Sheffield programme to examine the issue of identification. This research not only produced an instrument, but also examined its effectiveness. The instrument is the Infant Rating Scale (IRS). Data showed the IRS to be a better predictor of later achievement (at 7 years) than a variety of individually administered tests. Extended validations of the Myklebust Pupil Rating Scale assesses the value of teacher ratings as compared with traditional psychometric testing. It was reported by Skuy, Shmukler & Clark (1983) that based on their data, conclusions can be drawn that the instrument is one which predicts scholastic success in a broad psychological sphere.

2.5. Implications and Conclusions

School readiness is definitely a global, even ecological, concept. It appears that although the criteria of school readiness can be viewed separately, they are, in fact, inexorably interwoven and many factors must be taken into account when evaluating readiness for learning effectively.

One implication of the Gesell approach to school readiness is that if a child demonstrates insufficient readiness he should be kept out of school until such time as more adequate readiness is exhibited.

Hopefully, this strategy would not be motivated by the belief that 'aging' will 'cure' the readiness problem. Ausubel (1958) believes that the solution to the problem is not the exclusion of the the less ready child from school. Instead, he maintains the problem is that of adjusting one's teaching methods and materials to a child's current level of functioning. In this case, a school programme may assume responsibility for increasing the readiness level of the child through an appropriate programme of experience. An important consideration is what the school expects by the time a child arrives. Evans (1971, p.346) sees the issue of school readiness as being related to pre-school programmes which are ultimately concerned with salutory developmental effects on children's health, socio-emotional and intellectual status. He raises four specific questions:-

i) What exactly must the child know or be capable of in order to learn whatever it is planned to teach and the manner in which it is taught? (Task analysis

ii. To what degree does the child have at his command those pre-requisite and subordinate skills and knowledge? (Assessment).

iii) Is the child capable of and interested in attending sufficiently to each task so that he can master it? (Motivation).

iv) Can efficient learning be accomplished in time? (Economy).

In the opinion of Evans, empirical evidence becomes the final authority in deciding for or against a given programme or technique. It therefore seems that in order to programme effectively one must examine curriculum content and issues as well as factors which may impinge upon a child's progress at school. The lack of an enriched pre-school environment will not only hinder a child's intellectual development, but the lapse of precious time is especially harmful because it is difficult to compensate for later on. It must always be recognized that each child is an individual but we must consider the best methods of meeting the needs of most children. A classroom atmosphere free from anxiety is essential. The relationship between the teacher and children is also important as are opportunities to experience success within an accepting, positive atmosphere.

Considering all factors raised on this chapter on 'school readiness' the following conclusions can be drawn :-

- School readiness is a necessity for success with learning tasks.

- Age, per se, is not the sole criterion of readiness for learning.

- School readiness is a viable concept which can be promoted through positive measures by means of adequate programming for success, at pre-school level. The insinuation is that 'unreadiness' can be prevented.

- An evaluation of 'school readiness' based primarily on psychometric tests cannot produce reliable inferences regarding learning potential. Other factors such as teacher rating scales must be taken into account.

- In view of the fact that recommendations have been proposed by the Government of the Republic of South Africa for the introduction of a 'bridging year' to promote school readiness, educationists and psychologists must now devise appropriate programmes for implementation during this critical phase of early learning.

The question of learning problems and curricular modifications as related issues of school readiness will be examined in the next two chapters.

CHAPTER III

LEARNING PROBLEMS

3.1. General matters

There is no one cause or solution to a learning 'problem'. The factors associated with pre-, peri- and post-natal periods in a child's development may have specific or generalized cumulative affects. The obvious interactional relationship makes it difficult to ascribe the cause of learning difficulties to any one of them. The concept or term 'learning disability' is in itself a controversial issue. The need to identify and label children at an early age is even more contentious.

A widely accepted definition of learning disability is the one proposed by the American National Advisory Committee on Handicapped Children (1968). "Children with a learning disability exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling and arithmetic". It is thus very broad and inclusive of many theories, but excludes children with definite physical, emotional or environmental disadvantage.

Hallahan & Kaufman (1976, p.19,20) outlines how matters related to this definition were explored by special multi-disciplinary task forces which resulted in two more inclusive definitions, namely "Children with learning disabilities are those (1) who have educationally significant discrepancies among their sensory-motor, perceptual, cognitive, academic or related developmental levels which interfere with the performance of educational tasks; (2) who may or may not show demonstratable deviation in central nervous system functioning; and (3) whose disabilities are not secondary to general mental retardation, sensory deprivation and serious emotional 'disturbance'"; and, "Children with learning disabilities are those (1) who manifest an educationally significant discrepancy between estimated academic potential and actual level of academic functioning as related to dysfunctioning in the learning process, (2) may or may not show demonstratable deviation in central nervous system functioning; and (3) whose disabilities are not secondary to general mental retardation, cultural, sensory and/or educational deprivation or environmentally produced serious emotional disturbance". Many other definitions exist.

Numerous models and theories has been postulated regarding both etiology and treatment. These range from criticism of a particular educational system which is not meeting the needs of most children to more discrete, physiological processes and behavioural factors, through holistic approaches to the interactive ecological approach. The issue of a 'learning disability' is a contentious one and there is considerable overlap amongst definitions. Conflicting ideas pervade current discussions in the literature. Adelman & Taylor (1983, p.6) specifically state; "Much of the problem in defining learning disabilities is due to the lack of certainty about cause".

It suggests that a lack of clear definition is because no one school of thought has superiority in the field. A confusion in semantics clouds the identity of learning disabilities. Most descriptions are often too constricting, whereas non-specific definitions tend to encompass the overwhelming majority of school-going children. The one factor that is common to all definitions of the term 'learning disability' is that a child is unable to learn effectively despite the presence of basic integrity. Such a child will inevitably present a challenge both diagnostically and educationally.

3.2. Theories and approaches to the concept of learning disabilities

Models may be grouped into those which are concerned with disabilities within the child and those which also include considerations of the interaction between the child and his environment, i.e. 'interactive' models. Although there is a considerable overlap amongst definitions, several trends have evolved over the years.

3.2.1. Person-centred physiological theories

Definitions that focus on this dimension attempt to identify organic etiology. "The inclusion of constitutional (or physiological) correlates in the definition of learning disabilities is related to the assumption that there is a disorder of basic processes, and prohibits the labelling of children on the basis of poor instruction, cultural differences, and the like" Reid & Hresko (1981, p.5).

Some form of brain injury, whether overt or minimal, i.e. neurological factors, are considered by many theorists as primary and basic causes of learning disabilities. Genetic and biochemical factors also fall into this category. Theories generally reflect the historical genesis of the concept of neurological disorders.

The relationship of brain damage and central nervous system dysfunction to learning disabilities is actually a tenable hypothesis. Physiological factors have specific or cumulative effects on learning. Chemical or physical trauma or infection in utero, e.g. rubella, blood incompatibilities, etc., trauma during the birth process, infections during childhood, accidents or child battering, could all in some way result in brain injury.

However, dysfunctions of the brain causing learning disabilities are not necessarily due to damage. They may be developmental or they may occur on an endogenous basis and be hereditary in nature. "The term 'damage' assumes that normalcy persisted up to a given point in the life span and that through disease or accident some type of injury was sustained". It is unsuitable for children for whom such circumstances do not pertain. Applying the term 'minimal' only complicates the matter. Use of the term arose in attempting to distinguish between children whose involvement was minimal, as compared with diffuse. Criteria for verifying this distinction have been difficult to establish. "For education especially, these designations seem unwieldy and the trend is to interpret them as referring to behavioural manifestations, not to the degree of the involvement in the brain" Johnson & Myklebust (1967 p.5). They postulate that learning involves certain processes, viz. sensation, perception, imagery, symbolization and conceptualization and contend that learning breakdown can occur at any one of these levels. This view explains academic disorders in terms of these processes and accompanying disorders in the visual, auditory and motor modalities.

Amongst the group of researchers who look to physiological factors can be included the perceptual and visual motor theorists and those who look at language processing. Kephart (1960) stressed that as early perceptual motor development improves, so do other processes. Getman (1965), an optometrist paid heed to visual motor concerns as did Marianne Frostig (1972).

A lack of success in defining 'learning disability' in terms of an etiological basis for the definition caused many professionals to consider linguistic constructs as the basis for their models. These theorists were spearheaded by Ortan (1937), a neurologist and psychologist, who looked at brain damage and related it to language. He contended that, when a child is unable to read, the disability extends to other language areas and wrote about 'twisted' symbols. Kirk & Kirk (1971) conceptualize learning abilities in the context of a psycholinguistic model. This involves three types of learning disabilities, i.e. academic disorders, non-symbolic disorders and symbolic disorders, which may overlap. Wepman's (1951) research saw language dysfunction not only related to, but the cause of learning disability. Wallace & Larsen (1978) point out that language serves as an essential pre-requisite to all phases of academic achievement and Wiig & Semel (1976) state that clearer connections between learning disability and language are becoming evident.

3.7.2. Psychological Factors

These embrace environmental and behavioural dimensions. Reid & Hresko (1981) believe that environmentally based disorders include poor nutrition, lack of early stimulation and emotional disturbance. They postulate (p.9) "whatever the etiology, the behavioural manifestations are frequently similar and it is often impossible to determine whether a particular problem is organically or environmentally based". Wallace & McLoughlin (1979) distinguish between the descriptive manifestations of learning disabilities and underlying psychological factors. They tend to lay the onus, to a large extent, on 'inadequate instruction', 'narrow curriculum content' and the use of 'inappropriate methods, material and curriculum' (p.51). They believe that a lack of motivation and a poor self-concept can complicate any learning disability.

The orientation towards understanding and measuring psychological factors is represented in applied behavioural analysis. Gagne (1970) has drawn attention to the conditions necessary for certain kinds of learning, i.e. stimulus response learning. This approach focuses attention on the achievement, the task and the teacher and the child's reaction. Barbara Bateman (1968) believes that one must look at a child's behaviour and the methods of dealing with it while Hewett (1968) is another behaviourist concerned with strategies for behaviour modification. He looks at the steps of learning as a developmental sequence of educational goals. The child explores his world, masters it and then achieves his goal.

Hallahan & Kauffman (1970) follow this view. They state (p.28) "In attempting to formulate a definition of learning disabilities, it is our conviction that one must keep in mind the generic nature of the term. There are many different kinds of learning disabilities". It is their hope that the field of learning disabilities moves towards the adoption of a definition that recognizes the heterogenecy of the population of children considered learning disabled and that under this broader definition there may be subgroups or subtypes of learning disabilities based upon specific behavioural deficits.

3.2.3. Cognitive, holistic theories

Theorists propogating this approach tend to believe that ways of learning can be improved through personal effort and maturity.

People like Ross (1977) and Reid & Hresko (1981) believe in a synthesis of behavioural and cognitive orientations. Ross refers to maturational lag causing a delay in the ability to sustain selective attention. He maintains this can improve with training. Learning is a covert process, like digestion, not an overt action, like eating. Not only is learning a covert process, it is also a process of change over time.

"Learning, then, cannot be observed while it is going on, only after it has taken place, and this may be why we know so much more about stomach ailments than about learning problems", Ross (1977, p.31). Ross believes that any human capacity that undergoes developmental changes will reflect individual differences both in the rate of development and in the quality of any given capacity that is available to children. He assumes that one will therefore also find individual differences in rate and quality if one examines the development of the capacity to sustain selective attention. "This strongly suggests that learning disability represents a developmental lag in the acquisition of the ability to sustain selective attention" (p.111).

Reid & Hresko, on the other hand see learning as part of a global view of the child. They believe that it incorporates four principles, viz. that learning is a personal process, learners must be aware that they are responsible for their own learning, relationships in learning are significant and that learning in many areas is holistic. Reid & Hresko "do not advocate that cognitive processes become the goal of instruction" but "are firmly committed to employing all of the knowledge about how children think and learn to devising better ways of teaching them" Reid & Hresko (1981, p.22).

Thus the cognitive, holistic approach generally suggests that learning disabilities can be overcome through effective teaching and development.

3.2.4. The interactional systems-orientated approach

Persons advocate this view, e.g. Adelman & Taylor (1983) look at the relationship between a person, his environment and his perceptions of the problem as it currently exists. Cognisance is taken of Maslow's hierarchy of needs with his concepts of achievement and self-esteem leading to the self-actualization of the individual. It also considers Piaget's stages of cognitive growth with emphasis on environmental encounters and Bruner's key principles of motivation and structure. Interactional models, by definition, thus leave open the question of whether focus should be on the child, or relevant aspects of his setting.

It therefore appears that a specific model such as the physiological, maturational lag or inadequate environment approach is too restrictive. Emphasis on a predominant view of causality will limit the range of useful procedures in practice. This invariably leads to the question of prevention.

Adelman & Taylor (1983, p.6) specifically state "Much of the confusion in defining learning disabilities is due to the lack of uncertainty about cause". This is attributed to the fact that knowledge of causes does not help significantly in treating problems. They believe that better conceived theories and more etiological research is necessary. They stress motivation as the key to effective learning. They hold that a cognitive affective approach to teaching evoking motivation via an inter-actional model is the answer. They state; "A broad perspective of the complex phenomenon of motivation suggests its pervasive effects in terms of causes and corrections of learning problems" (p.182 . They then present an intervention model that attempts to incorporate motivational strategies in a comprehensive and systematic manner.

Since the child becomes a product of many problems stemming from his handicap practitioners adopting an inter-actional or ecological perspective believe that causes are elusive and it is difficult to pinpoint the exact root. Therefore any interventionist in the life of the child should look beyond his particular perspective and examine conditions in the prevailing environment. Since there could be an overlap of causes, procedures for rectifying or improving the situation could embrace a multi-disciplinary approach.

3.3. Issues relating to the Early Detection of 'Learning Disabilities

As with the concept of the term 'learning disability' the question of the early detection of such a problem is also contentious. An interpretation of the word 'early' in itself, is elusive. There is a dilemma between, on the one hand, providing an early identification of diffuculties, and on the other, of not wanting to label a child. Wedell & Raybould (1976) debate the issue and question of the notion of applying labels to little children when there cannot be any clear evidence of educational failure. However, it is generally accepted that learning disabilities and behaviour problems in school aged children can often arise as a result of deviation or delayed development in the pre-school years. Cooper, Moodley & Reynell (1978) hold that early help for such children is feasible, effective and important while Wedell & Raybould cite the work of Rosenthal (1966) which emphasizes how the power of a label can determine the way in which a child will be treated at school and the attitude taken towards him by his teachers.

Keogh & Becker (1973) showed that educational risk at kindergarten level involves at least two independent components, the first having to do with academic aptitude, the other with behavioural adaptability. Behavioural adaptability is relatively specific to school or even to a particular classroom or teacher and thus more amenable to change than is academic aptitude. Their data demonstrated that educational risk is compounded by differences in cultural and language background of pupils. At-risk children appeared to have problems in the perceptual organization of learning tasks, did not apply appropriate and efficient solution strategies and were more dependent upon adults for direction or demonstration on how to go about solving tasks.

Work in the United Kingdom with regard to children experiencing, or likely to experience learning difficulties has proliferated. Wedell (1980, 1981), Bailey (1981), Lindsay (1980) and Phillips & Williams (1983) have all investigated the feasibility of early identification and the evaluation of effectiveness of such procedures has been critically examined. They hold that emphasis on a predominant view of causily has perpetuated the range of useful implications for practice. This invariably leads to the question of prevention.

Adelman & Taylor (198[illegible]) stress motivation as the key to effective learning. They hold that a cognitive-affective approach to teaching evoking motivation via an inter-actional model is the answer. They state "A broad perspective of the complex phenomenon of motivation suggests its pervasive effects in terms of causes and corrections of learning problems" (p.18[illegible]). They then present an intervention model that attempts to incorporate motivational strategies in a comprehensive and systematic manner.

Wedell (1981) looks to the Bullock Report (1975) the Warnock Report (1978) and the subsequent White Paper of 1980 which assert that a crucial task in special education is to identify children's special needs as soon as possible. However, Wedell is sceptical about the usefulness of screening measures.

The two major types of instruments used at school entry have been tests and teacher-completed rating scales. Bailey (1981) investigated learning measures as screening procedures. The primary objective was to determine the usefulness of various repeated assessment procedures with a kindergarten population. Four repeated measures were administered and performance on these measures was compared with four indicators of school success. The data suggested that, in general a repeated measure approach to assessment may provide no more information about children then does a single administration procedure. Although learning measures have been demonstrated as useful with specific groups of children, the data from their study does not suggest the use of learning measures as general screening procedures. This conclusion is based on the relatively low degree of variability accounted for and problems in the identification of high risk children.

Another rating scale which is popular is the Myklebust Pupil Rating Scale (1971). A two-year follow up on this measure was conducted by Colligan (1979) and by Skuy, Shmukler & Clark (1983). The latter research, conducted in South Africa assessed the validity of teacher ratings and formed part of a longitudinal study with a follow up investigation involving a comparison between the Myklebust Pupil Rating Scale and later indices of school behaviour. Their data provides supportive evidence regarding the predictive utility of this Pupil Rating Scale. Teachers' perceptions, as reflected on the MPRS yielded highly significant correlations (p.<0001) with later measures of scholastic success. The usefulness of the MPRS with regard to socio-emotional functioning was also investigated and once again a highly significant correlation was yielded.

Phillips & Williams (1983) explore various kinds of screening procedures. Their intention was to bring into focus children who were likely to have learning problems. They believe "In the past, measures of some abilities were interpreted as measures of readiness; within a screening context they become measures of 'unreadiness'. The screen must provide indices of qualities that have a potentiality for change and which are within the power of teachers to modify. "All children are to be educated. Therefore, it would be improper to screen for attributes, the appraisal of which belongs to the domain of adjusting the curriculum to the child" (p.256). The purpose of their study was not the standardization of a particular early identification instrument, but investigation of learning skills as a determinate of future academic achievement.

It therefore appears that screening for 'school readiness' cannot, with conviction, indicate or [illegible] is 'ready' for successful learning at school. Teacher ratings, however, [illegible] and pinpoint specific areas of weakness. This being the case it seems logical to find ways and means of trying to prevent problems before they arise and a child becomes labelled. There is no one cause or solution to a 'learning problem' and the early detection of potential learning problems is less satisfactory than programming for success at kindergarten level.

Wallace & McLoughlin (1975, p.98) state "prevention is not merely a matter of early detection. We must also seek appropriate forms of early intervention". Adelman & Taylor (1983, p.1[illegible]7) feel that pre-school children may not yet have developed any deficit conditions for which they were identified and that educators tend to hypothesize about future development from present behaviour which is an act of expectancy. Their argument is that, "Educators must accept change so that a way can be forged to create a system in which innovation is not frightening and which can [illegible] opportunities for exploration. It makes little sense to predict specific problems if they can be averted by general preventative action. With regard to school learning behaviour problems, it is widely acknowledged that many, perhaps most, classrooms are less than optimal learning environments. Many preventative and early age intervention steps are simply not taken". This seems to signify that many children probably manifest psycho-educational problems because of deficient school systems.

Based on the above information and assumptions, it is highly probable and worth consideration that with the necessary intervention most children can be taught to succeed at school via appropriate programming measures at kindergarten level. As Jefferson Jansky (1974, p.83 - 84) states, "We should not overlook the marginally ready, or the immature child. If we pick them up, the worst that can happen is that they get help they did not really need. Inclusion in a programme will not hurt them and it will soon become apparent if they do not need it, and other arrangements can be made for them. The danger is, on the other hand, that what may appear to be false positives may become true positives by third or fourth grade. What adequate intervention requires is a school system that is prepared to recognize, in operational terms, subtle differences between children in readiness. It does not require money as much as awareness, a commitment to teaching, and the flexibility necessary for making changes as these are needed".

3.4. Conclusion

It appears that there is no one cause or solution to a learning problem. It is best to programme for the majority of children in an attempt to alleviate the pervasive effect of this type of problem in the life of a child, his family and for the failure rate in schools.

3.4.1. The field of learning disabilities is the focus of medical, psychological and educational concern. A child presenting with a 'problem' provides an enigma for which questions and answers are still being sought. Diagnostic information about a case may be useful, but only if positively related to intervention strategies and not used as a means of labelling a child. It is also obvious that any intervention in the life of a 'learning disabled' child will be based on the particular paradigm of the therapist.

Neurological type approaches will look to physiological factors as being the cause. They will be likely to stress medication, perceptual and language training as remedies. They therefore focus on deficits and the prognosis for these children seems poor. Behavioural theories pay attention to current environmental contingencies and the extinction of poor behaviour patterns which also does not provide a phenomenological holistic concept of the child. The cognitive views provide a link between developmental level and learning methods and believe that the child must actively contribute to his learning growth. They postulate the prognosis to be good as the child will eventually catch up to his potential level with good training. However, the focus, once again, is on the child. An interactive approach appears to be the most positive as it does not equate the child with the 'problem'. It looks to the system itself and ways and means of restructuring it if necessary. The aim is generally for motivation and fulfillment.

3.4.2. The question of early detection of 'learning disabilities' is like putting the cart before the horse, i.e. testing and labelling a child from a very early age. If it is felt that a particular child may be a cause for concern, then teacher rating scales, such as the Myklebust (as shown by Skuy et al), are the ones most predictive of weaknesses in specific areas. The important thing, however, is to provide preventative programmes, rather than to test and label. A great majority of children will respond to good teaching and a conducive environment. Thus there is no valid reason why any method used for remediation cannot be utilized prior to identification. In addition, it is apparent that learning conditions for optimum stimulation and enrichment must be sought.

3.4.3. Taking all these factors into account, the present researcher is of the belief that preventive and enriching programmes should be introduced to pre-school children during the kindergarten (bridging year) to meet the needs of most of them. Any such programme should bear in mind the initial socio-emotional adjustment necessary for the formalities of primary school as well as language enrichment and basic skills training generally reserved for remedial programmes.

In order to structure such a programme it is necessary to examine various programme formats and issues arising from them. An attempt will be made to do so in the next Chapter.

CHAPTER IV

CURRICULUM MODELS AND PROGRAMME ISSUES

When considering approaches to the design and implementation of appropriate programmes to meet the requirements of a 'bridging' period, educational objectives are of prime importance. The creation of any approach to the education of young children must consider, both immediate and long term goals. Varied philosophical and psychological thought is apparent in most goal statements. There is not much conflict among those who prescribe educational strategies with respect to long term goals. Few oppose the notion of education for the development of maximum individual potential, with the underlying assumption that the events of the early years are critical for long term development. The critical issues are related to the choice of early programmes and the manner in which they must be implemented to fill the void and bridge the gap that exists in the Republic of South Africa between pre-school and primary school education.

Three comprehensive classes of objectives have been established - socio-emotional, perceptual-motor, and cognitive. Into this triad is fused a fourth objective, language development. The search is now for a better yield from early education programmes in terms of cognitive growth and school readiness.

Issues in programming

The effects of various forms of early intervention programmes were compared by Karnes, Hodgens & Teska (1969). They generally found highly structured programmes more beneficial in developing intellectual functioning, language abilities, perceptual development and school readiness. Five models were compared. The two structured programmes, i.e. the Goal curriculum, stressing the acquisition of special information processing skills to prepare children for successful participation in the standard school curriculum, and the Bereiter-Engelman programme which included intensive oral drive with twenty minutes structured periods in which language, arithmetic and reading were taught, yielded the greater gains in intelligence over a year. Superior performances of children on these programmes was noted.

Reilly (1983), in investigating the criteria for the evaluation of the psychopaedigogical accountability of pre-school programmes, looks for universal criteria applicable to all good programmes. She maintains that the impact of some pre-school programmes has a lasting effect. In terms of her research she cites these to be: a stronger commitment to schooling and better performance than children who did not benefit from the programme, better achievement with skills such as reading, language and mathematics, a reduction in the need for special educational services for school-going children and a decreased tendency for anti-social behaviour.

Important aspects are the role of early experience in determining intellectual abilities, the effects of sensory deprivation/stimulation on mental development and the effect of patterns of language usage on children's cognitive style.

Reilly maintains that the exact nature of pre-school programmes as recommended by the De Lange Commission is open to interpretation. However, the following factors should be borne in mind:-

i) Recognition must be given to the diverse needs of the different cultural groups without losing sight of what is common to all.

ii) Consideration must be given to the typical learning style of environmentally handicapped children.

iii) Programmes must promote school readiness and, in doing so, reduce school failure and underachievement to the ultimate advantage of both the individual and society.

iv) Curricula must be informal, but programmes must provide comprehensive guidelines.

Whatever one's concept of school readiness it remains descriptive and requires transition into educational practice. Reilly states that contemporary school readiness programmes tend to focus on a multiplicity of component skills and separate aspects of development. She believes that educators who identify school readiness as a primary goal are much more direct in their approach. Adult directed activity plays an important part in the curriculum. Conformity, responsibility, convergent thinking and responsiveness to direction are highly valued.

The dynamics of learning are stressed with the opportunity for analysis, synthesis, identifying relationships, classifying and problem solving via convergent thinking and divergent thinking and creativity. Programmes must be challenging if school readiness is viewed as a general mode of relating to reality, rather than a particular constellation of isolated skills and characteristics.

The appropriateness of the curriculum is a constant question and arguments continue as to whether curricula designs meet the needs of different children. Richards (1982) believes that consistency and continuity are two related concepts referring to issues of increasing importance in curricular discussions. He explains that curricular consistency is a horizontal concept referring to the extent to which all pupils at a particular stage, whether in the same group or different groups or classes, are introduced to a similar set of curricular elements. Curricular continuity is a vertical concept referring to the extent to which curricular experiences offered pupils relate to, and build on those offered previously. Richards challenges the appropriateness of a 'laissez-faire' approach to the curriculum which leaves all curriculum decisions in the hands of individual practitioners operating in comparative isolation. He believes this to be inappropriate and feels it devalues the professionalism of the individual practitioners by assuming a degree of individual self-sufficiency which could only be sustained if the task in question is simple, uncontentious, fully understood and self-contained. Educating young children is none of these. Although Richards was alluding to the primary school curriculum the same holds true for pre-school programmes.

Objectives of the kindergarten programme vary in their specific terminology and functions. Evans (1971) believes that the breadth and abstractions of these goals permit countless programme variations. Curricula tend to vary in the degree of emphasis placed upon pre-academic training. Close examination of any kindergarten curriculum will usually reveal a potpourri of materials and techniques that can best be described as eclectic, that is, a combination of activities that may transcend a given philosophy or theory of educational psychology. Maturational readiness is duly considered within this pattern with education primarily geared to assist the child toward an understanding of himself and his world.

Davis (1963) suggests that most kindergarten programmes probably represent a fusion of many patterns. Variation is most likely a function of individual teacher's philosophies and competencies. Robinson & Spodek (1965) recommend a format for kindergarten practice under the umbrella 'new direction'. They attempt to demonstrate, by specific attention to content and organizational variables, how the substance of a curriculum can be made more commensurate with the needs and cultural background of the child. For Robinson & Spodek , the selection of content comes from a structural analysis of major disciplines.

Ream (1969) found that curriculum areas least frequently included in the kindergarten are language, arts, music and direct reading instruction. He feels that while general evaluations have treated the kindergarten concept kindly, several tormenting issues are associated with kindergarten practices. One of these concerns the question of intellectual stimulation leading to successful academic performance at school. A second invokes the search for the most appropriate combination of techniques and materials to accomplish the goals set by kindergarten teachers.

A Milwaukee project by Heber (1972) shows what can be accomplished when children are trained early enough and when the training is systematic and structured. The first study in 1964 started in an area of Milwaukee which had the lowest income, the highest population density and the worst living conditions in the city. He randomly selected certain children and exposed them to a stimulating environment from birth. The goal of the project was to provide enough stimulation during the critical years of cognitive development so that intellectual deterioration would not occur. At 42 months of age the average IQ in the experimental group was thirty three points higher than the average in the control group.

Assuming that this enrichment is accelerated at the kindergarten stage of development, it suggests that the children will be better prepared for school learning. If, for whatever reason, children have not been exposed to intellectually enriching instruction prior to their kindergarten year, then surely the input at kindergarten level is even more essential?

Stanley (1972) also concentrated on pre-school programmes for the disadvantaged and presented a case for a programme with a strong instructional basis which altered the focus of early education from custodial, socialization and mental health functions to a cognition enhanced philosophy. In presenting his case Stanley argues that Piaget, despite his brilliant account of how cognitive functions develop, has not offered a curriculum of instructional strategy that parallels it.

Almy (1975) believes that any early childhood programme is only as good as the teachers who implement it. She (p.120) states that early childhood education "may be doomed to lose its intellectual vitality, and indeed, its effective role in our society if it is unable to muster a sufficient number of teachers who are specialists in both theory and practice". The teacher is the one to put a programme into action and to implement it. This implies that the curriculum depends on the manner in which the teacher provides for the needs of the children and achieves the desired goals. It must, therefore, be relevant to the child's needs. Experiences must be created and developed that will help the child increase the skills of problem solving, reasoning, creating, etc. The success of the programme and desired achievement of the children will depend on continual and effective evaluation which should include both positive and negative aspects. The teacher is the key to successful implementation.

It thus appears that the school environment can foster the cognitive development of the child and a desire for learning which can be released under certain conditions, i.e. the attainment of sound instructional objectives. By recognizing (as discussed in an earlier chapter) that cognitive development is bound up with language facility and that social-emotional adjustment and 'readiness' for learning are vital, this research is proposing that a case for intervention should be related to such issues.

Discussions concerning these problems reflect variations in philosophy, psychological conceptions of child development and learning, availability of personnel and the formulation of day to day procedures. 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. The programme will have of necessity to be from the general to the specific. Certain critical questions will have to be answered, viz. What areas should be covered in the content of a programme? When should this be done in terms of timing and the sequential management of experiences appropriate to the developmental process? How should this be done in view of the methodology valid for pre-primary childhood education? Where should it be conducted? An attempt will be made to answer these questions in the present study.

4.2. Intervention through cognitive approaches to early learning

Kamii (1970) feels that Piagetion theory is a useful curriculum base for at least two main reasons, i.e. (i) it dileneates for teaching purposes the cognitive abilities critical for the scope of elementary school academic activities and (ii) it creates an in-depth developmental perspective on the subject matter at this level. For Kamii a principal conceptual guide is to assist children through a process of pre-requisite skill construction.

Stanley (1972) describes a programme initiated in Colorado which capitalizes on cognitive emphasis and is designed to achieve improved concept acquisition, the generalized effects of which are expected to aid the child to adapt better to the intellectual demands of the school. The Colorado programme is eclectic while the Ypsilanti programme, which is also eclectic, characterizes itself as Piagetian in its essential orientation. According to Tinker (1971), an authority on reading, a kindergarten programme should provide experiences essential to the attainment of reading skills. These should include opportunities for the improvements of verbal facility, concept building, word recognition, skills, left/right orientation, auditory discrimination, comprehension and interpretation, elementary study skills and widening of interests, all to be embedded in content that is interesting and challenging for young children.

Bakara (West African Journal of Education, February 1970, p.58) in discussing programmes for African children, believes the objectives of such programme could stem directly from an analysis of learning readiness. He recommends a highly directed instructional method like the Bereiter & Engelmann (1966) programme to teach the skills basic to the acquisition of reading. In order to lay the foundation for future numerical ability, pre-school programmes in Africa should also develop the conservation of quantity by teaching the pre-requisite abilities. In order to lay the foundations for writing, physical and motor co-ordination should be taught through games and outdoor play. The above objectives, when operationally defined, become the pre-requisite essentials for progress at school. In addition to these activities, much time should be spent in reading and talking to children, in providing a model of speech, in providing corrective feedback with respect to grammar and pronunciation and in developing listening, memory and attention skills. Bakara feels that on the whole, pre-school programmes for African children should be well structured since African children come from rather structured home environments and since studies have shown that adult-guided stimulation produces higher levels of learning and adjustment than unguided and self-guided exploratory learning. The socially orientated programmes whereby children attend school under conditions of free play alone have hardly any place in African countries. Thus, according to Bakara's research

(1970) the essential cognitive objectives would be :-

i) to provide a variety of stimulation;

ii) to develop attention skills by ensuring suitable orientating responses to stimuli;

iii) to arrange practice in perceptual and conceptual activities;

iv) to motivate the child to carry out knowledge seeking responses;

v) to encourage and provide a model for the development of language;

vi) to promote physical fitness;

vii to develop motor co-ordination.

The objectives concerning the development of those personality characteristics which are critical to learning readiness would be -

viii) to help the child to develop achievement motivation and competence motivation;

ix to teach the child to delay gratification;

x) to orientate the child towards a reflective disposition.

Like the objectives, the content and methods of pre-school educational programmes for African children should derive directly from the analysis of learning readiness.

Another programme based on Piagetian principles is currently in use in almost 2,500 kindergartens throughout Israel. It is termed the Matal Programme (Stachel, 1980) and the implementation has been accompanied by research designed to develop a model of introducing change in educational organizations. The Matal kindergarten science teaching programme is part of the Elementary Science project developed at Tel-Aviv University in conjunction with the Israel Centre for Science Teaching and the Ministry of Education and Culture. According to the Matal programme the rationale for teaching science at the kindergarten level is the concept of teaching a mode of enquiry, i.e. helping children understand the basic process of science and the way in which knowledge is verified. The programme is child-centred and strives to guide the child in his early interactions with the world around him and with himself. It attempts to build a feeling of belonging to the physical and social environment and to encourage involvement and responsibility towards it. Among the affective aims of the programme are these : helping the child to enjoy success, to face failure realistically, to develop open-mindedness and flexibility, to be able to give and accept criticism, to develop creativity and aesthetic awareness, to promote initiative and encourage co-operation.

The programme consists of four units which progressively foster basic concept development and the formation of flexible and favourable attitudes. The topics are arranged in order of increasing complexity.

The co-ordination is built with respect to conceptual content both within and between units. The concepts with which the programme deals are :

Identity of objects;
Variety - Individuality;
Relationships between structure and action.

The units of the programme are -

i) Our world and us.
ii) Sensing and knowledge.
iii) Shaping and relating.
iv) Grouping and classifying.

In the first unit the child becomes familiar with his classroom and its contents and his immediate environment. He learns to identify the objects and their characteristics; to discern various characteristics and functions and to detect changes that occur in them. He also discovers his ability to bring about change.

In the second unit 'Sensing and knowledge', the child observes the world outside himself through himself, while attempting to understand the significance of sensory impressions and respond accordingly.

In the third unit the child learns to relate to himself and to objects in a spatial framework. The idea of spatial relationships is formed through organization of actions performed on objects in space.

In the fourth unit, the activities focus on objects and their characteristics for the purpose of classification activities.

This science programme is closely correlated with mathematical skills that add to the child's capacity to gain in deeper understanding of his physical and biological surroundings. In reciprocal fashion the programme serves to initiate, develop and put to practical use the understanding of mathematics. Throughout the programme there is an emphasis on language development as a means for children to react to and represent what they discover in their environment.

In the units an attempt is made to integrate concrete experiences with the creative arts by means of which the child can express his experiences, both in the cognitive and affective level, spontaneously and individually with the materials of his choice. The programme is accompanied by didactic material designed to help the child to act according to rules or principles established either by the material or by the child himself. The material consists of a set of working sheets, didactic games and educational devices.

The Matal programme has been introduced into South African nursery schools under the auspices of the S.A. Board of Jewish Education.

4.3. Intervention through language development

Language must, of necessity, permeate the whole curriculum for young children. It embraces not only symbolic representation, but also linguistics and the psychological, social and emotional concomitants of communication and expression. The possession of language, more than any other attribute distinguishes man from other animals. Chomsky (197[illegible]) stresses that even if language is not given a central role in teaching, it is the most important focus of activity through instruction.

Dorothea McCarthy (1954) theorizes that a child learns syntax by simply imitating whole sentences and phrases and then differentiating the component parts. She postulates that the child's early environment is the most important external factor affecting the rate of language development. She believes that the musical devices of syntax in early speech acquisition represents a wealth of possibilities for later language comprehension.

Any curriculum designed to meet the needs of young children must take into account Language Arts. This is the aspect of curriculum that assists the child in the development of language skills.

Eliason & Jenkins (1981) assert that a great deal of language instruction is necessary in all early childhood programmes. Programmes [illegible]d utilize activities that stimulate listening and speaking. Speaking or oral communication is influenced by, and influences every other aspect of development. A child who can express feelings verbally will generally make better social adjustments. They maintain that the emphasis should be on poetry and drama. Poetry serves the imagination and creative thinking. Through poetry, children become more aware of sensory impressions as they are expressed through the imagery of poetry.

The importance of drama and dramatic activities into any teaching curriculum is stressed by Courtney (1974). He feels that drama offers opportunity for socialization and the release of feelings and attitudes. Dramatic play also encourages creativity and offers opportunity for children to play out their own personal world. Courtney puts forward a strong case for the inclusion of drama in early childhood curricula. He maintains that dramatic education enables the child to see the relationships between ideas and that through impersonization and identification he can comprehend the world around him. Therefore, drama is an intellectual discipline and also a creative activity generating an effective method for many forms of education. Imaginative play, which stems from drama, is the method by which children approach the realization of adult living.

In 1968, Canada established the term 'developmental drama'. It was defined as the developmental study of human enactment. Theoretically, this was conceived in two ways : personal - how the individual develops through dramatic action, and social - how cultures develop through dramatic action. From a Gestalt point of view, acting itself is a crucial aspect in effective memorizing. An actor, in memorizing a role, familiarizes himself with the play as a whole. Piaget (1962) sees play as an assimilation of new experience. He classifies play into three types; practice, symbol and role. Practice games begin in the first months of life and continue whenever a new skill is acquired. Symbolic games imply a representation of an absent object since there is a comparison between a given and an imagined element. Games with rules are regulations imposed by the group and their violation carries a sanction. While practice games are first to appear they are vicarious. They appear with a new acquirement, but disappear after saturation. Practice play combines in various ways with symbolic play and games with rules. Symbolic play declines with age because the older child can satisfy himself by playing with real things, but games with rules continue as strongly as before. Imitation is never, like play, a behaviour which is an end in itself.

Despite the fact that Piaget distinguised symbolic play from practice play and play with games, he indicated in some detail that the symbolic or dramatic level of the imagination was a key factor. It is this which internalizes objects and which gives them significance for the individual. Shmukler (1978, p.295) in investigating imaginative play in young children came to the conclusion that "It seems important for the adult to provide the appropriate setting initially. It is further necessary to provide input in the form of stimulus material. The important factors in facilitating imaginative behaviour are both the provision of material, and the endorsement from an adult that fantasy is acceptable".

Heinig and Stillwell (1981) of the Children's Theatre Association of America believe that creative drama has the potential to develop language and communication abilities, problem solving skills and creativity, to promote a positive self-concept, social awareness, empathy, a clarification of values and attitudes and an understanding of the art of theatre. Drama, as outlined by them, has many elements, including conflict, with its struggle between opposing forces; characterization, which aids in identification; and movement, which helps children achieve mastery over their own physical being. They maintain that sensory awareness also arises from drama. This leads to greater understanding of self and the world we live in, while the verbal interaction of the dialogue provides experimentation in situations and the verbalizing of the thoughts of others. Children also learn to sequence, a skill needed for reading and writing.

On the subject of creativity, it seems likely that creative children are the ones who will survive in a dehumanizing technological world. Creative talent needs to be released through a nurturing environment. It is likely that through creative drama children's positive self-concepts and self-expression can be fostered. Creative drama also provides learning experiences in social and group interaction. Social awareness may be fostered because children can pretend to be the people or things they find interesting. Children plan together, enact ideas together, organize their playing space and experience a variety of human interactions in their dramatization. Not only is co-operation essential, but children can experience empathy, see the world from another point of view, and respond as another person would respond. This could lead to tolerance and understanding. Drama also helps value clarification in that it deals with people and action, making decisions and living with the consequences. Children become aware of choices and alternatives.

In a study by Schmidt, Goforth & Drew (1975) thirty nine kindergarten children were exposed to sixteen half-hour sessions of creative drama and then compared with a control group who continued in the normal class routine. The experimental group scored significantly higher in two creativity tests, one verbal and one non-verbal.

Many educators in recent years have encouraged the incorporation of both verbal and non-verbal communication into the language arts curriculum. They recognize that oral language is the precurser of reading and writing and advocate its use in an underlying base for all language learning. Wagner (1978) asserts that drama is the basic skill underlying all language learning. He maintains that communication is enhanced because children must communicate in their character roles, either verbally or non-verbally. This, he feels, encourages them to become more effective in their use of language by broadening their repertoire of verbal and non-verbal interactive behaviour.

A rich language environment in the kindergarten can also be fed through literature. Literary language stretches the imagination and understanding by giving us more words to conjure images with than are normally used. As children become involved with literature they respond emotionally or grasp conceptually, the language of the book is absorbed in the same way language was first absorbed at home in babyhood - through the ears. Even if all words heard are not actually used, there is a gain in receptive language through input. They remain part of the much larger passive vocabulary that enriches our reading and deepens our understanding all through life.

The expansion of language simultaneously with thought is served by a combination of varied and interesting experiences and accompanied by verbal naming, questions and comment supported by regular discussions and regular story telling. Small children have the emotional power to be deeply moved by the feeling and the beauty of literary works, and although they are illiterate they can become acquainted with good literature. They generally have the intellectual capacity to respond to ideas, to learn new words and concepts and to follow a story and catch the humour from books properly presented to them.

The richness of the English language is felt and made use of by all good writers. This arouses in children curiosity about big words whose meaning will be remembered because of artful treatment. Literature also meets intellectual needs. The language of poetry has vivid imagery to which children, being imaginative themselves, respond strongly. Poetry is an expression of children's feelings and fantasies. The most immediate appeal of poetry to all young children is the physical appeal of the rhyme.

With due consideration being made to the above factors, it appears that language arts, incorporating literature and drama should be an integral part of pre-primary school programming. Bearing this in mind, Bruner's contention that any subject can be taught to children at any age if presented appropriately would seem to suggest that classical, vividly rich literature could form part of an experimental programme for children being 'made ready' for school.

4.4. Environmental - Social - Emotional - Motivational aspects of Intervention

On the basis of the abovementioned references to cognitive and linguistic aspects of learning viz-a-viz preparation for school, it would appear that curriculum content could be adequately comprehensive. However, another dimension, involving affective factors, seems warranted.

Rubin & Barlow (1971) studied the success of kindergarten children as they proceeded through school. In spite of adequate intellectual preparedness for schoolwork, a large percentage of the group was identified as needing special services. They state this was due to the fact that the school environment placed heavy emphasis on socio-emotional skills, particularly those skills needed to survive in traditional educational settings. Findings by Skuy, et al (1983, p.95) as stated before, indicated the value of this aspect of a child's educational functioning.

Schrag (1972) advanced the position that if the same kind of emotional nurturance characteristics of psychotherapy were incorporated into educational practice, the problems of children would decrease dramatically. Ellis (1971) developed a methodology for reducing the emotional behaviour problems of children. His technique, termed 'rational-emotive therapy' approaches educational problems with a series of games and activities designed to educate children to their own emotionality. He claimed that his technique can be used by teachers and has classroom applicability. Eriksen (1940) considers play to be one of the major ego functions. He asserts that play involves self-teaching and self-healing. He believes the child utilizes play to make up for defeats, sufferings and frustrations, especially those resulting from a technically limited use of language. He believes that play relationships with real people serve as opportunities for solving previous difficulties or in anticipating new problems. Thus in defining the essence of development, Erikson sees play as an integrated component of education.

Carl Rogers (1969) supports teaching methods associated with a humanistic approach to education. A basic assumption of humanistic education is that feelings are as important as facts. Also that affective experiences can be tied to other curriculum events. For Rogers, the facilitation of learning is the aim of education. On analyzing language and learning, Richard Jones (1968) calls for a 'wedding' of psychotherapy and pedagogy and elaborates on his own theory of instruction. This is one which emphasizes the need for the co-ordination of the cognitive approach with emotional and imaginal [illegible] He implies that there are times for passion in the classroom and that teachers must learn to deal with the hearts of children as well as their heads. They must discover how to involve the child emotionally, exercise his rich imaginal responses and thus motivate him to learn. Jones elaborates on the fact that what children must learn in school is prompting reconsiderations of what children can and will learn in school. He maintains that intrinsic motivation is a more durable aid to learning than extrinsic motivation. Dr. Jones comes to the conclusion that with respect to play, it is almost redundant to view it in connection with the expression of feelings and fantasies since playfulness is inherent in these. There is room, in his judgement, for the inclusion of exercises and activities which have, as their objective, instruction in emotional and imaginal expression. He believes a comprehensive theory of instruction should seek to prescribe not only optimal levels of intellectual uncertainty, but also optimal levels of emotional involvement and personal curiosity. Jones believes that children are likely to encounter novelties in school which challenge their sphere of mastery and therefore incite their imagination, except when systematically prevented from doing so by misguided considerations of their readiness. Presumably, this could occur when educators are vary of new ideas and experimentation for fear that their charges may be 'unready' to meet the challenge. This, in itself, is contrary tory and therefore incite their imagination, except when systematically pr

Morse (1971) noted the importance of an emotional training component in programmes of special education. He maintained that children with problems requiring special educational services should receive even more systematic attention to socio-emotional development than 'normal' children. He expressed the belief that ineptness in emotional behaviour is one of the key areas of difficulty in children termed 'exceptional'. Morse suggested the development of specific skill training for teachers in emotionally orientated education.

More recently, Adelman & Taylor (1983) also placed stress on intrinsic motivation. In describing intrinsic motivation as a key concept in education and in intervention with learning disabled children, they state (p.178), "It is important to recognize that motivation represents both a process and an outcome concern. Interveners must use processes to increase motivation towards objectives such as reading improvement and appropriate interpersonal behaviour. At the same time, maintenance, enhancement and expansion of intrinsic motivation also are major intended outcomes and thus are significant content areas". They hold that a broad perspective of the complex phenomenon of motivation suggests its pervasive effects in terms of causes and corrections of learning problems.

4.5. Implications and Conclusions regarding programme issues

Many factors must be taken into account when attempting to ensure that children are ready for formal learning at the commencement of Grade I. Any child's pre-school experiences should culminate in school readiness, thereby equipping the child for formal education. In other words, he should be able to attain the realization of his potential.

From the research and ideas which have been presented, it seems that the following conclusions can be drawn:-

i) The nature of programming to meet the needs of all children in a particular group or within a particular culture or environment presents a cause for debate. Protagonists of a particular theory of learning will argue in favour of an emphasis based on their theoretical rationale. However, research evidence points to new and dynamic factors being of significance.

ii) One of these is that increased attention should be paid to equipping children with the cognitive strategies and skills needed for success with formal learning. Via structured activities, they can be provided with specific techniques to improve intellectual functioning. these have usually been reserved for those children who have already been identified as 'at risk' for future learning.

iii) Enrichment of a child's language experience should be one of the principle objectives. This should embrace a language arts programme with particular focus on drama and organized, as well as, free play. The cited research has shown that early experiences with language tasks and important adults not only prepares the child for reading and written language but also aids in self-concept development and divergent thinking.

iv) Feelings are as important as facts and learning to feel is as important as learning to think. Therefore a key issue in the theory of instruction should include ways and means of cultivating aroused imagination and its attendant emotions. This could lead to intrinsic motivation and personal curiosity to seek new knowledge. Affective experiences can be tied to other curricula activities. The schooling variable can make qualitative differences of growth so that the desire for learning and discovery may be released under optimum conditions

v) Any programme drawn up or devised for maximum benefit will always depend, to a large extent, on the abilities of the particular educators who implement it. In addition it should always be open to improvement, debate and criticism based on new research and knowledge.

4.6. Conclusion of Part I

From the research mentioned in this chapter, it appears that educational issues relating to curricula content are still debatable and novel ideas give rise to scepticism. However, values ar undergoing change and in this technological age there is an increased need to improve the competency of individuals for a productive future in their country.

This should be done by attempting to decrease the failure and drop-out rate at schools. The impetus and direction in this regard should commence at the pre-primary level of education. Research concerned with the influence of environment on learning capacity shows that [illegible]ng can be encouraged or extinguished much earlier than ever believed possible.

Any child's pre-school experiences should culminate in school readiness, thereby equipping the child for formal education. It has been shown that pre-schoolers who are well prepared for learning, having attained the necessary skills, will benefit from early admission.

Programmes to enhance school readiness based on factors already mentioned could prevent learning problems from arising at the outset.

The De Lange Commission has recommended that equal opportunity be afforded to all population groups. This suggests that programmes be revised to meet the needs of as many children from all population groups as possible. This should be done through research, planning flexibility and modification.

In terms of the Commission's directive regarding the bridging year of schooling, research should attempt to provide the basis for programmes which could be implemented during this critical phase of learning.

Currently, the emphasis and focus of attention is directed at perceptual motor development as outlined in the suggested syllabus for -schools by the Transvaal Provincial authorities. This aspect is a crucial component of early education. However, original programmes should complement this concept by introducing new ideas and intervention procedures so that the children concerned can derive maximum benefit from education at this phase of their lives.

Finally, with the distinct possibility of pre-primary education becoming a reality, new programmes specifically directed at school readiness for formal learning should be devised. This constitutes the rationale for the present research project.

PART II

CHAPTER V

THE PRESENT STUDY

5.1. Rationale for the present study

A review of literature and research has shown that the promotion of school readiness is a viable concept and can be facilitated through appropriate intervention techniques. It appears that a well-structured, specific educational programme is needed for pre-school children in order to prepare them for formal learning. The objectives and content of any such programme should be based on research findings regarding the constituent elements of readiness. Well-planned activities involving specific content should provide the child with a graduated challenge which promotes all-round development, i.e. cognitive, affective and social. Incorporated into any such programme should be techniques required for successful mastery of formal learning skills, i.e. reading, mathematics and writing. These can be based on those employed for children who seem to have identified learning 'problems' and so obviate any difficulties at the outset.

In the Republic of South Africa, at present, there seems to be a gap between pre-primary education and formal learning. On the recommendations of the De Lange Commission a 'bridging period' of [illegible]uction is about to be introduced into the South Africa school system to meet this deficit. This will necessitate greater flexibility and variety in types of instruction and the need for teachers to be receptive to new ideas. A child needs to be ready for school in many areas of behaviour and functioning. In turn, the school must cater for the child's needs. A balanced programme with emphasis on the relevant aspects and timely anticipation and avoidance of under-achievement and failure could contribute substantially to his ultimate happiness. Adelman (1982) has suggested that rather than trying to determine who is at risk, educators should cater for all children through a comprehensive, individualized programme.

Bearing in mind the literature on school readiness which stressed the benefits of a structured, goal-directed pre-school programme with emphasis on language, social awareness and skill training, certain essential considerations need to be met. Firstly, opportunities must be sought to assist all pre-school children realize 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. Such a programme can be integrated with, or built upon, existing programmes which have proved beneficial in some respect.

5.2. Aims

The intention was to devise a structured, pre-school programme, the concepts of which could be incorporated into future 'bridging' classes. Specifically, the aims of the programme were :

i) To facilitate social adjustment and school readiness so that the children will be in a better position to benefit from their learning experience;

ii) To employ basic principles utilized in remedial instruction during the course of teaching in order to obviate any overt or latent learning problems before primary school education commences;

.i) To provide children with language enrichment through novel concepts of language teaching and thereby -

a) raise their general language level;
b) engender a positive attitude towards future literary endeavours.

5.3. Hypotheses

From the above stated aims, the following hypotheses were derived and tested -

i) Following participation in the structured pre-school programme the experimental group demonstrate increased verbal competency and language skills relative to control groups not having undergone the programme.

ii) Following participation in the structured pre-school programme, experimental group subjects show more effective socio-emotional functioning and greater independence relative to control groups not having undergone the programme.

iii) Following participation in the structured pre-school programme, children in the experimental group are more 'ready' for school and less 'at risk' for future learning relative to control groups not having undergone the programme.

iv) Three months after commencement of Primary School, experimental group subjects maintain their improvement in verbal competency, social-emotional functioning and readiness for formal learning relative to control group subjects who did not undergo the pre-school programme.

5.4. Method

To test the hypotheses and thus fulfill the aims of the study, an instructional programme was devised and monitored by the researcher.

5.4.1. Subjects

A total of one hundred and six children were initially involved in the experiment, but due to attrition the final number was reduced to eighty at twenty two different primary schools in and around Johannesburg.

All children involved in the experiment were eligible to attend primary school at the commencement of 1984 in terms of chronological age. Four English-medium Nursery Schools attached to Hebrew Congregations, but not limited to Jewish children, in the North-Western suburbs of Johannesburg (i.e. schools A, B, C and D) were utilized. The premise was that all the children came from similar socio-economic backgrounds and that the general school programmes and level of teaching were of an equal standard. Also, the dstribution of children on the basis of intelligence, sex and development would be comparable. It was accepted, however, that specific school structures and teacher variables could account for any differences amongst groups which might be found in the course of the initial testing procedures.

Group 1 - Experimental - This group comprised forty children of whom twenty came from School A and twenty from School B.
Group 2 - Placebo - This group consisted of twenty children of whom six were from School A, five from School B, four from School C and five from School D.
Group 3 - Control - This group contained eight children from School A, five from School B, three from School C and four from School D.

Table 1 - Design of Groups

Nursery School		A	B	C	D	Total
1 Experimental Group	Intervention Programme 1983	20	20	-	-	40
2 Placebo Group	Limited Intervention 1983	6	5	4	5	20
3 Control Group	No intervention 1983	8	5	3	4	20

E attempt was made to allocate subjects to groups in an unbiased fashion, i.e. the allocation of subjects to groups was not based on any variable which could conceivably have affected the outcome of the experiment.

In ipso facto research of this nature, allocation to groups depends on the availability of resources, i.e. on the distribution of children in schools in the area considered in this study. Control was extended wherever possible and by the time the children were tested at primary school level, ratings were done 'blind' as the teachers and schools concerned had no prior knowledge regarding whether the children being assessed had proceeded from the experimental or control groups.

Certain of the primary schools which were centrally situated to all four nursery schools contained children from all three groups, i.e. experimental, placebo and control.

5.4.2. Procedure

The writer approached the supervisors of four English/Hebrew schools in the North-Western suburbs of Johannesburg to obtain permission to conduct this research project. The supervisors, in turn, elicited the co-operation of their parent and governing bodies. The programme was presented to teachers responsible for incorporating the programme into daily activities. The writer spenttwo mornings per week with the children comprising the experimental group, during which time she conducted the literacy/drama aspects of the programme herself.

Monthly visits were paid to teachers of the one control group (placebo group) to discuss the general progress of the children and make mention of aspects of the experimental programme which could be of use to them when working with their children. The partial exposure of the programme was to counteract any Hawthorne effect. Except for testing, working contact was not maintained with the children in the second control group.

Testing was conducted in February/March 1983 before implementation of the programme. This was repeated in November 1983 towards the end of their nursery school training period and then again in March/April 1984 after all the children had spent an initial period at primary school.

Testing of subjects was conducted in three stages by the researcher herself, occasionally assisted by a friend who handed out, and collected, test booklets, etc., and who helped to ensure that children did not copy one another in group testing situations. Instructions for testing were adhered to strictly, as were the procedures for marking.

Stage I commenced in February 1983 when one hundred and six (106), children were assessed individually. The date of birth and age at testing was recorded.

A figure drawing was obtained from each child to ascertain his/her perception of himself/herself and a Mental Age. Other test instruments comprised the Peabody Picture Vocabulary Test of Receptive Vocabulary, which yields a Mental Age and Intelligence Quotient, and the WIIG-SEMEL Test of Linguistic Concepts. The teachers of all the children were requested to rate each child on the Myklebust Pupil Rating Scale.

Stage II was reached towards the end of the Nursery School year, i.e. October/November 1983. Each child was re-tested on the same measures. In addition, the Thackray Reading Readiness Test and Listening Sub-test of the Metropolitan Readiness Test was administered. Certain children had left the various schools during the year and the subject number was reduced to 98.

Lists of primary schools to which all the children would be proceeding was obtained from the four school supervisors. The headmasters were contacted and arrangements made to retest the children towards the end of the first school term in 1984, after three months at primary school.

The third and final occasion of testing, i.e. Stage III, took place as scheduled, i.e. March 1984. By this time numbers had been reduced to [illegible] subjects as certain children had entered primary schools which were geographically beyond the Witwatersrand/Pretoria region. Testing procedures on the third occasion consisted only of the full battery of Metropolitan Readiness Tests (which includes a human figure drawing), the Myklebust Pupil Rating Scale and a questionnaire drawn up by the writer to obtain teachers' impressions of initial adjustment factors.

5.4.3. Measures

After careful examination of many standardized psychometric tests available to the researcher, measures were selected because they appeared to be the most appropriate for assessing the programmes' aims and measuring its affectiveness. Although some more recent tests are available (as outlined in Chapter 4), the writer felt those selected cover the specific needs and indices for which they were intended. In addition, it was felt necessary by the writer to devise a School Adjustment Rating Scale to meet the specific criteria aimed for in the programme and to determine parameters of initial adjustment once the subjects had commenced formal schooling. Each test is detailed hereunder.

i) <u>Harris Figure Drawing (Draw-a-Person Test)</u>

This test can be used as a measure of general intelligence and/or mental development. In some instances it may be used as a projective technique. The Goodenough-Harris Drawing Test (1963) is based on the Goodenough Intelligence Test (also called Draw-a-Person) published in 1926. A drawing of a person is made by the child and a detailed system of scoring is used. Up to 72 details may be noted for the finest differentiation or a series of ranked quality scale cards may be used for a 24-level differentiation.

In addition to their use as indices of stages of mental development, the drawings sometimes prove indicative of artistic abilities, motor skills and manual dexterity which may contribute to success in handiwork, writing and drawing. These drawing can also reflect self-perceptions. Childrens' drawings frequently reveal their fantasies, deepseated feelings and wishes. Unusual or immature drawings can be symptomatic of disturbed behaviour.

The scoring and interpretation of this test in the research project was based on the Metropolitan Readiness Test adaptation which provides a scoring key dependent on pupils' responses. All attempts to represent the human figure, no matter how crude, are given credits for detail. From this a Mental Age is calculated. It has been shown that the drawings of children have an intellectual, rather than an aesthetic origin and that "the child draws what he knows, rather than what he sees." (Goodenough 1926, p.12). Goodenough constructed the scale for measuring intelligence and found an average correlation with Sanford-Binet mental age of ,763 for ages four to twelve taken separately.

ii) Peabody Picture Vocabulary Test (PPVT) (Dunn, 1958)

The Peabody Picture Vocabulary Test is designed to provide an estimate of a subject's verbal intelligence and Mental Age through measuring his receptive vocabulary. The test consists of a battery of 150 numbered plates, a Manual and separate Individual Test Record for the two parallel forms of the test, i.e. A and B.

The PPVT was standardized in 1958 on 4,012 cases. Alternate form reliability co-efficients for the PPVT were obtained by calculating Pearson product-moment correlations on the raw scores of the standardization subjects. Generally, the co-efficients are comparable to those found for the standardization population. Validity data for the PPVT were obtained both for individual items and for the total test. Content validity was built into the test.

For this experiment, both Intelligence Quotients and Mental Ages were calculated.

iii) Wiig-Semel Test of Linguistic Concepts

This test (Wiig-Semel, 1973, 1974a, 1974b) evaluates the comprehension of fifty linguistic concepts requiring logical operations. Of the fifty sentence items, ten each represent comparative, passive, temporal-sequential, spatial and familial relationships. The test was designed to control the sentence length of five to seven words, limit the relationship to involve only two critical elements, provide a large ethnic variety of proper names and to permit yes/no responses for the majority of the items.

Construct validity was determined by evaluating age differentiation (Wiig & Semel, p.113). Concurrent validity has been established with a widely used test of psycholinguistis (STPA)(Wiig-Semel, 1974 b). Correlations ranged from r = ,43 for auditory association to r = ,59 for psycholinguistic age. The internal consistency of the test was determined by the split-half method and corrected by the Spearman-Brown formula. The correlation for thirty children from the second and third grades was adequate (r = .8[illegible])

Grade norms are presented in a table, but for this research project computations were made from raw scores due to the young age of the subjects and their limited schooling.

iv) Myklebust Pupil Rating Scale

The prime purpose of the Pupil Rating Scale is to identify more accurately those children whose school experience might end on failure unless they are given essential remedial instruction. After intensive investigation by the compilers it was deemed advisable to have teachers rate the children on behavioural characteristics often associated with learning disabilities. The Pupil Rating Scale was developed for this purpose. It was also considered necessary to include both verbal and non-verbal characteristics.

Using a psycho-neurological-cognitive frame of reference, five areas of behaviour were chosen, viz. Auditory Comprehension and Memory, Spoken Language, Orientation, Motor Co-ordination and Personal-Social Behaviour. Each area of measurement was selected with a specific purpose in mind and each area includes aspects of functioning considered pertinent.

Standardization, Reliability and Validity studies have been extensively carried out by many researchers including Colligan (1979) and Skuy et al (1983). Their data have consistently shown that the scale is pertinent and applicable across groups irrespective of cultural factors. This would suggest that the Myklebust Pupil Rating Scale can be used by researchers in the field with confidence.

v) Thackray Reading Readiness Profiles

Reading Readiness is defined by Downing & Thackray as 'the stage in development when either through motivation or through previous learning, or both, the individual child can learn to read easily and profitably' (1971, p.10).

The Thackray Profiles have been designed to indicate those children who are strong in all the reading readiness measures, and who could learn to read with success, and also, those children who are weak in all the measures and who must not be hurried into learning to read. The Profiles aim to be diagnostic and to provide information about children's reading readiness abilities.

The Thackray Reading Readiness Profiles measure directly or indirectly the more important skills and abilities contributing to readiness for reading. They consist of three group measures and one individual measure which are identified as follows :

Profile 1.	Vocabulary and Concept Development.
Profile 2.	Auditory Discrimination.
Profile 3.	Visual Discrimination.
Profile 4.	General Ability (adapted from Harris revision of the Goodenough Draw-a-Man Test).

The above four abilities are measured directly, but in order to complete the measures satisfactorily, a child must pay attention and follow directions, and examine the pictures and words in a left-right sequence; so these two abilities are also measured indirectly in the Profiles.

The standardization of the Thackray Reading Readiness Profiles took place in October 1983. The number of children tested was 5,500 drawn from 350 schools in Great Britain and they ranged in age from 4 years 3 months to 5 years 8 months. Reliability co-efficients were obtained by the split-halves technique using the Spearman-Brown formula corrected for length.

Reliability Co-efficients for the Thackray Reading Readiness Profiles were as follows:

	No. of children	Reliability Co-efficients
Vocabulary	196	.80
Auditory Discrimination	196	.81
Visual Discrimination	196	.90

The validity of the Thackray Reading Readiness Profiles may be judged in terms of the content of the Profiles (content validity) and the correlation of the readiness scores with later reading achievement scores (predictive validity).

vi) Metropolitan Readiness Tests

vi.i) Nature and Purpose

The Metropolitan Readiness Tests were devised to measure the extent to which school beginners have developed in the several skills and abilities that contribute to readiness for first-grade instruction. Designed for testing pupils at the end of the kindergarten year or the beginning of first grade, these tests provide a quick, convenient and dependable basis for early classification of pupils thus helping manage the instructional effort more efficiently.

Six tests are included in the Metropolitan Readiness as follows:

Test 1	Word Meaning, a 16 item picture vocabulary test.
Test 2	Listening, a 16 item test of ability to comprehend phrases and sentences instead of individual words.
Test 3	Matching, a 14 item test of visual perception involving the recognition of similarities.
Test 4	Alphabet, a 16 item test of ability to recognize lower-case letters of the alphabet.
Test 5	Numbers, a 26 item test of number knowledge.
Test 6	Copying, a 14 item test which measures a combination of visual-perception and motor control.

A seventh, optional test, Draw-a-Man, provides an index of general intellectual maturity.

vi.ii) Validity

Content validity - the definition of 'readiness' that underlies these tests is 'that of the attainment of a sufficient degree of maturity, proficiency, or skill in a variety of abilities, all of which have a part to play in facilitating the child's successful progress through the work of the first grade. It is assumed that all of these abilities are subject to development, through the provision of appropriate learning experiences'(p.15). The extent to which the six tests go together to form a meaningful composite readiness measure and to which each contributes uniquely to this composite by the inter-correlations among the tests as follows:

	Sub-test	1	2	3	4	5	6
1.	Word Meaning		.49	.43	.46	.55	.39
2.	Listening			.42	.40	.50	.36
3.	Matching				.53	.60	.49
4.	Alphabet					.64	.45
5.	Numbers						
6.	Copying						.53
	Mean	8.67	8.69	7.49	9.39	12.02	6.82
	S.D.	3.10	2.82	4.04	4.70	4.70	3.88

Construct validity - Data are available on the relation between the Metropolitan Readiness Tests and certain other readiness and intelligence tests.

Predictive validity - For the Metropolitan Readiness Tests data involved the correlation between pupils' readiness score (sub-test or total) and later achievement.

Correlates between scores after a few months of school with various experimental groups have generally been high and several tables to substantiate the findings are presented in the Manual of Directions (p. 8 - 23).

vi.iii) Reliability - Data on the reliability of the Metropolitan Readiness sub-test and total scores have been obtained for both beginning first grade and end of kindergarten administration, and for both Form A and Form B of the test. The testing on which the determinations are based was done in seven different school systems. Both split half and alternate form values are reported.

vii) School Adjustment Questionnaire

A questionnaire was devised by the researcher to tap out a child's initial adaptation to primary school. (Copy of questionnaire in Appendix F). The teacher had to rate the child on a four point response system ranging from the highest level of adjustment for each aspect to the lowest. Each dimension was based on principles of behaviour and language usage which it was hoped to improve through implementation of the structured programme.

It was explained to all teachers concerned that they should attempt to objectively evaluate each child according to the criteria by placing a tick next to the most appropriate description of the child on each item. The total was then calculated out of a maximum of 48 points.

5.4.4 Grading of Data

Scores on the pre- and post-tests for each child on each measure were recorded, totalled and tabulated. Likewise, teacher ratings on the Pupil Rating Scale and questionnaire were tabulated for each subject. When all the data had been gathered careful consideration was given to the most desirable method of analysis.

5.4.5 Experimental Design

In order to statistically evaluate the hypotheses of this study the following procedures were utilized:

i) Means and Standard Deviations

To establish whether significant differences occured on the objective testing instruments between the experimental, placebo and control groups at the initial, post-test I and post-test II stages, means and standard deviations were calculated.

ii) Correlation Co-efficients (Pearson Product Moment Method ((r))

This was performed to calculate the degree of consistency between the variables within groups and the extent of relationships between groups. These correlations could indicate consistency between different sets of variables and whether the same trend occurred during the 3 different test periods. A predetermined 0.05 level of significance was maintained and applied to the correlation co-efficients of all the inter-relationships.

iii) <u>Analysis of Variance (ANOVA)</u>

In research of this nature where complex psychological phenomena are involved, experimental design requires more sophisticated data analysis procedures. In this study, where multiple variables on factors were encountered, the analysis of variance technique was introduced to analyse the data. ANOVA was regarded as the appropriate technique to establish whether the observed differences between group means were population differences provoked by the intervention programme, not just as a function of sampling error. A predetermined level of significance at the 0.05 was applied.

iv) <u>'t' Tests</u>

Where the ANOVA and Scheffe's was not applied to the results, use was made of one tailed 't' test calculations to demonstrate differences between means of measures at the three test stages. For interpretive purposes the most sensitive level of significance, i.e. 0.01 was applied to the calculations.

v) <u>Scheffe's Test</u>

Finally Scheffe's test was applied to the collected data relating to the 3 groups at the different test stages to establish significant pair comparisons between the groups. This is a more rigorous procedure which produces fewer significant results and controls experimental error, thus allowing sounder conclusions to be drawn from the information.

CHAPTER VI

STRUCTURED 'BRIDGING' PRE-SCHOOL PROGRAMME

6.1. Setting

The regular playroom of each group involved in the experiment provided the space in which the group teacher could implement the designed activities. When the researcher conducted her bi-weekly sessions involving literature and drama they were also held in the same rooms. This was to ensure that the programme could be incorporated as a normal extension of regular activities.

6.2. Method

At the commencement of implementation the researcher spoke to the teachers who were to be concerned with conducting the activities. The general aims of the programme were outlined and it was emphasized that the operations were to be conducted as part of the daily routine without undue disruption. It was also stressed that the programme was not intended to eliminate any other regular activities which form part and parcel of the curriculum as the programme only covered specific concepts and did not incorporate other learning and developmental essentials known to exist in the regular curriculum, e.g. motor development activities, handiwork, free imaginative play and Hebrew rings. Instructional details were supplied to the teachers at the outset and then again at the commencement of the second and third terms of school. It was suggested that one activity be incorporated during each 'ring' period on a rotational basis so that all aspects of the programme could be included weekly. In total the programme carried on for approximately eight months from March 1983 to October 1983.

The researcher introduced herself to the children by first name as this is common practice at Nursery School and the intention was for the researcher to be considered a 'visiting teacher' who came along twice a week. The purpose was to spend approximately twenty to thirty minutes actively participating with the group in the drama rings, i.e. 'playing Shakespeare'. Regular contact with the children enabled her to get to know them by name as well, and so integrate into the schools as one of the concerned and caring staff members.

An attempt was made by the writer to conduct the sessions in a consistent way in both schools. This presented some difficulties as certain sessions had to be curtailed or postponed due to other school commitments, or when Jewish holy days and holidays required that extra time be found to allow for related activities. The children and teacher's individuality also determined the development and full implementation of the programme.

Thus, the children forming the experimental group had regular programme input as part of their school curriculum. In addition, special outings had to be arranged for these children to meet the requirements of the instructional programme. Once again problems were encountered in this regard as transport for these outings was not always available. Fortunately, both schools involved were within walking distance of shops, libraries, building sites, etc., which enabled excursions to be facilitated without the use of public transport wherever possible.

6.3 Implementation of Drama

The procedure was the same with both experimental groups. Two plays were presented, viz. 'A Midsummer Night's Dream' and 'Macbeth'. These were selected for their contrasting themes and innate appeal to children's fantasy and imagination. Initially, the researcher presented simple introductory stories concerning Shakespeare. These incorporated a historical 'picture' of living conditions in the 17th century, a biographical outline of Shakespeare's life and a discussion about his writings and dramatic presentations.

'A Midsummer Night's Dream' was the first play to be introduced. A very basic synopsis of the plot with mention of significant characters was presented in story form with appropriate illustrations from posters and children's books about Shakespeare. A mask and 'long ears' were made for 'Bottom', fairies wings out of cardboard and cardboard crowns for the regal characters. The children helped to build a 'bower' for Titiania in a suitably chosen area of the school garden.

Extracts of the play were pieced together to form a simple approach, maintaining the original words of the text. The researcher then repeatedly dramatized the play, while the children were encouraged to 'join in' whenever they liked. Small groups of children took character roles together. As the sessions progressed more and more of the group began actively participating and reciting the words. After about two months simple props were made and the children were permitted to have chances individualizing the character roles while the remainder of the group usually joined in the reciting of the verse.

On occasion, recordings were made and played back, much to the children's amusement. The culmination of the children's effort and enthusiasm resulted in this 'play' being performed at the end of the year school concert.

'Macbeth was the second play to be handled. This was implemented in the same manner as with 'A Midsummer Night's Dream' and also performed at the termination concert held prior to these children leaving pre-school to embark upon their primary school careers. With 'Macbeth' a 'cauldron' was kept in the playroom and put in the middle of the ring at 'Shakespeare' time. The children voluntarily brought odd things, e.g. dead silkworms, leftover food, birds' feathers, empty egg-shells, etc., to incorporate in the 'witches' brew. There was always much vieing to hold Macbeth's dagger (a plastic toy dagger). (A recorded session is included with the appendices).

A simplified story about 'Romeo and Juliet' was given to the children by the researcher as a final 'end of the year' treat, although it did not form part of the literature programme.

6.4. General Nature of the Programme

The programme used for the intervention was devised by the writer herself. It was based on a combination of the following:

i) Successful past experiences with similar groups of children when the researcher/writer had freedom for innovation.

ii) Guidelines from the review of the literature when researching the feasibility of this project.

iii) Recommended activities for remediation as outlined by Janet Lerner (1971) and modified for the purpose intended.

The researcher designed the programme primarily in instructional form so that it could be utilized easily by the teachers involved. It was separated into broad content categories to suit the needs of the children and the conceptual aims of the project. There was no rigidity in its application, and whenever there were pressing pupil's or teacher's needs, sessions focused around these needs in preference to anything planned on the programme. This was viewed as essential to prevent the programme becomming an imposition which could have adversely affected the motivation of the teachers or pupils concerned.

6.4.1. Overall Aim

To provide the nucleus of a structured programme to meet the specified objectives of the research project.

6.4.2. Specific Aims

As outlined in Chapter 5, 5.2.

6.4.3. Content of Programme

The following is the basic format as presented to the teachers involved. They were required to use their own initiative, flexibility and methods in presenting each theme.

A Structured Pre-School Programme to help 'Bridge the Gap' between Pre-Primary and Primary school and thereby enhance 'school readiness' promote initial Primary School Adjustment and attempt to obviate potential 'learning problems' at the outset.

AREA A Language Enrichment

Devised by the present researcher from guidelines in the literature review. The general aims are similar for each theme, but, of necessity, some of the themes have broader scope. Therefore all aims are outlined at the commencement of each theme.

Theme 1

Topic - Homes

i) Aims

i.i) To enrich and extend word knowledge (vocabulary) through discussion and experiential field trips.

i.ii) To impart factual information in a 'structured' learning environment.

i.iii) To arouse curiosity.

ii) Implementation

ii.i) Group discussions. Each child to describe his/her home - locality, number of rooms, kind of garden, family composition. This can progress to a description of grandparents' or a relative's home.

ii.ii) Teachers to discuss with children other types of living conditions found in Johannesburg, e.g. -

people who live in flats, apartments, duplexes, etc.
people who live in caravan parks.
people who live in hotel/rooming houses.
old age homes.
Institutions for 'orphans'.
lower income group housing.

estates and farmsteads.
Black, Coloured, Indian housing.

ii.iii) Children to collect illustrations and make a chart of different types of homes as discussed.

ii.iv) Activities concerning animal and bird homes.

ii.v) Some types of homes found in other countries and cities, e.g. Britain/London, USA/New York, Asia, primitive Africa (straw huts), North Pole (eskimos), homes on stilts, etc. Pamphlets, pictures, postcards, photographs to be collected wherever possible.

ii.vi) People responsible for the building of homes and their necessary duties, i.e. engineers, architects, builders, plumbers, electricians, carpenters, etc.

ii.vii) Creative ideas. Children to draw, design or describe a type of home they would like and why.

iii) Field Trips

iii.i) Visits to two or three unusual houses, e.g. a large old-fashioned mansion, an ultra modern house, a compact middle-class home, a farmstead or smallholding.

iii.ii) A drive(s) to a caravan park, a residential hotel, an old-age home, a hotel, a children's institution, a guest farm, e.g. Siesta, a drive through Houghton, Hyde Park, Bertrams, the outskirts of Soweto or Alexander.

iii.iii) Children to visit a house under construction during the various phases from the foundation up.

All field trips should be followed by group discussions.

iv) Ideas for divergent thinking

If you lived in a place which was freezing cold and covered with ice and there are no trees or bricks, only ice, how would you build your house? Thus proceed into a topic related to Eskimos.

In the same way, if it is very hot and there are many trees, no bricks, no trucks to bring bricks, etc. what could you use to make your house? How would you dress? Thus proceed into a discussion of primitive Africans.

If there is a small plot of ground and many people want to live on it, how can they build their homes? Children to generate ideas, e.g. on top of each other, flats, apartments, etc.

Theme [illegible]

Top[illegible] and Shopping

i) Aims

i.i) [illegible] and extend word knowledge (vocabulary) through discussion and experiencial field trips.

i.ii) To impart factual information in a 'structured' learning environment.

i.iii) To arouse curiosity.

Implementation

ii.i) Purchasing

With what do we buy things?

Money - discussions on monetary systems from the old method of bartering to different currencies of today. 'Samples' of money (both local and foreign) to be shown to the group. Discussions regarding the value of money, e.g. R10 can purchase more than 10 cents can. Copper, silver, paper and gold money (Kruger Rand), should be displayed and handled by the children. Any foreign coins which are available can also be shown.

ii.ii) Saving money

Discussions on the ways of saving money as well as reasons for not spending everything. Simple practical examples of how interest rates accrue from savings may be given. Mention ways and means of saving money from the basic (money boxes) to the more formalized (building societies).

ii.iii) Classification of shops

Food stores - supermarket, greengrocer, fishmonger, delicatessen, dairy. Clothing stores - men's, women's, children's departmental. Furniture. Others, e.g. shoe, jewellery, interior decorating, antique shops, music, book stores, toy shops, hardware, gardening stores, etc. Service stores - printing and publishing, lawnmower repairs, hairdressers, shoemaker, tailor, dry cleaning, video hire shops, etc.

Relate shopping and shops to purchasing and the importance of living within one's means.

ii.iv) 'Balancing a Budget

Although the children themselves are not reading, they can be shown how words and money (number designates), refer to items-

A list of objects is drawn on cardboard or on a blackboard. Next to is the name and price of the article. The teacher explains how much the total purchases will amount to and how much money she has on hand. Children to realise that they can't spend more than they possess and perhaps some articles will have to be eliminated. The amount of cash on hand must balance with the amount needed for purchases.

Explain that credit cards or cheques can only be utilised when there is sufficient money in the bank.

ii.v) Creative Activities

A 'shopping corner can be constructed and stocked in the corner of the classroom. Children can play imaginary games there.

iii) Excursions/Field Trips

iii.i) Visits to a bank, building society and post office.

iii.ii) A shopping expedition. The group can be taken to a small self-contained shopping centre. Children to divide into pairs with each pair being given a shopping basket and a certain amount of money. (This also encourages independence). They are instructed to make certain purchases which vary from group to group, e.g. "You will buy a newspaper and a litre of milk" - "You will buy a loaf of bread and a packet of seeds" - "You will buy margarine and sugar" etc. The children must be able to ascertain where to go for their purchases. The children then return to the school with the articles. Money is sorted out and the commodities utilised. This is very important in terms of internalizing their experiences.

Example: Children should make sandwiches and tea.
'Read' the newspaper. This can be done by examining the different pages. Distinguish information by the pictures and size of print and the type of news on each page, e.g. sports, news headlines, classified, entertainment, advertisements.

iii.iii) Visit a newspaper printing works to show how the paper is manufactured.

All field trips should be followed by group discussions.

iv) Further Activities and Possibilities for Divergent Thinking

The children should be encouraged to think about and discuss personal happenings in their lives which could be considered 'newsworthy'. From this the teacher can produce a simple newspaper for display in the classroom. The children can draw the illustrations themselves.

Theme 3

Topic - Transport

i) Aims

i.i) To enrich and extend word knowledge (vocabulary) through discussion and experiencial field trips.

i.ii) To impart factual information in a 'structured' learning environment.

i.iii) To arouse curiosity.

ii) Implementation

ii.i) Group Discussion (General)

Through action, mime or explanation elaborate on the meaning of the word 'transport'. Human beings need to move themselves and their goods about over short and long distances. Methods of transport have changed over the years due to advances in technology. Modes of transport will also depend on area and access to places, e.g. primitive cultures rely on animals or make their own 'transport', e.g. Tarzan and his rope, Huckleberry Finn and his raft. (Elicit ideas from the children). More advanced peoples can purchase suitable vehicles. Transport for children, adults, and conveying children, goods, etc., will vary. Transport may be by land, sea or air.

ii) Specific Activities

Discuss, draw and collect pictures of modes of transportation. Talk about the children's personal transport.
Examples of the the above include:

Land - walking, running.
perambulators and push-carts for babies.
trolleys for groceries.
riding - bicycles, motor-bikes, motor-cars, trains, racing cars, trailers, trucks, busses, etc.

Water - swimming, ocean-going liners, ferries, cargo-ships, tankers, fishing boats.

Air - passenger aircraft, fighter planes, helicopters, transport planes, space-craft.

Pleasure - bicycles, yachts, rowing boats, canoes, dinghys, light planes, caravans.

ii.iii) Creative Activities

Children to collect waste material, e.g. empty matchboxes, inner cardboard from toilet rolls or paper towels, empty egg boxes, etc., and 'build' forms of transport. Discuss and describe.

Stimulate imgination by suggesting that each child could invent a form of transport. Children to describe what they would make and where they would go.

ii.iv) Field Trips

The Airport - A visit to the airport to see what goes on behind the scenes, e.g. in the control tower, catering division, maintenance areas. If possible organize a climb into a jumbo jet including the pilot's cabin and other areas of the aircraft.

The Station - Perhaps a short ride to a nearby town could be arranged.

The Traffic Department Playground.

The Bus Terminus - A return busride into the city centre.(Many of these children will never have taken a bus into town).

Theme 4

Topic - Occupations

i) Aims

i.i) To enrich and extend word knowledge (vocabulary) through discussion and experiencial field trips.

i.ii) To impart factual information in a 'structured' learning environment.

i.iii) To arouse curiosity.

i.iv) To create early awareness of the various occupational fields, identification of interests and career possibilities. (This range of careers is included in the Kuder Preference Record 1960).

ii) Implementation

ii.i) Group Discussions

ii.i.i) A general discussion on the fact that people need to work. Encourage the children to think why this is so. Then tell them to go home and find out exactly what sort of work the father and/or mother does. Use the words occupation, vocation and career. Explain to the children that many careers or vocations require pre-requisite intensive study or training. Talk about Universities, Technikons and Colleges as places of higher study. (These will be visited at a later stage when the Cultural Section is handled).

ii.i.ii) Refer back to the topic about shops. Explain that a shopkeeper who sells things also has an occupation. At this point in time it is well to explain the differences between a manufacturer, wholesaler and retailer. Then broaden out to discuss the role of salesmen or representatives.

ii.i.iii) Talk sessions can be held when children could describe what their parents do and, where possible, bring examples of parents' work (particularly applicable where parents are manufacturers, businesspersons or salespeople).

iii) Specific Fields of Occupation

iii.i) Outdoor Occupations

As this topic is complicated it is essential that each area to be discussed should incorporate as much practical participation by the children as possible, e.g. miming, collecting pictures, etc. Indicate that this refers to work situations where there is a preference for work that keeps one outside most of the time, usually dealing with animals and growing things.

Ask children to suggest occupations they can think about in this category. Include others, e.g. farming, forestry, nature conservation, gardening, horticultural work, tourguiding, distributing post, coaching sport, zookeeping, building and flying aircraft.

iii.ii) Mechanical Duties

Explain that this indicates a preference for work with machines and tools. After eliciting ideas from the children, discuss various types of trades and technical occupations. For example, refer to the work of electricians, fitters and turners, motor mechanics, craftsmen, computer operators, etc Also the role of engineers of different kinds, radio operators, T.V. technicians, builders, production managers, miners, roofers, stonecutters, blacksmiths, tool and die makers, etc., could be included in this category.

.iii) Computational and Financial Fields

Explain that this indicates a preference for working with numbers and mathematics. Talk about accountants, economists, bankers, stockbrokers, etc.

iii.iv) Scientific Work

This indicates a preference for discovering new facts and solving problems as well as medical, laboratory and para-medical occupations. Once again elicit ideas from the children, e.g. the role of chemists, pharmacists, doctors, dentists, electrical engineers, meteorologists, psychologists, dieticians, chiropodists, laboratory workers, oral hygienists, physiotherapists, nurses, etc.

iii.v) Persuasive Activities

Explain as simply as possible that this implies in some way or other persuading and convincing others and promoting projects or things to sell. Cite the examples of public relations officers, salesmen, politicians, lawyers, teachers, business managers, property salesmen, auctioneers and supervisors.

iii.vi) Artistic and Musical Endeavours

This refers to a preference for activities involving creative satisfaction. It may be work that incorporates attrative design, colour and materials. It could be musical, aesthetic, acting or dancing. Talk about the nature of work by a painter, architect, civil engineer, interior decorator, sculptor, occupational therapist, window dresser, commercial artist, photographer, dress designer, beautician, hairdresser, composer, etc. The children should always be encouraged to suggest examples.

iii.vii) Literary Pursuits

This indicates a preference for reading, writing or speaking to people. The children should submit ideas. Then mention careers such as teaching, law, politics, journalism, newspaper editing or reporting, translating, librarianship, etc.

iii.viii) Social Service Work

Indicates a preference for helping people. Once again obtain children's examples. Priest/rabbi, nurse, doctor, social worker, personnel manager.

iii.ix) Musical Careers

These arise from a desire to dance, sing, play an instrument. Music teacher, dancing teacher, singer/dancer, composer, musician and bandleader.

iii.x) Clerical Duties

This denotes a preference for office work that requires precision and accuracy. It could refer to the work of an accountant, a bookkeeper, cashier, hotel clerk, typist, banker, post office clerk, receptionist, etc.

Discuss how certain interests can be combined in actual occupational situations, e.g. clerical/computational (accountant), literary/social service (teacher), scientific/social service (doctor), artistic/outdoor (landscape gardener). This is the most difficult concept and should be handled as practically as possible.

With all of the above vocational fields, the children should be encouraged to give examples, rather than the teachers providing them.

iv) General

At this stage try to discuss the children's personal interests or the interests of siblings. Encourage divergent thinking about what career they may follow when older (based on interests). The children can be encouraged to do or make objects related to certain occupations, e.g. build houses from matchboxes, dance for the group, 'do' other children's hair, cook, garden, etc,.

v) Field Trips

Visit places of interest by arrangement in order that the children have an opportunity to observe the nature of actual work situations.

v. A hospital - See doctors, nurses, social workers, physio-therapists, radiographers, etc. This is worthwhile too, to reduce any fear children may have should they ever require admission to hospital.

v.ii) A building site - See a house nearing completion and the different workmen involved (ties up with previous theme on Homes).

v.iii) A bank - Walk around and see the many people working in various areas of the bank, e.g. tellers, computer operators, accountants, etc.

v.iv) A Hotel - (ties up with the earlier theme of Homes) - See the kitchens/cooks, receptionists, housekeepers, porters/managers, etc.

v.v) The Airport - (Also in Transport theme) - Note the persons employed at an airport, e.g. ground and air hostesses, porters, pilots, policemen, cleaners, etc.

vi) Visits to the School

Select diversified occupations which have interested the children. Representatives in those fields can visit the school and briefly tell the group about their work, e.g. an architect, a plumber, a social worker, a crane driver.

Theme 5

Topic - Communication

i) Aims

i.i) To enrich and extend word knowledge (vocabulary) through discussion and experiencial field trips.

i.ii) To impart actual information in a 'structured' learning environment.

i.iii) To arouse curiosity.

iv) The necessity and value of communication systems in daily living.

ii) Group Discussions

ii.i) Ascertain from the children the meaning of the word 'communication'. Talk about ways of communicating with one another. e.g. speaking, sign language, body language and facial expressions.

ii.ii) Play games, e.g. telephones, whereby messages are passed on; communication with each other by means of facial expression;

the teacher mimes and the children should attempt to anticipate what she wants; show how deaf people communicate by means of sign language; teach the children a few simple signs.

ii.iii) Discuss voices - how we speak. A simplified explanation of human speech organs can be given and/or shown by diagram. A simple explanation of how the ear works can be given and/or shown by diagram.

ii.iv) Animal and bird communication systems. Select and discuss the noises they make, e.g. dogs (bark), elephants (trumpet), donkeys(bray), birds (chirp), etc. Possibly play tapes with various animal sounds recorded for the group to attempt to identify.

ii.v) Proceed on to communication in olden days, e.g. postal systems. Ask the children how they think post was delivered. Hieroglyphics - explain what they are. Travellers messages - smoke signals - danger and distress signals, S.O.S., etc.

ii.vi) Instruments of communication - Discuss different types of telephones. Also make mention of, and show, examples of the telegram, telex messages, dictaphone, tape recorded and transmitted messages, cables, etc.

ii.vii) Mass media transmission - Evolve activities embracing radio, T.V. and newspapers.

ii.viii) Persons who communicate or handle communications, e.g. postmen, newsreaders on radio/television.

iii) Field Trips

iii.i) Visit the local post office (ties up with 'Shops' theme). Suggest the children send a short telegram to themselves at the school with the teacher writing it out. Let them also draw something on a greeting/Xmas/New Year card and post it off. At the post office the children can purchase stamps. The teacher or parents can address the envelopes. Suggest the children explain why addresses and stamps are necessary. Show the children a telephone switchboard centre.

iii.ii) The SABC. Try and arrange an observation of an actual broadcast, either by radio or television. Discuss the work done by the engineers and script-writers. Perhaps the group can examine sound equipment to appreciate it's significance.

iv) Divergent Thinking Activities

The children should think of unusual ways to transmit messages. Cut out a 'T.V.' set from a cardboard box. Discuss current news and allow the children to take turns as 'newsreaders'.

Theme 6

Topic - Cultural Exposure

i) Aims

i.i) To enrich and extend word knowledge (vocabulary) through discussion and experiencial field trips.

i.ii) To impart factual information in a 'structured' environment.

i.iii) To arouse curiosity.

i.iv) To afford the children the opportunity of experiencing rewarding cultural contact, the benefit of which is normally reserved for older persons.

ii) Implementation

ii.i) Group Activities

Explain how most big cities of the world have places of interest, learning and pleasure for the benefit of mankind. Encourage the children to think why a city has parks, museums, theatres, art galleries, universities, orchestras, ballet, opera and 'play' (theatre) companies. Discuss the various activities which may take place in these centres.

(The main thrust in this section comprises the various field trips and subsequent ensuing conversations).

ii.ii) Field Trips

If possible, arrange visits to :

ii.ii.i) PACT headquarters - See a rehearsal of an opera, play or ballet. Go backstage and see the dressing rooms if the rehearsal is at a theatre. The children can perhaps see the vast wardrobes of clothes, or watch the players/dancers/singers put on their make-up.

i.ii.ii) Try and visit a play/ballet or whatever is appropriate at the Civic Theatre.

ii.ii.iii) A Museum - Visit the Africana Museum and the War Museum. Modified guided tours could be worthwhile for explanation purposes.

ii.ii.iv) The Municipal Art Gallery - Allow the children to walk around and browse at the different exhibits. Give a simplified explanation of the different styles of paintings. Try and encourage the children to differentiate between impressionistic, landscape and still-life paintings. Look at sculptures. Once again a modified conducted tour could be beneficial for the children. Suggest that the children selec and make a mental note of the work of art they like best. When they return to school they can describe it to the other teachers.

ii.ii.v) Educational Institutions - A Primary or High School and a Technikon or University. With appropriate arrangements, well organized beforehand, the children should be allowed to see interesting aspects of the work done at these places. It will also afford them the opportunity of seeing that there are other more advanced places of study besides a school.

At the University they can visit places like the canteen, Student's Union, Campus Bookshop, laboratories, the library and

Great Hall. A few minutes observation of a lecture in progress might make an impression on the children.

At the Technikon, the children could possibly briefly observe different practical sessions in progress.

After their return the group can discuss and make drawings of their visits.

Theme 7

Topic - Experiential Literature and Drama

i) Aims

i.i) To enrich and extend word knowledge through role playing, i.e. characterization.

i.ii) To present advanced English literature in a way which is pleasurable, exciting and as simple as possible through rote, mime, improvisation, rhyme and repetition.

i.iii) To encourage the children to deduce the meaning of more difficult words from the context.

ii) Implementation

Present plays by William Shakespeare, George Bernard Shaw, etc. with contrasting themes which will arouse the imaginal responses of the children, e.g. 'A Midsummer Night's Dream', 'Hamlet', 'Macbeth', 'Romeo and Juliet', 'Twelfth Night', Pygmalion.

Taking each play in turn, introduce the narrative by means of a simple story with illustrations as far as possible.

Discuss the characters, describing them fully. Then select an extract or extracts from the text and act it out for the children. This is repeated daily, always encouraging the children to mime and 'join in' the performance. Eventually they can be assigned character roles. As far as possible, encourage the children to deduce the meaning of difficult words from contextual clues.

AREA B SCHOOL/READING READINESS SKILLS

(Modified and amended from activities recommended
as remediation techniques by Janet Lerner 1971, p.190-194)

i) Aim

To prepare the children for formal school by affording them the opportunity of participating in activities designed to promote some of the perceptual. linguistic and concentration skills needed when learning to read.

ii) Content

A range of techniques. These relate to auditory perception, discrimination, visual perception and discrimination, linquistic concepts, listening skills, haptic perception and games intended to improve memory and concentration.

iii) Method

The operations listed in the lesson details should be introduced on a rotational basis to avoid monotory, i.e. one day a memory game or games, the next auditory perception, etc. However, if in practice it is found to be more useful to continue with similar activities, this should be done.

iv) Lesson Detail

iv.i) Auditory Perception and Discrimination

Suggested activities

Teacher made sounds

Teacher should clap r hands, stamp her feet to a certain beat. The children must co r. Then a child should do it while the other children copyhim r.

The teacher makes sounds which the children copy. She can then make a series of sounds with one being different. Children should be encouraged to identify the sound which is different. This can be done in the form of some game.

Musical sounds

The children can be led to distinguish between high and low pitched sounds on the piano. Then the teacher can play high sounds with an occasional low one and vice-versa. The children can be instructed to react when the sound is different, e.g. crawl, jump, etc.

Tunes can be played on a piano or guitar by the teacher. The children should respond according to the music, e.g. loud music - stamp; soft music - tip-toe; fast music - run; slow music - crawl; etc.

Near and Far sounds

With their eyes closed the children should judge from what part of a room a sound is coming.

Sensitivity to sounds

The children can be asked to close their eyes so as to become auditorily sensitive to environmental sounds around them. Sounds like cars, aeroplanes, or other outside sounds, and sounds in the next room can be attended to and identified.

Recorded sounds

Familiar sounds can be played on a tape while the children are asked to identify them. These could include the noise of trains, animals, a typewriter, doors banking, packets being opened, etc.

Classroom sound

The children can close their eyes and identify sounds the teacher makes with equipment in the classroom Examples of such sounds include dropping a pencil, tearing a piece of paper, using a stapler, bouncing a ball, sharpening a pencil, tapping on a glass, opening a window, snapping the light switch, leafing through pages in a book, cutting with scissors, opening a drawer, jingling money, etc.

Food sounds

In turn, the children can be given different items of food to eat while others try to identify the kind of food which is being eaten, cut or sliced, e.g. celery, apples, carrots, chewing gum, etc.

Shaking sounds

Small items of different kinds can be placed into small containers, e.g. items such as beans, rice, chalk, salt, sand, water, stones, etc. The children should attempt to identify the contents through shaking each container and listening.

Word Differentiation

The children should be encouraged to identify words that sound different. They do not need to say or state why they are different, e.g. pan - ran - man - bun - fan; hit - bit - cob - sit - lit. The identification of childrens' names that sound the same or different, e.g. Ryan and Bryan, Kim and Jonathan. The same thing can be done with surnames. The children can be given a series of names, e.g. Smith, Jones, Blake and Karavelakis. They can then be asked which name is different and why this is so. Similar games can then be played with words, e.g. jumping, sitting, hitting, go, playing.

Initial Consonants and Final Consonants

It is advisable for the teacher to use real objects or pictures of objects. She should say the name of the object and ask the children to tell which pictures or objects begin/end with the same sound, e.g. the initial consonant "m" may be presented with milk, money, moon, man, monkey.

Initial Consonants (same or different)

Say three words, two of which have the same initial consonant. Ask the children to identify the word that begin/end with a different sound, e.g. car, dog, cat.

Auditory Blending Game

Have the children identify objects when you mention the name of the object by separating the individual phenomenas, e.g. "b-e-d" or "d-o-g".

Riddle Rhymes

Make up riddle rhymes, e.g. "I rhyme with look. You read me. What am I?"

NB All these types of exercises should be repeated constantly for practice.

iv.ii) Visual Perception and Discrimination Activities

Much of this work can be undertaken in groups.

Pegboard Designs

Reproduce coloured visual geometric patterns to form the design on a pegboard using coloured pegs.

Blocks

Have the children copy patterns using blocks of one colour initially. Then proceed on to pattern making with multi coloured blocks. Small plastic or wooden blocks would be appropriate.

Finding shapes in pictures

Discuss basic shapes. Then suggest that the children find round objects or designs in a picture. Then let them find all the square objects, etc.

Bead Designs

Copy or reproduce designs with beads on a string, or simply place shapes in varying patterns. The children can then follow suit.

Puzzles

Have the children put together puzzles of humans, animals or objects that are teacher or commercially made.

Classification

Have the children classify geometric shapes of varying size and colour. The figures may be cut out of cardboard or be placed on small cards.

Rubberband designs

Have the children copy geometric configurations with coloured rubber bands stretched between rows of nails on a board.

Worksheets

Transpose the outline of two objects onto sheets, e.g. a teddybear and a doll. The children must discriminate between the objects and colour in one of them.

Matching Geometric Shapes

Place shapes on cards and play games matching these shapes. Collect different sized boxes with lids. Mix the lids and have the children match the lids with the boxes.

Find missing parts

Using pictures from magazines, cut off functional parts. The children can find and fill in the missing parts from a group of missing parts.

Rate of perception

Collect various pictures of scenes or figures. Using them like flash cards to limit time, have the children attempt to recognise and remember the pictures or figures.

Other suggestions in this field

iv.iii) Linguistic Concepts

The following activities are suggested:

Verb meanings

Teach the concept of verbs by illustrating with the performance of the activity, e.g. hop, sit, walk, stroll, etc.

Concepts of Attributes

Words that describe the attributes of objects can be taught by providing contrasting sets of experiences that illustrate the attributes, e.g. rough-smooth; pretty-ugly; little-big. Both concrete objects and pictures may be utilized.

Development of Concepts

By combining experiences with particular objects, the children can be helped to understand the concept beyond the object itself. For example, in learning about the concept of a chair, use may be made of a kitchen chair, an upholstered chair, a rocking chair, a [illegible] chair, a garden chair, etc. Through experiences with many objects the children should develop the concepts. More difficult or uncommon objects can gradually be introduced.

Understanding Sentence Construction

Help the child to comprehend language within the linguistic structure of the sentence, e.g. -

Find the Picture

Line up several pictures. Give a sentence about one picture and ask the child to point to the correct picture. This exercise can be made harder by sequentially adding more difficult sentences to describe the picture.

Function Words

These should be taught within a sentence or phrase, e.g. words such as on, over, under, behind, in front of, beneath, inside, may be taught by placing objects in a box or under a chair, etc., while saying the entire phrase to convey the meaning.

Riddles

Have the children listen to sentences and fill in the word that fits, e.g. "I am thinking of a word that tells what you use to rest your head on when you go to sleep at night".

iv.iv) Listening Skills

This combines listening skills with thinking, e.g. -

Listening for details

Read a story to the children and ask questions about the story, viz. true-false; who, what, when, where and how questions. Also, stories related to specific subjects can be read to the children, e.g. "How to take care of a new pet". The children may then be asked to list all the things they should do.

Sequence of events

Read a simple story and ask the children to picture the different events in the order that they happened. The use of a pictorial series, such as a comic strip, to illustrate the events of the story could prove helpful; the pictures are then mixed and the children are asked to place the series in the proper chronological order.

Following directions

Read simple directions on how to make something. Have the materials ready and ask the children to follow the directions step by step.

Getting the main idea

Read a short, but unfamiliar story and ask the children to make up a good title for it. Read another simple story and ask the children to choose the main idea from 3 choices.

Making inferences and drawing conclusions

Read or tell part of a story that the children do not know. Stop at an exciting point and ask them to guess what happens next.

Recognising absurdities

Tell a short story with a word or phrase that does not fit the story. Ask the child to discover what is funny or foolish about the story, e.g. "It rained all night in the middle of the day", or "The boy was swimming in the empty pool".

Correct me

Use flannel board figures while telling a story. Plan obvious errors through discrepancies between what is said and what is placed on the board. Have the children listen for and correct the mistakes.

iv.v) Haptic Perception Activities

Tactile and kinesthetic skills

These activities are representative of activities designed to stimulate tactile and kinesthetic perception.

Feeling various textiles

Have the children feel various textures, such as wood, metal, sandpaper, felt, cotton wool, sponge, wet surfaces, foods, etc., and then guess what they are.

Touch boards

Small boards may be made of different shapes and textures. The children should feel these and learn to discriminate the various surfaces and identify them through tactile perception. These boards can include plastic, wood, cardboard, clay, etc.

Feeling temperatures

Fill small jars with water of different temperatures. They then touch these to distinguish between warm, cold, hot, etc.

Feeling weights

Fill small cardboard containers with beans, rice, etc., to different levels. Have the children match weights through shaking and sensing the weights.

Smelling

Put materials of distinctive scents in bottles (cloves, cinnamon, vinegar, etc.). Have the children match the smells.

Stereognosis

Have the children seated and then trace designs or pictures on the children's palms. Ask them to identify the shape.

Arranging sizes by feel

Let the children arrange geometric shapes of various sizes according to size when blindfolded.

Feel and Match

Match pairs of objects by feeling their shape and texture. Use a variety of textures pasted on pieces of wood, masonite or plastic.

iv.vi. Memory and Concentration

The following games are suggested :

iv.vi.i) Children to sit in a ring. Various objects are to be put in the middle and then removed. The children must try and recall what these objects were. The number of objects can gradually be increased. Sometimes one object can be removed and the children must try and recall the missing object.

iv.vi.ii) Games such as - "I went to the kitchen and fetched..."; "I went to the bedroom and saw ......"; "In the lounge I ..."; etc. (Can be related to theme 'homes').

iv.vi.iii) The teacher should give each child instructions varying from simple to more complex, e.g. "John, fetch the green block, put it on the window sill. Then sit on the piano stool and put your head on your lap." etc.

iv.vi.iv) Ask the children to watch specific suitable television programmes. Then they should return to school the next day and try to remember all the things that happened. Encourage them to watch the early news broadcast and recall what was said.

iv.vi.v) Play television games. A cardboard box with the front cut out can be made to resemble a television set. The teacher sits on a chair with her head through the television. She may tell a simple story or say a lengthy sentence. The children can take chances at being the television announcer and repeating what the teacher says.

iv.vi.vi) Garden/outdoor activities. Specifically ask children to note objects in the garden or playground and then tell as much as they can about what they saw. See who can remember the most things.

iv.vi.vii) The children can collect pictures of animals, vegetables, toys, etc. Keep these groups together and then play memory games, e.g. line up a sequence of animals and then remove one. The children must say which is missing. Put things in a certain order and let the children mix them up and try to re-arrange them in the same order as before. (This is also a sequencing exercise).

iv.vi.viii) Collect buttons or beads. The teacher should make patterns with these objects. Then remove them and ask the children to try and repeat the patterns.

iv.vii) Classification

Collect groups of objects, e.g. -

Leaves
Flowers
Stamps
Seeds
Pictures of people
Buttons
Items of clothing
Books
Pictures of animals, birds, etc.
Newspapers

Taking one group at a time, discuss the objects, then note 'sameness' or 'differences', e.g.

- With leaves - Have the children trace the lines with their fingers. Ask where the leaf comes from, what colour it is, how many shades of colour, etc. Let the children feel them against their faces, crush them, smell them and compare them with other leaves.

    Make leaf moulds in clay or plasticine.

- With books - Take two different kinds of books and let the children compare them, e.g. this one has pictures, this one no pictures.

    Take two or three Hebrew books and two or three English books. Encourage the children to sort them into piles according to the type of print.

- Newspapers - Each child should bring a complete newspaper to school. Examine them. Ask how they are the same. The children should note that they all have writing on them, they have pictures and drawings, the print makes one's hands dirty, etc. Then note differences, e.g. -

    On the front pages there are big pictures and bold print. On the back pages one sees sports pictures. The classified section looks different from the rest of the newspaper, i.e. the printing is small. The entertainment section in, for example, "The Star" contains a smaller booklet. The writing is in 'boxes', for example, advertisements for shows.

    Then collect the newspapers and cut them up into separate pages. Encourage the children to sort the different types of pages that go together. (This can, if possible, be tied up with the newspaper activity in the language theme on shopping).

- Birds - Show pictures of a faew different birds. Look at sameness, e.g. they all have feathers. Ask what else they have in common, for example, two legs. Then look at differences, for example, size, shape, colours, types of beaks, claws, etc.

- Clothing - e.g. discuss the dresses of two or three girls in the group, shoes of the boys, etc. Look for similarities and differences.

- Flowers - e.g. each child can bring a flower to school. He/she should then attempt to describe the flower. Then select two or three more flowers. Encourage the children to think in what way they are the same. They may all have stems, petals, pollen, etc. Then ask in what way they are different. It may be the shape, colour, numbers of petals, etc.

These excercises also incorporate the concept of classification. More advanced activities for the development of visual discrimination and other activities which can be modified for the pre-schooler can be found in the book "Perceptual Development - A Guide" by M.C. Grove, H. Hauptfleisch & M.C. Sonnekus - 1976.

AREA C SOCIAL AND EMOTIONAL DIMENSIONS

Devised by the present researcher from guidelines in the review of the literature.

i) Aims

i.i) To promote self-awareness, social confidence and a sensitivity towards other fellow beings and creatures.

i.ii) To put the children in touch with their own needs, feelings and emotions.

i.iii) To enhance social functioning in the peer group, at home and at school.

i.iv To develop co-operativeness and independence.

ii) Content

A series of activities designed to appropriate concepts.

iii) Method

Activities should be introduced on a daily basis, if possible. They should also, wherever applicable, be integraded with all the Nursery School activities.

iv) Lesson detail

iv.i) The Development of Self-Awareness

iv.i.i) Each child should describe him/herself in terms of appearance, age, place in family, etc.

iv.i.ii) A simple discussion on the parts of one's body and their function is proposed. The children could perhaps touch various parts of their bodies upon instruction. They should be made aware that each and every person is very special and unique. "I am like my friend X because ......". "I am different from X because ...."

iv.i.iii) The children could be instructed to bend their necks, put out their tongues, touch both cheecks, bend knees, hands on shoulders, rub tummy, put hands on top of head, curl back, touch elbows and heels in turn, etc., to familiarize themselves with their own bodies.

iv.i.iv) Each child could lie on his/her back upon the floor on a sheet of newspaper with arms and legs slightly sprawled. Someone should trace (paint) around the body shape. This may then be cut out and the various body parts, e.g. face and features, neck, fingers, toes, clothing, etc. painted by the children. As each part is painted the teacher could say "What is missing? Where will it go?" (eyes on head, toes on feet, etc.). At a later stage the children could cut up these figures into their body parts and then re-assemble them.

iv.ii Needs and Desires

iv.ii.i) In a simplistic way the teacher could help the children understand the concept of 'need' and talk about about physical and emotional needs.

iv.ii.ii) On a prsonal level the children can descuss various needs of their own and how they can be fulfilled if realistic. Wherever possible the 'needs' should be concretized for the children, e.g. a need to eat - have school lunch; a need to be loved - hug each other.

iv.iii) Feelings

iv.iii.i) General discussion - reach for a definition of 'feelings' or 'moods'. Explain that everyone has 'feelings'. Some make one feel good and others make one feel bad. Tell the children that things other people do and say can make one feel many ways. If you see someone you like, you feel happy. If someone says something mean, you may feel angry. You have many kinds of feelings. Your feelings are important.

iv.iii.ii) Select various emotions for discussion of situations which can give rise to these feelings:

Love
Pain
Resentfulness
Sadness
Jealousy
Contentment
Bewilderment
Tenderness
Hate
Bitterness
Happiness
Anger/rage
Loneliness
Insult (hurt)
Embarrassment
Surprise
etc. etc.

iv.iii.iii) Role playing - select various emotions and moods, e.g. -
A SAD child walking;
A HAPPY boy skipping;
A TIRED little girl.

Then allow the group to act these out. The teacher can relay a simple story and the children must mime how they would feel in such a situation.

iv.iii.iv) Draw or collect pictures of faces. Children to guess what emotion the face conveys, e.g. danger, fear, surprise, love, pain, jealousy, etc.

iv.iii.v) After the children have gained facility in simple interpretations of feelings and expressions, more difficult exercises can be introduced. Charts may be put up portraying family situations, e.g. a mother looking unhappy after the children and a dog have run across a clean carpet with muddy feet and paws, a child being teased, a man looking at a flat tyre with the family sitting in the car. The situations and possible feelings of the persons involved can be discussed.

Picture stories, film strips or plastic overlays can be used to construct a sequence of traumatic or exciting events.

As each picture is presented the child is asked to tell what he sees. Through this type of training the child can learn how to respond appropriately to similar experiences in daily life. This can progress to situations, which could be encountered in the school setting, e.g. a child messing up another child's books. (A good book to read to children is 'Feelings' by C.B. Smith & Wardhaugh; McMillan - 1980).

iv.iv) Communication

Explain to the children that the spoken language is but one means of communication and that people can also 'talk' to others without the use of words, i.e. that there is both verbal and non-verbal communication.

Discuss 'silent language and how meaning can be implied in facial expression and gesture. Ascertain from the children the meanings of various gestures such as waving goodbye, shaking a finger for "No", shrugging a shoulder, turning away, tapping a foot or fingers for impatience, outstretched arms in gestures of welcome, etc. The children can mime certain gestures in the form of a game or activity. Assist the children to recognize implications in human voice beyond the words themselves. Voices can be taped for the group to determine the communication conveyed by the tone of the voice.

(This aspect of the activities could prove difficult and may need to be repeated on several occasions.)

iv.v) Social Judgement in Practical Situations

iv.v.i) Courtesy and Manners

Discuss socially accepted patterns of behaviour and the transfer of these patterns to various situations.

Refer to appropriate manners, such as saying "sorry", "please", "thank you", "you're welcome", etc. Discuss table manners, how to answer the telephone, and how to tell people to wait when having to hold on. These activities concretized for the children in play situations, i.e. through role playing with toys or at 'food time'.

Talk about acts of politeness and kindness, e.g. young people giving up seats for elders; assisting persons much older or younger than themselves; respect for parents.

Wherever possible elicit the ideas from the children themselves.

Explain the meaning of tactfulness. Encourage the children to think about social situations which will require tact, e.g. if a child sees a person who looks strange or who has some physical or mental handicap or impediment, what they should do instead of staring or commenting.

iv.v.ii) Social Judgement and Interaction

Read or tell the children an incomplete story that involves social judgement. Have a child anticipate the ending or supply the completion of the story. Also discuss the consequences of certain behaviour, e.g. a child's rudeness when interrupting adults who are speaking; or a child pulling a face when her mother's friend asks if she likes a new dress; or a child demanding the teacher's attention when she is busy with another child.

Discuss certain social situations which occur in the play/classroom and also in other environments. Explain and give examples as well as elicit examples from the children, of:

Co-operation - working together for common goals. Discuss activities appropriate for this.

Rivalry - discuss how children sometimes vie for attention and how to deal with this.

Competition - advantages of healthy competition in outdoor play activities and in the classroom can be discussed.

Tolerance - try to inculcate an awareness of other's shortcomings and how to accept them.

Conflict - discuss how and when this can arise.

Compromise - talk about the need to share or make do with other's toys or objects when something desired is unobtainable.

In a simplistic way deal with super-ordination; sub-ordination; the teacher/child; child/teacher relationships. Utilize opportune moments as they arise in the general group interactions.

Discuss the average primary school 'set-up', expectations, and the roles which teachers, principals, secretaries, sports masters, prefects, etc. play.

With this age group attempt to make the 'discussions' as appropriate and practical as possible.

iv.v.iii) General

Encourage sensitivity towards others less fortunate than themselves. Try and instil in the children a fondness for animal and bird life and an appreciation of nature and beauty.

Discuss people of different race and religious groups from their own. Extend the discussions stemming from earlier lessons on feelings. Ask children to suggest ways in which they can be kind and tolerant towards others who are 'different' in some way.

Talk about people with various handicaps. Role-playing - let children cover their eyes and feel what it is like to be blind; put cottonwool in ears (deafness); pretend to be lame, mute, etc. Possibly discuss and present 'mental retardation' in a simple non-judgemental way so that if, and when, a child should come across another who may be mentally handicapped they will understnd or have some understanding of the problem.

In a simple way, try to discuss the various stages of life and how one should treat babies, elderly people, etc.

This basically concludes the programme, although it is realized that other aspects and further elaboration could have been included in each of the areas. It is only after implementation that modifications and extensions can be made, based upon teachers' comments and the time factor.

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CHAPTER VII

RESULTS

Quantitative data pertaining to the measures and anlysed in terms of the stated hypotheses are presented in this chapter.

The following abbreviations were used for the groups, dates of testing and measures applied throughout:

1 = March 1983 C = Control group
2 = November 1983 P = Placebo group
3 = March 1984. E = Experimental group.

Draw P = Draw-a-Person Test
PeaBIQ = Peabody Intelligence Quotient
PeaMA = Peabody Mental Age
WST = Wing-Semel Total Score
AC = Auditory Comprehension (Myklebust Pupil Rating Scale)
SL = Spoken Language " " " "
CR = Orientation " " " "
MC = Motor Co-ordination " " " "
PS = Personal-Social Behaviour " " " "
Myk V = Myklebust Verbal Score " " " "
Myk NV = Myklebust Non-Verbal Score " " " "
Myk Tot = Myklebust Total Score " " " "
Thak Tot = Thackray Total Score
Met Li = Metropolitan Listening Test
Met Word = Metropolitan Word Meaning
Metmatch = Metropolitan Matching
Metal = Metropolitan Alphabet
Met Numb = Metropolitan Numbers
Met Copy = Metropolitan Copying
Met Tot = Metropolitan Total Score
Quest = Questionnaire.

1. Quantitative Data

1.1. Variables of the Myklebust Pupil Rating Scale

The consistency of the sub-tests of the Myklebust Pupil Rating Scale was analysed by means of the Pearson Product Moment Method because of its key role in the investigation from a predictive point of view.

Tables 2, 3 and 4 reflect the correlations calculated between the different sub-tests by this method for each of the samples. Correlations were calculated on the basis of the initial tests and post test I and II stages after being exposed to the intervention programme.

Pearson Product Moment Correlation Coefficients for Experimental Group
(N = 40 for r to be significant p>0.329 at 5% level)

TABLE 2

GROUP=1

Experimental

CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 40

	AC1	AC2	AC3	SL1	SL2	SL3	OR1	OR2	UR3	MC1	MC2	MC3	PS1	PS2	PS3
AC1	1.00000 0.0000	0.47661 0.0022	0.33487 0.0347	0.24891 0.1214	0.58812 0.0001	0.40299 0.0099	-0.00874 0.9573	-0.18749 0.2467	0.23514 0.1441	0.11078 0.4962	0.23238 0.1490	0.12723 0.4340	-0.00167 0.9918	0.34134 0.0311	0.34225 0.0306
AC2	0.47661 0.0022	1.00000 0.0000	0.44284 0.0042	0.28465 0.0750	0.69632 0.0001	0.53555 0.0004	-0.03917 0.8104	0.11970 0.4619	0.33607 0.0340	0.19409 0.2301	0.24177 0.1328	0.26115 0.1036	0.00156 0.9924	0.32179 0.0429	0.32576 0.0402
AC3	0.33487 0.0347	0.44284 0.0042	1.00000 0.0000	0.16149 0.3195	.55003 0.0002	0.55355 0.0002	-0.11847 0.4666	0.07110 0.6629	0.40723 0.0024	0.31118 0.0507	0.35020 0.0267	0.37035 0.0187	0.01509 0.9234	0.44518 0.0040	0.60193 0.0001
SL1	0.24891 0.1214	0.28465 0.0750	0.16149 0.3195	1.00000 0.0000	0.44571 0.0039	0.31265 0.0495	-0.01594 0.9028	0.08821 0.5958	0.25311 0.1151	0.02362 0.8849	0.06133 0.7070	0.06981 0.6685	-0.17561 0.2784	0.03398 0.8351	-0.03009 0.8538
SL2	0.58812 0.0001	0.69632 0.0001	0.55003 0.0002	0.44571 0.0039	1.00000 0.0000	0.75115 0.0001	0.02375 0.8843	0.09561 0.5599	0.46421 0.0097	0.07627 0.6399	0.39267 0.0121	0.35341 0.0253	-0.04638 0.7763	0.37862 0.0165	0.38125 0.0152
SL3	0.40299 0.0099	0.53555 0.0004	0.55355 0.0002	0.31265 0.0495	0.75115 0.0001	1.00000 0.0000	0.06913 0.6716	0.27610 0.0846	0.45549 0.0031	0.08525 0.6009	0.46604 0.0024	0.33916 0.0323	0.12043 0.4589	0.46197 0.0027	0.45804 0.0029
OR1	-0.00874 0.9573	-0.03917 0.8104	-0.11847 0.4665	-0.01594 0.9028	0.02375 0.8843	0.06913 0.6716	1.00000 0.0000	0.53063 0.0004	0.15322 0.3452	0.18750 0.2465	0.20914 0.1953	0.07076 0.6644	0.25390 0.1139	0.27153 0.0901	0.26092 0.1039
OR2	-0.18749 0.2467	0.11970 0.4619	0.07110 0.6629	0.08821 0.5958	0.09561 0.5599	0.27610 0.0846	0.53063 0.0004	1.00000 0.0000	0.40478 0.0096	0.26190 0.1025	0.41741 0.0074	0.26949 0.0885	0.28333 0.0762	0.38464 0.0144	0.28307 0.0767
UR3	0.23514 0.1441	0.33607 0.0340	0.40723 0.0024	0.25311 0.1151	0.46421 0.0097	0.45549 0.0031	0.15322 0.3452	0.40478 0.0096	1.00000 0.0000	0.36424 0.0209	0.55032 0.0002	0.58403 0.0001	0.15870 0.3280	0.56034 0.0001	0.61033 0.0001
MC1	0.11078 0.4962	0.19409 0.2301	0.31118 0.0507	0.02362 0.8849	0.07627 0.6399	0.08525 0.6009	0.18750 0.2465	0.26190 0.1025	0.36424 0.0209	1.00000 0.0000	0.31578 0.0471	0.45604 0.0031	0.11375 0.4846	0.25210 0.1164	0.33238 0.0361
MC2	0.23238 0.1490	0.24177 0.1328	0.35020 0.0267	0.06133 0.7070	0.39267 0.0121	0.46604 0.0024	0.20914 0.1953	0.41741 0.0074	0.55032 0.0002	0.31578 0.0471	1.00000 0.0000	0.71530 0.0001	0.37036 0.0187	0.64651 0.0001	0.56261 0.0002
MC3	0.12723 0.4340	0.26115 0.1036	0.37035 0.0187	0.06981 0.6685	0.35341 0.0253	0.33916 0.0323	0.07076 0.6644	0.26949 0.0885	0.58403 0.0001	0.45604 0.0031	0.71530 0.0001	1.00000 0.0000	0.25075 0.1186	0.57471 0.0001	0.44927 0.0036
PS1	-0.00167 0.9918	0.00156 0.9924	0.01509 0.9234	-0.17561 0.2784	-0.04638 0.7763	0.12043 0.4589	0.25390 0.1139	0.28333 0.0762	0.15870 0.3280	0.11375 0.4846	0.37036 0.0187	0.25075 0.1186	1.00000 0.0000	0.56250 0.0002	0.32033 0.0439
PS2	0.34134 0.0311	0.32179 0.0429	0.44518 0.0040	0.03398 0.8351	0.37862 0.0165	0.46197 0.0027	0.27153 0.0901	0.38464 0.0144	0.56034 0.0001	0.25210 0.1164	0.64651 0.0001	0.57471 0.0001	0.56250 0.0002	1.00000 0.0000	0.76376 0.0001
PS3	0.34225 0.0306	0.32576 0.0402	0.60193 0.0001	-0.03009 0.8538	0.38125 0.0152	0.45804 0.0029	0.26092 0.1039	0.28307 0.0767	0.61033 0.0001	0.33238 0.0361	0.56261 0.0002	0.44927 0.0036	0.32033 0.0439	0.76376 0.0001	1.00000 0.0000

PS2 PS3

Pearson Product Moment Correlation Coefficients for the Placebo Group
(n = 20 for r to be significant p>0.45 at 5% level)

TABLE 3

GROUP=2 Placebo

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / N = 20

	AC1	AC2	AC3	SL1	SL2	SL3	DR1	DR2	DR3	MC1	MC2	MC3	PS1	PS2	PS3
AC1	1.00000 0.0000	0.43225 0.0570	0.19895 0.4004	0.65657 0.0017	0.60483 0.0047	0.08102 0.7342	0.31836 0.1742	0.30250 0.1945	0.09250 0.6969	0.51726 0.0195	0.26138 0.2656	0.06966 0.7704	0.58557 0.0067	0.35381 0.1259	-0.04286 0.8576
AC2	0.43225 0.0570	1.00000 0.0000	0.12660 0.5940	0.44032 0.0520	0.53142 0.0159	-0.10638 0.6553	0.61352 0.0040	0.60404 0.0048	0.10555 0.6579	0.57598 0.0079	0.48473 0.0303	0.17196 0.4685	0.34653 0.1373	0.57539 0.0079	0.03007 0.8999
AC3	0.19895 0.4004	0.12660 0.5940	1.00000 0.0000	0.06002 0.8015	0.17259 0.4668	0.56775 0.0090	-0.35705 0.1213	0.26820 0.2529	0.35650 0.1224	-0.06717 0.7784	0.18070 0.4458	0.43248 0.0568	0.11346 0.6339	-0.02292 0.9236	0.05946 0.8033
SL1	0.65657 0.0017	0.44032 0.0520	0.06002 0.8015	1.00000 0.0000	0.66054 0.0015	-0.13830 0.5601	0.48930 0.0286	0.19746 0.4040	0.03627 0.8793	0.39016 0.0890	0.26273 0.2631	-0.08557 0.7199	0.42736 0.0602	0.20469 0.3852	-0.22300 0.3402
SL2	0.60483 0.0047	0.53142 0.0159	0.17259 0.4668	0.66054 0.0015	1.00000 0.0000	0.07515 0.7529	0.49447 0.0265	0.00000 1.0000	-0.12043 0.6130	0.43165 0.0574	-0.01169 0.9610	-0.16769 0.4798	0.11608 0.6258	0.03302 0.8901	-0.32542 0.1615
SL3	0.08102 0.7342	-0.10638 0.6553	0.56775 0.0090	-0.13830 0.5601	0.07515 0.7529	1.00000 0.0000	-0.30962 0.1840	0.12726 0.5929	0.52549 0.0173	0.08375 0.7255	0.08185 0.7316	0.33328 0.1511	0.23277 0.3233	0.01446 0.9511	0.26842 0.2525
DR1	0.31836 0.1742	0.61352 0.0040	-0.35705 0.1213	0.48930 0.0286	0.49447 0.0265	-0.30962 0.1840	1.00000 0.0000	0.11926 0.6165	-0.14694 0.5364	0.47400 0.0345	0.10434 0.6603	-0.15227 0.5216	0.36570 0.1050	0.36756 0.1110	-0.08365 0.7256
DR2	0.30250 0.1945	0.60404 0.0048	0.26820 0.2529	0.19746 0.4040	0.00000 1.0000	0.12726 0.5929	0.11926 0.6165	1.00000 0.0000	0.45389 0.0445	0.51565 0.0200	0.65959 0.0015	0.39943 0.0810	0.52137 0.0184	0.66546 0.0014	0.47314 0.0351
DR3	0.09250 0.6969	0.10555 0.6579	0.35650 0.1224	0.03627 0.8793	-0.12043 0.6130	0.52549 0.0173	-0.14694 0.5364	0.45389 0.0445	1.00000 0.0000	0.13367 0.5742	0.45317 0.0447	0.69255 0.0007	0.39348 0.0861	0.34007 0.1424	0.52758 0.0168
MC1	0.51726 0.0195	0.57598 0.0079	-0.06717 0.7784	0.39016 0.0890	0.43165 0.0574	0.08375 0.7255	0.47400 0.0345	0.51565 0.0200	0.13367 0.5742	1.00000 0.0000	0.47007 0.0365	0.25138 0.2850	0.60446 0.0048	0.50569 0.0228	0.35557 0.1237
MC2	0.26138 0.2656	0.48473 0.0303	0.18070 0.4458	0.26273 0.2631	-0.01169 0.9610	0.08185 0.7316	0.10434 0.6603	0.65959 0.0015	0.45317 0.0447	0.47007 0.0365	1.00000 0.0000	0.53477 0.0151	0.33316 0.1510	0.40497 0.0765	0.40402 0.0773
MC3	0.06966 0.7704	0.17196 0.4685	0.43248 0.0568	-0.08557 0.7199	-0.16769 0.4798	0.33328 0.1511	-0.15227 0.5216	0.39943 0.0810	0.69255 0.0007	0.25138 0.2850	0.53477 0.0151	1.00000 0.0000	0.24408 0.2995	0.21741 0.3572	0.54415 0.0131
PS1	0.58557 0.0067	0.34653 0.1373	0.11346 0.6339	0.42736 0.0602	0.11608 0.6258	0.23277 0.3233	0.36570 0.1050	0.52137 0.0184	0.39348 0.0861	0.60446 0.0048	0.33316 0.1510	0.24408 0.2995	1.00000 0.0000	0.70902 0.0005	0.58672 0.0065
PS2	0.35381 0.1259	0.57539 0.0079	-0.02292 0.9236	0.20469 0.3852	0.03302 0.8901	0.01446 0.9511	0.36756 0.1110	0.66546 0.0014	0.34007 0.1424	0.50569 0.0228	0.40497 0.0765	0.21741 0.3572	0.70902 0.0005	1.00000 0.0000	0.52505 0.0165
PS3	-0.04286 0.8576	0.03007 0.8999	0.05946 0.8033	-0.22300 0.3402	-0.32542 0.1615	0.26842 0.2525	-0.08365 0.7256	0.47314 0.0351	0.52758 0.0168	0.35557 0.1237	0.40402 0.0773	0.54415 0.0131	0.58672 0.0065	0.52505 0.0165	1.00000 0.0000

PS2 PS3

Pearson Product Moment Correlation Coefficients for the Control Group

(N = 20 for r to be significant p>0.45 at 5% level)

TABLE 4

GROUP=3 Control

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / N = 20

	AC1	AC2	AC3	SL1	SL2	SL3	OR1	OR2	OR3	MC1	MC2	MC3	PS1	PS2	PS3
AC1	1.00000 0.0000	0.59032 0.0061	0.45105 0.0459	0.73938 0.0002	0.71895 0.0004	0.55804 0.0106	0.75807 0.0001	0.65486 0.0017	0.58274 0.0070	0.47183 0.0357	0.19318 0.4145	0.55946 0.0102	0.55415 0.0112	0.64372 0.0022	0.62643 0.0030
AC2	0.59032 0.0061	1.00000 0.0000	0.65630 0.0017	0.45584 0.0434	0.82675 0.0001	0.80450 0.0001	0.58700 0.0064	0.62816 0.0030	0.61365 0.0040	0.43712 0.0540	0.43519 0.0527	0.53516 0.0152	0.34230 0.1396	0.48490 0.0302	0.43160 0.0574
AC3	0.45105 0.0459	0.65630 0.0017	1.00000 0.0000	0.39701 0.0831	0.63916 0.0024	0.83282 0.0001	0.40764 0.0744	0.68009 0.0010	0.66930 0.0012	0.33958 0.1425	0.51471 0.0188	0.62837 0.0030	0.50657 0.0226	0.55544 0.0108	0.42887 0.0592
SL1	0.73938 0.0002	0.45584 0.0434	0.39701 0.0831	1.00000 0.0000	0.68934 0.0008	0.53114 0.0160	0.68519 0.0009	0.52662 0.0170	0.41785 0.0668	0.62240 0.0034	-0.03070 0.8978	0.42641 0.0608	0.35596 0.1235	0.53259 0.0156	0.49236 0.0274
SL2	0.71895 0.0004	0.82675 0.0001	0.63916 0.0024	0.68934 0.0008	1.00000 0.0000	0.82937 0.0001	0.63170 0.0028	0.78501 0.0001	0.73978 0.0002	0.48344 0.0308	0.28399 0.2249	0.67486 0.0011	0.42690 0.0605	0.64416 0.0022	0.60293 0.0049
SL3	0.55804 0.0106	0.80450 0.0001	0.83282 0.0001	0.53114 0.0160	0.82937 0.0001	1.00000 0.0000	0.59650 0.0055	0.79321 0.0001	0.75105 0.0001	0.39353 0.0860	0.44083 0.0517	0.63542 0.0026	0.41840 0.0663	0.57702 0.0077	0.49995 0.0248
OR1	0.75807 0.0001	0.58700 0.0064	0.40764 0.0744	0.68519 0.0009	0.63170 0.0028	0.59650 0.0055	1.00000 0.0000	0.62753 0.0031	0.56875 0.0089	0.41444 0.0692	0.08021 0.7367	0.65346 0.0018	0.42783 0.0599	0.48457 0.0302	0.34181 0.1402
OR2	0.65486 0.0017	0.62816 0.0030	0.68009 0.0010	0.52662 0.0170	0.78501 0.0001	0.79321 0.0001	0.62753 0.0031	1.00000 0.0000	0.93105 0.0001	0.25447 0.2789	0.49410 0.0268	0.75751 0.0001	0.62415 0.0033	0.63585 0.0026	0.67440 0.0011
OR3	0.58274 0.0070	0.61365 0.0040	0.66930 0.0012	0.41785 0.0668	0.73978 0.0002	0.75105 0.0001	0.56875 0.0089	0.93105 0.0001	1.00000 0.0000	0.23256 0.3238	0.57370 0.0082	0.75707 0.0001	0.62109 0.0034	0.68355 0.0009	0.69242 0.0007
MC1	0.47183 0.0357	0.43712 0.0540	0.33958 0.1425	0.62240 0.0034	0.48344 0.0308	0.39353 0.0860	0.41444 0.0692	0.25447 0.2789	0.23256 0.3238	1.00000 0.0000	0.07413 0.7561	0.24547 0.2969	0.16230 0.4417	0.34385 0.1377	0.21531 0.3525
MC2	0.19318 0.4145	0.43519 0.0527	0.51471 0.0188	-0.03070 0.8978	0.28399 0.2249	0.44083 0.0517	0.08021 0.7367	0.49410 0.0268	0.57370 0.0082	0.07413 0.7561	1.00000 0.0000	0.37460 0.1040	0.47916 0.0325	0.45501 0.0415	0.33554 0.1481
MC3	0.55946 0.0102	0.53516 0.0152	0.62837 0.0030	0.42641 0.0608	0.67486 0.0011	0.63542 0.0026	0.65346 0.0018	0.75751 0.0001	0.75707 0.0001	0.24547 0.2969	0.37460 0.1040	1.00000 0.0000	0.66191 0.0015	0.74270 0.0002	0.56831 0.0089
PS1	0.55415 0.0112	0.34230 0.1396	0.50657 0.0226	0.35596 0.1235	0.42690 0.0605	0.41840 0.0663	0.42783 0.0599	0.62415 0.0033	0.62109 0.0034	0.16230 0.4417	0.47916 0.0325	0.66191 0.0015	1.00000 0.0000	0.80744 0.0001	0.62469 0.0032
PS2	0.64372 0.0022	0.48490 0.0302	0.55544 0.0108	0.53259 0.0156	0.64416 0.0022	0.57702 0.0077	0.48457 0.0302	0.63585 0.0026	0.68355 0.0009	0.34385 0.1377	0.45501 0.0415	0.74270 0.0002	0.80744 0.0001	1.00000 0.0000	0.77385 0.0001
PS3	0.62643 0.0030	0.43160 0.0574	0.42887 0.0592	0.49236 0.0274	0.60293 0.0049	0.49995 0.0248	0.34181 0.1402	0.67440 0.0011	0.69242 0.0007	0.21531 0.3525	0.33554 0.1481	0.56831 0.0089	0.62469 0.0032	0.77385 0.0001	1.00000 0.0000

PS2 PS3

From this analysis it was found that -

i) The correlation co-efficients indicated that generally speaking there were significant positive inter-relationships between the sub-tests on each testing occasion. Although not conclusively so, it demonstrates a consistent and stable measure as it occurred in all three groups (Tables 3, 4 and 5).

ii) From an examination of these correlations many of the measures were significantly inter-related on test and retest. Some possible interpretations which could be made from these calculations would tend to give a greater credence to the reliability of the results when specific measures were used to verify the hypotheses.

In addition greater confidence is engendered by the significant correlations in the different testing phases as insignificant correlations could have shown up weaknesses in the experimental design.

An alternative point worth considering from the results is that the experimental group appears to have lower correlations than the other two groups. This would serve as support of the effectiveness of the intervention programme in changing functioning rather than demonstrating consistency, while the other two groups bear witness to the greater stability without intervention.

Another interesting conclusion can be drawn from the high incidence of positive correlation between many of the tests where similar dimensions of behaviour were tapped, e.g. the highest relationship occured between spoken language and auditory comprehension. This fact indicates that the number of testing instruments could possibly have been reduced particularly in retest. AC2/SL2 0.69, AC3/SL3 0.55.

On examining the correlation co-efficients for the placebo group, not quite as many positive correlations are evident, but similar patterns occur. This may of course be due to the disparity in the sample size. Examples of correlation co-efficients which are significant in the right direction are A[illegible] and S[illegible] 0.8[illegible] and AC and MC 0.[illegible]1.

In the case of the control group shown in Table 4, a very high proportion of positive relationships and consistency occurs when looking at the different variables, though it should be noted that these are only [illegible] at the [illegible] level. This is particularly evident with respect to relationships between auditory comprehension and spoken language [illegible] and [illegible] behaviour [illegible], spoken language and orientation 0.7[illegible].

[illegible] Means and Standard Deviations of All Measures

Table [illegible] presents the Means and Standard Deviations pertaining to the three test periods on all measures applied to the three groups, i.e. Experimental, Placebo and Control.

TABLE 2

Means and Standard Deviations for the Experimental Placebo and Control Groups

	Experimental						Placebo						Control					
	1		2		3		1		2		3		1		2		3	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Draw P	6.34	0.968	8.47	1.473	9.10	1.249	6.11	0.569	6.63	0.711	6.84	0.854	6.11	0.525	6.57	0.863	6.76	0.959
Rea BIO	104.57	6.071	111.90	8.687	-	-	104.30	7.034	101.25	10.29	-	-	104.70	6.798	106.85	7.382	-	-
Rea BMA	6.03	0.689	7.06	1.037	-	-	6.01	0.601	6.39	0.999	-	-	6.02	0.579	6.34	0.561	-	-
WST	14.8	4.380	28.2	4.477	-	-	14.55	5.510	21.25	5.877	-	-	16.40	4.247	26.00	3.755	-	-
AC	13.60	3.019	15.57	2.836	16.17	2.570	12.15	3.030	12.55	2.625	11.65	1.348	11.35	2.378	11.45	2.684	10.75	3.119
SL	15.10	2.340	18.55	4.289	19.42	3.514	15.30	2.546	15.45	2.114	14.60	2.186	13.20	3.577	13.50	3.734	14.55	3.899
OB	11.65	2.527	13.15	1.702	14.77	2.506	11.25	2.099	12.00	1.891	12.15	2.345	11.25	1.996	10.65	2.719	11.20	3.105
MC	9.50	1.839	11.60	2.250	12.30	2.322	9.25	1.888	9.45	2.235	8.70	2.716	9.20	1.399	9.15	1.725	8.90	2.359
PS	24.87	5.084	31.05	4.771	32.32	4.843	24.55	4.695	24.10	4.598	24.15	4.233	23.05	5.529	22.90	6.060	21.30	5.282
MYK V	28.95	4.144	34.47	5.688	[illegible].55	5.411	27.15	5.626	28.10	4.302	26.45	3.153	25.00	6.316	24.75	6.171	25.50	6.723
MYKMV	40.90	6.834	55.65	7.492	59.15	8.122	44.30	7.587	45.55	7.430	45.00	7.914	43.15	7.875	42.20	9.779	41.75	9.486
MYKT	74.85	7.963	90.12	11.305	94.95	12.344	72.55	11.495	73.65	9.916	71.45	9.643	68.15	12.541	67.95	14.317	66.75	14.909
THAK	-	-	52.37	7.681	-	-	-	-	40.75	11.502	-	-	-	-	33.60	10.742	-	-
QUEST	-	-	-	-	78.20	8.944	-	-	-	-	56.40	11.522	-	-	-	-	49.05	9.304
Met Li	-	-	-	-	12.55	1.665	-	-	-	-	10.20	1.765	-	-	-	-	8.10	2.268
Met Word	-	-	-	-	10.82	1.483	-	-	-	-	9.00	2.077	-	-	-	-	7.80	2.190
Metacth	-	-	-	-	12.15	1.625	-	-	-	-	8.80	2.607	-	-	-	-	9.10	1.997
Metal	-	-	-	-	13.75	2.862	-	-	-	-	8.75	4.529	-	-	-	-	7.60	2.927
Met Numb	-	-	-	-	18.07	3.503	-	-	-	-	11.70	4.243	-	-	-	-	8.85	2.888
Met Copy	-	-	-	-	11.10	2.193	-	-	-	-	7.95	2.684	-	-	-	-	7.60	1.875

The improvements between the means of almost every measure relating to the experimental group's three testing periods is evident. Although on some scores they may not be as obvious, the general trend is consistent. On both the re-test scores of the Placebo and Control groups, the difference in means is generally minor and there are occasions where the score actually deteriorates, e.g. Verbal section of Myklebust for the Placebo group, and Non-Verbal results for the Control group. Although the numbers are smaller than the Experimental group, the differences between scores on the Placebo and Control groups appear to be very similar and insignificant.

7.1.3. Analysis of Variance (ANOVA)

Separate one-way analysis of variance for each variable was used to test whether there were any significant differences between experimental, placebo and control groups on the measures prior to intervention. Only one significant difference occurs between the experimental and control groups i.e. the Myklebust Verbal scale on the pre-test measures. All the others were found to be insignificant, thus to a large extent corroborating the assumption of random allocation to groups. Table 6 demonstrates these calculations.

Table 6

Differences between Experimental, Placebo and Control Groups Means before intervention. (Differences are considered significant above the 0.05 probability level; df between groups = 2; within groups = 77)

Measure	Source	Sum of Squares	F. Ratio	F. Prob.	H_c	Scheffe's Test
raw-a-Person	Btw.Gr	1.128125	0.91	0.408	P<0.05	No sig.
	Wthin Gr	47.95575				
Peabody I.Q.	Btw.Gr	1.71250	0.0.	0.98	P>0.05	No sig.
	Wthin Gr	3257.1750				
Peabody M.A.	Btw.Gr	0.005651	0.01	0.9932	P>0.05	No sig.
	Wthin Gr	31.795397				
Wiig-Semel	Btw.Gr	43.33750	1.00	0.3725	P>0.05	No sig.
	Wthin Gr	1668.15000				
Myklb.V.	Btw.Gr	211.53750	4.01	0.0219	P<0.05	E sig.higher than C.
	Wthin Gr	2029.45000				
Myklb.N.V.	Btw.Gr	100.93750	0.95	0.3915	P>0.05	No sig.
	Wthin Gr	4093.95000				

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	Wthin Gr	4093.95000				

In instances where Scheffe's test was applied concern may be attached to the fact that utilizing the more sophisticated statistical technique fewer significant results may occur. Some investigators counter this problem by choosing to employ less sensitive levels, e.g. <0.10. It was not necessary in this study.

Table 7

Differences between Experimental (E), Placebo (P) and Control (C) Groups Means after intervention. (Differences are considered significant above the 0.05 probability level; df between groups = 2; within groups - 77).

Measure	Source	Sum of Squares	F. Ratio	Prob.	H_o	Scheffe's Test
Draw-a-Person	Btw.Gr	69.9740	24.84	0.0001	P<0.05	E sig.higher than P & C
	Wthin Gr	108.4380				No dif. P & C
Peabody I.Q.	Btw.Gr	1546.050	5.56	0.055	P<0.05	Sig.dif.E & P No dif. E & C, P & C.
	Wthin Gr	1069.900				
Peabody M.A.	Btw.Gr	9.760350	5.60	0.0053	P<0.05	Sig.dif.E & P, E & C.
	Wthin Gr	67.04850				No dif. P & C.
Wiig-Semel	Btw.Gr	1163.23750	17.53	0.0001	P<0.05	Sig.dif. E & P E & C.
	Wthin Gr	2554.15000				No dif. P & C.
Myklb.V.	Btw.Gr	1408.2750	23.19	0.0001	P<0.05	Sig.dif. E & P, E & C.
	Wthin Gr	2337.5250				No dif. P & C
Myklb.N.V.	Btw.Gr	2885.23750	21.97	0.0001	P<0.05	Sig.dif. E & P E & C.
	Wthin Gr	5055.2500				No dif. P & C.
Thak.Part 1	Btw.Gr	113.4750	5.85	0.0043	P<0.05	Sig.dif.E & P E & C.
	Wthin Gr	746.3250				No dif.P & C
Thak.Part 2	Btw.Gr	569.7000	20.49	0.0001	P<0.05	Sig.dif. E & P, E & C, P & C
	Wthin Gr	1070.3000				
Thak.Part 3	Btw.Gr	1377.91250	21.43	0.0001	P<0.05	E sig.dif.C
	Wthin Gr	2474.9750				

Post test scores yielded on the measure following intervention were also subjected to separate ANOVAs. These are shown in Tables 7 and 8 for the post test I and II stages. The differences produced after intervention on the measures for the three groups were significant and in the expected direction. The Scheffe's test comparison demonstrated the significant differences between the experimental group on the one hand, with the placebo and control groups on the other. Frequently, the placebo and control groups showed no significant difference.

Table 8

Differences between Experimental (E), Placebo (P) and Control (C) Groups Means after intervention and the period Post Test II. (Differences are considered significant above the 0.05 probability level; df. between Groups = 2, within groups = 77).

Measure	Source	Sum of Squares	F. Ratio	Prob.	H	Scheffe's Test
Metrop.T.	Btw.Gr. Within Gr.	13519.73750 [illegible]	71.42	0.0001	P<0.05	E better than P and C.
Quest.	Btw.Gr. Within Gr.	1533.9000 [illegible]	12.65	0.0001	P<0.05	E better than C
Myk.P.V.	Btw.Gr. Within Gr.	1842.6375 2169.8500	[illegible]	0.0001	P<0.05	E better than P and C
Myk.N.V.	Btw.Gr. Within Gr.	[illegible] [illegible]	35.75	0.0001	P<0.05	E better than P and C

The ANOVA technique was also applied to the sub-tests of the Myklebust Pupil Rating Scale and the results are set out in Table 9. Here it can be seen that not all the results were in the expected direction. On initial test there is a significant difference between the means for the experimental and control groups on auditory comprehension and spoken language. However, when examining the results for the post I and II testing phases, there is further improvement in performance by the Experimental Group. Thus it may be fair to say that the Myklebust Pupil Rating Scale provided evidence of a trend in the desired expectation in respect of this measure.

Table 9

Differences between Experimental, Placebo and Control Groups Means on the Myklebust sub-tests, initial test and following intervention (Post Test I and II). Differences are considered significant above the 0.05 level; df between groups = [illegible] within groups = 77.)

Measure	Source	Sum of Squares	F. Ratio	Prob.	H_0	Scheffe's Test
AC1	Btw.Grps	[illegible]	[illegible]	[illegible]	[illegible]	Sig.dif. E & C
	Wthin.Gr	650.700				No dif.P & C, E & P
AC2	Btw.Grps	[illegible]	[illegible]	[illegible]	[illegible]	Sig.dif.E & P, E & C
	Wthin Gr	581.675				No dif. P & C
AC3	Btw.Grps	[illegible]	38.08	.0001	P 0.05	Sig.dif.E & P, E & C
	Wthin Gr	[illegible]				No dif. P & C
SL1	Btw.Grps	58.550	3.89	0.024	P<0.05	Sig.dif. E & C only
	Wthin Gr	579.000				
SL2	Btw.Grps	[illegible]	18.46	0.0001	P<0.05	Sig.dif. E & P,E & C
	Wthin Gr	771.8500				No dif. P & C
SL3	Btw.Grps	[illegible]	[illegible]	[illegible]	[illegible]	Sig.dif. E & P,E & C
	Wthin Gr	[illegible]				No dif. P & C
OR1	Btw.Grps	[illegible]	[illegible]	[illegible]	[illegible]	No difference
	Wthin Gr	[illegible]				
OR2	Btw.Grps	[illegible]	[illegible]	0.0001	P<0.05	Sig.dif. E & C only
	Wthin Gr	[illegible]				
OR3	Btw.Grps	[illegible]	[illegible]	0.0001	P<0.05	Sig.dif. E & P,E & C
	Wthin Gr	532.7250				No dif. P & C
MC1	Btw.Grps	[illegible]	[illegible]	[illegible]	[illegible]	No sig.difference
	Wthin Gr	[illegible]				
[illegible]	Btw.Grps	[illegible]	[illegible]	0.0001	[illegible]	Sig.dif.E & P,E & C
	Wthin Gr	349.1000				No dif. P & C
MC3	Btw.Grps	[illegible]	[illegible]	0.0001	[illegible]	Sig.dif. E & P,E & C
	Wthin Gr	[illegible]				No dif. P & C
PS1	Btw.Grps	[illegible]	[illegible]	[illegible]	[illegible]	No sig. difference
	Wthin Gr	[illegible]				
PS2	Btw.Grps	1194.4500	[illegible]	0.0001	P<0.05	Sig.dif. E & P,E & C
	Wthin Gr	1987.5000				No dif. P & C
PS3	Btw.Grps	1924.4250	41.50	0.0001	P<0.05	Sig.dif. E & P,E & C
	Wthin Gr	1785.5250				No dif. P & C

7.2. Hypotheses

Quantitative data pertaining to each of the hypotheses are presented below.

7.2.1. Hypothesis 1

Following participation in the structured pre-school programme, the experimental groups demonstrate increased verbal competency and language skills relative to control groups not having undergone the programme.

The data from the following objective tests are specifically pertinent to supporting the efficacy of this hypothesis, the Peabody Picture Vocabulary Test, the Wiig-Semel Test of linguistic concepts and the Myklebust Pupil Rating Scale - Verbal Score.

The Peabody statistics are not encouraging. When examining the means (Table 5), and the analysis of variance (ANOVA - Table 7) no significant differences are recorded, but only a trend on the post-test I, where there is a significant difference between the Experimental and Control groups on Scheffe's test i.e. F (2.77) = 5.56, $p<0.05$ for Intelligent Quotient; F (2.77) = 5.60 $p<0.05$ for the mental age.

The Wiig-Semel Test of Linguistic Concepts, on the other hand, shows a much more promising picture with significant differences on post-test I on total score at 0,05% level and no difference on the initial test between the experimental and control groups. Referring to the Wiig-Semel results on the ANOVA and Scheffe's tests, there are no significant indications on initial test, but highly significant indicators on post test I between the experimental, control and placebo groups, while the placebo and control groups show no differences. These results are summarized in Table 10.

Table 10

Means, F. Values and Scheffe's Test after intervention programme on the Wiig-Semel Test:

Group	M.	F.	P.	Scheffe's Test
Experimental (E)	13.4			Sig.dif.btw. E & P, E & C.
Placebo (P)	6.70	17.53	<0.05	
Control (C)	9.60			No dif. btw. P & C.

The verbal score of the Myklebust, which includes auditory comprehension and spoken language, relates to verbal competency.

Table 11

Means, F values and Scheffe's Test for the three testing periods on the Myklebust Verbal Scale:

	Initial Test			Post Test I			Post Test II		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
Experimental	28.95			34.47			35.55		
Placebo	27.65	4.0	0.0211	28.10	23.19	0.0001	26.45	32.40	0.0001
Control	25.00			24.75			25.50		
Scheffe's	Sig.dif.btw. E & C.			Sig.dif.btw. E & P, E & C. No dif.btw.P & C			Sig.dif.btw. E & P, E & C.		

Results on the ANOVA and Scheffe's test for the Verbal scale of the Myklebust show a significant difference at initial test between experimental and control groups which threw some doubts on the random selection of the sample and thus the efficiency of a possible expected conclusion. However on subsequent post I and II test stages, the differences between the Experimental and Control groups increase in the expected direction. Following the intervention programme the performance on this rating scale by the experimental group is significantly better than the placebo or control groups. This is further maintained at post test II level whilst the placebo and control groups do not yield a significant difference after the intervention programme (Table 11).

One can conclude from this information that the structured programme had a definite influence on the experimental group in that they generally performed more competently in most of the tests of verbal facility and language skills. On the other hand, the placebo and control groups did not improve significantly. Thus Hypothesis I was to a large extent supported.

7.2.2. Hypothesis II

Following participation in the structured pre-school programme, experimental group subjects show more effective socio-emotional functioning and greater independence relative to control groups not having undergone the programme.

This hypothesis can be evaluated from an examination of the results of the Myklebust non-verbal scale, in particular the subtest personal-social behaviour, the adjustment Questionnaire, and the Goodenough Harris Draw-a-Person Test.

A comparison of the Means of the Myklebust sub-test on personal social behaviour demonstrates clearly the importance between the Groups at the different testing stages. On the analysis of variance and Scheffe's test the initial test shows no significant differences between the groups in Table 1[illegible]. In the case of post I and II testing stage, definite significant differences occur between the experimental and the other two groups whilst the placebo and control groups indicate no differences (Table 9).

Comparison of Means, F.Value, Scheffe's Test of Myklebust sub-test personalsocial behaviour for the three groups during the three test stages.

Table 12

	Experimental(E)			Placebo(P)			Control(C)		
Test Stage	1	2	3	1	2	3	1	2	3
Mean Myklb.Sub-test Pers.Soc.Beh.	24.87	31.05	3[illegible].35	24.58	24.10.	24.56	23.05	22.90	21.30
F. Value		0.87			22.36			41.50	
P.	.4212				0.0001			0.0001	
Test Stage	1.				2.			3.	
Scheffe's	No sig.dif.				Sig.dif.E & P, E & C No dif. P & C.			Sig.dif.E & P, E & C No dif. P & C	

Referring to the Draw-a-Person test the means once again highlight the significantly higher scores the Experimental from a mean of 6.34 on initial test to an improvement of 9.10 on post test II. A similar pattern does not occur in the case of the Placebo and Control groups, 6.11 to 6.84 and 6.11 to 6.76.

The F values and the Scheffe test (Table 6) at initial test are not significant in showing differences between the groups. At the post-test I stage, however, the calculations clearly show the differences on the Draw-a-Person Test (Table 7) i.e. F(2,77) = 24.84, p<0.0001 between 1 & 2, 1 & 3 and no significant difference between 2 & 3.

The adjustment questionnaire was only applied at post test II stage. Here the means clearly demonstrate observable differences between the groups, the experimental mean score of 78.20, the placebo 56.40 and the control 49.06 and when tested for significance the F value df.(2,77) = 71.24 with p<0.0001. Scheffe's test reaffirms that the experimental group is better than the control groups.

These findings together provided a reasonable measure of support for Hypothesis II.

7.2.3. Hypothesis III

Following participation in the structured pre-school programme, children in the experimental group are more 'ready' for school and less 'at risk' for future learning relative to control groups not having undergone the programme.

Data from the Thackray Reading Readiness Test, the Goodenough Harris Draw-a-Person Test and the Myklebust Pupil Rating Scale total score were utilized to establish support for this hypothesis.

Data from the Thackray Reading Readiness test, which was only applied at post-test I stage demonstrates the following.

The means on the data illustrate differences between the three groups,namely experimental 52.37, placebo 40.75 and control 33.60. The significance of the difference is demonstrated by the ANOVA and Scheffe's tests which indicate that experimental group's results are better than placebo and control groups. On all three sub-tests with F values of 21,43, 20.49 and 5.85 and significant levels of 0.0001, 0.0001 and 0.0043, respectively with df of 2, and 77.

The Goodenough Harris Draw-a-Person (Table 6) Test indicates from the mean score that there is no obvious significant difference at initial tests (6.34(E), 6.11(P), 6.11(C)) but a positive difference at the post-test I and II stage between the experimental and control groups, i.e. 8.47 and 9.10 as to 6.57 and 6.76 mean scores respectively.

The Myklebust Total Score displays further evidence when the significant differences between the means of the group scores are compared in the case of experimental and control groups. In this case the one tail 't' test was applied and the difference was in the right direction $p<0.0001$.

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Mean Comparisons - Myklebust Total Score

Table 13

	Experimental			Placebo			68.15 67.95 66.75		
Test Stage	1	2	3	1	2	3	1	2	3
Myklb.T	74.55	90.12	94.95	92.55	73.65	71.45	68.15	67.95	66.75

Taking the above results into consideration Hypothesis III is thus confirmed.

7.2.4. Hypothesis IV

Three months after commencement of Primary School, experimental group subjects maintain their improvement in verbal competency, socio-emotional functioning and readiness for formal learning relative to control group subjects who did not undergo the pre-school programme.

Results pertaining to the Metropolitan School Readiness Test and the Verbal and Non-Verbal scores of the Myklebust confirm the benefit of the intervention programme over a longer time period.

Tables 11 and 13 illustrate the favourable mean comparison on the Myklebust V. and N.V. tests, whilst the Metropolitan School Readiness Test also displays identifiable differences in means on its various sub-tests shown in Table 5, i.e.g. Met. Numbers 18.07 (E), 11.70 (P) and .85 (C). In the case of the ANOVA and Scheffe's test calculations (Table 8) the same profile of results is re-affirmed, viz. maintained improvement by the experimental subjects.

An examination of the Myklebust sub-test scores give the best indication of the functioning of the subjects over the 3 test periods (Table 9) and in particular the ratings of independent teachers unaware of which of their charges fell into the experimental and control groups. The F value on the initial test demonstrates some inconsistencies which may be due to sampling error or erratic application of the testing instruments. However, in the case of the orientation, motor co-ordination and personal-social behaviour measures, the expected non-significant trend occurs. On post-tests I and II, all the desired significant differences result as shown in the F values and the level of probability. Table 14 below summarizes all the pertinent trends for the three measures and the Myklebust sub-tests at the post-test II stage.

Table 14

Means, F values and Scheffe's Test for Metropolitan School Readiness Test and Myklebust Rating Scale for post test II.

Measure	Means	F	P	Scheffe's Test
Myklb.V.	30.76	32.40	<0.0001	E. sig.dif. to P and C.
Myklb.N.V.	51.26	35.75	<0.0001	E. sig.dif. to P and C
Metrop.	62.46	71.24	<0.0001	E. sig.dif. to P and C
Myklb.Sub-tests				
MC_3	10.55	20.70	<0.0001	E. sig.dif. to P and C No dif.P and C
OR_2	13.22	14.54	<0.0001	E. sig.dif. to P and C No dif. P and and C
PS_2	27.52	41.50	<0.0001	E. sig.dif. to P and C No dif. P and C

On the basis of these results, one can accept the hypothesis that an improved performance by the experimental group subjects was maintained.

An interpretation of the findings and factors affecting the findings are discussed in the final chapter together with a general discussion which evaluates this research study.

CHAPTER VIII

DISCUSSION

The aims of this study and investigation and interpretation of the findings are considered in this chapter as are the broader implications of the findings. Limitations of the study, as well as proposals for further research are also presented here.

8.1. The Purpose of the Study

The purpose of this study was an attempt to provide the foundations of a curriculum to promote school 'readiness' The aims of the programme, as outlined in Chapter V, are hereby analysed in terms of the results.

The questionnaire was specifically designed to tap out initial social adjustment at Primary School level. The questionnaire was only applied at Posts II stage when the children had attended primary school for approximately three months. The data analysed on the variables showed significant differences between the performance of the experimental group subjects and those of the control group. The experimental group subjects displayed more effective socio-emotional functioning and greater independence.

Data from the Thackray and Metropolitan measures showed that the experimental groups of children were better performers on the variables the post-test phases. The ANOVA Post Test II confirmed the benefit the intervention programme over a longer time period when the children were expected to be meeting the requirements laid down by the various Primary Schools attended by subjects across groups.

8.1.1. The facilitation of social adjustment and school readiness to enable children to benefit from learning experience.

The Goodenough-Harris Draw-a-Person Test, the socio-emotional criteria of Myklebust Pupil Rating Scale and the Questionnaire were utilized to determine the social adjustment of the subjects, while the

Thackray Reading Readiness Test and Metropolitan School Readiness Test were employed to assess school readiness.

Referring to the Draw-a-Person test, the t tests indicated no initial differences between groups, but highly significant differences on post-testing I and post-testing II between the groups. The Scheffe's procedure on the initial test were not significant whilst the post-test I statistics clearly indicated the impact of the perception of self for the experimental group as compared to the two control groups.

Findings by Skuy, Shmukler & Clark 1983) underlined the relevance of socio-emotional variables in the educational process. They demonstrated the value of the MPRS in assessing this aspect of a child's functioning. The employment of the MPRS in this experiment could therefore be considered most useful as an indicator of socio-emotional performance. The significant results on second and third occasions of testing on this measure suggests that the experimental group's social adjustment was enhanced as a result of this experiment.

8.1.2. The employment of basic remedial principles to obviate any overt or latent learning problems before primary school commenced

For expedient reasons this aim could only be assessed in this study on a short-term basis. An evaluation of this aim is therefore based on two factors, viz. the 'readiness' of the children for learning shortly after commencement of school, and the predictive utility of the Myklebust Pupil Rating Scale, as shown by Colligan (1977) and validated by Skuy et al (1983). The confirmation of readiness for learning is cited under the previous aim while the overall observation of the Myklebust Pupil Rating Scale was set out in Table 9. The ANOVA statistics showed that the experimental group differed significantly from the placebo and control groups while the latter two groups showed no differences at post-test I and II.

However, Reilly (1983) tabulated the pass rate of South African children over a period of four years. She showed a steady decline in school success across all race groups. This would indicate that

Thackray Reading Readiness Test and Metropolitan School Readiness Test were employed to assess school readiness.

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However, Reilly (1983) tabulated the pass rate of South African children over a period of four years. She showed a steady decline in school success across all race groups. This would indicate that learning problems often only manifest after several years of schooling. Therefore, it is not possible to state, with certainty, that the experimental group subjects are less prone to learning problems in the future, but only to conclude that this aim was tentatively and temporarily achieved.

8.1.3. The Provision of Language Enrichment through novel concepts of language teaching, (i) to raise the general language level and (ii) to engender a positive attitude towards future literary endeavours.

i) To determine whether the general level of language had improved, the three groups involved in the experiment were assessed on tests designed to evaluate language proficiency. These include the Peabody test of receptive language, the Wiig-Semel Test and Linguistic Concepts and the Verbal Scale of the Myklebust Pupil Rating Scale.

The Peabody reesults were not as conclusive as those of the other measures, although a definite trend was noted at the Post-test I phase. As this measure examines receptive language only and not language usage, it would appear that, while all the children across groups benefited from general language input during the course of their final pre-school year, those who were involved with the programme, i.e. the experimental group, gained specifically from the employment of dramatization as a critical component of the curriculum. This ties up with the beliefs of Heinig and Stillwell (1981) that creative drama has the potential to develop language and communication abilities. The proposition is further supported by the fact that highly significant differences at the <0.1 level were recorded for all the other measures utilized to tap out language performance.

ii) The attitude of the subjects towards future literary endeavours cannot yet be verified by empirical data for two reasons, i.e. the time lapse between cessation of the programme and post-testing II was too brief, and an attitudinal survey can only be conducted when all subjects across the groups have had an opportunity of being exposed to literature. Any conclusions drawn are therefore based on observations of the children.

8.2. Observations

Due to the fct that ongoing contact with the children and staff of the schools was an essential feature of the implementation of the programme, certain happenings were noted and recorded. This was done so that subjective factors could be evaluated in terms of their positive or negative influences on research results. In addition, it was felt that the notation of any shortcomings could assist in making proposals for future investigations of this nature and for general programme improvement.

The following matters were considered relevant:

i) The children enjoyed the regular contact with the present researcher and rapport with these children was soon established. This enhanced motivation as regards implementation of the programme.

ii) The areas of the experiment devoted to literature and drama invoked and generated much excitement and anticipation for following sessions. Children greeted the researcher enthusiastically on arrival and were always asking what roles they could play. The positive effect of this aspect of the programme was evidenced in numerous ways. For example, one child brought a copy of 'The Complete Works of William Shakespeare' to school to show the group that this book was in his home and that 'Mr. Shakespeare' wrote many works, other than those with which they were familiar. Another child mentioned that his father was leaving for a trip to Scotland and that he had told his father "all about Macbeth". One child related how he had watched a production of Macbeth on television. In addition, parents frequently accosted the researcher at local shopping centres or at the school to enquire about, and discuss, the concept of 'learning Shakespeare' at Nursery School.

When the researcher met the children at Primary School several months after the intervention programme had terminated, many of them asked whether the purpose was "to play Shakespeare again". To date, if the researcher encounters a child who was a subject in the experimental group at the local shops she is still greeted with excitement and frequently asked about 'Shakespeare'.

iii) Teachers involved in the experiment, although apprehensive at first, became so involved with the project that they invariably discussed matters concerning the implementation on a regular basis. This often led to further queries about specific children's needs and 'problems'. Those teachers whose charges were not engaged in the experiment tended to be resentful at times and sometimes complained of 'unfairness' in that their charges were 'missing out'.

After completion of the programme, teachers of experimental group subjects were consulted by the researcher to ascertain their views about the programme. They generally agreed that the language and socio-emotional dimensions were the most stimulating, both for the children and themselves. There was one isolated complaint that the excursions created a burden for the teacher in terms of organization and transport, although the person concerned acknowledged the benefits of the regular outings to unusual places of interest. All the teachers involved with the experimental groups mentioned that some of the topics included with the skills designed to promote readiness for learning formed part of their regular curriculum anyway. However, they commented on the fact that there were ideas incorporated which they had not considered and that other schools, particularly in disadvantaged areas, may not have the personnel with the knowledge or training to impart these skills without a structured format.

Analysing the above factors, it appears that the aspect of the programme devoted to literary endeavours was the one which appealed to the children most of all and that the general motivation of all the teachers and children involved in the experiment could have had some bearing on overall results. However, a major consideration when evaluating the final conclusions is the subject distribution at Primary School level. All the school principals and teachers concerned were unaware of the previous groupings and samplings and certain classes and schools accommodated subjects from several of the groups. It can therefore be inferred that no school system or teacher per se could be considered an extraneous variable affecting or contributing to final test results.

[illegible] Implications arising from this study.

One of the purposes of this study was to enhance academic achievement and socio-emotional functioning at Grade I level, taking into account the fact that cognitive functioning and interpersonal processes are inseparable.

The results obtained point to the fact that when activities designed to enhance socio-emotional functioning are introduced into the curriculum of a 'bridging' class, the children concerned benefit from the experience. This is noticeable because first grade teachers were able to identify these children as better all-round performers in relation to others who did not receive prior training.

Although most well run pre-schools attempt to encourage effective interpersonal relationships and independence, the socio-emotional dimension is rarely implemented as a specific goal. The findings of Schaffer & Schaffer (1982) and Skuy et al (1983) stressed the relevance of socio-emotional variables in the early educational situation. Yet, to date, in South Africa scant attention have been paid to the need for pre-school programmes to include this dimension. It would therefore seem pertinent for local educators and psychologists to seriously consider incorporating appropriate techniques for improving the matter when reviewing and revising curriculum content.

In line with the research studies by Perret-Clermont (1981) and Wood (1981), stressing language enrichment and those by Courtney (1974) and Heinig & Stillwell (1981) which emphasize the relevance of dramatic activities in any teaching curriculum, this study has specifically included such criteria. The general departure and possible contentious issue is the inclusion of advanced literature for tots. Based on observations and personal involvement, the present researcher, however, believes that little children can, and do, benefit from engaging in activities which provide pleasure while extending divergent thinking capacities. It is nevertheless realized that the degree of exposure to advanced literature will largely depend on the enthusiasm and interest of the teacher concerned. Generally the present study has highlighted the fact that young children can be exposed to literature with beneficial results. It therefore seems expedient to conclude that advanced literature or poetry can be introduced to children at a tender age, while the choice should remain the prerogative of the teacher or school concerned.

With regard to the notion of obviating 'learning problems' at the outset, it has been shown that the tendency is to identify 'at risk' children by means of psychometric testing. As stressed by Feurstein (1979) and Adelman & Taylor (1983) it is preferable to programme to the needs of individual children, rather than to 'label' before manifestation of difficulties arise. Skuy et al (1985) investigated the limitations of pre-school measures in this country. They concluded (p.39) that "prediction of later school performance from pre-school predictors is hazardous and cannot be used as a basis for far-reaching educational decisions". They support the need for early preventative and health maintenance programmes for all. The present study incorporated an attempt to utilize remedial techniques in an educational programme as one means of prevention. The goal was tentatively and at least, temporarily achieved. It suggests that this work should form an integral and crucial component of any 'bridging' course for pre-schoolers.

8.4. Limitations of this Study

i) In a school setting intervening variables exist which could have adversely affected this study. Examples of these were:

i.i) The group teachers who, faced with many other commitments, inevitably neglected aspects of the programme, e.g. excursions to more distant places.

i.ii) The unavoidable suspension of activities due to other school functions, e.g. rehearsals for concerts, visits by doctors/dentists and other pre-arrangements considered equally as important as the programme by the educators concerned.

i.iii) The Primary School principals who were reluctant to allow individual testing of children because of the length of time it would involve. This meant that the research tools for the final retest had to be confined to those which were appropriate for group settings. Thus instruments utilized for the first two occasions of testing had to be discarded in the final instance.

i.iv Permission from the relevant authorities to test en masse at Government schools was not forthcoming, although interest was dispalyed and suggestions were put forward. Consequently private arrangements were made between principals, parents and researcher.

ii) A preventative intervention programme is of such a nature that beneficial results may not lend themselves to immediate evaluation by use of available psychometric tests and may also only be perceived at a future stage of the child's growth. 'Learning' disabilities, for example, often only manifests after a few years at school as the failure rate tends to increase with time. Thus it remains unclear at this stage whether the impact of the programme is only transitory or whether it will postively influence subjects over a long-term period.

iii) Generalizations regarding the results of this study are limited due to the fact that the 'bridging' programme, for practical purposes, was administered to a restricted sector of the population, viz. the white middle to upper middle class group. The results may have proved more interesting had the sample included children from the different population and socio-economic groups.

iv) It is difficult to assess this type of study objectively because 'emotional-social' factors do not easily lend themselves to scientific measurement and statistical analysis. It was not feasible for the researcher to devise specific instruments to measure specific aspects of the programme as the subjectivity factor would have been too great.

v) The programme was implemented in South African pre-school situations and conditions. Suitable standardized tests do not relate directly to the programme content and are based on North American and British standards. In addition, the settings were not always conducive to the testing as the 'sick room', garden or partitioned off classrooms had to be utilized. Such factors might have adversely affected the concentration of individual children.

vi) At the schools where the researcher conducted the study, there was unavoidable variability within each group although as much control as possible was exercised in choosing comparable groups. Also, several different teachers were involved in the implementation of the programme and some were more conscientious and co-operative than others. Statistically significant results are thus limited because of this variability.

vii) Another limitation would seem to be the small size of the sample. Although this small sample size was caused by factors beyond the researcher's control, there is nevertheless an increasing acceptance of small sized samples (Cowles, 1974). The latter warns against arbitrarily accepting the conclusion that significant statistics necessarily indicate significant relationships.

viii) There will inevitably be a gap between research and practice. This refers to the difficulty in applying these findings as educationally useful innovations, particularly when an educator has to consult with governmental authorities before acceptance, improvements, and implementation can result.

8.5. Proposals for Further Research

The limitations which emerge, although unavoidable, give rise to certain suggestions for future investigation.

i) The present study could be repeated with possible modification of those aspects which proved difficult to implement, e.g. several of the field trips, together with suggestions which may emerge from similar research. Such methodological improvement could provide the basis for an appropriate curriculum for the 'bridging' classes as outlined by the White Paper of November 1983.

ii) There are indications for long-term follow-up studies with the subjects in this research project to assess the effects of the programme more fully, and as an extension of the evaluations carried out.

iii) A wider cross section of the population should be involved in a project of this nature to ascertain whether the merits of such as programme are applicable with different ethnic and socio-economic groups of children.

iv) The programme was devised to improve the cognitive and affective development of each child. If benefits can be achieved by one researcher, then programmes of a similar nature should be systematically investigated by a research team with the full co-operation of the authorities and schools concerned.

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TEST BEHAVIOR

Examples needed:	☐ only 1	☐ 2 or 3	☐ over 3
Types of response:	☐ S called numbers	☐ Subject pointed	☐ Examiner pointed
Rapport:	☐ easily attained	☐ slowly attained	☐ poor rapport
Guessing	☐ guessed when asked	☐ resisted guessing	☐ prone to guess
Speed of response:	☐ fast	☐ average	☐ slow
Attention span:	☐ very attentive	☐ average	☐ distractible
Perseveration:	☐ none noted	☐ some	☐ frequent
Need for praise:	☐ little needed	☐ some needed	☐ much needed
Shyness:	☐ friendly	☐ slightly shy	☐ very shy
*Effort:	☐ good effort	☐ fair effort	☐ perfunctory effort

PHYSICAL CHARACTERISTICS

Hearing: need to repeat stimulus words	☐ never	☐ seldom	☐ often
apparent hearing acuity	☐ good	☐ fair	☐ poor
hearing aid	☐ S did not own one	☐ S owned but did not wear one	☐ S wore one
Vision: distance of eyes from page	☐ under 8"	☐ average (8" - 20")	☐ over 20"
apparent visual acuity	☐ good	☐ fair	☐ poor
glasses	☐ S did not own glasses	☐ S owned but did not wear glasses	☐ S wore glasses
Motor activity:	☐ hyperactive	☐ average	☐ hypoactive
Sedation:	☐ none	☐ slight	☐ heavy

RECOMMENDATIONS

PERFORMANCE EVALUATION

*Do you believe that the test performance of the subject has fairly represented his or her ability? ☐ Yes ☐ No.
If not, why?

Examiner's signature

Peabody Picture Vocabulary Test

by Lloyd M. Dunn, Ph.D.

FORM a

INDIVIDUAL TEST RECORD

NAME ____________ (last) ____________ (first) ____________ (initial) SEX: M F (circle) GRADE ____ (or phase)

SCHOOL ____________ (or agency or address) TEACHER ____________ (or counselor or supervisor)

EXAMINER ____________ TIME ____ (min.) CODE ____ (or race or descent)

AGE DATA

Date of testing ____ (year) ____ (month) ____ (day)

Date of birth ____ (year) ____ (month) ____ (day)

Age ____ (years) ____ (months)

TEST SCORES

Raw score (from page 1) .... ____

Intelligence quotient (I.Q.) .... ____

Percentile score (%ile) .... ____

Mental age (M.A.) .... ____

CONVERSION OF MONTHS TO NUMERALS FOR USE IN RECORDING AGE DATA

Month	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
No. of Months	1	2	3	4	5	6	7	8	9	10	11	12

OTHER TEST DATA

Names of tests	Ie	CA	Score	Type of score
PPVT, Form B				

LANGUAGE BACKGROUND

Language of the home: ____________ (if other than standard English)

Quality of language:	☐ good for age	☐ fair for age	☐ poor for age
Quantity of speech:	☐ talkative	☐ average	☐ taciturn
Intelligibility of speech:	☐ good	☐ fair	☐ poor

REASON FOR TESTING ____________

AGS
Published by
AMERICAN GUIDANCE SERVICE, INC.
Publishers' Building, Circle Pines, Minnesota 55014

SCORE SHEET
FORM
a

Suggested Starting Points (see manual page 8)

Age Category	Begin with:	Age Category	Begin with:
below 3-3	Plate No. 1	9-6 to 11-5	Plate No. 60
3-3 to 4-2	Plate No. 10	11-6 to 13-5	Plate No. 70
4-3 to 5-5	Plate No. 25	13-6 to 15-5	Plate No. 80
5-6 to 7-5	Plate No. 40	15-6 to 17-5	Plate No. 90
7-6 to 9-5	Plate No. 50	above 17-6	Plate No. 100

RAW SCORE CALCULATIONS

Ceiling item .... ______

Less errors .... ______

Raw score .... ______

BASAL: 8 consecutive correct responses

CEILING: 6 errors in 8 consecutive responses

*TO RECORD ERRORS: Make oblique strikes through the geometric figures. Every eighth figure is identical to facilitate the determination of the basal or ceiling

Plate No.	Word	Key	Resp.	Errors*
1	car	(4)	___	○
2	cow	(3)	___	□
3	baby	(1)	___	△
4	girl	(2)	___	✤
5	ball	(1)	___	♡
6	block	(3)	___	☆
7	clown	(2)	___	◇
8	key	(1)	___	○
9	can	(4)	___	□
10	chicken	(2)	___	△
11	blowing	(4)	___	✤
12	fan	(2)	___	♡
13	digging	(1)	___	☆
14	skirt	(1)	___	◇
15	catching	(4)	___	○
16	drum	(1)	___	□
17	leaf	(3)	___	△
18	tying	(4)	___	✤
19	fence	(1)	___	♡
20	bat	(2)	___	☆
21	bee	(4)	___	◇
22	bush	(3)	___	○
23	pouring	(1)	___	□
24	sewing	(1)	___	△
25	wiener	(4)	___	✤
26	teacher	(2)	___	♡
27	building	(3)	___	☆
28	arrow	(3)	___	◇
29	kangaroo	(2)	___	○
30	accident	(3)	___	□
31	nest	(3)	___	△
32	caboose	(4)	___	✤
33	envelope	(1)	___	♡
34	picking	(2)	___	☆
35	badge	(1)	___	◇
36	goggles	(3)	___	○
37	peacock	(2)	___	□
38	queen	(3)	___	△
39	coach	(4)	___	✤
40	whip	(1)	___	♡
41	net	(4)	___	☆
42	freckle	(4)	___	◇
43	eagle	(3)	___	○
44	twist	(2)	___	□
45	shining	(4)	___	△
46	dial	(2)	___	✤
47	yawning	(2)	___	♡
48	tumble	(2)	___	☆
49	signal	(1)	___	◇
50	capsule	(1)	___	○
51	submarine	(4)	___	□
52	thermos	(4)	___	△
53	projector	(3)	___	✤
54	group	(4)	___	♡
55	tackling	(3)	___	☆
56	transportation	(1)	___	◇
57	counter	(1)	___	○
58	ceremony	(2)	___	□
59	pod	(3)	___	△
60	bronco	(4)	___	✤
61	directing	(3)	___	♡
62	funnel	(4)	___	☆
63	delight	(2)	___	◇
64	lecturer	(3)	○	○
65	communication	(2)	___	□
66	archer	(4)	___	△
67	stadium	(1)	___	✤
68	excavate	(1)	___	♡
69	assaulting	(4)	___	☆
70	stunt	(1)	___	◇
71	meringue	(1)	___	○
72	appliance	(3)	___	□
73	chemist	(4)	___	△
74	arctic	(3)	___	✤
75	destruction	(4)	___	♡
76	porter	(3)	___	☆
77	coast	(2)	___	◇
78	hoisting	(4)	___	○
79	wailing	(1)	___	□
80	coil	(2)	___	△
81	kayak	(3)	___	✤
82	sentry	(2)	___	♡
83	furrow	(4)	___	☆
84	beam	(1)	___	◇
85	fragment	(3)	___	○
86	hovering	(2)	___	□
87	bereavement	(3)	___	△
88	crag	(4)	___	✤
89	tantrum	(2)	___	♡
90	submerge	(1)	___	☆
91	descend	(3)	___	◇
92	hassock	(2)	___	○
93	canine	(1)	___	□
94	probing	(1)	___	△
95	angling	(1)	___	✤
96	appraising	(3)	___	♡
97	confining	(4)	___	☆
98	precipitation	(4)	___	◇
99	gable	(1)	___	○
100	amphibian	(1)	___	□
101	graduated	(3)	___	△
102	hieroglyphic	(2)	___	✤
103	orate	(1)	___	♡
104	cascade	(3)	___	☆
105	illumination	(4)	___	◇
106	nape	(1)	___	○
107	genealogist	(2)	___	□
108	embossed	(2)	___	△
109	mercantile	(4)	___	✤
110	encumbered	(2)	___	♡
111	entice	(4)	___	☆
112	concentric	(3)	___	◇
113	vitreous	(3)	___	○
114	sibling	(1)	___	□
115	machete	(2)	___	△
116	waif	(4)	___	✤
117	cornice	(1)	___	♡
118	timorous	(3)	___	☆
119	fettered	(1)	___	◇
120	tartan	(2)	___	○
121	sulky	(3)	___	□
122	obelisk	(4)	___	△
123	ellipse	(2)	___	✤
124	entomologist	(2)	___	♡
125	bumptious	(4)	___	☆
126	dormer	(2)	___	◇
127	coniferous	(2)	___	○
128	consternation	(4)	___	□
129	obese	(3)	___	△
130	gauntlet	(4)	___	✤
131	inclement	(1)	___	♡
132	cupola	(1)	___	☆
133	obliterate	(2)	___	◇
134	burnishing	(3)	___	○
135	bovine	(1)	___	□
136	eminence	(4)	___	△
137	legume	(3)	___	✤
138	senile	(4)	___	♡
139	deleterious	(2)	___	☆
140	raze	(4)	___	◇
141	ambulation	(2)	___	○
142	cravat	(1)	___	□
143	impale	(2)	___	△
144	marsupial	(4)	___	✤
145	predatory	(3)	___	♡
146	incertitude	(1)	___	☆
147	imbibe	(2)	___	◇
148	homunculus	(3)	___	○
149	cryptogam	(4)	___	□
150	pensile	(3)	___	△

TEST BEHAVIOR

Examples needed:	☐ only 1	☐ 2 or 3	☐ over 3
Types of response:	☐ S. called numbers	☐ Subject pointed	☐ Examiner pointed
Rapport:	☐ easily attained	☐ slowly attained	☐ poor rapport
Guessing:	☐ guessed when asked	☐ resisted guessing	☐ prone to guess
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Perseveration:	☐ none noted	☐ some	☐ frequent
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Shyness:	☐ friendly	☐ slightly shy	☐ very shy
*Effort:	☐ good effort	☐ fair effort	☐ perfunctory effort

PHYSICAL CHARACTERISTICS

Hearing: need to repeat stimulus words	☐ never	☐ seldom	☐ often
apparent hearing acuity	☐ good	☐ fair	☐ poor
hearing aid	☐ S. did not own one	☐ S. owned but did not wear one	☐ S. wore one
Vision: distance of eyes from page	☐ under 8"	☐ average (8"–20")	☐ over 20"
apparent visual acuity	☐ good	☐ fair	☐ poor
glasses	☐ S. did not own glasses	☐ S. owned but did not wear glasses	☐ S. wore glasses
Motor activity:	☐ hyperactive	☐ average	☐ hypoactive
Sedation:	☐ none	☐ slight	☐ heavy

RECOMMENDATIONS

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PERFORMANCE EVALUATION

*Do you believe that the test performance of the subject has fairly represented his or her ability? ☐ Yes ☐ No. If not, why?

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____

____

Examiner's signature

Litho in U.S.A.

Peabody Picture Vocabulary Test

by Lloyd M. Dunn, Ph.D.

FORM b

INDIVIDUAL TEST RECORD

NAME ____________ (last) ____________ (first) ____________ (initial) SEX: M F (circle) GRADE ______ (or phase)

SCHOOL ____________ (or agency or address) TEACHER ____________ (or counselor or supervisor)

EXAMINER ____________ TIME ______ (min.) CODE ______ (or race or descent)

AGE DATA

Date of testing ______ (year) ______ (month) ______ (day)

Date of birth ______ (year) ______ (month) ______ (day)

Age ______ (years) ______ (months)

TEST SCORES

Raw score (from page 3) .... ______

Intelligence quotient (I.Q.) .... ______

Percentile score (%ile) .... ______

Mental age (M.A.) .... ______

CONVERSION OF MONTHS TO NUMERALS FOR USE IN RECORDING AGE DATA

Month	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
No. of Month	1	2	3	4	5	6	7	8	9	10	11	12

OTHER TEST DATA

Names of tests	Date	CA	Score	Type of score
PPVT Form A				

LANGUAGE BACKGROUND

Language of the home ____________ (if other than standard English)

Quality of language:	☐ good for age	☐ fair for age	☐ poor for age
Quantity of speech:	☐ talkative	☐ average	☐ taciturn
Intelligibility of speech:	☐ good	☐ fair	☐ poor

REASON FOR TESTING ______________________________

____

AGS

Published by
AMERICAN GUIDANCE SERVICE, INC.
Publishers' Building, Circle Pines, Minnesota 55014

SCORE SHEET FORM

b

Suggested Starting Points (see manual page 8)

Age Category	Begin with	Age Category	Begin with
below 3-3	Plate No. 1	9-6 to 11-5	Plate No. 60
3-3 to 4-2	Plate No. 15	11-6 to 13-5	Plate No. 70
4-3 to 5-5	Plate No. 25	13-6 to 15-5	Plate No. 80
5-6 to 7-5	Plate No. 40	15-6 to 17-5	Plate No. 90
7-6 to 9-5	Plate No. 50	above 17-6	Plate No. 100

RAW SCORE CALCULATIONS

Ceiling item .... ______

Less errors .... ______

Raw score .... ______

BASAL: 8 consecutive correct responses

CEILING: 6 errors in 8 consecutive responses

*TO RECORD ERRORS: Make oblique strokes through the geometric figures. Every eighth figure is identical to facilitate the determination of the basal or ceiling.

Plate No.	Word	Key	Resp.	Errors*
1	table	(2)	____	○
2	bus	(4)	____	□
3	horse	(2)	____	△
4	dog	(3)	____	✣
5	shoe	(4)	____	▽
6	finger	(4)	____	☆
7	boat	(3)	____	◇
8	children	(2)	____	○
9	bell	(1)	____	□
10	turtle	(4)	____	△
11	climbing	(2)	____	✣
12	lamp	(1)	____	▽
13	sitting	(3)	____	☆
14	jacket	(2)	____	◇
15	pulling	(1)	____	○
16	ring	(2)	____	□
17	nail	(1)	____	△
18	hitting	(2)	____	✣
19	tire	(3)	____	▽
20	ladder	(3)	____	☆
21	snake	(1)	____	◇
22	river	(1)	____	○
23	ringing	(4)	____	□
24	baking	(4)	____	△
25	cone	(2)	____	✣
26	engineer	(3)	____	▽
27	peeking	(4)	____	☆
28	kite	(1)	____	◇
29	rat	(1)	____	○
30	time	(1)	____	□
31	sail	(4)	____	△
32	ambulance	(2)	____	✣
33	trunk	(2)	____	▽
34	skiing	(4)	____	☆
35	hook	(2)	____	◇
36	tweezers	(1)	____	○
37	wasp	(3)	____	□
38	barber	(2)	____	△
39	parachute	(3)	____	✣
40	saddle	(4)	____	▽
41	temperature	(3)	____	☆
42	captain	(1)	____	◇
43	whale	(2)	____	○
44	cash	(4)	____	□
45	balancing	(1)	____	△
46	cobweb	(3)	____	✣
47	pledging	(3)	____	▽
48	argument	(1)	____	☆
49	hydrant	(3)	____	◇
50	binocular	(4)	____	○
51	locomotive	(1)	____	□
52	hive	(2)	____	△
53	reel	(4)	____	✣
54	insect	(1)	____	▽
55	gnawing	(1)	____	☆
56	weapon	(2)	____	◇
57	bannister	(3)	____	○
58	[illegible]	(1)	____	□
59	globe	(1)	____	△
60	walrus	(3)	____	✣
61	filing	(1)	____	▽
62	shears	(3)	____	☆
63	horror	(1)	____	◇
64	chef	(4)	____	○
65	harvesting	(4)	____	□
66	construction	(3)	____	△
67	observatory	(4)	____	✣
68	assistance	(4)	____	▽
69	erecting	(2)	____	☆
70	thoroughbred	(3)	____	◇
71	casserole	(2)	____	○
72	ornament	(4)	____	□
73	cobbler	(3)	____	△
74	autumn	(2)	____	✣
75	dissatisfaction	(3)	____	▽
76	scholar	(4)	____	☆
77	oasis	(1)	____	◇
78	soldering	(3)	____	○
79	astonishment	(3)	____	□
80	tread	(1)	____	△
81	thatched	(2)	____	✣
82	jurisprudence	(1)	____	▽
83	sapling	(2)	____	☆
84	arch	(3)	____	◇
85	dwelling	(4)	____	○
86	lubricating	(1)	____	□
87	pedestrian	(2)	____	△
88	vale	(3)	____	✣
89	jubilant	(3)	____	▽
90	laden	(2)	____	☆
91	pursuit	(2)	____	◇
92	goblet	(4)	____	○
93	rodent	(2)	____	□
94	confiding	(3)	____	△
95	reclining	(4)	____	✣
96	frisking	(1)	____	▽
97	moat	(2)	____	☆
98	salutation	(3)	____	◇
99	barrier	(2)	____	○
100	foal	(3)	____	□
101	incandescent	(4)	____	△
102	cornucopia	(3)	____	✣
103	ascending	(2)	____	▽
104	summit	(1)	____	☆
105	caster	(3)	____	◇
106	lobe	(2)	____	○
107	patriarch	(3)	____	□
108	sampler	(3)	____	△
109	ingenious	(3)	____	✣
110	repose	(1)	____	▽
111	constrain	(3)	____	☆
112	tangent	(1)	____	◇
113	sconce	(4)	____	○
114	hoary	(4)	____	□
115	pendant	(1)	____	△
116	prodigy	(1)	____	✣
117	casement	(2)	____	▽
118	quiescent	(1)	____	☆
119	talon	(4)	____	◇
120	chevron	(1)	____	○
121	feline	(4)	____	□
122	cairn	(2)	____	△
123	convergence	(4)	____	✣
124	apothecary	(3)	____	▽
125	indigent	(2)	____	☆
126	edifice	(4)	____	◇
127	scallion	(3)	____	○
128	infirm	(1)	____	□
129	emaciate	(1)	____	△
130	catapult	(2)	____	✣
131	arable	(2)	____	▽
132	orifice	(4)	____	☆
133	renovate	(3)	____	◇
134	precarious	(1)	____	○
135	dromedary	(2)	____	□
136	pedagogue	(1)	____	△
137	sepal	(1)	____	✣
138	lethargic	(3)	____	▽
139	delectation	(4)	____	☆
140	embellish	(3)	____	◇
141	osculation	(1)	____	○
142	cincture	(2)	____	□
143	barrister	(3)	____	△
144	carrion	(3)	____	✣
145	lanate	(2)	____	▽
146	chirography	(4)	____	☆
147	mendicant	(1)	____	◇
148	saltation	(1)	____	○
149	florascence	(2)	____	□
150	culver	(4)	____	△

Wiig-Semel Test of Linguistic Concepts

Comparative relationships

1. Are watermelons bigger than apples?
2. Are jets slower than turtles?
3. Are trees smaller than flowers?
4. Are trains faster than airplanes?
5. Are parents older than their children?
6. Are lemons sweeter than candy?
7. Is ice cream colder than coffee?
8. Is night darker than day?
9. Are feathers heavier than books?
10. Is water wetter than snow?

Passive relationships

1. John was hit by Eric Was John hit?
2. Bill was caught by Tom Was Tom caught?
3. Jerry was pushed by Bob Was Bob pushed?
4. Judy was pulled by Sue Was Judy pulled?
5. Betty was brought by Ruth Was Betty brought?
6. Mary was driven by Alice Was Alice driven?
7. Pearl was phoned by Fran Was Fran phoned?
8. Don was upset by Jane Was Jane upset?
9. Paul was chosen by Steve Was Paul chosen?
10. Ann was left by Kate Was Ann left?

Temporal relationships

1. Does lunch come before breakfast
2. Does evening come before afternoon?
3. Does dinner come before lunch?
4. Does noon come after morning?
5. Does Saturday come before Sunday?
6. Does Thursday come after Tuesday?
7. Does summer come after spring?
8. Does Thanksgiving come before Halloween?
9. Does May come after June?
10. Does December come before November?

Spatial relationships

1. Pat came after James Was James first?
2. The elephant sat on the mouse Was the mouse on top?
3. Sally ran in front of Brian Was Sally first?
4. The chair fell on the toy Was the chair on the bottom?
5. Philip rode behind Charles Was Philip last?
6. Leslie swam between Burt and Angel Was Angel in the middle?
7. Sharon finished before Henry Was Henry last?
8. The ball rolled to the left of the fence Was the ball on the left side?
9. Hal stood in back of Beth Was Beth in front?
10. Mike walked to the right of Joe Was Joe on the right side?

Familial relationships

(Demonstration What do you call your mother's mother?)

1. Give another name for your mother's father
2. Give another name for your father's father
3. Give another name for your father's mother
4. Give another name for your mother's brother
5. Give another name for your mother's sister
6. Give another name for your father's brother
7. Give another name for your aunt's daughter
8. Give another name for your uncle's son
9. Give another name for your aunt's son
10. Give another name for your uncle's daughter.

THE PUPIL RATING SCALE

Screening for Learning Disabilities

HELMER R. MYKLEBUST, Ed.D
Department of Special Education, Northern Illinois University

PUPIL'S NAME ____________ *SEX* ____ *DATE* ____________ (*Year Month Day*)

RESIDENCE ____________________ *BORN* ____________ (*Year Month Day*)

PARENTS ____________________ *AGE* ____________ (*Years Months Days*)

SCHOOL ____________________

TEACHER ____________________ *GRADE* ____________

SUMMARY OF SCORES

AUDITORY COMPREHENSION ____

SPOKEN LANGUAGE ____ *VERBAL SCORE* ____

ORIENTATION ____

MOTOR COORDINATION ____

PERSONAL SOCIAL BEHAVIOR ____ *NONVERBAL SCORE* ____

TOTAL SCALE SCORE ____

111 Fifth Avenue
New York, New York 1000

TO THE TEACHER

Some children have deficits in learning which distinguish them from others in their class The Pupil Rating Scale was developed so that these children can be effectively identified.

Your are to rate each child in five *behavioral areas*, all of which are related to success in learning *Auditory Comprehension, Spoken Language Orientation, Motor Coordination*, and *Personal-Social Behavior* The ratings are made on a five point scale A rating of 3 is average, ratings of 1 or 2 are below average, and ratings of 4 or 5 are above average A rating of 1 is the lowest and a rating of 5 is the highest that can be given Indicate your rating by circling the number that represents your judgment of the child's level of function When making your evaluation, rate only one area of behavior at a time and bear in mind that a child may be learning well in some respects but not in others

The purpose of the Pupil Rating Scale is to identify those children who have learning disabilities It should not be used as an indicator of inferior potential nor of lack of opportunity to learn. It is important, therefore that your ratings be made only on the basis of the items listed on the Scale

Other precautions are that you have extensive opportunity for observing the child and that you carefully study the Manual before you make your ratings

SPOKEN LANGUAGE

	RATING
VOCABULARY	
Always uses immature, poor vocabulary	1
Limited vocabulary, primarily simple nouns, few precise, descriptive words	2
Adequate vocabulary for age and grade	3
Above-average vocabulary, uses numerous precise, descriptive words	4
High level vocabulary, always uses precise words, conveys abstractions	5
GRAMMAR	
Always uses incomplete sentences with grammatical errors	1
Frequently uses incomplete sentences, numerous grammatical errors	2
Uses correct grammar, few errors in use of prepositions, verb tenses, pronouns	3
Above average oral language, rarely makes grammatical errors	4
Always speaks in grammatically correct sentences	5
WORD RECALL	
Unable to recall the exact word	1
Often gropes for words to express himself	2
Occasionally searches for correct word, recall adequate for age and grade	3
Above average, rarely hesitates on a word	4
Always speaks well, never hesitates or substitutes	5
STORYTELLING—RELATING EXPERIENCES	
Unable to tell a comprehensible story	1
Difficulty relating ideas in a logical sequence	2
Average, adequate for age and grade	3
Above average, uses logical sequence	4
Exceptional, relates ideas in a logical, meaningful manner	5
FORMULATING IDEAS	
Unable to relate isolated facts	1
Difficulty relating isolated facts, incomplete and scattered ideas	2
Usually relates facts meaningfully, relates facts adequately for age and grade	3
Above average, relates facts and ideas well	4
Outstanding, always relates facts appropriately	5
SCORE	______

ORIENTATION

	RATING
JUDGING TIME	
Lacks grasp of meaning of time, always late or confused	1
Fair time concept, tends to dawdle, often late	2
Average time judgment, adequate for age and grade	3
Prompt, late only with good reason	4
Skillful in handling schedules, plans and organizes well	5
SPATIAL ORIENTATION	
Always confused, unable to navigate around school, playground, or neighborhood	1
Frequently gets lost in relatively familiar surroundings	2
Can maneuver in familiar locations, average ability for age and grade	3
Above average, rarely lost or confused	4
Adapts to new situations and locations, never lost	5
JUDGING RELATIONSHIPS (big little, far close, heavy light)	
Judgments always inadequate	1
Makes elementary judgments successfully	2
Average judgments for age and grade	3
Accurate but does not generalize to new situations	4
Unusually precise judgments, generalizes to new situations and experiences	5
KNOWING DIRECTIONS	
Highly confused, unable to distinguish right left, north south east west	1
Sometimes exhibits confusion	2
Average, uses right left, north south east west	3
Good sense of direction, seldom confused	4
Excellent sense of direction	5
SCORE	______

MOTOR COORDINATION

GENERAL COORDINATION (walking, running, hopping, climbing)	
Very poorly coordinated, clumsy	1
Below average, awkward	2
Average for age, graceful	3
Above average, does well in motor activities	4
Excels in coordination	5
BALANCE	
Very poor balance	1
Below average ability, falls frequently	2
Average ability for age, adequate equilibrium	3
Above average ability in activities requiring balance	4
Excels in balance	5
MANUAL DEXTERITY	
Very poor in manual dexterity	1
Awkward, below average in dexterity	2
Adequate dexterity for age, manipulates well	3
Above average dexterity	4
Excels, readily manipulates new equipment	5
SCORE	______

Behavioral Characteristics

AUDITORY COMPREHENSION

	RATING
COMPREHENDING WORD MEANINGS	
Extremely immature level of understanding	1
Fails to grasp simple word meanings, misunderstands words at grade level	2
Good grasp of vocabulary for age and grade	3
Understands all grade level vocabulary as well as higher level word meanings	4
Superior understanding of vocabulary, understands many abstract words	5
FOLLOWING INSTRUCTIONS	
Unable to follow instructions, always confused	1
Usually follows simple instructions but often needs individual help	2
Follows instructions that are familiar and not complex	3
Remembers and follows extended instructions	4
Unusually skillful in remembering and following instructions	5
COMPREHENDING CLASS DISCUSSIONS	
Unable to follow and understand class discussions, always inattentive	1
Listens but rarely understands well, mind often wanders	2
Listens and follows discussions according to age and grade	3
Understands well, benefits from discussions	4
Becomes involved, shows unusual understanding of material	5
RETAINING INFORMATION	
Almost total lack of recall, poor memory	1
Retains simple ideas and procedures if repeated	2
Average retention of materials, adequate memory for age and grade	3
Remembers information from various sources, good immediate and delayed recall	4
Superior memory for details and content	5

SCORE ________

PERSONAL-SOCIAL BEHAVIOR

	RATING
COOPERATION	
Continually disrupts classroom, unable to inhibit responses	1
Frequently demands attention, often speaks out of turn	2
Waits his turn, average for age and grade	3
Above average, cooperates well	4
Excellent ability, cooperates without adult encouragement	5
ATTENTION	
Never attentive, very distractible	1
Rarely listens, attention frequently wanders	2
Attention adequate for age and grade	3
Above average in attention, almost always attends	4
Always attends to important aspects, long attention span	5
ORGANIZATION	
Highly disorganized, very slovenly	1
Often disorganized in manner of working, inexact, careless	2
Maintains average organization of work, careful	3
Above average organization, organizes and completes work	4
Highly organized, completes assignments in meticulous manner	5
NEW SITUATIONS (parties, trips, changes in routine)	
Becomes extremely excitable, totally lacking in self control	1
Often overreacts, finds new situations disturbing	2
Adapts adequately for age and grade	3
Adapts easily and quickly with self-confidence	4
Excellent adaptation, shows initiative and independence	5
SOCIAL ACCEPTANCE	
Avoided by others	1
Tolerated by others	2
Liked by others, average for age and grade	3
Well liked by others	4
Sought by others	5
RESPONSIBILITY	
Rejects responsibility, never initiates activities	1
Avoids responsibility, limited acceptance of role for age	2
Accepts responsibility, adequate for age and grade	3
Above average in responsibility, enjoys responsibility, initiates and volunteers	4
Seeks responsibility, almost always takes initiative with enthusiasm	5
COMPLETION OF ASSIGNMENTS	
Never finishes even with guidance	1
Seldom finishes even with guidance	2
Average performance, follows through on assignments	3
Above average performance, completes assignments without urging	4
Always completes assignments without supervision	5
TACTFULNESS	
Always rude	1
Usually disregards feelings of others	2
Average tact, behavior occasionally inappropriate socially	3
Above average in tactfulness, behavior rarely inappropriate socially	4
Always tactful, behavior never socially inappropriate	5

SCORE ____

Thackray
Reading Readiness Profiles

Derek and Lucy Thackray

NAME ____________________ DATE OF TESTING ____________________

SCHOOL ____________________ DATE OF BIRTH ____________________

SEX ____________ CLASS ________ CHILD'S AGE ______ YRS ______ MTHS

Reading Readiness Profile

	PROFILE 1 Vocabulary	PROFILE 2 Auditory discrimination	PROFILE 3 Visual discrimination	PROFILE 4 General ability
SCORE				
RATING				

A				
B				
C				
D				
E				

TEACHER'S REMARKS AND RECOMMENDATIONS

Hodder and Stoughton

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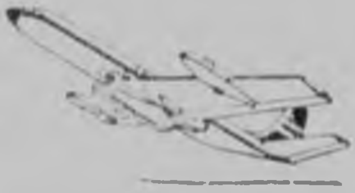
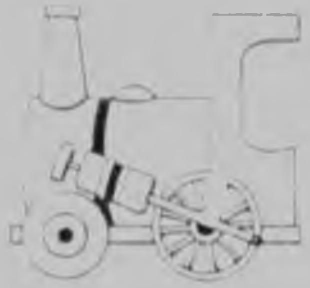
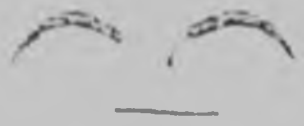
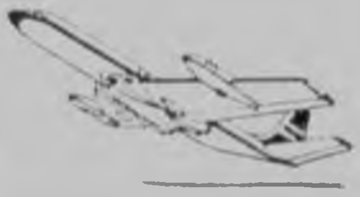






PROFILE A [illegible]



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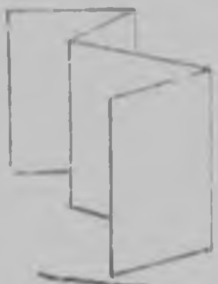

PROFILE 4 Vocabulary

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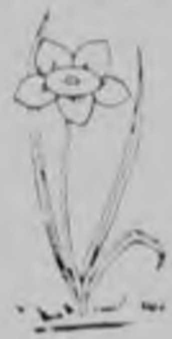
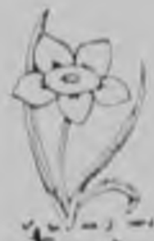
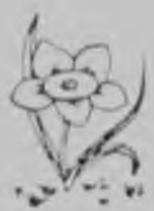
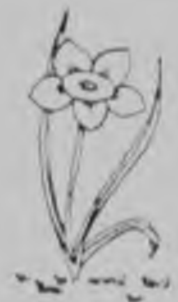

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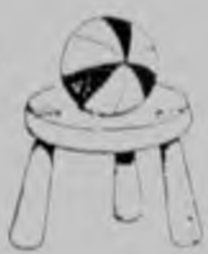
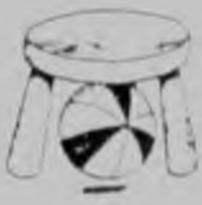
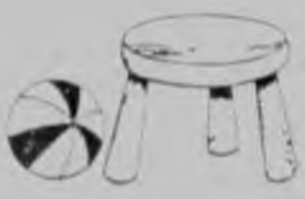
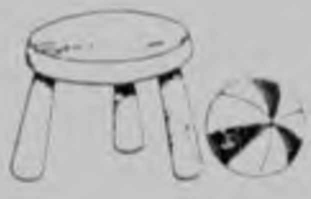

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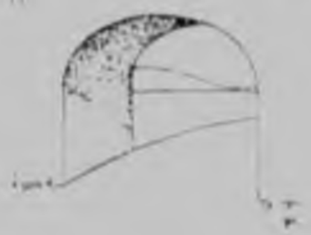
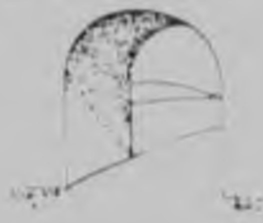
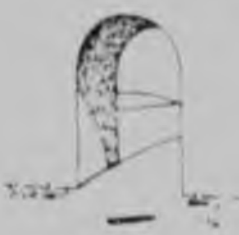
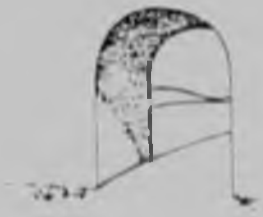

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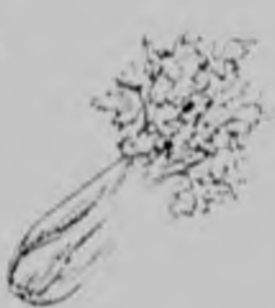
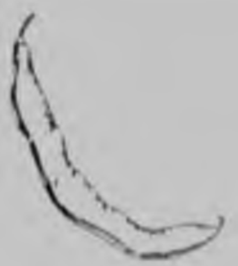
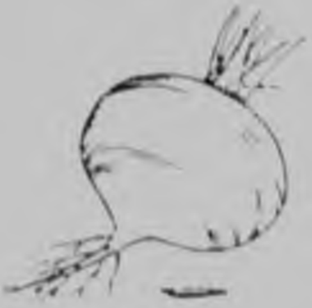
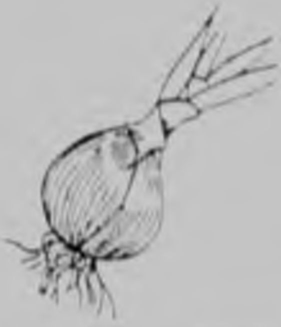

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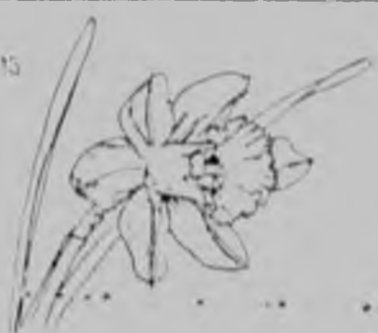
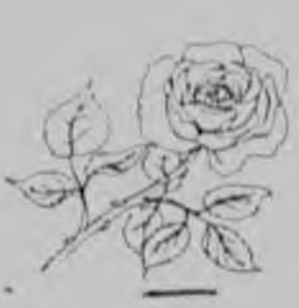
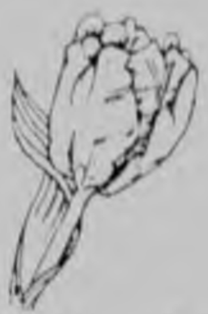
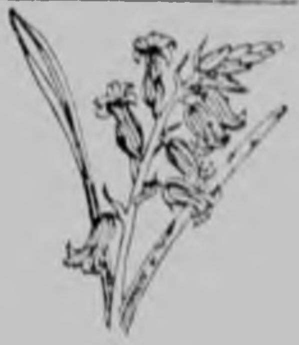

PROFILE of Vocabulary

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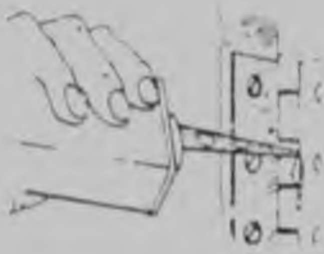

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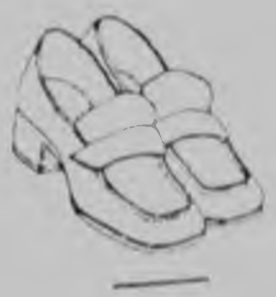
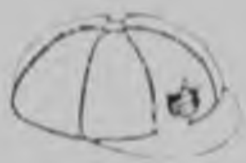
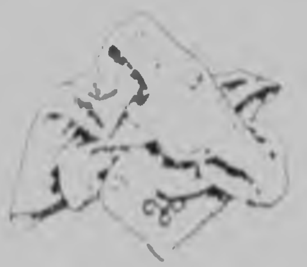
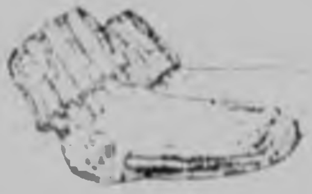

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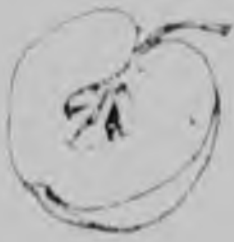
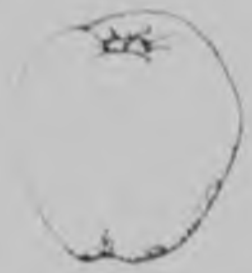
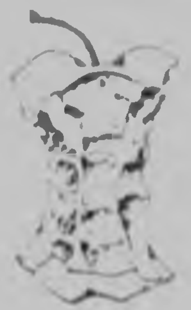
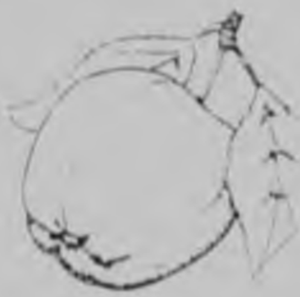

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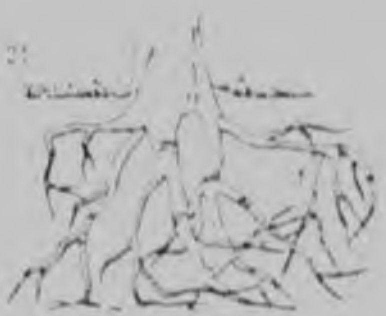
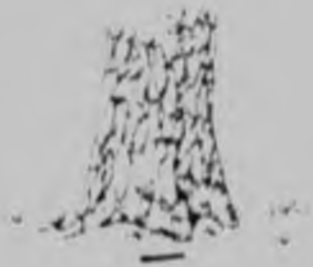
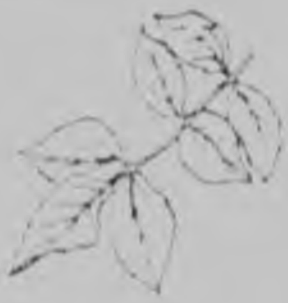
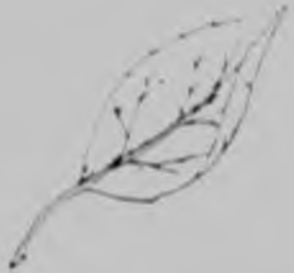

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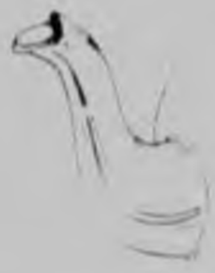
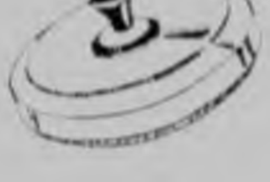
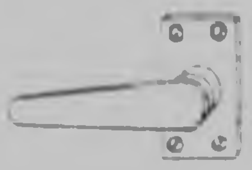
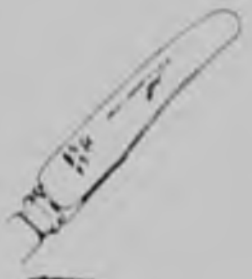

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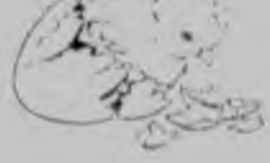
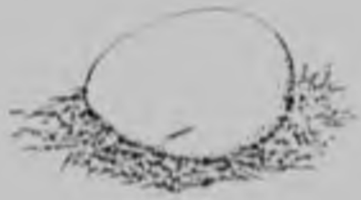
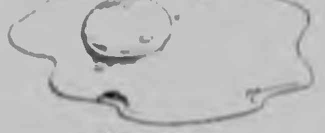
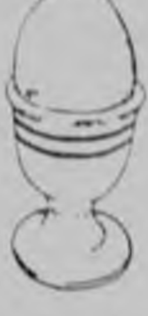

PROFILE 2 Auditory Discrimination

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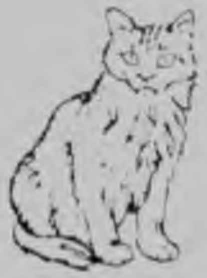

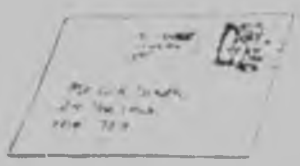

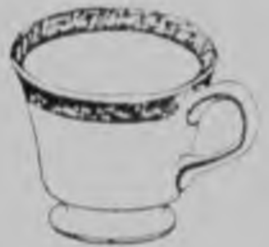

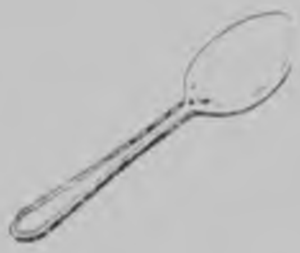

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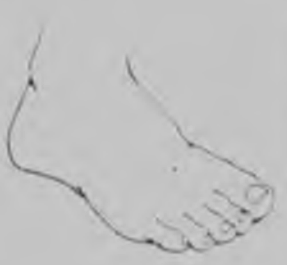

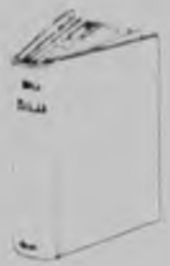

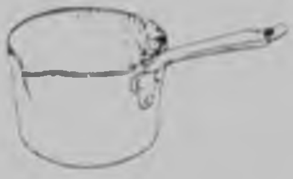

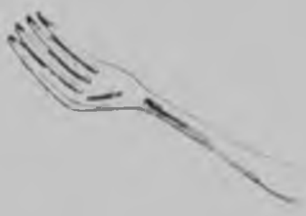

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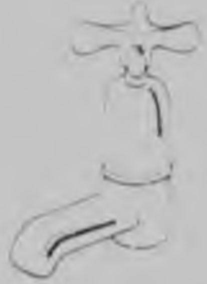

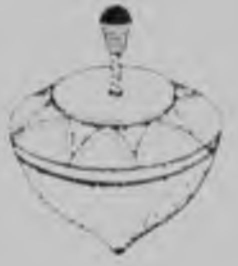

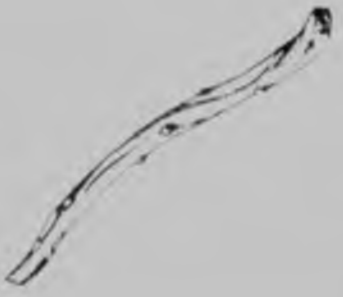

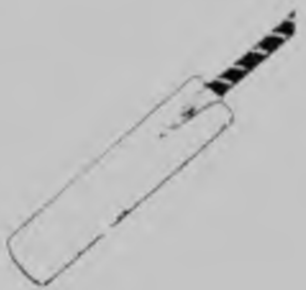

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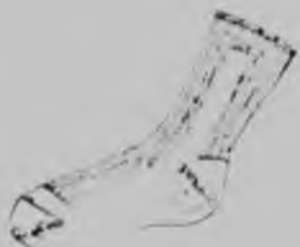

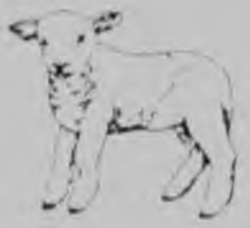

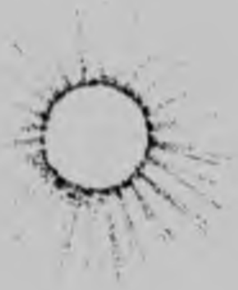

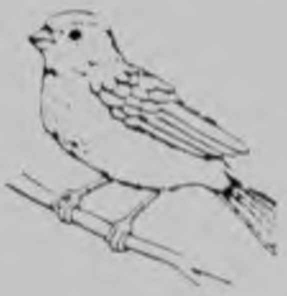

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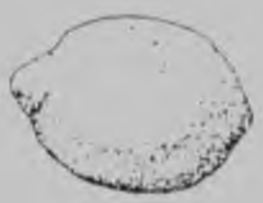

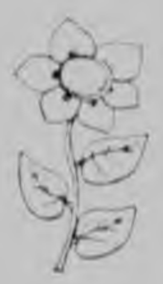

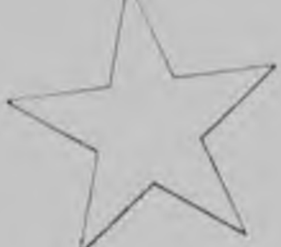

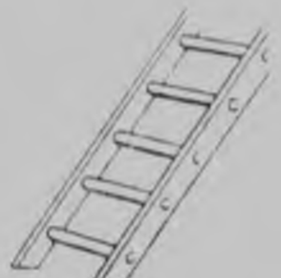

PROFILE 2 Auditory Discrimination

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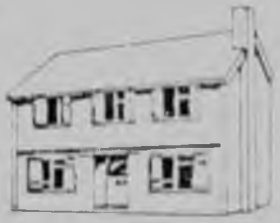
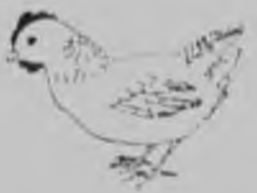
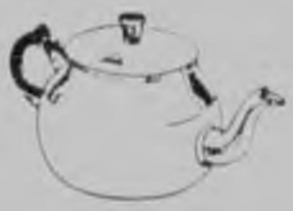
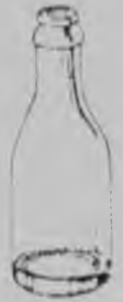

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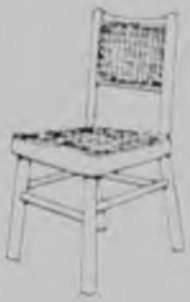
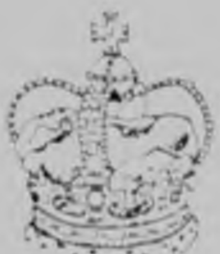
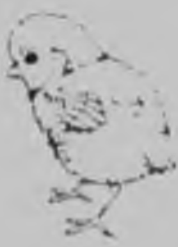
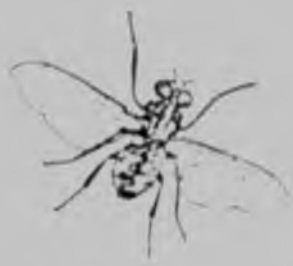

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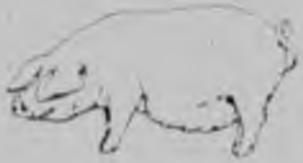
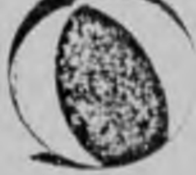
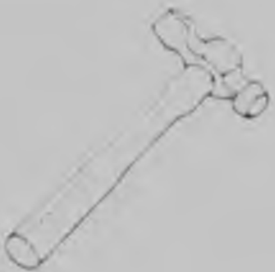
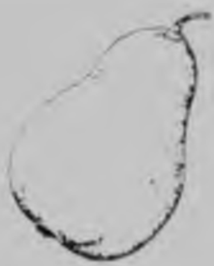

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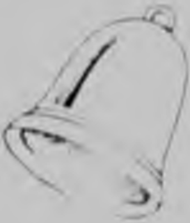
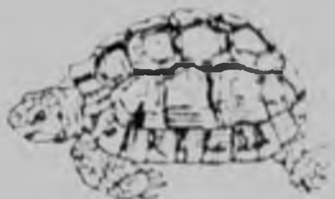
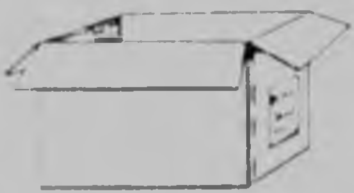
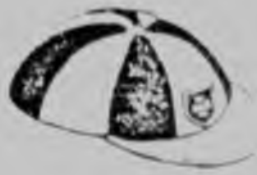

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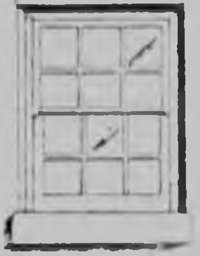
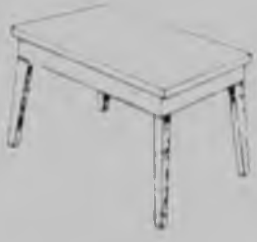
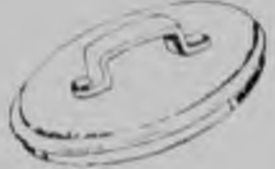
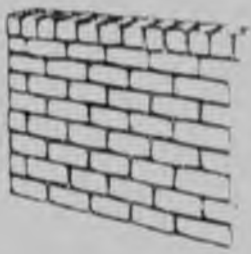

PROFILE 2 Auditory Discrimination

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PROFILE 2 Auditory Discrimination

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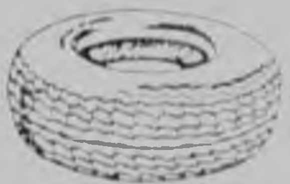
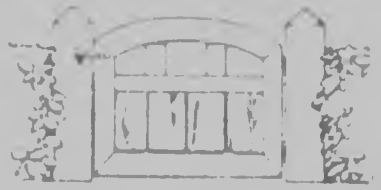

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Score

PROFILE 3 Visual Discrimination

☆	us	use	so	as	us
☆	go	to	go	do	dog
☆	is	it	in	is	us
1	on	no	an	so	on
2	saw	was	sow	saw	sew
3	tap	pat	tap	top	pat

4	bit	hit	bite	tip	bit
5	you	yon	you	nay	yew
6	boy	bay	buy	boy	dog
7	walk	talk	wake	walk	wall
8	will	will	mill	with	wall
9	ship	shop	skip	spit	ship

PROFILE 3 Visual Discrimination

10 even	ever	even	oven	never
11 seen	soon	seep	seam	seen
12 make	wake	mark	make	made
13 love	lone	live	love	dove
14 came	come	came	cane	name
15 goat	gate	goal	goad	goat

FIGURE 3 Visual Discrimination

other	otter	other	there	alter
look	look	lock	loot	book
some	soon	come	some	same
spot	tops	pots	stop	spot
goes	does	goes	goose	shoes
clock	cloak	cluck	flock	clock

22	house	horse	house	mouse	noose
23	these	there	three	these	those
24	heard	heart	beard	heard	hoard
25	better	butter	batter	bitter	better
26	become	because	become	becarne	beacon
27	farmer	farther	farmer	father	firmer

Score ____

PROFILE 4 General Ability

This space is for the child's drawing

Rating

ISBN 0 340 17140 8 Printed in Great Britain for Hodder and Stoughton Educational, a division of Hodder and Stoughton Ltd, Mill Road, Dunton Green, Sevenoaks, Kent, by Chigwell Press Ltd, Buckhurst Hill, Essex
Seventh impression 1979

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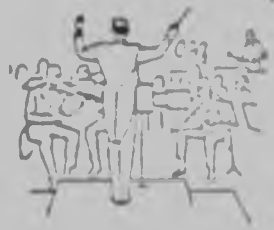

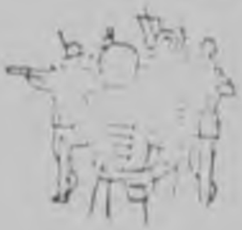

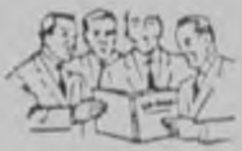

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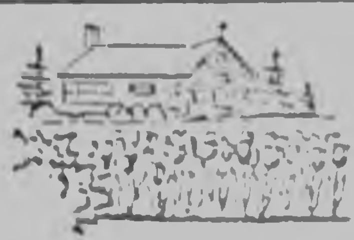

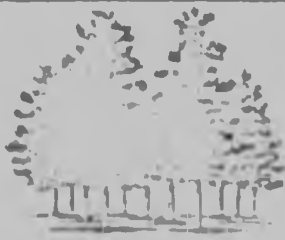

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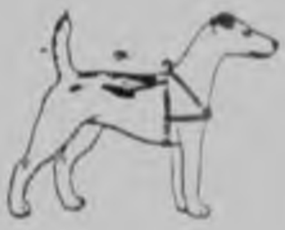

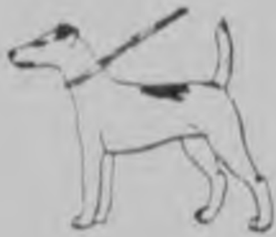

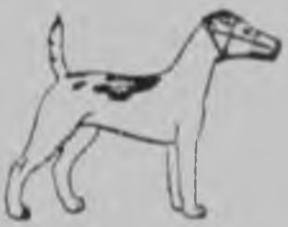

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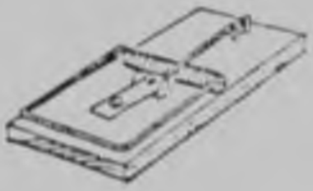

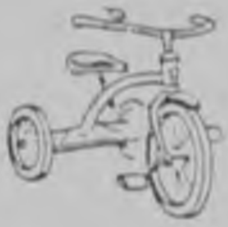

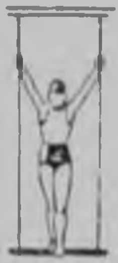

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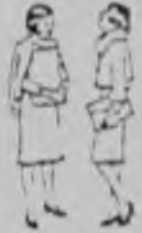

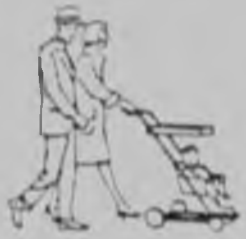

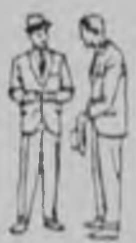

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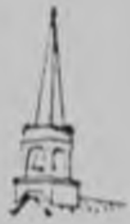

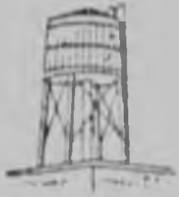

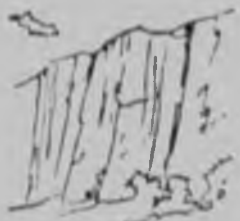

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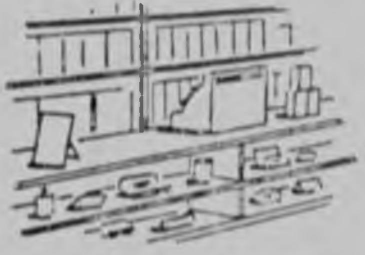

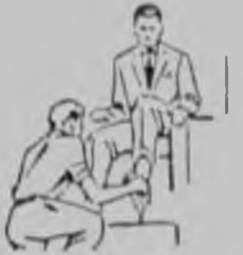

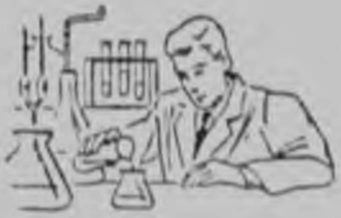

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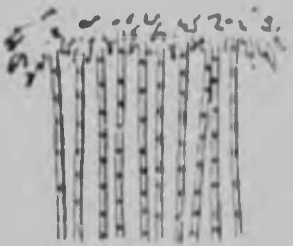

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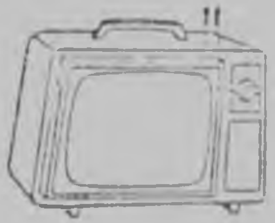

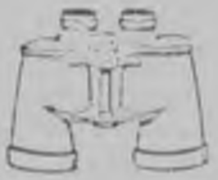

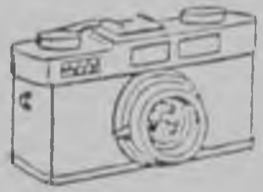

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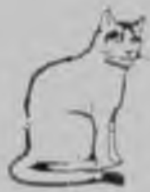

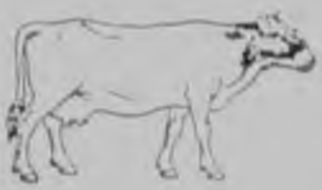

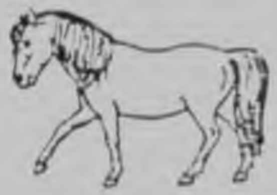

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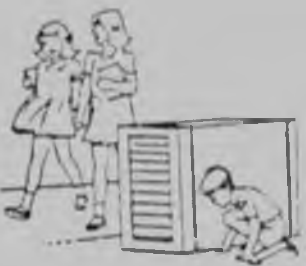

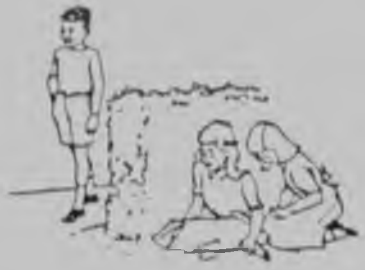

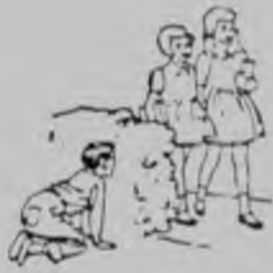

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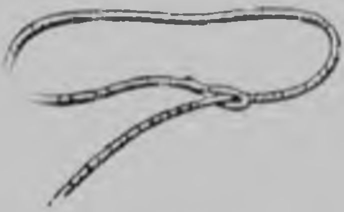

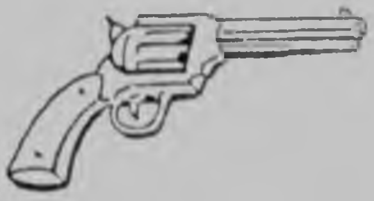

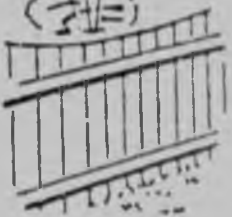

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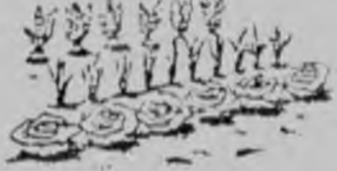

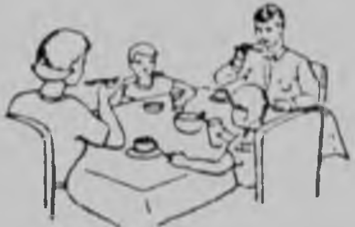

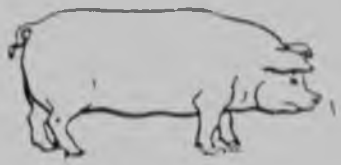

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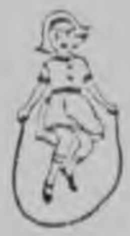
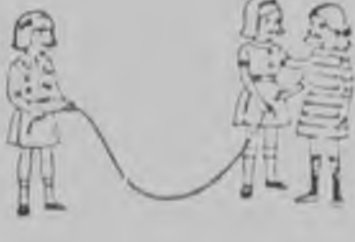
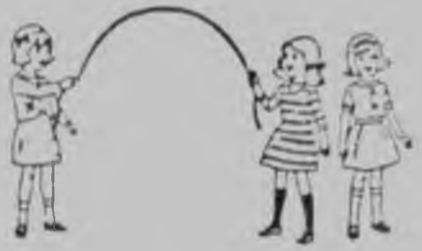

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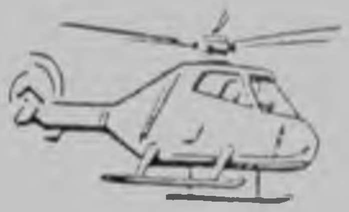
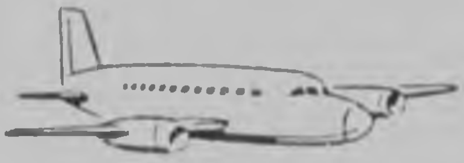
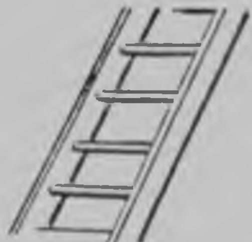

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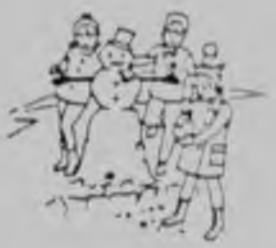
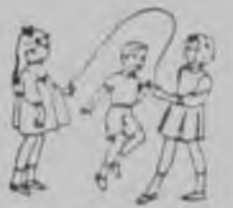
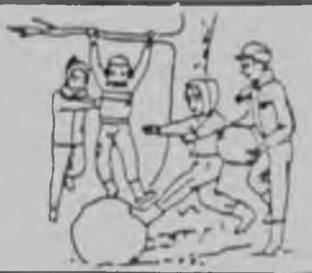

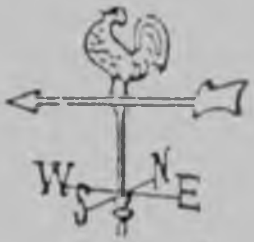

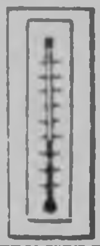
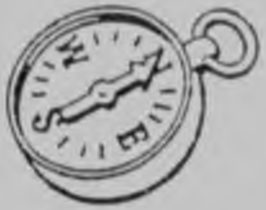

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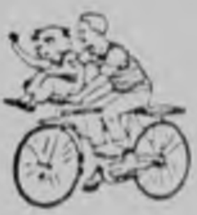
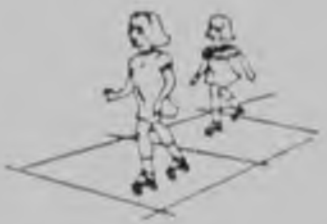
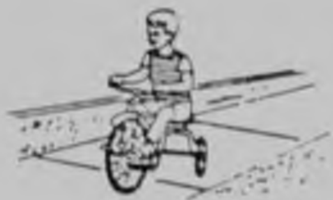

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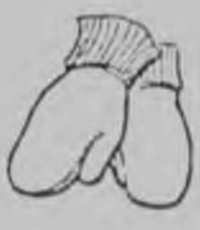
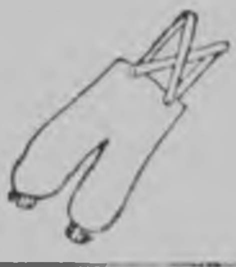
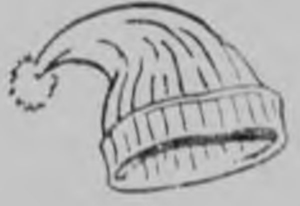

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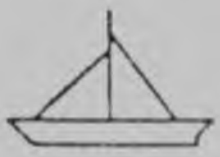
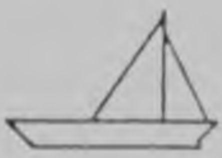
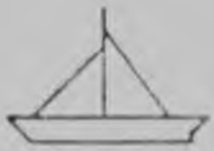
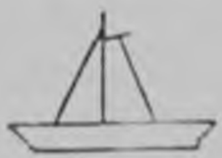

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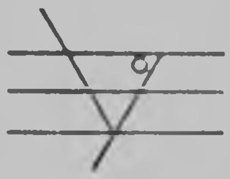
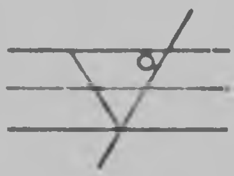
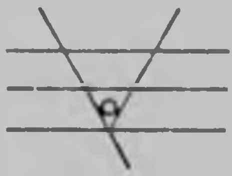
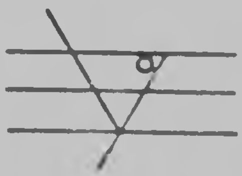

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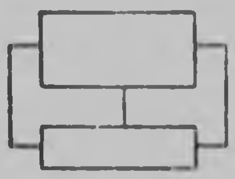
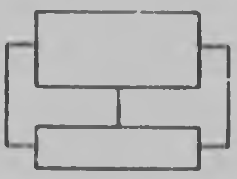
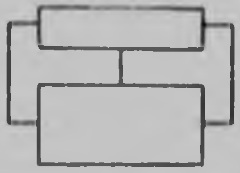
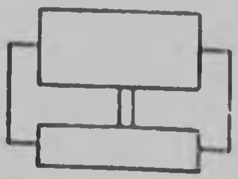

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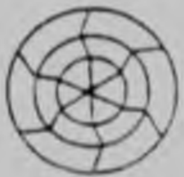
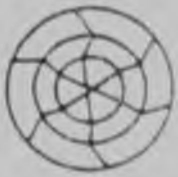
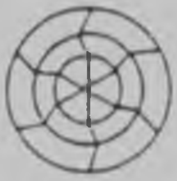
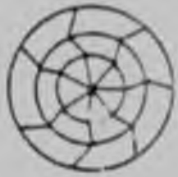

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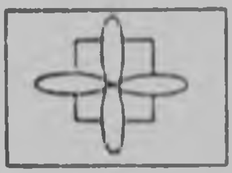
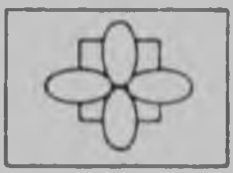
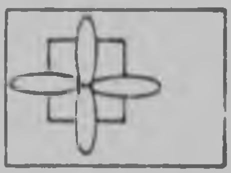
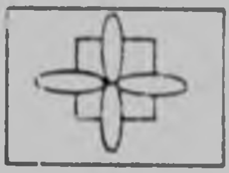

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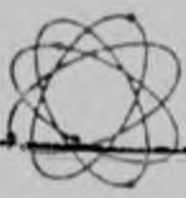
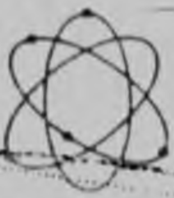
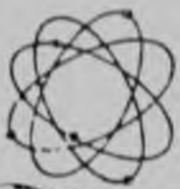
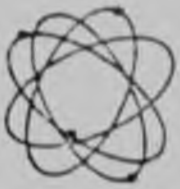

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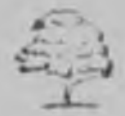
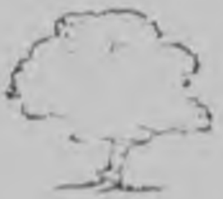
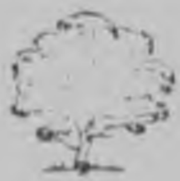
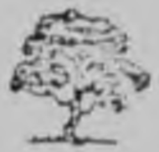

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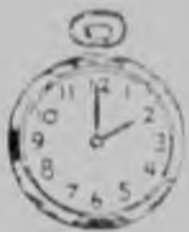
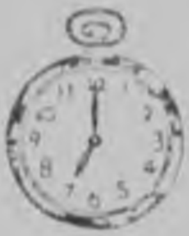
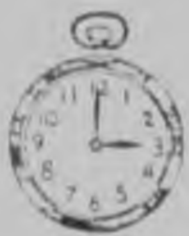
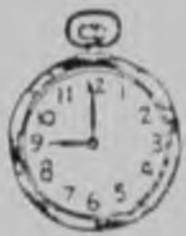

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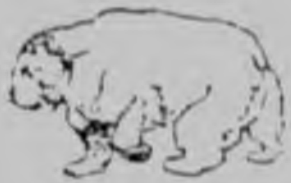
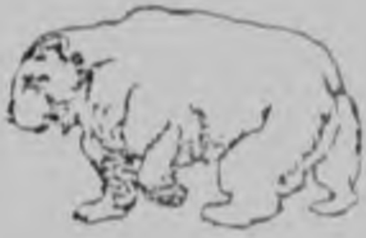
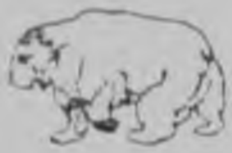
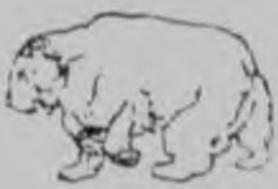

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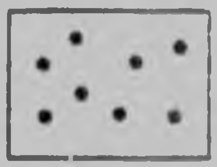
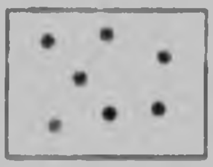
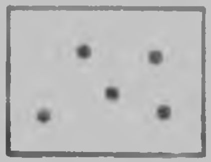
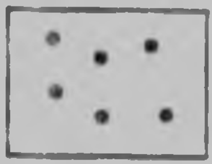

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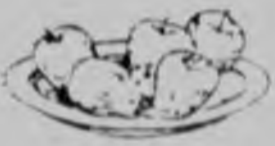
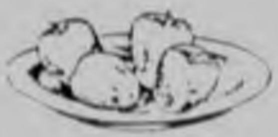
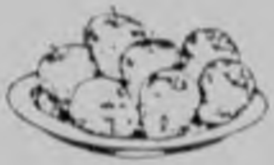
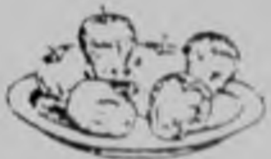

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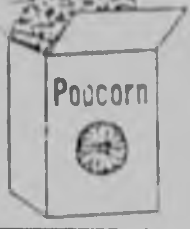

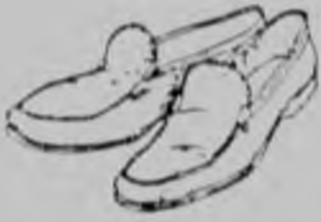
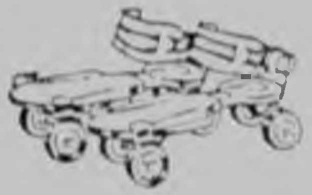
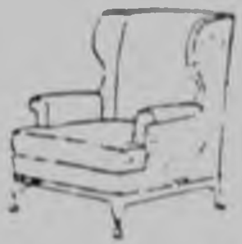

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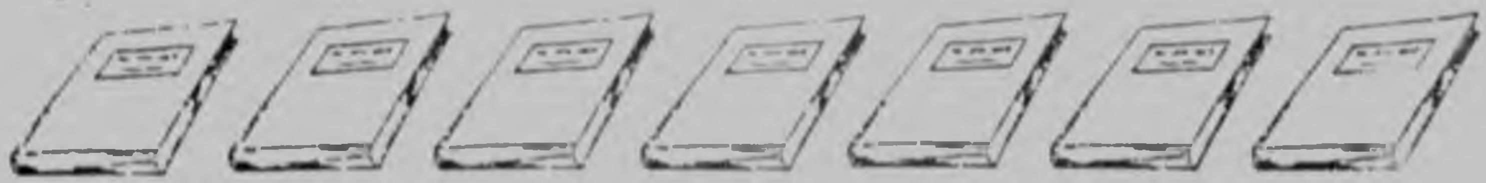

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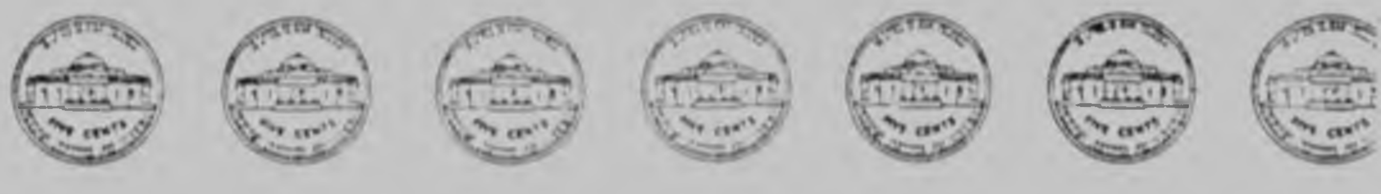

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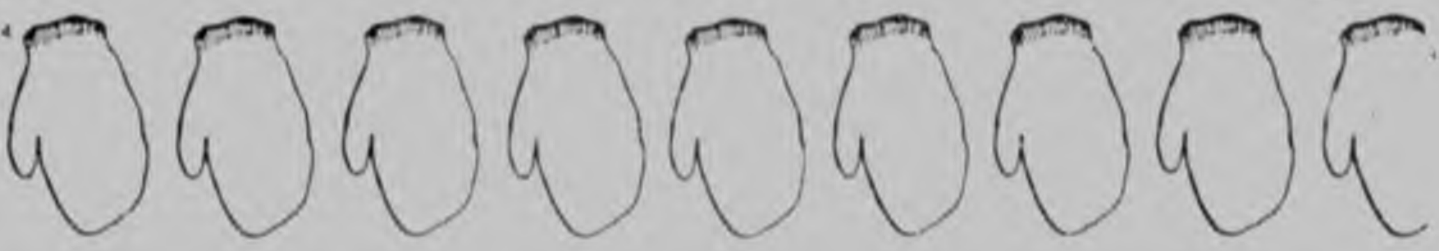

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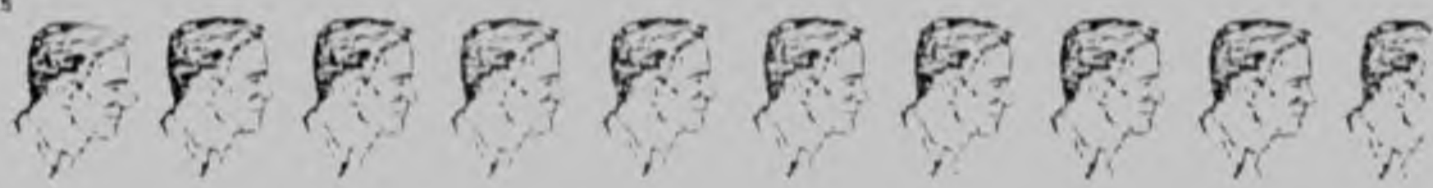

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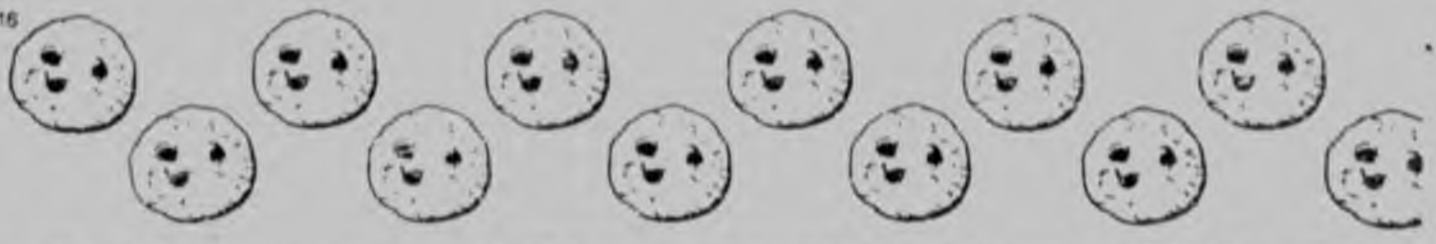

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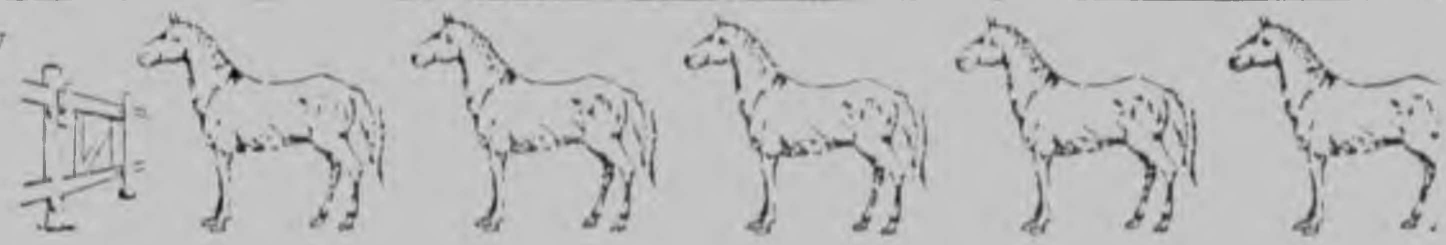

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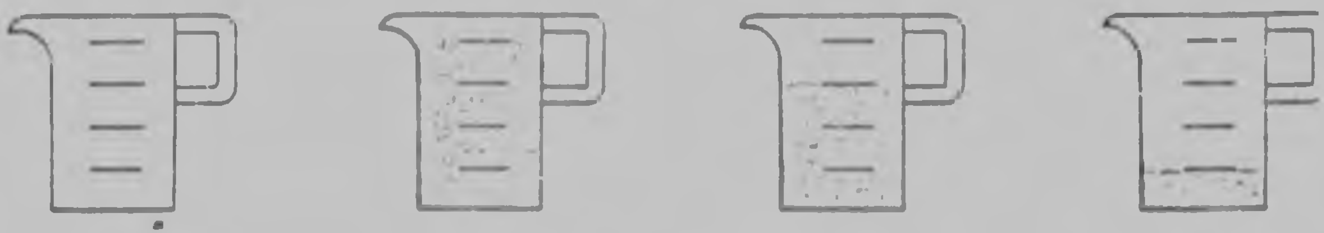

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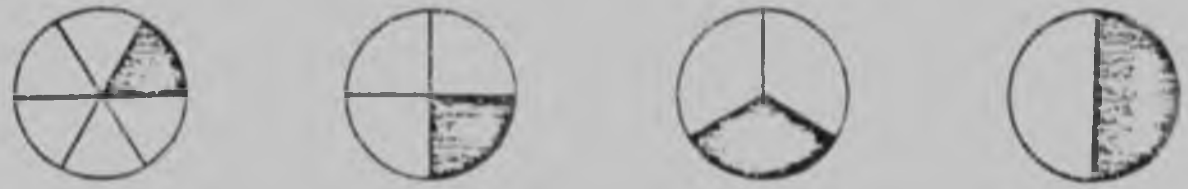

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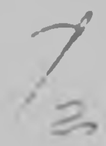

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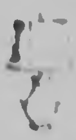

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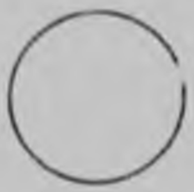
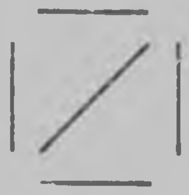
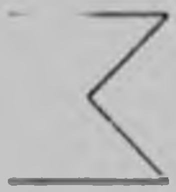
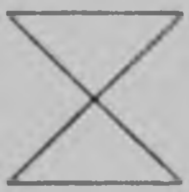
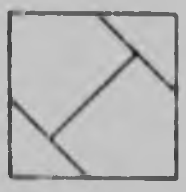
	1 CA	2 VSX
39	4 dm	5 
	7 	8 

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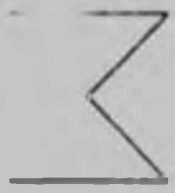	7 	8

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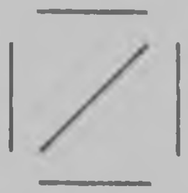
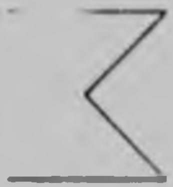
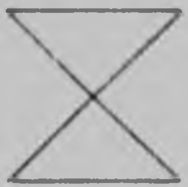
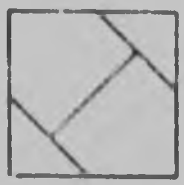
39	4 dm	5 
	7 	8 

APPENDIX F

SCHOOL ADJUSTMENT RATING SCALE

NAME OF CHILD: ------------------------------------

Please put a tick next to the appropriate response on each item.

1) Did the child initially adapt to the routine and unfamiliar atmosphere of primary school in a way which was :

   i) Very confident, secure and happy ----

   ii) Reasonably confident, secure and happy ----

   iii) Hesitant and unsure of him/herself ----

   iv) Weepy and very insecure ----

2) Regarding the integration and acceptance of the class routine, is the child.

   i) Very co-operative ----

   ii) Usually co-operative ----

   iii) Tending to be unco-operative and stubborn ----

   iv) Unco-operative ----

3) When the children in the class are required to get on with certain work by themselves, does the child :

   i) Carry out the assigned tasks independently of the teacher ----

   ii) Occasionally ask for assistance or guidance ----

   iii) Frequently require assistance or guidance ----

   iv) Find it impossible to work on his/her own ----

4) When requested to run errands for the teacher or carry out some duty fo the class, is the child :

   i) Very reliable ----

   ii) Usually reliable ----

   iii) Not very reliable ----

   iv) Unreliable ----

/ ... 2.

5) If asked to carry out a succession of tasks or to bring a number of items to school next day, is the child :

- i) Able to organise him/herself and plan ahead so that everything is according to instruction ----
- ii) Usually able to plan ahead and organise him/herself adequately ----
- iii) Seldom able to carry out a sequence of required tasks ----
- iv) Disorganised and forgetful ----

6) If something unexpected happens, e.g. the mother fails to arrive on time to fetch the child, or a friend lets him/her down, would the child :

- i) Wait patiently without concern for someone to sort matters out ----
- ii) Become a little anxious and apprehensive ----
- iii) Be very anxious ----
- iv) Break down in tears ----

7) Should the principal or another teacher strike up a conversation with the child, will he/she :

- i) Communicate with ease ----
- ii) Find some difficulty in communicating with the person concerned --
- iii) Only answer when spoken to ----
- iv) Be too shy to speak at all ----

8) When the children have to learn new skills or concepts, does this child cope :

- i) Very effectively ----
- ii) Quite well most of the time ----
- iii) Not too well ----
- iv) Inadequately ----

9) If the child is faced with a difficult time-consuming task, does he/she :

- i) Persevere until the undertaking is complete ----
- ii) Usually persevere until the undertaking is complete ----
- iii) Behave erratically while undertaking the task ----
- iv) Give up immediately ----

/.... 3.

10) When the class have a group activity or project, does the child :

- i) Always take the leadership role and show initiative ----
- ii) Now and again display leadership qualities and initiative ----
- iii) Display a lack of leadership qualities and initiative ----
- iv) Always remain a follower ----

11) During interactions with other children, is the child :

- i) Perceptive to their needs and feelings ----
- ii) Sometimes perceptive to other children's feelings and needs ----
- iii) Rarely able to think of others ----
- iv) Selfish ----

12) When the child is given work to complete, is he/she :

- i) Motivated and conscientious, always trying his/her best ----
- ii) Usually keen to give of his/her best.
- iii) Displaying some tendency towards a lack of interest ----
- iv) Disinterested in the quality of work he/she produces ----

Thank you

APPENDIX G

EXTRACTS FROM "A MIDSUMMER NIGHT'S DREAM"

Act II - Scene I
A wood near Athens

Puck Wither wander you.

Fairy
Over hill, over dale
Through bush, through briar,
Over park, over pale
Through flood, through fire,
I do wander everywhere
Swifter than the moon's sphere
And I serve the fairy queen.

Oberon
My gentle Puck, come hither ....
Fetch me that flower, the herb I showed thee once
The juice of it on sleeping eyelid laid
Will make a man or woman madly dote
Upon the next live creature that it sees ......

Puck I'll put a girdle round about the earth in forty minutes.

Oberon
I'll watch Titania when she is asleep
Adn drop the liquor of it in her eyes
The next thing then she waking looks upon ......
She shall pursue it with the soul of love......

Enter Puck

Oberon Hast thou the flower there.

Puck Ay, there it is

Oberon
I pray thee, give it me
I know a bank where the wild thyme blows
Where oxlips and the nodding violet grows.
There sleeps Titania sometime of the night.
And with the juice of this I'll streak her eyes
And make her full of hateful fantasies.

Act II - Scene II (Goes to Titania)

What thou seest when thou dost wake
Do it for thy true love take
Love and languish for his sake
Be it Lynx or cat or bear
Pard or boar with bristled hair
Wake when some vile thing is near ....
(Goes away)

Act III - Scene 1

Men walk in. Bottom comes last with donkey's head

Other men — O monstrous, Help.

Bottom — Why do they run away. To make me afraid. I will sing
that they shall hear I am not afraid ... la la la .....

Titania — What angel wakes me from my flowery bed?
(Looks)
On my first view, to say, to swear, I love you.
Peaseblossom, Cobweb, Moth and Mustardseed

All fairies — Ready

Titania — Be kind and courteous to this gentleman
Hop in his walks, and gambol in his eyes
Feed him with apricots and dewberries
With purple grapes, green figs and mulberries
The honey bags steal from the humble bees
And pluck the wings from painted butterflies
To fan the moonbeams from his sleeping eyes.

Come wait upon him; lead him to my bower ....

Act IV - Scene 1

(They all go to the bower)

Titania (to Bottom) — Come sit thee down upon this flowery bed
While I thy amiable cheecks do coy
And stick musk-roses in they sleek, smooth head
(kiss) my gentle joy ....

Sleep thou, and I will wind thee in my arms
Fairies be gone.
(fairies go) O! how I love thee, how I dote on thee ......
(They sleep)

Oberon (Titania rubs her eyes) — Wake you, my sweet queen.

(rubs Bottom's eyes) — When thou wakest, with thine own fool's
eyes peep.
(Takes off his head).

Titania (wakes) — Oberon, what visions have I seen.

Oberon — There lies your love ....

Titania — Come my lord, and in our flight
Tell me how it came this night
That I sleeping here was found
With this mortal on the ground ....

Bottom (shakes his head) I had had a dream, past the wit of man to say what dream it was ....

(He goes out)

Act I - Scene II

Puck

If we shadows have offended
Think but this, and all is mended
That you have but slumbered here
While these visions did appear ....

So, goodnight unto you all!

EXIT

APPENDIX H

EXTRACT FROM "MACBETH"

Act I - Scene I

First Witch — When shall we three meet again
In thunder, lightning, or in rain?

Second Witch — When the hurlyburly's done,
When the battle's lost and won

Third Witch — That will be ere the set of sun ....

All — Fair is foul, and foul is fair
Hover through the fog and filthy air.

Scene III

Third Witch — A drum! a drum!
Macbeth doth come .....

(Macbeth and Banquo enter

First Witch — Hail
Second Witch — Hail
Third Witch — Hail........

Thou shalt get kings, though thou be none;
So, all hail, Macbeth and Banquo ....

Act II - Scene I

(In the Castle)

Macbeth — Is this a dagger which I see before me,
Thy handle toward my hand? Come, let me
clutch thee;
I have thee not, and yet I see thee still .....

Act II - Scene II

Lady Macbeth — What hands are here! Ha! ....
Will all great Neptune's ocean wash this blood
Clean from my hand? ....

Act IV - Scene I

(Enter the three witches who dance around a cauldron).

All three (all the group) — Round about the cauldron go;
In the poisoned entrails throw.
Toad, that under cold stone

Days and nights has thirty-one
Sweltered venom sleeping got,
Boil thou first in the charmed pot.

Double, double toil and trouble
Fire burn and cauldron bubble.

Fillet of a fenny snake
In the cauldron boil and bake;
Eye of newt, and toe of frog,
Wool of bat, and tongue of dog,
Adders fork, and blind worms sting,
Lizards leg, and howlet's wing,
For a charm of powerful trouble
Like a hell-broth boil and bubble......

Double, double toil and trouble
Fire burn and cauldron bubble.

Cool it with a baboon's blood,
Then the charm is firm and good.

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Author Fabian B R
Name of thesis A structured pre-primary school programme as a bridge between pre-primary and primary school 1985

PUBLISHER:
University of the Witwatersrand, Johannesburg