Differentiation in the school system for Indians in the Republic of South Africa

by

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DECLARATION

I hereby declare that

Differentiation in the school system for Indians in the Republic of South Africa

is my own work and that all the sources I have used or quoted have been indicated by means of complete references.

O. H. Ncoko

November 1992

Potchefstroom
DEDICATION

This dissertation is dedicated to my wife, Sylvia Olga Sizakele and my two children, Vuyelwa Lwandiso and Sibongile Ayanda.

It is also dedicated to my late mother, Patricia Nomawonga and my father, Hope Faith, for their encouragement and insistence on hard work.

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This research concentrates on investigating and evaluating the system of differentiation in the school system for Indians in the Republic of South Africa. This will necessitate the investigation and evaluation of differentiation on all the educational levels of the school system. It is generally accepted that for the child to attain his maximum developmental and educational potential, his particular needs with regard to his interest, ability and aptitude should be catered for by the school system. The question posed here is: "What are the possibilities for differentiation in the school system for Indians in the Republic of South Africa?"

This research aims at identifying those possibilities for differentiation that have shaped the course of development of the Indian education system in the Republic of South Africa. Both the literature study and the interview methods have been used. The interviews which were conducted verified the information derived from literature study, as well as providing new information regarding differentiation in the Indian education system.

Chapter 2 presents a theoretical justification for differentiation in the school system for Indians in the Republic of South Africa as well as a description of the historical perspective for the Indian education system.

Chapter 3 focuses on the description and investigation of practices for differentiation at the pre-primary level and the primary level.
Chapter 4 comprises a description and investigation of the practices for differentiation at the secondary level.

Chapter 5 summarizes the preceding chapters. The findings are presented and recommendations on differentiation are made with a view to effecting improvement.
Hierdie navorsing verteenwoordig 'n ondersoek na en 'n evaluering van die stelsel van differensiasië in die skoolsisteem vir Indiërs in die Republiek van Suid Afrika. Ten einde hierdie doel te bereik sal dit nodig wees dat aandag geskenk word aan die differensiëring op alle vlakke van die skoolsisteem. Dit word redelik algemeen aanvaar dat die kind slegs sy/haar maksimum vlak van ontwikkeling en opvoedkundige potensiaal kan bereik indien sy/haar besondere behoeftes, met betrekking tot belangstelling vermoëns en aanleg, deur die skool bevredig word. Die sentrale probleemstelling van hierdie navorsing is dus: "Tot hoe 'n mate daar ruimte is vir differensiasië in die skoolsisteem vir Indiërs in die Republiek van Suid Afrika."

Hierdie navorsing poog om daardie moontlikhede van differensiasie, wat die weg van ontwikkeling bepaal, te identifiseer in die Indiëër onderwyssisteem van die Republiek. In die loop van die navorsing is daar aan die hand van 'n literatuurstudie en onderhoude gepoog om antwoorde op die probleemstelling te vind. Die inligting wat uit die onderhoude na vore gekom het, het inligting wat in die literatuurstudie bekom is, bevestig. Nuwe inligting aangaande die differensiasië in die Indiëër onderwysstelsel is ook aan die lig gebring.

Hoofstuk twee verskaf 'n teoretiese regverdiging vir die differensiasië van die skoolsisteem vir Indiërs in die Republiek, sowel as 'n beskrywing van die historiese perspektief van die Indiëër onderwyssisteem.
Hoofstuk drie bied 'n beskrywing en 'n ondersoek na die praktyke van differensiasie op die pre-primêre en die primêre vlakke van onderwys aan.

Hoofstuk vier lê weer klem op die beskrywing van en die ondersoek na die praktyke van differensiasie op die sekondêre vlak.

Hoofstuk vyf lewer 'n opsomming van die voorafgaande hoofstukke. Die resultate van die studie word voorgehou en voorstelle word gemaak, ten einde 'n verbetering in die stelsel teweeg te bring.
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1. INTRODUCTION

1.1 INTRODUCTORY REMARKS

Vos and Brits (1987: 29) contend that an education system comes into being when different social institutions combine and co-operate in an organized way for the sake of effective educative teaching of the child, and thus central to this cohesion of social structures is the educationally qualified institution, namely the school. The school, as the social structure, undertakes educative teaching of the child and is also directed at his responsibility to practise his cultural mandate by means of his particular talents. Ruperti (1976: 82) contends that educational institutions, namely the school system, in every community differ according to the kind of education they offer. Each community, therefore, has its particular institutional pattern which is determined by the various educational needs and requirements of individual pupils and communities. Over the years, man has developed schools, inter alia, for technical, trade, commercial, agricultural, art, music and academic education to meet the child's interests and aptitudes and his responsibility to fulfil his calling by means of his particular talents and also according to the educational needs in society (Van Schalkwyk, 1978:93). For the child's needs owing to his abnormal sensory, intellectual or physical equipment and his responsibility and calling to fulfil his cultural mandate normatively, man has established schools for special educa-
tion such as for the blind, deaf, retarded, disturbed and cerebral palsied. In accordance with the child's cultural and developmental differences, there are schools for primary and secondary education, as well as institutions for tertiary education such as colleges and universities.

The learner's developmental differences and scholastic achievements require that there should be differentiation which should suit each child's unique nature. Each child's particular individuality gives rise inter alia to a particular aptitude, interest, physical normality or handicap, cultural level or ground motive, and the school system, as the core of an education system, should make provision for differentiated education, and supply effective teaching to pupils of different abilities (Van Schalkwyk, 1988: 32). The school system, therefore, should make provision for various educational possibilities, as well as for the possibility of both the vertical and horizontal flow of pupils through the school system.

Differentiation or individuality indicates the uniqueness, distinctiveness and peculiarity of each creature (Van Schalkwyk, 1978: 170). This principle means that the education system will note the individual separately and educate him optimally according to his particular individuality. In the same vein, each particular system must open up the particular world of its community for its particular youth, i.e. according to his aptitude, interest, sex, level of development, etc. and furthermore an opening up of its own history, geography, language,
morals, religion, etc. (Van Schalkwyk, 1978:170-171).

In terms of the Constitutional Dispensation of 1983, Vos and Brits (1987: 56) are correct in stating that the education system of the Republic of South Africa had a national education system with four executive systems catering for the whites, blacks, coloureds and Indians, based on the policy of multi-national development for the main cultural groups.

The present generation of Indians is part and parcel of the four population race groups which are found in the Republic of South Africa. They have managed to establish a degree of permanency in the country. Although Indian languages are spoken in some Indian homes, English and Afrikaans are languages used by the Indians in the different spheres of work and employment, and the degree of proficiency varies from province to province. English is, however, the mother tongue of a majority of Indians. Indians, according to Behr and MacMillan (1966:335), moved to Natal in 1860 as indentured labourers to work in the sugar and cotton industries. Having shed the yoke of manual labour, Indians have made significant inroads into the economic and educational influence in South Africa. It is against this background that Indian education will be investigated in general, and the policy of differentiation as affecting Indians in particular will also be investigated.
1.2 PROBLEM ISSUES OF THE RESEARCH

The main problem of the research can be phrased as follows:

* What are the possibilities for differentiation in the school system for Indians in the Republic of South Africa?

The problem of the research will necessitate the investigation of the sub-problems which will be:

* What is the theoretical justification for differentiation in the school system and what are the historical perspectives of the Indian education system?

* What are the present practices of differentiation in the pre-primary and primary school system for Indians?

* What are the present practices of differentiation at the secondary level?

1.3 AIMS OF THE RESEARCH

The aim of this study is to gain a better insight into, and a deeper understanding of, the present educational system for Indians in the Republic of South Africa, so as to determine whether the system of differentiated education functions
effectively or not, and thereby to contribute to a sound system of differentiated education for Indians.

The purpose of this study is therefore fourfold:

* To determine the theoretical justification for differentiation in the school system for Indians;

* To describe the historical perspectives of the Indian education system;

* To evaluate the practices of differentiation in pre-primary and primary education since 1984; and

* To evaluate the practices of differentiation in secondary education since 1984.

1.4 METHODS OF RESEARCH

1.4.1 General

To solve the problems of research, the following methods of investigation were followed:

1.4.2 Literature study

In order to gain a better insight into the phenomenon of differentiated education in general, and its practice for
Indians in the RSA in particular, a literature study was conducted. There are many primary and secondary sources in connection with differentiated education and the education of Indians in the RSA. These sources serve to provide information on differentiation in the South African school system in general and the Indian school system in particular. These include the Annual Education Reports, HSRC Reports, some Departmental Journals such as the Fiat Lux, and journals on education in general.

The literature study was undertaken by obtaining and studying primary and secondary sources, and material was obtained by visiting, inter alia, the Ferdinand Postma Library of PU for CHE and libraries of RAU and Unisa.

1.4.3 Personal unstructured interviews
In order to verify the information on current educational matters derived from the literature study as in paragraph 1.4.2 above, as well as to derive new information regarding education of the Indians in the Republic of South Africa, unstructured interviews were conducted. Here, people (officials) with extensive knowledge and experience in educational matters, were consulted. The criteria for selection of each official interviewed, were: the person's experience, his knowledge of education in general and of the Indians in South Africa in particular, his position in the Department of Education and Culture: House of Delegates, and his academic level.
The purpose of these personal unstructured interviews was dual in nature:

* to determine how closely the views of those interviewed correlated with information obtained from the primary and secondary sources; and

* to ascertain how the people who were interviewed felt about the present system of differentiated education for Indians.

1.4.4 Interpretation of data

The data obtained from the sources referred to above in paragraphs 1.4.2 and 1.4.3 were carefully arranged and interpreted to form a logical structure.

1.4.5 Evaluation of data

After the arrangement and interpretation of data, an objective evaluation of the material was made by using a theoretical model on differentiation. The objective evaluation of data brought the researcher to the point where he could make objective recommendations.

1.4.6 Scientific writing

The writing of this research study was undertaken on the basis of an objective evaluation of the interpreted data.
1.5 DEMARCATION OF THE FIELD OF STUDY

1.5.1 General

This study is confined to differentiation in the school system for Indians in the Republic of South Africa. In order to arrive at a better understanding of differentiation in the school system in general and differentiation in the Indian education system in particular, the theory of differentiation is given in this study.

1.5.2 Demarcation of the field of study in terms of the explanation of words used in the title of this study

1.5.2.1 Differentiation

The concept of "differentiated education" refers to the policy of education provision which accommodates and takes cognisance of the differences among pupils only with regard to ability, aptitude and interest of the individual pupils (HSRC, 1981:39).

1.5.2.2 Education

Van Schalkwyk (1988: 28) defines educative teaching as the unfolding/development of a pupil's potential by the educator/teacher by means of educational content (learning matter) and by the execution of teaching and learning (or aspects of reality) in order to obtain a particular goal. Steyn (1985:253) defines education as the action which enables the receiver of education to acquire certain knowledge, skills and attitudes in order to fulfil his calling in life.
1.5.2.3 Education system

In academic literature there are various and different definitions which exist regarding the education system. Stone (1981: 132) defines the education system as the most comprehensive cultural product of humanity in the area of schooling; and education, as an interwoven structure wherein social structures of a specified community unite with the education institutions to bring about, through co-ordination of contributions and through organization, the accelerated development of the youth within a specific national area, in conjunction with the national demands of time and place. Van Schalkwyk (1988: 10) defines the education system as a composite of various social structures, each of which is responsible for a particular facet of educative teaching. Vos and Barnard (1984: 37) state that the education system, among others, represents a certain cohesion or interwovenness of different social structures such as the State, the family, the school, the church, the political party and the trade union, and when they function in cohesion to make education possible on a wide scale, a system is created in which each element fulfills a certain predetermined or prescribed role in public education. A useful and practical description is that used by Steyn (1988:7) who defines the education system as the logistical framework or structure for effective teaching comprising of various components, namely, the education system policy, education system administration, educational structure and supportive services, which are directed at the educational needs of the target group.
1.5.2.4 School system or educational structure

The educational structure points to the collection of all educational institutions on all four educational levels, namely, the pre-primary, the primary, the secondary and the tertiary levels, and to the development possibilities, in and between the different educational institutions, of the learners according to the differentiated educational needs (Steyn, 1988:32). Vos and Brits (1987:29) contend that an education system comes into being when different social institutions combine and co-operate in an organized way for the sake of effective educative teaching of the child, and central to this cohesion of social structures (education system) is the educationally qualified institution, namely, the school (the term "school" includes colleges and universities).

The HSRC Report (1981: 95) uses the term "educational structure" to refer to an integrated grouping of educational institutions and defines the term as follows: "The educational structure is the framework within which different types of teaching and learning situations are arranged, including also their mutual relationships. The structure makes provision for various educational possibilities as well as for the possibility of both the vertical and horizontal flow of pupils through the system." The HSRC Report (1981: 97) further states that the functions of an educational structure are to create and organize the teaching and learning situations that on the one hand, will provide in the best possible way for the differences in ability, interest and choices of learners, and on the other hand, for the rightful and differentiated demands, especially with regard to vocational needs.
made by society. Bondesio and Berkhout (1987:25) believe that the educational structure, as the central component of the education system, characterizes the school system as a system of educational provision.

1.5.2.5 Indians in R.S.A.

From 1860 onwards Indians were brought to Natal as indentured labourers to work in the sugar and cotton industries. The Indians, according to Behr and MacMillan (1966: 335) differ in religion, language and tradition from the indigenous native and European settler. It was, therefore, clear that separate educational provision would have to be made for them. The South African Indians have displayed a lack of enthusiasm to share in the administration of their own developing education system, preferring to leave the matter in the hands of the State, which has organized it into a single system (Ruperti, 1976: 21). It was finally the provisions of Sections 14 - 18 of the Constitutional Act, 110 of 1983, which vested them with the power of providing for education, amongst others.

There has been a movement to, and settlement in, the Cape Province and the Transvaal over the years and in the Orange Free State in the late 1980's, despite earlier efforts to repatriate them to India. Indians are, therefore, a permanent population group of the R S A.

The South African Indian population is a heterogeneous population, consisting of two main sub-groups, namely, the Muslims
and the Hindus. A variety of languages is spoken, of which Tamil, Hindi, Gujerati, Urdu and Telegu are the most important (Vos and Barnard, 1984:70).

1.5.2.6 Clarification of terms and abbreviations used in this study

- **Interest**: Strong (1955: 138) defines interest as: "... activities for which we have liking or disliking and which we go toward or away from or concerning which we at least continue or discontinue the status quo."

- **Aptitude**: It is a condition or a set of characteristics regarded as symptomatic of an individual's ability to acquire with learning, some knowledge, skill or a set of responses like the ability to speak (Van den Aardweg and Van den Aardweg, 1988:23).

- **Ability**: The sufficient power, capacity to do something, for example, cleverness and mental faculty (Van den Aardweg and Van den Aardweg, 1988:5).

- **National education system**: The national education system is the logistical framework directed at the educational needs of all citizens of a specific State territory, for example, the inhabitants of South Africa, or France or Belgium (Steyn, 1988:7).
- **Formal education**: This refers usually to the purposeful, planned proceedings whereby the education clients or the target group in formal education are equipped with the necessary knowledge, skills and attitudes (Steyn, 1988:10).

- **Non-formal education**: This usually refers to the purposeful, planned proceedings outside the national education system, whereby the target group is equipped with the necessary knowledge, skills and attitudes, and by this is usually meant training in commerce and industry (Steyn, 1988:11).

- **Informal education**: This usually refers to the non-purposeful, unplanned proceedings whereby the target group is equipped with the necessary knowledge, proficiency and attitudes, for example, when a father teaches his son to fasten his shoes (Steyn, 1988:11).

- **Abbreviations**:

  - **HOD**: House of Delegates
  - **CP**: Cape Province
  - **OFS**: Orange Free State
  - **RSA**: Republic of South Africa
  - **HSRC**: Human Sciences Research Council
  - **UDW**: University of Durban-Westville
  - **Unisa**: University of South Africa
  - **RAU**: Rand Afrikaans University
  - **PTR**: Pupil Teacher Ratio
  - **PCR**: Pupil Classroom Ratio
1.6 THE STRUCTURE OF THE DISSERTATION

Chapter 1 is an introductory and orientating chapter, gearing the reader towards a clearer understanding of the subsequent chapters.

Chapter 2 is devoted to the theoretical justification for differentiation in the school system for Indians, and a description of the historical perspective of Indian Education.

Chapter 3 and Chapter 4 focus on the description and investigation of practices for differentiation at the pre-primary level, the primary level and the secondary level. These two chapters are mainly devoted to the description and evaluation of the policy of differentiation at the aforesaid levels.

Chapter 5 is devoted to a conclusion, findings and recommendations. All matters raised in the previous four chapters are summarized in main points and recommendations are made concerning scientific and objective observations made regarding the education system in question.

1.7 SUMMARY

In Chapter 1 the following issues have been addressed: the problem of the research, the aims of the research, methods of research, demarcation of the field of study and the structure of this dissertation.
The following chapter will be devoted to the grounds for differentiation in the school system, and the historical perspective on the school system for Indians.
CHAPTER 2

2. THE THEORY OF DIFFERENTIATED EDUCATION AND THE HISTORICAL PERSPECTIVES OF THE INDIAN EDUCATION SYSTEM

2.1 INTRODUCTION

The system of differentiated education is a general policy coordinated for the whole of the Republic of South Africa. The relevance and the importance of the system of differentiation rests on the fact that each child is guided in such a way within this system that he can benefit optimally from the varied learning experiences on his way to one of the many differentiated occupations or training alternatives (HSRC, 1981:63). From any investigation and reflection on differentiated education develops the question of the theoretical principles and rationality thereof. In this chapter a brief exposition of the theory of differentiation will be undertaken. The historical perspective of the education system for Asians in the Republic of South Africa will also be undertaken. This will necessitate the investigation of the following questions:

* What is the meaning of the terms to be used?
* What are the principles of differentiation and differentiated education?
* What is the purpose of differentiated education?
* What is the technique for differentiation and differentiated education?
* What is the reason for individual differences in pupils?
* What is the scope of individual difference?
* What are the historical perspectives of Indian education in the RSA?
2.2 DEFINITION OF TERMS

2.2.1 Differentiation

The concept of "differentiation" in the Verklarende Afrikaanse Woordeboek (1972) is described as "... onderskeiding van verskille, verskillmaking". The Oxford Etymological Dictionary (Hornby, 1983) describes "differentiate" as "... to show to be different". The term "differentiate" is borrowed from the Latin word "differentia" and the French "differer", which means to differ (Klein, 1966:446; Partridge, 1963:156). The concept of "differentiated education" therefore refers to the policy of educational provision which accommodates and takes cognisance of the differences among pupils. Differentiation, therefore, should be geared to the optimization of educational opportunities, and should take into consideration educational merit, the requirements and the needs of individual learners and the requirements of the society (HSRC, 1981:39).

2.2.2 Education

Van Schalkwyk (1988:28) defines educative teaching as the unfolding/development of a pupil's potential by an educator/teacher by means of educational content (learning matter) and by the execution of teaching and learning (or aspects of reality) in order to obtain a particular goal. Steyn, (1985:253) defines education as the action which enables the receiver of education to acquire certain knowledge and skills in order to fulfil his career. Education therefore, is defined as a conscious, purposive intervention by the educator in the life of an educand, in order to bring him to the full realization, among others, of his physical, cultural,
social, psychological, intellectual, moral and psychic independence (Van Rensburg and Landman, 1984:277). Education is therefore a purposive act, designed to guide the child's humanization on a determined course, with the educand co-operating in full acceptance of his mentor's guidance.

2.2.3 Education System

Steyn (1988:2) contends that in academic literature there are various and different definitions which exist regarding the education system. Stone (1981:132) defines the education system as the national education system, the most comprehensive cultural product of humanity in the area of schooling and education, as an interwoven structure wherein social structures of a specified community unite with the education institutions to bring about, through co-ordination of contributions and through organization, the accelerated development of the youth within a specific national area, in conjunction with the national demands of time and place. Van Schalkwyk (1988:iv) defines the education system as a composite of various social structures, each of which is responsible for a particular facet of educative teaching. Vos and Barnard (1984:37) state that the education system represents a certain cohesion or interwovenness of different social structures such as the State, family, school, church, political party and trade union, and when they function in cohesion to make education possible on a wide scale, a system is created in which each element fulfils a certain predetermined or prescribed role in public education. Stone (1981:130) further defines the education system as an interwoven structure in which social structures of a given
society combine with educational institutions so that, by the co-
ordination with education of each one's contribution to education,
and by organization, they may bring about the accelerated devel-
opment of the young in the territory of a specific State, in com-
pliance with the cultural and natural demands of time and place.
The education system, therefore, can be defined as a structure
which facilitates the provision of education in a planned, in-
tegrated and organized way. A useful and practical description
is that of Steyn (1988:15) who defines the education system as
the logistical framework or structure for effective teaching,
comprising of various components, namely the education system
policy, education system administration, educational structure
and supporting services, which are directed at the educational
needs of the target group.

2.2.4 School system as a component of the education system

The educational structure, as a component of the education system,
points to the collection of all educational institutions on all
four educational levels, namely, the pre-primary, the primary,
the secondary and the tertiary educational levels, and to the de-
velopment possibilities, in and between the different educational
institutions, of the learners according to their differentiated
educational needs (Steyn, 1988: 32). Vos and Brits (1987:29) con-
tend that an education system comes into being when different so-
cial institutions combine and co-operate in an organized way for
the sake of effective educative teaching of the child and central
to this cohesion of social structures (education system) is the
educationally qualified institution, namely the school (the term
'school' includes colleges and universities).
In the HSRC Report (1981:95) the term "educational structure" is used to refer to an integrated grouping of educational institutions, and the Report defines the term as follows: "The educational structure is the framework within which different types of teaching and learning situations are arranged, including also their mutual relationships. The structure makes provision for various educational possibilities as well as for the possibility of both the vertical and horizontal flow of pupils through the system." In the HSRC Report (1981:97) it is further stated that "the functions of an educational structure is to create and organize the teaching and learning situations that on the one hand, will provide in the best possible way for the differences in ability, interest and choices of learners and, on the other, for the rightful and differentiated demands, especially with regard to vocational needs, made by society." Bondesio and Berkhout (1987:25) believe that the educational structure, as the central component of the education system, characterizes the education system as a system of educational provision. The educational structure, therefore, refers to the possibilities of the movement of the pupils, provision by the teachers, physical phases and the curricula, which conform directly to the institutions described above.

2.3 PRINCIPAL THEORIES FOR DIFFERENTIATED EDUCATION

2.3.1 The normative basis of differentiated education

The essence of education lies in the formational involvement which the educator has with the pupil. Van Dyk (1973:1) correctly remarks: "The person initiating the formation searches for a
more comprehensive and far-reaching participation in reality by the learner. This additional participation in reality reveals especially that the mobility of such reality is realised in an ever increasing measure." Kamper (1985:7) contends that the opinion reached by the formed person is inevitably concern for values (norms) which is inseparable from such reality. As a result the state of formation is revealed particularly at the level of natural theory or standard of living. It is clear that in education as a realization of a standard of living in children, one can differentiate - as all people, including children, are not equal, and values for one can therefore be different from the others (HSRC, 1972:122, Kamper, 1985:7).

Formational influence and the normative basis for differentiated education emanates from education in the process of transferring the educational content. By means of subject matter of tuition, the pupil is enabled to come in contact with values and norms which would otherwise have been beyond his reach. The pupil is thus in a position to take a view, intellectually as well as emotionally, that is to say, knowledgeably, discriminately, intentionally and appreciatively, regarding matters such as interpersonal relationships, courtesy (social), aesthetical, political, ethical, religious, national and labour institutions, which are displayed as living-content in the learning content, and which are offered by the teacher as matter for formation (HSRC, 1972:175). Although every school subject contains formational value, there are undeniably school subjects with a factual content which enables the teacher to place at the pupil's disposal, more direct and specific knowledge regarding religious, ethi-
cal, citizenship, intellectual and cultural reality. As a result certain subjects will be compulsory for this reason, seen in the light of the image of adulthood which is striven for (HSRC, 1972: 175).

2.3.2 The anthropological foundation of differentiated education

Differentiated education is based on the anthropological premise that people do not have similar abilities. This qualitative inequality, according to Kamper (1985:8), manifests itself in differences of mental abilities, temperament, emotionality, talent, interest and language command, which indicates that one child, by virtue of his individual difference, will be able to do what another child cannot do, or only partly accomplish. It is self-evident that an education system intended for this inequality should make provision for each child to reach maximum development. "It is given in principle that each person is a particular individualization of the universal attributes of human existence. Individualization or differentiation means development according to the own nature as genetically determined" (Van Schalkwyk, 1977:248).

A system of differentiation consequently makes provision for "difference", on horizontal as well as vertical planes. Horizontal differentiation includes making provision for the groups of educational structures, for example, pre-primary schools, primary schools, secondary schools and tertiary institutions, which in turn can be divided into a number of grades as can be distinguished, for example, by Standard 8, higher grade or Standard
9, standard grade (Van Schalkwyk, 1988:109). Provision is also made for study directions and curricula which in turn lead to differentiated assimilation of what is taught, and differentiated testing and certifying. Vertical differentiation implies that on the basis of the chronological development phases of pupils, educational phases are distinguished, according to which school attendance of pupils is classified (Kamper, 1985:8). The emphasis on individualization in a system of differentiated education has an inherent danger in that the equipollence of students could suffer. The anthropological foundation of differentiated education implies, therefore, for the teacher, two methods of action, namely, to distinguish in his role of giving assistance for the sake of diversification, and to guard against violation of the child's own dignity (HSRC, 1972:122).

2.3.3 The pragmatic foundation of differentiated education

Differentiated education is derived from the diversity in occupations with their various training and proficiency demands (Kamper, 1985:9). It is accepted as starting point that educational matters have the responsibility of enabling the pupil to link up with an occupation or occupational direction. As the learner cannot investigate the whole of the vocational system during his school years, it is imperative that in an education system in which an effective school enlightenment system is integrated, the manpower requirements of the country be noted and the reality of the vocational system in the school be differentiated in the form of human sciences, natural sciences, commerce, agriculture, technical and other study directions. In this way the
2.3.4 The philosophical foundation of differentiated education

Differentiated education is formed by a special view of man and of the child (Louw, 1988:62). The child is not simply a person; he is an individual. He is not simply an example of general humanity; he is a special person-in-the-making (Jooste, 1973:143). Each child is a special and unique person and the potential of each child must be realised fully. Education should, therefore, give pupils the opportunity to develop to the full according to their abilities. The task of the educational planner and the educator in the school milieu is, therefore, to point the child "... towards a norm-determined future and on the way to what he should become while still allowing him to be a child. Formative guidance given to the child through fields of study and subject matter, entails teaching him to face up to his responsibilities with dignity - without trying to avoid them ..." (Jooste, 1973:144).

Van der Merwe (1974:5-6) contends that there are, however, certain inequalities between pupils, manifested in the abilities they are born with - intellectual abilities, temperament, potential interest and emotionality. The inequality among, or the differences between, pupils must be taken into account when education is being planned so that it can be presented according to the pupils' abilities. This recognition of reality, the acceptance of each child's abilities and talent, and his education, with a view to realising all his potential, is fundamental to
education and necessitates differentiated education.

One of the four basic principles of differentiated education is that the manpower needs of the country would have to be taken into account. This does not mean that the child should be sacrificed to the needs of the occupational sector. The world of work may not "...dictate to secondary education as to the number of pupils who must be 'trained' to satisfy the manpower demands in specific occupational fields which have been established by means of estimates." After all, education is concerned with the religious-moral, intellectual and cultural moulding of the child in his work at school, so that, in adulthood, this experience culminates in the ability to take on and carry out tasks independently, as a means to personal fulfilment (Louw, 1988:85).

It is regarded as pedagogically correct that a child should not receive education for the sake of the occupational system because, then "...he would be used as a means to an end, which would make him nothing more than a utilisable and skilled cog in the giant machine of the State." The school's task is rather one of formative education with a view to meaningful employment in the vocational system (Louw, 1988:85). This implies that the major concern in this context must, and indeed should be, the eventual religious-moral and culturally moulded person who, with positive convictions and values, attains fulfilment in life by entering into and fulfilling his task. If the national economy were to demand something else from education with regard to future labour
resources, it would be displaying a narrow and defective view of the future (Louw, 1988:86).

2.3.5 The Christian foundation of differentiated education

One of the greatest wonders of God's creation lies in the fact that no two people are created identical, not even identical twins. It is not only outward, physical differences which are perceivable, but also inner aspects such as aptitude, abilities, interests, drives, aspirations, needs, disposition, feelings, strivings, skills, belief, language, culture, religion, perseverance, behaviour and similar personality attributes which differ from person to person (Coetzee, Malan & Steyn, 1985: 160). Because man is created by God, each person is thus a unique and distinctive being. Schoeman (1979:86) sums up the individualized nature of man as follows: "God created his creatures as distinct, different individualities, each with an individual-typical, own-nature, appearance and manner."

Coetzee, Malan & Steyn, (1985:160) state that this unique nature of man does not only contain particular implications for the teaching and educating of each child, but demands insight in all teachers in handling the multiplicity of individual differences between children. The principle of differentiation is therefore precisely aimed at offering each pupil the fullest opportunity of attaining the greatest possible success from the school situation according to his own nature. It is only through differentiation that a child can develop his intellect and skills to the maximum.
2.4 THE AIMS OF DIFFERENTIATED EDUCATION

The necessity for differentiation within the school context is emphasized by the great educationist Pestalozzi (1746-1827) when he propounds that education should take into account the individuality of each pupil. Since then sustained efforts were put into practice to differentiate at various levels, for example, placing of pupils in proficiency groups, the 'streaming' system which was in operation in Transvaal schools for a number of years, the Winnetka plan, Dalton plan and the project plan as individualization possibilities (Coetzee, Malan & Steyn, 1985:161). Various types of schools were established over many years in order to accomplish differentiation, for example, commercial schools, technical schools, agricultural schools, schools for the deaf and blind, schools for the physically disabled and special schools for the mentally handicapped.

According to the HSRC Report (1972:124) the aims of differentiated education can briefly be stated as follows:

* Education corresponding to the abilities of the pupils, so that they can attain full development.
* Education which will embrace the demands made with reference to after-school vocational training.
* Information to pupils with reference to their education and career choices so that the manpower needs of the country can be satisfied.
* The transfer of a value system to pupils, establishing this through education on a differentiated foundation.
In the HSRC Report (1981:15) a system of differentiated education is approved, as is especially obvious in the fourth principle of the prescribed principles for the provision of education in the RSA:

"The provision of education will be directed in an educationally responsible manner, according to the needs of the individual as well as those of the community and economic development, and will, amongst other things take into account the manpower needs of the country."

On these grounds the HSRC Report (1981:112) recommended a modular educational structure wherein particular emphasis is placed on horizontal differentiation at a specific study level, namely:

* Grade 0: Enriched difficulty grade for gifted pupils

* Grade 1: Normal difficulty grade at school, with a normal amount of assistance

* Grades 2, 3 and 4:

  Grades of increasing assistance in accordance with poor achievement during basic education, or grades of vocational canalizing in after basic education

From the above it can be concluded that the fundamental criterion for the evaluation of a system of differentiated education, is the question to what extent the system ensures the optimal development of the various abilities of the learners, with observance of national needs (Kamper, 1985:11).
2.5 TECHNIQUE FOR DIFFERENTIATION

2.5.1 Differentiation in courses and streams

In this plan there is the division of the heterogeneous school community into an homogeneous proficiency group in accordance with ability and scholastic performance (Brimm, 1963:92). A pupil or student will, therefore, be able to take subjects or courses in a fixed stream. Steyn (1977:13) states that in 1955 the Van Wyk Commission recommended four groups, namely: those pupils with an IQ of 110 and above who take matriculation subjects for exemption; those pupils with an IQ of 100 to 110 with the school-leaving certificate as their goal; pupils with an IQ of between 80 and 100 whose exit point will be Std 8; and pupils with an IQ of less than 80, who will be accommodated through special education. Slavin (1987:294) states that this kind of plan means the grouping of students for instruction by ability or achievement so as to reduce their heterogeneity.

In the first instance, this method embraces homogeneous grouping, meaning the division of pupils into relatively homogeneous groups on the grounds of test achievement and scholastic ability. This method of grouping has the advantage that it eases the task of the teacher in regard to his choice of methods for a homogeneous group. Enrichment of the curriculum is also easier. It also eliminates the danger of giving too much attention to weaker pupils at the expense of the talented pupils, and vice versa. Healthy competition also takes place more readily between such groups. Therefore, no greater demands are made of any pupil than
he is capable of (Coetzee, Malan & Steyn, 1985:162). The positive aspect of this technique of differentiation is that the pupils' individual needs enjoy a great degree of attention, and that in a group of equals, they will develop a more realistic comprehension of their potential and limitations (Brimm, 1963:92).

The negative aspect of this technique of differentiation is the fact that the high achievers gain the most from the practice (Slavin, 1987:293). The plan is of little value in enhancing student achievement. Students low in socio-economic status are discriminated against by being disproportionately placed in low tracks or streams. Good and Brophy (1984:274) contend that this technique substantially reduces the range of IQ or achievement among students in the same class. The students then are similar in aptitude or ability, hence the term homogeneous grouping. The failure by teachers to adjust instructional materials and methods to achieve greater efficiency is one of the reasons for the negative aspect of the plan. Furthermore, homogeneously low performing groups and classes have been observed to experience a slower pace and lower quality of instruction than do students in higher achieving groups.

**2.5.2 Cross-grouping**

Slavin (1987:295) contends that according to this form of differentiation, students are assigned to heterogeneous home room classes for part or most of the day, but are "regrouped" according to achievement level for one or more subjects. The pupil will then choose between the higher grade and the standard grade in
each subject, bearing in mind the conditions for a specific certificate regarding the grouping of subjects. Those pupils, for example, who have entered for the minimum of six subjects, must pass three of these subjects at the higher grade level in order to obtain a matriculation exemption. The required grade in a specific subject can also constitute the criterion for admission at university level.

The choice of subject grade by the pupil places an occupational emphasis and direction on the pupil, for example, a pupil who has Commercial Mathematics on the Standard Grade, cannot expect to be admitted to a School of Medicine.

Steyn (1977:14) states that the negative aspect of this form of differentiation is the question of the degree in which the content of the Standard Grade and Higher Grade can be equated with easy and difficult. Good and Brophy (1984:276) contend that this form of differentiation creates elitism among high achievers and alienation or humiliation among low achievers. On the positive side is the fact that a pupil can take the minimum number of subjects on the Higher Grade, being those in which he has ability and interest, and the rest on the Standard Grade, thus increasing his chance of obtaining a higher aggregate mark.

2.5.3 Tracking

Classrooms are usually heterogeneous with respect to student ability in elementary schools, but they are usually fairly homogeneous in high schools, where students are moved in defined
tracks, for example, academic, general and technical (Kulik and Kulik, 1989:309). This form of differentiation is based on the tracks which are offered in a particular school, with the result that when all the pupils in the school take general subjects, their subject choices and study directions will be limited to those subjects offered in the general course.

Steyn (1977:15) states that the Steyn and Van Wyk Commissions of 1953 and 1955 respectively, emphasized the importance of this type of differentiation, which can be achieved by the establishment of a comprehensive school, or alternatively, by having, amongst others, commercial schools, technical schools and agricultural schools.

2.5.4 Differentiation in time

McLoughlin (1967:12) as quoted by Steyn (1977:1) contends that the point of departure for this form of differentiation is the fact that the lessons and examinations are the same for all the pupils, but a pupil can take a longer period to complete the course/subject, depending on his ability. In the United States of America this system of differentiation is implemented in the so-called non-graded school (Steyn, 1977:15; Wolfson, 1969:16). The non-graded school is the one in which grade-level designations are entirely removed, and students are placed in flexible groups according to their performance level, not their age (Slavin, 1987:295). This plan of differentiation uses team teaching, individualized instruction, learning centres and other means of accommodating student differences in all academic subjects. The
The curriculum in each subject is divided into levels through which students progress at their own rates, picking up each year where they left off the previous year.

Due to the fact that the schools are not divided into standards, forms or grades, a pupil cannot fail. The slow learner will merely complete a component of the course in a longer period than other pupils in a given phase. In accordance with his ability and aptitude, a pupil allocates himself a fixed period of time for the completion of a particular subject.

A gifted pupil can complete a three-year senior secondary phase in two years, whereas a slow pupil may complete the same phase in four or five years, depending on his progress.

2.5.5 Regulation through time-limit

This individual progress-plan is followed and implemented chiefly in the United States of America, whence the pupil himself sets the pace for the handling of the subject-matter. The pupil can request and sit for an examination any time during the school calendar.

In South Africa this form of differentiation played a significant role in the forties and fifties of the twentieth century. This practice was referred to in the Afrikaans spoken language as the "spring" of the standard. Through the permission of the school inspector, a pupil, who completed and passed a year's work in six months, could proceed with the work of the following standard.
Emotional and social maturity, however, serve as the important co-determining criteria for such promotion (Duminy, 1959:149).

Steyn (1977:17) accentuates the following basic differences between differentiation in time and time-limited:

(a) Differentiation in time is the acceleration and retardation within a fixed phase of two or three years, through the initiative of the educator, whilst the subject-matter in the individual's progress plan is taken as single year units in the minimum time-limit through the initiative of the educand.

(b) Examinations in the former are taken at the end of the phase, where a fixed time-point is the same for all the pupils, whilst the pupils/educands in an individual progress plan can request to sit for examination at any time.

2.5.6 Differentiation through enrichment of the syllabus

Steyn (1977:16) contends that on the grounds of normal distribution in accordance with ability, interest and aptitude of pupils from the same chronological age-group, approximately 4% can be described as talented or gifted. In a pedagogical-didactical encounter, special provision should be made for these gifted pupils, whose performance may be retarded by the pace and the content of the syllabus. As these pupils constitute a minority group within the school community, the accepted solution is the placement in an homogeneous group within the classroom situation.
Enrichment through the syllabi is not a quantitative effort but a qualitative subject-matter extension which is directed towards gifted pupils. De Haan, (1963:45) as quoted by Steyn (1977:16), contends that enrichment displays a multiform character in accordance with the broad methods of application, namely in a heterogeneous or homogeneous group, and in stipulated subjects in the curriculum, such as through vocation courses or other organized programs. It is then possible for the pupil to be motivated to the maximum potential of his intellectual ability and knowledge-ability. This form of differentiation takes cognizance of the educational knowledge and professional experience of the teacher/educator.

2.5.7 Differentiation through special classes

Bent (1970:325) states that in primary and secondary school, provision should be made for educands with special abilities or handicaps, through special classes. Here there is the case of gifted pupils who have fulfilled the requirements for the Std 10 certificate during the first half of the year, and then commence with courses at college or university level. This in South Africa is equivalent to the post-matriculation programs offered by private institutions.

Pupils with physical and mental handicaps should be placed in special classes or schools where there is suitably qualified staff, whilst pupils with speech and learning problems should be separated from the rest of the group in order to allow each specific group to meet the demands of their capabilities. Remedial education should be offered to this group by trained staff (Steyn, 1977:18).
2.5.8 Mainstreaming

The practice of removing students with diagnosed physical, intellectual, or emotional impairments, from special, segregated, learning environments and returning them to regular classrooms, is commonly known as mainstreaming (Good and Brophy, 1984:277). Turnbull and Schulz (1979:53) contend that mainstreaming is the creation of new and different educational alternatives for handicapped students rather than the elimination of alternatives.

Most mainstreamed students will adjust well to regular classrooms if they receive acceptance and support from their teachers and peers. Teachers must be willing to begin at the students' present level and provide them with whatever extra help or consideration they may need but at the same time to demand that they apply themselves consistently and progress at a satisfactory rate. They may need a great deal of the teacher's time because they will need closer supervision, unique assignments and detailed feedback (Good and Brophy, 1984:278). The theory of mainstreaming holds that children have a right to, and would benefit from, participation in the least restrictive educational program they can manage (Rich, 1988:243).

2.5.9 Differentiated evaluation

In order realistically to measure and assess the ability and potential of the child, differentiated evaluation should be applied. Differentiation in courses or streams, for example, demands differentiated evaluation in order to determine the potential, in-
37.
tellectual ability, specific aptitude and the school progress of each pupil. In an heterogeneous grouping, use can be made of graded examination papers (Coetzee, Malan & Steyn, 1985:164). Furthermore, differentiation will have to be applied to higher, standard and lower grade examination papers. This will serve to distinguish between the very bright pupil and the average pupil within the same grade.

2.5.10 Differentiated extra-mural activities

Acknowledging individual differences should also be applied in the extra-mural activities of the school (Coetzee, Malan & Steyn, 1985:164). The school should attempt to involve every pupil in at least one activity in which the pupil is interested and for which he shows some aptitude. The demands made on the individual pupil in participating in a particular extra-mural activity should, however, be judged against the background of his ability and aptitude.

2.6 INDIVIDUAL DIFFERENCES IN PUPILS

2.6.1 Introduction

Concepts such as ability, aptitude and interest are generally used to categorise the pupils in different groups. As an educator, the teacher in a pedagogical-didactical situation should, be in possession of the basic knowledge of the significant individual characteristics of the child. As a person with specialized train-
ing, he has to obtain and interpret information regarding the educand by means of standardized methods and techniques. The success of education depends on adapting teaching to individual differences among learners (Corno and Snow, 1986:605).

Due to the fact that the whole of differentiated education rests upon differentiated ability, aptitude and interest, the occurrence of individual differences is discussed in this section.

2.6.2 Causes of individual differences

Steyn (1977:19) contends that individual differences in people of all ages can be attributed to the influence of the following factors: heredity and environment, race and nationality, and gender.

2.6.2.1 Heredity and environment

The relative weight carried by these two determinants in the development of specific personality traits, is a matter on which researchers have not yet reached consensus.

According to Jensen (1969:1) the American education system rests upon the "traditional" approach that individual differences in general intelligence, as determined by intelligence tests, can be ascribed to a one-sided emphasis on environment and cultural factors. Burt (1958: 24) pointed out that one must not lose sight of the fact that heredity factors form a co-determinant in the development of intelligence among other things. Jensen (1973:355)
concluded that genetic factors carried twice the weight of environmental factors in determining intelligence level. Shockley (1972: 299) although in support of Jensen's ideas, pointed out the unscientific method of using "identical" twins to illustrate the influence of qualitative educational stimulation in specific environments. Coincidental duplication of certain genes in "identical" twins is not very noticeable but can be responsible for I.Q. differences of up to 10 points. The result is that this difference in I.Q. is attributed to environmental factors, whereas genetic variables are the actual cause.

A large group of researchers agree that heredity and environmental factors play an important role in the development of personality traits such as intelligence, general and exceptional aptitudes, interests and affective factors - without an attempt to determine the relationship quantitatively (Husen, 1974: 2).

From the time of the joining of genes during conception, foetal growth in the uterus is influenced by bio-chemical variables, which can be the most important environmental influences on the hereditary intellectual potential of the child. Piaget (1953: 361-363) states that the innate biological component is influenced by maturation, organic development, experience, practice and social interaction. Kruger (1972: 49) contends that genetic intellectual ability is in essence intelligence in potency, formed and sharpened (refined) by environmental influences within the confines determined by inherited potential. The extent to which this sharpening takes place depends on the educational quality of the stimulation received by the child especially in the home en-
vironment (Hirsch & Costello, 1970:84). Gordon (1986:70) states that the influence of the home is not a simple one characterized by the child's relationships with other householders, but is complicated by a wide range of outside agencies such as the subsistence tasks of the adult community. Schibeci (1989:14) justifiably identifies three classes of educational environment; the home, the school and the peer group, as representing the major non-personal variables which are thought to influence student achievement.

Steyn (1977: 22-23) summarizes the conclusions of various researchers as follows: heredity and environmental factors both play a role in the development of personality attributes. Because of the interwovenness of these two factors, it is not possible to express the quantitative proportional influence of each. Heredity factors are more apparent in the genetic transfer of specific physical characteristics, while environment plays an important role in the forming of the personality; although mental age increases fairly constantly with the increase in chronological age, there are still individual differences in the tempo of development, and in the mental qualities. Differences in pupils in the same I.Q. group can be ascribed to the quality of educational stimulation. Greater inter- and intra-individual differences, with reference to general abilities, are found in children in the exceptionally gifted group, than in less gifted children.

It is, therefore, essential for pupils to have the opportunity of taking their subjects on different levels or grades; the stability of specific talents such as music, art, mechanical and ling-
uistic abilities, make prediction possible with regard to future accomplishment, and a leaning towards emotional stability might well be present in the child as an hereditary factor, but the environment has the greater influence in developing it.

2.6.2.2 Race and nationality

The occurrence of individual differences in racial groups was one of the most prominent research themes in the 60's and 70's in the U.S.A. It was found that Negro children starting school generally scored up to 20 I.Q. points lower, in intelligence tests, than white children (Samuel, 1976: 273). General scholastic progress is also weaker in the former. Various explanations for this phenomenon, as well as efforts to rectify it, were made accordingly.

Samuel (1976: 283) attributes the difference in I.Q. scores to the atmosphere created by white and Negro examiners respectively. Both white and Negro children achieved lower test results in the presence of Negro examiners. Lack of ability to motivate pupils to optimal performance and the use of ineffective testing techniques may thus be partially responsible for interracial differences in I.Q.

Pines (1969: 14) refers to the project "Head Start" which was launched in the U.S.A. to enable Negro children, growing up in culturally deprived slum areas, to be prepared for school readiness by stimulation programs. This program did not, however, result in permanent I.Q. improvement and scholastic performance.
In giving a reason for this, Pines (1969: 173) quotes the case of a child who joined the program at the age of 4 years. The child's initial I.Q. rose from 97 to 104 and dropped back to 97 after two years. Initial scholastic improvement showed the same lowering tendency.

Various researchers indicated, however, that the lower I.Q. in Negroes, as compared to whites, is due solely to the quality of the educational environment (Gage, 1972: 312). Mercer (1973: 89) supports Jensen's (1969) findings that individual differences within a specific race are due 80% to hereditary factors and 20% to environmental factors, but Mercer differs in stating that differences between races are pre-eminently due to environmental factors. Bent (1970: 316) indicates that genetically determined biological differences are not present in specific population groups, which could, for example, result in higher accomplishment. Bent indicates that greater individual differences exist between members of a specific population group, than exist naturally between race or nationality groups. Changes in environment, cultural background and socio-economic conditions open the possibility for members of any race or nationality to attain the same accomplishments on grounds of biological factors.

2.6.2.3 Gender

No empirical study has indicated the superiority of males to females in intelligence tests. Tobin and Garnett (1987: 91) argue that a considerable amount of research in education has focused on gender differences and school learning. In science education,
for example, there is concern that girls are not achieving as well as they might. Throughout the world, schools perpetuate the gender inequalities of their cultural and economic environments, irrespective of the type of educational system, official goals or the extent of schooling (Finn, Dulberg & Reis, 1979:476; Lemmer, 1988:126). The school is a formal agent of sex role socialization that is transmitting predominant social values as regards sex roles. Lemmer (1988: 127) attributes this ambiguity to unofficial as well as official influences exerted by the curriculum, which operates on two levels, one intentional and the other unintentional and unexamined. Davies & Meighan's (1975:171) definition of the hidden curriculum is useful: "The hidden curriculum comprises those aspects of learning in schools that are unofficial, or unintentional, or undeclared consequences of the way in which teachers organise and execute teaching and learning."

In an appraisal of the curriculum in the South African context, Buckland (1982) points out both the existence and crucial influence of a hidden curriculum in South African schools.

There is evidence to show that, in certain respects, single-sex schools show less stereotyping than mixed schools with regard to subject choice (Harvey & Stables, 1986: 163). Marland (1983) suggests that these differences are consistent with two of the most likely ways in which socialisation produces sex-stereotypical attitudes in pupils:

(a) the adolescent develops attitudes which are reflections of what he or she thinks peers feel, and tries to behave in a way calculated to win approval from them, and
(b) the chances of women teachers in mathematics and physical science teaching in girls-only schools is greater than in mixed schools. It is therefore likely that successful role-models will encourage girls towards non-typical sex choice.

Consideration should also be given to the question of learning and teaching styles. If the language of the classroom, its topics, its discipline, its methods of encouragement and criticism, and learning materials are boy orientated, then it would probably be better to educate girls separately (Harvey & Stables, 1986: 164). Interests and attitudes are as important as knowledge in laying a firm foundation at school (Smail & Kelly, 1984: 87).

2.7 SCOPE OF INDIVIDUAL DIFFERENCE

2.7.1.1 Interest

The aim of this paragraph is to review interest as the scope for individual difference among pupils. To arrive at this aim, interest will be defined, the types of interests will be classified and the role of interest in education will be stated briefly.

2.7.1.2 Definition of interest

Interest is the deliberate, voluntary focusing of attention, concern and activity on a particular person, object, event or sphere. Interest is directly related to what a person can do and has already learned and experienced. Interest has a subjective dimension in that it is related to a person's values and the inten-
sity of the interest is indicative of the need for self-actualization in the direction of interest (Van den Aardweg & Van den Aardweg, 1988:120). Strong (1955:138) contends that interest is an expression of one's reaction to his environment. The reaction of liking and disliking is a result of satisfactorily or unsatisfactorily dealing with the object. Interest is defined: "... activities for which we have liking or disliking and which we go toward or away from, or concerning which we at least continue or discontinue the status quo." Block (1971: 17) defines interest as a voluntary engagement of the pupil in additional learning tasks if free to make a choice, and it is (subjectively) the individual's liking, enthusiasm, positive view, preference, and desire. Gumede (1989: 82) holds a similar view and he defines interest as a deliberate direction of attention and as a completely voluntary attitude. Similarly, Coetzee (1975: 1) defines interest as a spontaneous attraction towards or preference for certain activities, as well as a spontaneous dislike of other activities.

Another definition of interest is given by Smit (1984: 284) who sees interest as a dynamic inclination of an individual to look for a specific object or action, or to do something with which need satisfaction can be brought about. To Smit, interest is dynamic and not static. It is something that changes. It is true that interests (or attitudes) are labile in young children (Vrey, 1979: 73) but there is evidence that from adolescence to adulthood, interests are relatively stable as a result of vocational information that has become available to pupils at this stage (Strong, 1943: 380; Gumede, 1989: 82).
The characteristics of interest are summarized by Jackson and Messick (1978: 584) as follows:

* they are acquired reaction or tendency to like or dislike a certain activity or object for the purpose of satisfying a certain need,

* they are persistent, especially after adolescence,

* they are characterized by intensity in the sense that differential preference for various activities depends on the extent to which the activity satisfies a particular need, and

* they are characterized by bipolar variables of acceptance and rejection, and by a state of indecision, where both poles have equal power for the individual.

2.7.1.3 Evaluation of interest in the light of differentiation

It has already been argued that interest patterns are objectively measurable by means of interest questionnaires. The items of the questionnaire should consist of details of general as well as occupational activities for which pupils must indicate preferences (Stoops, 1958:66). A questionnaire where the pupil has to indicate his preference according to titles of occupations, places unrealistic demands on the pupil's limited knowledge of activities in a large variety of occupations. It is therefore the task of the guidance officer to provide scientifically re-
sponsible criteria in the selection of psychometric aids, upon which diagnostic and prognostic vocational guidance activities are based.

Croubach (1970: 481) contends that the interest questionnaire fulfils an important role in the establishment of self-knowledge in the pupil and makes guidance possible with regard to educational and occupational choices, in conjunction with objective information about other personality traits. In the establishment of self-knowledge by objective determination of interest, manifesting interest is verified. A boy might, for example, dismantle motor-car parts hoping for peer group acceptance rather than showing a specific interest in a technical direction (Stoops, 1958: 55).

In interpreting the results of an interest questionnaire, the guidance officer should bear in mind that a pupil might indicate certain items in the questionnaire as preferences on a subjective and prejudiced basis, and thus his true interest would not be reflected. The interpretation of interests is more complex than that of aptitudes, because interest is closely bound to the emotions (Alberts, 1974: 66). The role of parents and other adults in occupational identification can have a strong positive or negative influence in developing interest patterns in the child. Note should also be taken of the fact that the underprivileged pupil often displays little enthusiasm for exploring new fields of interest, as a result of a history of failure, and the deprived adolescent, who experiences a lack of quantitative and qualitative educational stimulation, may also reveal a weakly differentiated interest pattern.
High demands are made on the guidance officer, not only when a pupil's interest profile shows little differentiation, but also when the various fields are widely divergent, as in the case of intellectually gifted children, who reflect a high interest in more than one field. The successful handling of this case requires analysis of the pupil's abilities, aptitudes, scholastic history and other personality traits.

2.7.2 Aptitude

2.7.2.1 Definition of the concept aptitude

Aptitude can be described as a natural tendency, fitness, capacity or potential to fulfil or complete a specific task. Aptitude is the potential an individual possesses which enables him to attain a certain level of competence after practice and/or training. Aptitude refers to underlying potentialities on the basis of which certain abilities can be developed (Van den Aardweg & Van den Aardweg, 1988:120). Adams (1965:151) cites the definition of aptitude from Warren's dictionary (1934) as follows: "It is a condition or a set of characteristics regarded as symptomatic of an individual's ability to acquire, with learning, some (usually specified) knowledge, skill, or a set of responses like the ability to speak the language, produce music, etc." This definition of aptitude includes all specific cognitive abilities and even creativity (Gumede, 1989:25).

Similarly, Hahn and Maclean (1955) cited by Cottle and Downie (1970: 207) regard aptitudes as latent, potential, undeveloped
capacities to acquire abilities and skills and to demonstrate achievement. Van der Westhuizen (1979: 86) sees aptitude as a potential ability that enables a person to attain a specific level of proficiency. Super (1957: 198) defines aptitude as the psychological factors, each relatively stable, unitary and independent, which contribute in varying degrees to success in various occupations.

The concepts of aptitude, qualification and achievement are often used as synonyms. Jones (1970: 60) however points out the differences as follows: on grounds of qualifications and abilities, aptitude predicts the possible degree of development which can be attained with the aid of teaching and training; qualification indicates the present practice of specific skills; and achievement refers to the result of an action. Alberts (1974: 42) defines qualification as follows: the individual's acquired knowledge, understanding and insight in certain specific areas, which have developed according to aptitude, interests, other personality qualities and learning opportunities.

2.7.2.2 Aptitude in the light of differentiation

Myers (1927: 4) stated that general aptitudes are normally spread, so that all educable persons as a group manifest average aptitudes in various activities. A small percentage of cases is centred around the lowest and topmost poles of this distribution curve. Hereditary and environmental factors will determine which aptitudes can be developed to the highest qualification. Accordingly pupils differ intra-individually as well as inter-individually with regard to specific aptitudes (Steyn, 1977: 40).
In a pedagogical-didactical situation, aptitude which has been developed to certain qualifications, will only have prediction value if the quality thereof is perceived or determined by means of objective testing. The economic utilization of time and manpower, as well as the need for a scientifically objective judgement in determining general and specific aptitudes, lead to the development of standardized aptitude tests. Prediction of educational and occupational success can also be made by careful interpretation of aptitude test results in conjunction with factors such as motivation, interest and other personality qualities (Williamson, 1965: 111, Myers, 1927: 227). The physical and psychic totality of a person must also be taken into consideration.

Keller (1948:86) states that in occupational guidance of pupils, the guidance officer should bear in mind the following limitations of general aptitude test results: "Aptitude tests certainly do not reveal aptitude in highly specific occupations, but they do seem to mark out large areas of occupations and give the subject some first clues as to favourable occupations." Super (1957: 198) concurs with this argument and indicates that a large number of individual differences are found in successful persons in the same occupations. Differences of opinion could occur in determining norms for success in an occupation.

In conclusion it can be stated that the person fulfils a single criterion for success in the occupation. Further, a pupil with average intelligence and specific mechanical aptitude and interest, could make a greater success of an occupation in this direction, than a pupil with above average intelligence, average mechan-
anical ability and a lack of interest in this occupational activity. In order correctly to interpret the role of aptitude in a pedagogical-didactical situation, and to give the correct guidance to pupils, specialized training as an educator is required, especially a grounding in the concepts, aims and methods of occupational guidance (Steyn, 1977: 43). In the system of differentiated education, aptitude will be of assistance in placing the pupils in a correct stream or grouping, and will help the guidance officer in choosing the correct technique to be employed so that the pupil can reach his maximum potential.

2.7.3 Ability

2.7.3.1 Concept of ability

The Concise Oxford Dictionary (1929) defines ability as "the sufficient power, capacity to do something ... cleverness, mental faculty." This potential could indicate physical abilities, such as muscle power and endurance, and in the education situation it applies particularly to psychic aspects which in turn point particularly to intellect (Kruger, 1974:72). Ability is a physical or mental power or faculty which develops gradually over the years, enabling an individual to deal effectively with his environment (Van den Aardweg & Van den Aardweg, 1988:5).

Spearman (1904), as quoted by Anastasi (1968:327), proposed a two-factor theory of intelligence. According to Spearman, all intellectual activities share a single common factor, called the general factor 'g'. Later, Spearman acknowledged the presence of
factors which are specific to certain activities (Skemp, 1979:195). Cattell (1940), as quoted by Cattell & Butcher (1968: 18), did not concur with the single general ability factor 'g' and proposed two types of intelligence: fluid intelligence and crystallized intelligence. Fluid intelligence (gf) relates to non-verbal or non-scholastic forms of abilities (Jensen, 1980: 539). These non-verbal abilities refer to the ability to adapt to new situations (Butcher and Lomax, 1972: 89). Crystallized intelligence (gc) on the other hand refers to cognitive performance which is mainly verbal, such as formal reasoning, number facility, experiential evaluation, and verbal comprehension (Jenson, 1980: 538).

Guildford (1968:10) carried out a factor analysis of all aspects which play a role in intelligence, and illustrated this by means of a three-dimensional structure of the intellect. The three main aspects of the model are: thought processes (evaluation, convergent thought, memory and cognition), thought products (unities, classes, relationships, systems, transformations and implications) and thought content (figure, symbolic, semantic and behaviour).

In classifying intellectual ability according to content, Guilford (1968:29-32) differentiates three types of intelligence, namely: concrete, abstract and social intelligence. Occupations where concrete intelligence plays an important role, are motor mechanics, machine operators, engineers, artists and musicians. Two forms of abstract intelligence are symbolic and semantic contents. Symbolic abilities are especially noticeable in language and mathematical tasks, whereas semantic abilities are important
in dealing with verbal concepts. Social intelligence presumes particularly the understanding and evaluation of behavioural patterns. This form of intelligence is of particular importance to teachers, social workers, politicians and other community leaders.

2.7.3.2 Ability in the light of differentiation

During the various stages of the pupil's school career, his intelligence quotient (I.Q.) will display both the diagnostic and prognostic values for the guidance officer. When a pupil attains much lower scores in the verbal sub-tests of the intelligence test, than in the non-verbal, it has definite diagnostic value (Kruger, 1972: 57). In the first instance the cause may be of a physiological nature, such as, organic cerebral dysfunction. A typical characteristic of a pupil with this problem is the inability to think in the abstract and an attachment to concrete concepts. A further deduction which could be made from a significantly lower verbal than non-verbal ability, is that the pupil could be the victim of inadequate educational stimulation. This situation is found not only in low, culturally deprived socio-economic areas where qualitative linguistic and apperceptive stimulation is lacking, but also in high socio-economic milieus where this neglect takes on a more subtle form (Steyn, 1977: 30). A lack of educational stimulation could retard development towards abstract thought, although the child might possess good genetic intellectual potential.

The guidance officer should have further knowledge regarding the influence of specific personality traits on pupils, which could
have an important influence on intelligence and academic achievement, namely: purposefulness, motivation, interest, self-confidence, etc. and other positive qualities, as against lack of motivation, feelings of inferiority and other characteristics of a negative self-image which adversely affect intelligence actualization and academic achievement (Steyn, 1977:31).

To a large extent, ability determines the maximum level of training and schooling of which a person is capable. Because various occupations demand different training requirements, the guidance officer should be familiar with the school grade required for entrance into specific occupational groups.

2.7.4 Conclusion

One of the prerequisites for the implementation of more effective grouping practices in schools and classrooms falls under the rubric of teacher training - the principle of group organisation and group dynamics, the handling of student diversity, and decision making for assignments of students to instructional groups (Calfee and Brown, 1979:179-180).

The model for the evaluation of the practices for the implementation of the policy of differentiated education will be given in the following paragraph, in order to indicate that differentiation enhances the student's progress by way of the educational mobility. A discussion of the means by which students are assigned to teachers for instruction, will be given. This will be based on the principle theories for differentiated education,
amongst others, the normative basis for differentiation, the anthropological foundation for differentiation, the pragmatic foundation of differentiated education and the Christian foundation of differentiated education.

The evaluation model will show whether the aims of differentiated education are achieved through the maximum development of the child. This will further show that education must correspond to aptitude, ability and interest in order to have maximum benefit for the child, while taking into consideration the manpower needs of the country. This will serve to indicate how the policy of differentiation is being implemented in assisting the child through the educational levels.

The model of evaluation will also entail the methods or technique employed in the process of the maximization of the child's potential in the educative encounter. The model will detail methods that teachers can use to optimize classroom grouping plans to deal with student commonality and diversity within the school system.

2.7.5 Theoretical model for evaluation of differentiation in the school system for Indians in the RSA

The practice of differentiated education in the school system for Indians could be evaluated by using the following model:

2.7.5.1 Grounds for differentiation

Differentiated education should:
* Cater for differences of sex;

* Provide for differences in aptitudes;

* Provide for differences in abilities;

* Provide for differences of interest;

* Consider the differences in age and level of development;

* Cater for gifted children;

* Cater for abnormalities;

* Provide for emotionally deprived children;

* Cater for the practicalities of the school;

* Cater for differences in religion and philosophy of life;

* Make provision for cultural differences;

* Make provision for normative differences.

2.7.5.2 Means of differentiation

Differentiated education should take into account the following means of differentiation (Keikabile, 1991:24):
INDIVIDUALIZATION: Is the nature and ability of every pupil taken into account in schools?

GROUPING: Is any grouping done on the basis of interest, ability and aptitude?

STUDY DIRECTIONS: Are there study directions or courses to choose from for pupils?

2.8 HISTORICAL PERSPECTIVES OF INDIAN EDUCATION IN SOUTH AFRICA

2.8.1 Introduction

For the education of the Indians in South Africa to be placed in proper perspective, it is of paramount importance to provide some information on the general education structure in the Republic of South Africa. Education in the Republic is administered on the basis of ethnicity. The reasons for this division are, among others, social prejudices, history, cultural differences and economic rivalry (Naidoo, 1989: 103). The history of education for Indian South Africans relates largely to events in the provinces of Natal and the Transvaal, for it is only in these two provinces that their numbers justified the establishment of separate schools (Van Rensburg, 1975:123). In the Cape Province, Indian children have been educated with Coloured children and there have been too few Indians to warrant the provision of education.
Indians came to Natal in 1860 at the invitation of the British Government, to work as indentured labourers in the sugar plantations in Natal (Naidoo, 1989; 103). Indians arrived in South Africa bringing in their own value systems, cultural norms, religion and language. From the beginning they tried to internalise the new environment in which they found themselves.

2.8.2 Early missionary effort in education

The development of formalised Western education for Indians in South Africa can be traced to the early missionary efforts. Father Labou established a private school for 30 pupils in 1867. This was followed by the establishment of schools by other missionaries like Revd Ralph Scott of the Wesleyan Mission Society, and Revd Joseph Barker of the Church of the Province of South Africa (Naidoo, 1989:104). In the Transvaal prior to 1902, education of Indian children was undertaken exclusively by missionary effort with the Revd John T Darragh of the Anglican Church and the Revd Charles Phillips of the Congregational Union being closely associated with Indian education.

There is apparently nothing specifically stated in the indentures entered into between the governments of India and South Africa regarding the education of the children of Indian immigrants (Kuppusami and Pillay, 1978:53). For almost a decade after the Indians' arrival, what little secular education there was, was due entirely to missionary zeal (Van Rensburg, 1975: 123). Father Labou opened the first private school for 30 pupils
in 1867. Revd Ralph Scott of the Wesleyan Mission Society estab-
lished a day-school for children in 1869, and an evening school
for older pupils in Durban. The Church of the Province of South
Africa also opened an evening school under Joseph Barker for Af-
ricans and Indians employed by the Umzinto Sugar Company. By 1872
only 73 boys and 15 girls were receiving education in the 'three
R's', whilst there were about 930 Indian children of school-going
age; over 90% were, therefore, still not at school (Van Rens-
burg, 1975: 123).

2.8.3 The Indian immigrant school board and colonial education

The Lieutenant-Governor, Lord Musgrave, appointed a commission in
1872, to investigate the need to educate the children of Indians.
He emphasized the need to assist owners and managers of the sugar
plantations in providing education for Indian children. The report
recommended that any education scheme should be operated without
regard to sect, party or creed. As a result, the Lieutenant-
Governor, Lord Keat, approved the attendance of Indian children
at white schools, and by 1875 this practice had become the offi-
cial policy (Van Rensburg, 1975:123).

Act 20 of 1878 of the Natal Legislature, provided for the cre-
ation of the Indian Immigrant School Board whose function was to
administer and promote the education of indentured Indians, thus
excluding the children of about 200 Indians who had come from
Mauritius as well as those of the "passenger Indians", a commun-
ity that had entered South Africa free of any indenture agree-
ments. These children attended the schools for whites.
The Board was set up in 1879 with the Colonial Government's annual grant of 1500 pounds. In order to be effective, it was realized that communication with the local Indians was essential. To achieve this goal, the services of George Dunning from the Government of Madras were secured. He was proficient in Tamil, Hindustani and English, and was required to inspect and make recommendations concerning the educational needs of the Indian community (Naidoo, 1989:105).

A number of problems faced the Board as its activities were restricted to the coastal area around Durban, for example, the school drop-out rate was high and education for girls was minimal. Coupled with the above, Indians of a socially more advanced class were reluctant to send their children to the Board schools. There was also a shortage of teachers. The aim of education during this period was to develop in pupils a minimum degree of literacy. The following syllabus for standard one will provide some idea of what was expected of pupils (Van Rensburg, 1975:123,124):

**English:**
- Read from a Standard 1 book
- Memorise 20 lines of simple verse and know the meaning

**Writing:**
- Write ten easy words from dictation

**Arithmetic:**
- Notation and numeration up to 1000; simple addition, subtraction and multiplication up to the six times table

By 1894, the number of Board schools had increased to 26 and the enrolment to 2452 pupils.
The Constitution Act of 1893 accorded Natal responsible government in 1894. Law 20 of 1878 was repealed, the Immigrant School Board was abolished and Indian education was brought under the control of the Education Department of the Natal Colony. By the turn of the century, provision for education was made up to standard four level. The curriculum consisted of the "three R's", geography, gymnastics, drawing and needlework. The grave educational disabilities suffered by the Indians of Natal was highlighted by the commission appointed by the Natal Government in 1909. These included overcrowding and shortage of schools and trained teachers (Van Rensburg, 1975:124).

After the Anglo-Boer War, the new colonial government in the Transvaal immediately began to devote attention to the education of non-whites as a matter of policy (Naidoo, 1989:105). The Transvaal's first education ordinance of 1903 made provision for the establishment, maintenance, control and inspection of government schools for non-white children, and State aid to approved private schools, including those founded by the churches.

In the Transvaal, Act 25 of 1907 provided for free education for both the coloureds and Indians on the same basis as that for white children (Van Rensburg, 1975:124).

2.8.4 The implications of the South African Act of 1909 for the education of Indians

Under Article 85 of the Union of South Africa Act of 1909, the provinces retained the right to control primary and secondary
education with the full support of the central government (Naidoo, 1989:107). The haphazard progress made prompted the government of India to negotiate with the S A government for improved facilities for the education of Indians. The Agent-General for India in South Africa, Sir Srinivasa Sastri, played an important role in these negotiations. The result was the Cape Town Agreement of 1927 between India and South Africa. The "upliftment clause" of the agreement stated that the Union government took the view that, in the provision of educational and other facilities, the considerable number of Indians who remain part of the permanent population should not be allowed "to lag behind other sections of the people" (Van Rensburg, 1975:124).

In 1928, a commission of inquiry into education for Indians was appointed. This resulted in the implementation of certain reforms such as the discontinuation of religious and vernacular instruction in State schools and the maintenance of the policy of separate schools for Indians, in 1930. The Report criticised the provision made for religious and vernacular instruction in the curriculum of the primary school (Naidoo, 1989:108).

This resulted in the discontinuation of the religious and vernacular instruction (Van Rensburg, 1975:124).

2.8.5 The system of State-aided schools

The system of State-aided schools, established after the Second World War, represented a unique feature of community effort to provide education for its people, and the Indian community can
be commended for its remarkable contribution in this respect. The demand for schooling in the post-war era (Second World War) far outstripped the available accommodation. As a solution to the problem, a system of platoon or double-shift classes for primary education was introduced (Naidoo, 1989:108).

2.8.6 Events that led to the establishment of a Department of Indian Affairs in 1961

2.8.6.1 The election Manifesto of the Nationalist Party (1946)

The National Party election Manifesto of 1946 provided the Nationalist Government after 1948 with a blueprint to carry out its policies based on Apartheid. The main purpose of the policy, according to the Manifesto, was the prevention of conflict between whites and non-whites. According to the Nationalist Party, the possible solution to the problem was the separation of the races in every sphere and in so far as feasible. At the same time an opportunity could be afforded to the non-whites to develop their own areas in accordance with their own nature and ability, in conformity with the systems which were best suited to their nature and tradition to govern themselves, and to serve their community in all the different spheres of their national life (Pillay, 1988:42).

2.8.6.2 Indians acknowledged as a permanent part of RSA, 1960

In 1960, the Nationalist Government came to the realization that the method of repatriation offered no solution to the problem
facing the State, as the majority of Indians were reluctant to make use of the Government's repatriation scheme. As it was against Government policy to compel the Indians to leave South Africa, a change of policy was unavoidable. This prompted the then Prime Minister, Dr H F Verwoerd, to make a policy statement regarding the future of Indians of South Africa. He declared that the Indians would be regarded as a permanent part of the South African population and the Indians were to be known as Indian South Africans (Pillay, 1988:42).

2.8.7 Reasons for the transfer of Indian education

A number of people queried the transfer of Indian education to the Department of Indian Affairs. From the study of the arguments put forward by the National Party for the transfer, the following reasons could be deduced for the proposed transfer (Pillay, 1988:44-45):

* the Government's policy of separate development;
* formation of an advisory council;
* formation of education committees and promotional opportunities;
* financial reasons;
* participation by involvement of parents;
* planning and research; and,
* opportunities for education.
2.8.8 The establishment of the Department of Indian Affairs in 1961

The Department of Indian Affairs was established on 1 September, 1961, to promote the interests of the Indian community in all spheres on a co-ordinated basis. In keeping with the policy of separate development, the Department provided the means to enable the Indian population group to give full expression to their aspirations in the educational and cultural fields (Naidoo, 1989:109). The Indians Education Act 61 of 1965 provided for the creation of the division of Education within the department. The control of Indian education was transferred from the Natal and the Transvaal Provincial Administrations to the Department of Indian Affairs, as from 1 April 1966 and 1 April 1967, respectively. The majority of Indian pupils in the Cape attended coloured schools.

Naidoo (1989:109) contends that the establishment of an entirely new education division presented a multi-dimensional challenge, as it meant:

* the creation of a comprehensive infra-structure of personnel and services to meet the range of needs of a developing education system;

* a training programme for Indian personnel to give effect to the principle of separate development; and

* tackling immediately the problems of providing school accommodation and facilities.

In 1965 the overall responsibility for Indian education was vested in the Minister of Indian Affairs. In 1976 his powers concerning education were delegated to the South African Indian...
Council. In 1981, the Departments of Indian Affairs and Coloured Affairs were merged into the Department of Internal Affairs, maintaining a separate division for each group (Naidoo, 1989: 109, 110).

2.8.9 The Constitutional Act 110 of 1983

In 1977, the machinery was set into motion to create a new constitution for the RSA that would enable the various population groups to have more say in the legislation of the running of the country. The outcome was the Republic of South Africa Constitutional Act, 1983 (Act 110 of 1983) which introduced a system of tri-cameral government in South Africa. The Act created a legislature comprising a Parliament consisting of three chambers, namely: a House of Assembly comprising white members; a House of Representatives comprising coloured members; and a House of Delegates comprising Indian members. The legislature is headed by the State President, who is vested with executive powers (Behr, 1988: 17).

Act 110 of 1983 introduced the concepts of 'own affairs' and 'general affairs'. In terms of section 14 of Act 110 of 1983, 'own affairs' are defined as those matters which specifically or differentially affect a population group in relation to the maintenance of its identity and the upholding and furtherance of its way of life, culture, traditions and customs. Schedule 1 of the Act 110 of 1983 gives a list of matters that fall under the category of 'own affairs'. Matters which are not 'own affairs' of a population group are considered 'general affairs' (section 15) (Behr, 1988: 17, 18).
Education is designed partly as 'own affairs' and partly as 'general affairs'. The aspects of education that fall under the category of 'own affairs' are instruction at all levels, including instruction by way of correspondence, the training of adults in trades, the training of cadets at school and official school sports. The aspects that fall under the category of 'general affairs' are norms and standards for the financing of running and capital costs of education; salaries and conditions of employment of staff and professional registration of teachers; and norms and standards for syllabuses and examinations and for certification of qualifications (Behr, 1988:8).

An 'own affairs' matter is discussed by the House concerned and, after the adoption of the proposed legislation, is sent to the State President for signature. If approved by him, it becomes a law for that group, and its implementation is entrusted to the relevant minister of the Ministers' Council of the House concerned. A 'general affairs' matter is entrusted to a cabinet minister who presents it in the form of a Bill to each of the three Houses for consideration. If the Bill is adopted by all three Houses, it is sent by the cabinet minister concerned to the State President for signature and it then becomes an Act of Parliament applicable to all groups (Behr, 1988:18).

The organisational structure of the Department of Education and Culture Administration: House of Delegates, is illustrated in Table 2.1.
2.8.10 Conclusion

At the time when Indian education was transferred to the State, the policies, curriculum structures and syllabuses of Indian education were the same as those used by the white provincial departments. This period resulted in the introduction of free and compulsory education, revision of the curriculum structures and the elimination of platoon classes (Dilla, 1973:116-120).

2.9 CHAPTER SUMMARY

In this chapter the theory of differentiated education and the historical perspectives of the Indian education system have been presented. Differentiation is defined as the policy of educational provision which accommodates and takes cognisance of the differences among the pupils. The school system is defined as the framework within which different types of teaching and learning situations are arranged.

The principal theories of differentiation and differentiated education have been given and are described as the normative basis of differentiated education, the anthropological foundation of differentiated education, the pragmatic foundation of differentiated education and the Christian foundation of differentiated education. This is followed by a discussion of the aim of differentiated education and the technique for differentiation and differentiated education.
The reason for individual differences in pupils and the scope of individual differences is also presented. The historical perspectives of the Indian education system have been traced, from the time of the arrival of the Indians in Natal until the present political dispensation.
Table 2.1
The organizational structure of the Department of Education and Culture

<table>
<thead>
<tr>
<th>Minister of Education and Culture</th>
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<tbody>
<tr>
<td>Director-General</td>
</tr>
<tr>
<td>Chief Executive Director</td>
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</table>

- **Chief Director (Planning services)**
  - Chief Planners
  - Research Services
    - Teacher education
    - Curriculum development
    - Physical amenities
    - School instruction
    - Examinations
    - Special education
  - Advisory services
    - Inspectorial services
    - Psychological and guidance services

- **Chief Director (Control services)**
  - Chief Inspectors, Education Leaders, Chief School Psychologist
  - Pupil welfare
    - School attendance
    - Teacher training
    - Special education
    - Technical education
    - Examinations
    - School accommodation
    - Auxiliary services
    - Tertiary education

- **Deputy Director**
  - Administrative services
  - Culture promotion
  - Liaison (publications)
CHAPTER 3

3. DIFFERENTIATION IN THE PRE-PRIMARY AND PRIMARY LEVELS

3.1 INTRODUCTION

In the previous chapter, the theoretical justification for the system of differentiated education and the historical perspective for Indian education were discussed under various sub-headings. In this chapter the discussion of the practices of the system of differentiated education in the pre-primary level and the primary level will be undertaken.

3.2 DIFFERENTIATION IN THE PRE-PRIMARY LEVEL

3.2.1 General description of the institutions in the pre-primary level

3.2.1.1 The crèche

The crèche as a kind of educational institution came into being in the 20th century in order to provide for the physical, psychological and educational needs of children from 0 - 3 years. These needs arise from the circumstances of life in countries with a strong expanding economy, poor social conditions and either a spirit of materialism or a lack of material well-being (Van Schalkwyk, 1982:186).

Foremost, the child has to be taught good toilet habits, has to learn to eat by himself, to walk and to talk. Secondly, he needs love, social intercourse, security and aesthetic experiences. The
crèche, therefore, emphasises caring (taking care of, looking after, protecting) and educating (preservation, inter alia, of religious, ethical, social and aesthetic values) according to his ability to benefit from them (Van Schalkwyk, 1982:186). These aspects need informal but purposeful, planned and organized educative teaching, as well as physical care on a day or half-day basis.

3.2.1.2 Pre-primary school

Pre-primary (or pre-basic) education is considered to be an essential ingredient of the total process of the school system (Behr, 1988:117). The rapid economic advances and the entry of Indian women into the labour market, gave rise to the large-scale employment of married women in many sectors of the economy. This created the need for pre-primary schooling. Van Schalkwyk (1982:186,187) states that the pre-primary school is a place where a group of 3 - 6 year-olds receive norm-centred formative education in a structured environment (by means of a program offering a wealth of opportunities) in an informal yet purposeful, planned and organized way. The child needs to be offered the maximum opportunity for healthy mental and physical development. Pre-school education complements that of the home, and it should be seen against the background of the community. The early childhood at this level is enriched by many real-life experiences by giving confidence to the child as well as motivating him to explore and thus expand his horizons (Lloyd, 1978:30).

3.2.2 Organization in the pre-primary phase

Pre-school education for Indian pupils in the Republic of South
Africa rests on a voluntary and private basis. The Indian Education Act of 1965 (Act 61 of 1965) includes nursery schools under the definition of schools. Sections 1 and 6 of the said Act require that such nursery schools run by private individuals or bodies be registered with the Department.

Four private pre-primary schools were registered by the Department in 1986 bringing the total number of private pre-primary schools registered with the Department to 32 (Annual Report, 1986:8). The registration of nursery schools by the Department is subject to the applicant(s) satisfying certain minimum requirements in respect of the premises at which the proposed nursery school is to be conducted (Anon, 1979,:10). Private pre-primary schools cater for children in the age group 3 to 5 years. The average enrolment at these schools is in the region of 80 pupils per school.

Community organizations are permitted to use State furniture/premises to conduct readiness classes for children who are eligible for admission to Class 1 in the following year. In most instances such classes occupy the grades classrooms when the junior primary pupils leave after midday. More than 7000 children attend such classes at approximately 160 schools (Annual Report, 1986:8). The community organization is invited to apply for a wage subsidy which is payable to the teacher.

3.2.3 School readiness as the aim of pre-primary education

It is generally accepted today that school readiness is a funda-
mental prerequisite for formal education to be effective in the total development of the child. School readiness as the aim of pre-primary education entails (Asmall, 1984:6):

* such a degree of physical and psychological development that the child is able and willing to cope with the demands of formal education;

* good physical health;

* adequate large and small muscle development and coordination;

* adequate eye-hand co-ordination;

* adequate development of cognitive skills and communicative abilities;

* adequate independence; and

* a positive attitude towards work.

School readiness is a stage of development reached through a gradual process which begins at birth and is dependent on both upbringing and spontaneous development. Unfavourable and inadequate educative situations can seriously inhibit the child's readiness for school. This is the case where environmental deprivation prevails, where the economic, social and cultural situation in a community is such that the quality of educational exposure is totally inadequate for a normal development of the child.
The main objectives of school readiness were that the child must (Joshua & Lloyd, 1982:16):

* be able to accept school discipline;
* accept the school system of rewards;
* accept the teacher as a source of information;
* be able to carry out instructions;
* be able to pay attention;
* be able to concentrate on the task in hand;
* be eager to learn;
* be ready for reading and for elementary mathematics.

In order to achieve these objectives, it is necessary to structure the programme in such a way that it provides the experiences necessary for school and tackles the area of major deficiency with these disadvantaged children, which is language.

3.2.4 Language and early exposure to reading

The child must be presented with the concepts which he needs in school in such a manner that he builds up a language system which corresponds to that of his standard or level. Due to the severity of language (English) deficiency, a programme was devised to provide children with (Anon A, 1981:16):

* the correct structure of sentences in order to attain a language base acceptable to the school situation;
* opportunity to manipulate that language base in different situations eg. "this" and "that" for immediate and distant, etc.;

* a chance to familiarise the children with the fact that a picture can represent a concrete object; and

* practise exercises to be alert and recognize items quickly and accurately

Pre-school education for Indian children aimed at school readiness took a further step forward in 1972 when, as a pilot scheme, the Department of Indian Education, at the request of the Indian Child Welfare Society of Port Shepstone, made available the use of Junior Primary classrooms for pre-schoolers after the pupils had gone home each day. The pilot scheme proved an unqualified success.

The Department viewed the early exposure of the children to reading as of great importance.

A child first experiences words he learns to speak, but listening to stories increases his awareness of the power of words. Listening to stories acts as (Omarjee, 1984:23):

* a stimulus to the child's imagination and perception;

* a stimulus to think and to reason;
* an arouser of emotions, and an aid to the development of his ability to identify directly or vicariously with the characters, situations and the environment of the story; and

* creator, eg. creator of a new experience, or extending his own existing world.

Listening also enables the child to recognize aspects of his own world. It also extends the knowledge of language usage. It prepares the child for reading. Reading depends on the degree of intellectual, social and emotional involvement with the plot situation and characters in the book and the efficiency of the reader.

An inefficient reader will be handicapped not only educationally but also emotionally and socially (Anon A, 1981:17):

* educationally, as he is unable to exploit fully the teaching and learning procedures used in most subjects;

* socially, as he is different from his peers and is often regarded as stupid; and

* emotionally, as he is constantly aware of his failure to read.

3.2.5 The teacher/pupil ratio as the indicator of growth

The growth of the teacher/pupil ratio in the pre-primary level as shown by Table 3.1 indicates an increase in the enrolment, as the
fewer the pupils in each class, the more manageable is the implementa
tion of the system of differentiation. Each child's interest, ability and aptitude is nurtured through the individual attention which is given to him. The increase in numbers requires that the learner's development should be differentiated by means of receiving a particular form of more specialized education which will suit his unique nature. The system of differentiation will lead to the balanced development of every learner.

Table 3.1
Pre-primary enrolment (South African Statistics, 1986:54,55):

<table>
<thead>
<tr>
<th>Year</th>
<th>Pupils</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>210</td>
<td>11</td>
</tr>
<tr>
<td>1977</td>
<td>301</td>
<td>20</td>
</tr>
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<td>1978</td>
<td>285</td>
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<td>1979</td>
<td>652</td>
<td>47</td>
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<tr>
<td>1980</td>
<td>837</td>
<td>53</td>
</tr>
<tr>
<td>1981</td>
<td>1 286</td>
<td>65</td>
</tr>
<tr>
<td>1982</td>
<td>1 356</td>
<td>67</td>
</tr>
<tr>
<td>1983</td>
<td>1 685</td>
<td>77</td>
</tr>
<tr>
<td>1984</td>
<td>1 801</td>
<td>95</td>
</tr>
<tr>
<td>1985</td>
<td>2 418</td>
<td>129</td>
</tr>
<tr>
<td>Total</td>
<td>10 831</td>
<td>592</td>
</tr>
</tbody>
</table>

3.2.6 Evaluation of differentiation in the pre-primary level

The system of differentiated education is designed to ensure that children receive a type of education that is best suited to their skills, interests, abilities and aptitudes. The fundamental aim
of differentiated education is, therefore, the recognition of individual differences. Since pre-primary school education aims at the general development of the child, no formal instruction is given. The teachers at this level of education try to induce a state of willing readiness to learn. The children are offered a variety of activities to develop their intellectual growth and dexterity (Pillay, 1988:189). They are encouraged to talk and their vocabulary is enlarged by means of rhymes, songs and stories. Differentiation at the pre-primary level refers not to the provision with regard to individual pupils but to the group as such.

There is a paucity of both primary and secondary sources pertaining to differentiated education at this level. This can be attributable to the fact that education at this level rests on a voluntary and private basis, and the education is aimed at the general development of the child.

3.3 DIFFERENTIATION IN THE PRIMARY SCHOOL LEVEL

3.3.1 General aims of the primary school

Primary school education provides elementary or basic education. It lays a foundation for the child and is of a preparatory nature with regard to his future development (Van Schalkwyk, 1982: 187). A child is introduced to the skills of numeracy, literacy and independence. Primary education lays a foundation for differentiated education. This foundation will help in catering for the individual differences in pupils.
3.3.2 Phases and duration

At the primary level, the school system for Indians provides for two phases of schooling, each of three years' duration. Naicker (1982:5), in this regard, states that the division into phases is not fortuitous for the sake of convenience; it is based on sound scientific, educational reasons, namely, the phases of the child's development to maturity. The demarcation of the phases and duration at the primary level is as follows:

Table 3.2

Phases, ages and classes/stds in the primary level (Pillay & Naguran, 1976:20).

<table>
<thead>
<tr>
<th>Phase</th>
<th>Age in years</th>
<th>Class/Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Primary</td>
<td>6 - 8</td>
<td>Class 1; ii Std I</td>
</tr>
<tr>
<td>Senior Primary</td>
<td>9 - 11</td>
<td>Std 2; 3; 4</td>
</tr>
</tbody>
</table>

3.3.3 The junior primary phase

One of the major aims during this phase is to develop the senses of the child as fully as possible. The subjects taught are identical to those for the same age bracket of all other population groups, for example, the whites (Van Rensburg, 1975:132). The function of the junior primary phase is specifically to adapt children to school life and to teach them the basic skills, particularly reading and number concepts (Behr, 1978:245).
3.3.4 The senior primary phase

The senior primary phase follows naturally on the junior primary phase. The approach adopted is designed to pave the way for secondary education. The phase is geared to develop the skills and necessary background to undertake secondary education profitably (Behr, 1978: 245). Class teaching, namely one teacher per class, forms the basis of the educational programme in the two primary phases.

3.3.5 The curriculum

The curriculum in the junior primary phase is elementary. A study of the physical, social and intellectual level of development of these pupils suggests that they can be successfully grouped together as an educational unit and that a programme of education can be prepared to provide for their specific needs (Van Rensburg, 1975:131-132).

In the junior primary phase, differentiation is based on presentation of subject matter, and only class teaching is generally done. Pillay (1988:174) contends that this subject matter is presented in a manner that will develop the potential of every child to the utmost.

Grouping of pupils to cater for individual differences, receives prominence. Teachers adapt their teaching to make it more effective, so that pupils with different levels of ability and aptitude would derive the full benefit from the educational programme offered. The emphasis in this phase is on the development of basic skills in Reading, Mathematics and Writing (Pillay, 1988:175).
A uniform curriculum prevails in all the senior primary phases, founded on the hard core of subjects. Education during this phase is of a generally formative nature, that is, differentiation is according to the method of presentation, but not in syllabus content (Pillay, 1988:176). Class teaching still forms the basis of the educational programme, with subject teaching being attempted in certain subjects where specialised knowledge and methods of presentation would enable the children to develop their ability to the maximum. The curriculum consists of compulsory examination and non-examination subjects. The compulsory examination subjects are: English, Afrikaans, History, Geography, General Mathematics and Elementary Science, and the compulsory non-examination subjects are: Right Living, Physical Education (including Health Education), Aesthetic Education (including Music, Art and Singing), Skills (including Handwork and Handicraft), School Guidance (as an auxiliary service), Library Science and Writing (Standards two and three only) (Pillay, 1988:176-177). In keeping with the policy of differentiation and in order to see that the individual differences in the pupils are accommodated, subject committees were established.

3.3.6 Textbooks and reference books

The provision of a full range of stationery and textbooks and reference books at State expense, to all pupils, has offered welcome financial relief to many Indian parents (Pillay & Naguran, 1976:20).
3.3.7 New methods and approaches

The emphasis has shifted from the conventional learning by rote, to the promotion of understanding, reasoning and discovery. New methods and approaches are being tried out all the time and greater emphasis is being placed on the use of audiovisual teaching media and on other technological aids, such as language laboratories (Van Rensburg, 1975:132).

3.3.8 Indian language subjects

Indian language subjects such as Hindi, Gujerati, Tamil, Telegu and Urdu have been introduced into the senior primary school curriculum on a phased basis. These were introduced in 1984, starting in standard two. Thus far, these subjects have not proved to be popular and only a small number of schools offer them (Naidoo, 1989:114).

3.3.9 Black languages

The Department is aware of the significant relevance that the black languages have in the South African context (Naidoo, 1989:114). In the HSRC Report on Intergroup Relations, the HSRC recommended the introduction of a third (black) official language on a regional basis, as it regards language as "potentially one of the main factors that can influence the natural form and quality of intergroup relations." There is the need to investigate the pos-
sibility of introducing black languages such as Zulu, Tswana, Northern Sotho, Southern Sotho and Xhosa as optional examination subjects in the curriculum (Mohammed, 1990). This must be implemented on a regional basis.

3.3.10 School accommodation

In order to meet the requirements of the differentiated system of education, classrooms were updated. A standard primary school comprises of 18 classrooms, seven specialist rooms, one general purpose room and limited administrative facilities. These are accommodated in austerity type single-storey schools (Marx, 1990).

3.3.11 Platoon classes

The platoon or double-shift classes which were introduced due to the natural growth of the school population, the resettlement of Indians into new residential areas and the unsatisfactory condition of schools and classrooms, ceased on the 15th August 1983. The phasing out of the platoon system has eliminated the backlog for basic school accommodation (Naidoo, 1989: 116).

3.3.12 Pupil growth

Table 3.3 indicates the growth in school population as from the time of the take-over in 1966.
Table 3.3

Boys and Girls

<table>
<thead>
<tr>
<th>Year</th>
<th>Sub A &amp; B</th>
<th>Std 1</th>
<th>Std 2</th>
<th>Std 3</th>
<th>Std 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967</td>
<td>34368</td>
<td>20171</td>
<td>20077</td>
<td>18143</td>
<td>16224</td>
<td>108983</td>
</tr>
<tr>
<td>1968</td>
<td>30511</td>
<td>19662</td>
<td>19593</td>
<td>20193</td>
<td>16681</td>
<td>106640</td>
</tr>
<tr>
<td>1969</td>
<td>34566</td>
<td>14946</td>
<td>19265</td>
<td>20216</td>
<td>18692</td>
<td>107685</td>
</tr>
<tr>
<td>1970</td>
<td>38270</td>
<td>15553</td>
<td>14495</td>
<td>19774</td>
<td>18181</td>
<td>106273</td>
</tr>
<tr>
<td>1971</td>
<td>40360</td>
<td>17885</td>
<td>15460</td>
<td>15740</td>
<td>18457</td>
<td>107902</td>
</tr>
<tr>
<td>1972</td>
<td>41729</td>
<td>19317</td>
<td>17394</td>
<td>16012</td>
<td>14834</td>
<td>109286</td>
</tr>
<tr>
<td>1973</td>
<td>42581</td>
<td>18963</td>
<td>18600</td>
<td>17699</td>
<td>14823</td>
<td>112666</td>
</tr>
<tr>
<td>1974</td>
<td>42674</td>
<td>19650</td>
<td>18446</td>
<td>19085</td>
<td>16465</td>
<td>116320</td>
</tr>
<tr>
<td>1975</td>
<td>42413</td>
<td>20317</td>
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<td>19341</td>
<td>17709</td>
<td>118984</td>
</tr>
<tr>
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<td>20158</td>
<td>20034</td>
<td>19807</td>
<td>18260</td>
<td>121309</td>
</tr>
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<td>44240</td>
<td>20377</td>
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<td>20557</td>
<td>19079</td>
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<td>1978</td>
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<td>20511</td>
<td>20143</td>
<td>20835</td>
<td>19893</td>
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<tr>
<td>1979</td>
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<td>21446</td>
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<td>20068</td>
<td>128778</td>
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<tr>
<td>1980</td>
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<td>22528</td>
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<td>130063</td>
</tr>
<tr>
<td>1981</td>
<td>43557</td>
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<td>20248</td>
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</tr>
<tr>
<td>1982</td>
<td>43031</td>
<td>21773</td>
<td>23193</td>
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<td>21047</td>
<td>131864</td>
</tr>
<tr>
<td>1983</td>
<td>41415</td>
<td>22103</td>
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<td>22138</td>
<td>130939</td>
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<td>1984</td>
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<td>21618</td>
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<td>1985</td>
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<td>22266</td>
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<td>1986</td>
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<td>19092</td>
<td>19392</td>
<td>21255</td>
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<td>1987</td>
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<td>19192</td>
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<td>20679</td>
<td>21122</td>
<td>118998</td>
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<tr>
<td>1988</td>
<td>40417</td>
<td>19152</td>
<td>19217</td>
<td>19957</td>
<td>20553</td>
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<td>1989</td>
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<td>19035</td>
<td>18841</td>
<td>19550</td>
<td>19573</td>
<td>118194</td>
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<td>Total</td>
<td>940431</td>
<td>457646</td>
<td>451938</td>
<td>463211</td>
<td>440611</td>
<td>2753837</td>
</tr>
</tbody>
</table>
Several significant observations can be made based on Table 3.3:

The table shows the pupil growth per standard from 1967 to 1989.

There has been a steady growth in the Indian school population since 1970. At present this growth is more or less stabilized. The Department can predict its enrolment for future years with reasonable accuracy and can undertake its physical planning program with greater assurance.

This is of importance in the implementation of the system of differentiated education.

3.3.13 Age group of the pupils

In order to achieve the maximum benefit and a degree of social integration in schools, the system of differentiated education requires that pupils of the same age group should be educated together. Tables 3.4 and 3.5 show the position in the Department.

Table 3.4

Pupils by standard and age (South African Statistics, 1990:5.23)

<table>
<thead>
<tr>
<th>Age</th>
<th>Sub A</th>
<th>Sub B</th>
<th>Std 1</th>
<th>Std 2</th>
<th>Std 3</th>
<th>Std 4</th>
<th>Total</th>
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</thead>
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<td>13</td>
<td>176</td>
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<td>0</td>
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<td>175</td>
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<td>Total</td>
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Table 3.5
Pupils by standard and age (South African Statistics, 1990:5.22)

<table>
<thead>
<tr>
<th>Age</th>
<th>Sub A</th>
<th>Sub B</th>
<th>Std 1</th>
<th>Std 2</th>
<th>Std 3</th>
<th>Std 4</th>
<th>Total</th>
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</thead>
<tbody>
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<td>6</td>
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<td>174</td>
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<td>3</td>
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<tr>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
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</tr>
<tr>
<td>16</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>2</td>
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<td>25</td>
</tr>
<tr>
<td>17</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>19+</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>20685</td>
<td>19381</td>
<td>18989</td>
<td>19066</td>
<td>19797</td>
<td>20408</td>
<td>118326</td>
</tr>
</tbody>
</table>

3.3.14 Cultural Studies

Cultural Studies have been introduced in the curriculum in standards two to four. These are offered as an alternative to Indian subject languages. Syllabuses and guides for the subject are prepared by the Department. This subject has been implemented in schools since 1987. Cultural Studies gives the child an extension of the subject pool from which his individualised interest, ability and aptitude can be catered for.
3.3.15 Music

Since the aim of education is the development of every facet of the individual, due recognition has been given to music by the Department. This subject has been introduced in the curriculum. This, however, has been hampered by inadequately qualified music teachers. In successive years syllabuses for the theory of music, designed in 1968, were introduced from Std 2 to Std 8 (Anon, 1978:9). Progress in Indian schools was highlighted by the introduction of the recorder to Std 3 pupils in 1971. The reason for choosing the recorder in preference to other musical instruments, was because it is comparatively inexpensive, easy to teach, portable and it can be taught in groups. The last factor was particularly important in determining the choice of an instrument in view of the tremendous shortage of music teachers at the time. This shortcoming has been addressed through the introduction of a Music major for a B.A. degree at the University of Durban-Westville.

Children are introduced to the recorder in Std 3. In Std 4, children are prepared for the Grade I Practical Examinations set by the Department. Grade I theory is introduced in Std 5. Standards are maintained and ensured through the use of the standard of the University of South Africa as a yardstick (Anon, 1978:9). Children's aesthetic interests are enhanced by the subject.

3.3.16 Religious instruction

In the RSA, the majority of Indians are Hindus (approximately 70%)
and about 20% are Muslims (Islam religion) (Vos and Brits, 1987:113). Indian children attend so-called scheduled religious schools at the nearest mosque during school hours for their religious instruction. These two religious groups do not tolerate instruction in other religions for their children. Indian pupils, therefore, do not receive religious instruction during school hours. No Indian teachers are trained to offer this subject at schools. Few church schools offer Christian religious instruction. Instead of Religious Instruction, Right Living is offered as a compulsory subject for all pupils (Vos and Brits, 1987:113).

Right Living is concerned with, inter alia, morals, and notably, moral deeds. Lessons are based equally on writings from the Bible, the Koran and Hindu literature (Vos and Brits, 1987:113).

3.3.17 Repeaters in primary schools

In Indian schools, the maximum number of years that a child may remain in the junior primary phase is four years. Underachievers are referred to the Psychological Services Section of the Division of Education. When a child is found to be retarded during his/her first few years of schooling, it is a grave concern. According to research carried out by leading educationists, a system of progression by age would be the most suitable one during the early years of schooling. Pillay (1988:175) states that pupils who are retarded often show up less well on achievement tests after a year of repeating the grade than before doing so. Saunders also subscribes to the same view in stating that children do not appear to learn by repeating a grade but experience
less growth in subject-matter achievement, than they do when pro-
moted. Therefore, a practice of non-promotion because a pupil
does not learn sufficient subject-matter in the course of a
school year, is not justifiable (Pillay, 1988:175). Except in the
case of special problems, the pupil is allowed to proceed to the
following class or standard save when he/she requires remedial
education (Samuel, 1990). A child cannot remain in one class or
standard for more than two years (Mohammed, 1990). Thus a child
can fail only once.

In standard two, promotion is based on regular monthly class
tests and there are no formal examinations as such. In standards
three and four, promotion is based on internal school examina-
tions and tests. Two formal examinations, one in June and one in
November/December, are written and promotions are based on per-
formances in these examinations.

In conclusion, one may be right in saying that in the primary
phases, the emphasis is on the development of the pupils' intel-
lectual and personal skills as well as attitudes, that will
lay the foundation and thus provide tools for further learning.

3.3.18 Medium of instruction

As at the time of entry in Class 1 up to standard four, the med-
ium of instruction in the Indian primary schools is English.
Afrikaans, although it is a second official language in the RSA, is
taught as a school subject.
3.3.19 Pupil/teacher ratio

As illustrated in Table 3.3, the Department is able to predict with a reliable degree of certainty, the expected number of pupils in each class or standard. The constant demographic patterns facilitate the Department’s provision of physical structures. The number of Indian teachers who are trained at the Colleges of Education under the Department and at the autonomous University of Durban-Westville, also contributes to the ideal teacher/pupil ratio. At present the teacher/pupil ratio is 1:24 (Mohammed, 1990). As shown by Tables 3.1, 3.3, 3.4 and 3.5 tremendous strides have been made in improving the teacher/pupil ratio as from the time of the take-over. The didactic principle of individualization acknowledges the fact that individuals differ from each other and that a teacher has to take this difference into account when planning and executing his teaching strategies (Fraser, Loubser & van Rooy, 1992:58).

3.3.20 School psychological services

School psychological and guidance service is the cornerstone in the whole process of the differentiated system of education. The aim of this system, as stated previously, is to provide pupils with education according to their ability, aptitude and interests - and the manpower requirements of the country (Anon, 1981:25).

School psychologists act as advisers on aspects of special education treatment. Policy developments in which the service has played an active part, include (Fiat Lux, 1981:25):
* establishment and expansion of special education classes;
* establishment and expansion of remedial services;
* introduction of guidance and counselling services;
* plans for pre-vocational high schools for mentally retarded pupils;
* plans for the establishment of school clinics on a regional basis;
* plans for the establishment of purpose-built special education classes, remedial rooms, guidance and counselling units;
* plans for the establishment of services of all kinds for children with special needs; and
* plans for the establishment of diagnostic centres.

3.3.21 The role of psychological services in a system of differentiated education remedial services

The School Psychological Services provide special educational treatment for pupils who are backward in the basic school subjects but for whom there is evidence that this is not due to the lack of general ability (Anon, 1981: 25). In every school there are pupils of average and above-average intellectual potential who do not make sufficient progress in the regular class because they have some learning disability or problem. Some of these pupils have faulty attitudes or some degree of emotional maladjustment, while others have missed earlier learning opportunities through absence or home circumstances which do not provide sufficient stimulation. The treatment given ranges from individual sessions several times a week to daily group sessions.
The first step in the identification of pupils with learning problems, is taken by the class teacher. It is the task of the principal and staff and of the remedial teacher, if one has been appointed, to try and establish the causes of the pupil's problems and to provide remediation. Lack of success will lead to referral to the Psychological Services for further professional attention (Pillay, 1990).

The psychologist, as far as possible:

* interviews the parents to obtain a full history of the pupil;
* interviews the class teacher;
* administers tests to determine the intellectual potential of the child;
* screens the pupil for any physical or sensory defects.

Once the pupil has been examined, the psychologist may recommend one or more of the following:

* detailed assessment to be made by the remedial teacher in one or more subjects;
* tentative remedial programmes to be drawn up by the remedial teacher;
* examination by a medical doctor;
* examination by an audiologist or speech therapist;
* examination by an optometrist.

Once the psychologist has all the relevant facts at his disposal he may then recommend (Anon, 1981:25):
* corrective or remedial work to be undertaken by the class teacher;

* attention from a specialist remedial teacher;

* transfer to a clinic school.

3.3.22 Special education

3.3.22.1 Introduction

The Indians Education Act, 1965, (Act No 61 of 1965) defines a handicapped person as one between the ages of three and twenty-three years who deviates from the majority of persons of his age in body, mind or behaviour but who can, in the opinion of the Secretary of Indian Affairs, still benefit appreciably from a suitable course of education (Van Rensburg, 1975:138).

This person cannot attend the ordinary class in an ordinary school as this would be detrimental to both himself and other pupils. In order to facilitate his adaptation to the community, he needs special education.

The educational provision for the handicapped person is a community effort with a State subsidy. Numerous special schools and classes for handicapped Indian pupils are in existence.
3.3.22.2 School for the blind

There is a private residential institution at Pietermaritzburg which is controlled by the Natal Indian Blind and Deaf Society. This institution is subsidised by the Department.

The teaching staff consists of a principal, a vice-principal, two senior assistants, six assistant teachers, two handcraft teachers, one music teacher, a teacher-psychologist and clerical and domestic staff (Van Rensburg, 1975:138).

In the primary section, the general syllabuses are followed. These pupils receive instruction in subjects such as woodwork, basketry, pottery and weaving. Participation in debates, singing and sports, amongst others, is encouraged (Pillay, 1990).

3.3.22.3 The school of industries

Boys and girls are committed to the schools of industries when they have been referred in terms of the Children's Act. The schools seek to rehabilitate them and instruct them in suitable trades.

The major aim of this type of school is the rehabilitation of the child in need of care. This necessitates inclusion of extra-mural and cultural activities in the curriculum. Inter-school sports meetings are arranged with normal school pupils. This arrangement has yielded good results (Pillay, 1990).
3.3.22.4 Special classes

Since 1975, special classes for mentally retarded pupils have been established at 61 primary schools with 15 classes being added every year. These pupils need not be isolated entirely from normal pupils. Participation in music, singing, physical education and in sports meetings is encouraged. Transference from the special classes to normal classes is possible if there is sufficient progress to benefit from ordinary education (Pillay, 1990).

3.3.22.5 Adaptation classes

Scholastically retarded pupils receive remedial attention in ordinary classes. Remedial education and speech therapy have also been offered by the University of Durban-Westville to a number of scholastically retarded pupils and to pupils with speech problems (Pillay, 1990).

3.3.22.6 School for the cerebral palsied

In April, 1976, a school for cerebral palsied children was opened at Genazzana, Tongaat. This is a private school registered with the Department. Usual subsidies payable to private schools are received (Pillay, 1990).

3.3.22.7 Schools, pupils and staff for special schools

Table 3.6 illustrates the numbers of schools, pupils and staff
involved in special education. The handicapped pupils qualify for special education as they have their own unique problems requiring particular specialized education. This constitutes grounds for the creation of different kinds of schools suiting their particular interest, ability and aptitude.
<table>
<thead>
<tr>
<th></th>
<th>PUPILS</th>
<th>STAFF</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SCHOOLS</td>
<td>TOTAL</td>
<td>BOYS</td>
<td>GIRLS</td>
<td>TOTAL</td>
<td>MALE</td>
</tr>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Aurally</td>
<td>3</td>
<td>332</td>
<td>178</td>
<td>154</td>
<td>88</td>
<td>34</td>
</tr>
<tr>
<td>Visually</td>
<td>1</td>
<td>115</td>
<td>61</td>
<td>54</td>
<td>38</td>
<td>19</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>100</td>
<td>49</td>
<td>51</td>
<td>24</td>
<td>9</td>
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<td>Physically</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Autistic</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CHILDREN'S ACT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools of Industries</td>
<td>2</td>
<td>274</td>
<td>186</td>
<td>88</td>
<td>41</td>
<td>25</td>
</tr>
<tr>
<td>Reformatories</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Training Centres for mentally retarded</td>
<td>8</td>
<td>594</td>
<td>339</td>
<td>255</td>
<td>101</td>
<td>33</td>
</tr>
<tr>
<td>MENTALLY HANDICAPPED</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HOSPITALS AND INSTITUTIONS</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td>15</td>
<td>1415</td>
<td>813</td>
<td>602</td>
<td>292</td>
<td>120</td>
</tr>
</tbody>
</table>
Van Schalkwyk (1988:32) contends that each person is an individual with a particular aptitude, ability or perhaps handicap which requires a specific type of education. The educational practice at the primary level requires the provision of differentiated education for every learner. The system of differentiated education as applied to Indian education at the primary level resulted in the extension of the school curriculum at all the primary schools. Gender differences require that certain subjects, in keeping with the nature, ability and interest of boys and girls, be offered. This lays the foundation for the choice of subjects which they can select at the advanced levels. The greater use of school guidance at the primary level is aimed at directing the children to subjects that suit their particular nature.

The primary school level provides for the development of both the general and the particular aptitudes of the pupils. The spread in the school population should be made wide so as to make a mild form of ability grouping profitable. The range of pupil ability in each class should then be reduced, making it easier to teach but leaving enough range to allow the advantages of diversification to occur. The introduction of religious studies provides an education which can be given to each group, namely Hindu or Muslim, on the basis of the underlying ground motive and the philosophy of life.

The division of primary school education into junior primary phase and senior primary phase, means that pupils of the same age grouping are educated together, and this diminishes the develop-
mental problems that might occur if different age groups were educated together. Each phase provides the kind of education which accords with the level of development of the group concerned and satisfies its educational needs as determined by the task of each age group. The fact that pupils rarely repeat a class or standard facilitates the achievement of these endeavours. Pupils with particular handicaps are catered for in special schools. Pupils who are educationally neglected are catered for in schools of industries and reformatories. Their handicaps result from the poor or wrong educational treatment or intervention by their educators, resulting in the pupils losing their sense of direction and purpose. Education of neglected pupils is aimed at the development of the healthy body, so as to attain health and maximum usefulness, intellectual growth and development, emotional stability, social adaptability and balance, a healthy outlook on life, good behaviour, the solving of domestic problems and improvement in relations with members of the family (Van Schalkwyk, 1988:122).

3.4 CHAPTER SUMMARY

The general description of the educational institutions found both in the pre-primary level and the primary level, were given. In order to determine whether the pupils' interests, abilities and aptitudes were accommodated within the educational structure, the organization of the pre-primary phase and school readiness are discussed at the primary level. Language and early exposure to reading were also mentioned to indicate the implementation of the system of differentiated education at this level.
The diversity of the subjects discussed under the primary level serve to indicate the degree in which the implementation of the system of differentiated education is taken by the Department. The new approaches and methods like, amongst others, the use and construction of the criterion-reference tests and the use of the school psychological services indicate beyond reasonable doubt that differentiation is indeed implemented and is being consciously evaluated in order to attain the optimal results.
CHAPTER 4

4 DIFFERENTIATION AT THE SECONDARY LEVEL

4.1 INTRODUCTION

In the previous chapter, the practices of the policy of differentiation in the pre-primary level and the primary level were discussed. In this chapter, the practices of differentiated education in the secondary level will be investigated. The study will focus on how individual differences in aptitude, ability and interest are catered for as the pupils progress from standard to standard. The nature of secondary education requires that it should be more differentiated so that the schools can assume a number of different forms such as technical, commercial or agricultural schools, in accordance with the particular differentiated courses which they offer.

The provision of secondary education for Indians consists of two phases, namely, the three-year junior secondary phase (stds 5, 6 and 7) and a three-year senior secondary phase embracing the last three years of schooling, namely stds 8, 9 and 10. A programme of differentiated education was introduced in 1973.

As a point of departure, it can be stated that the main function of the junior secondary phase is to make a valid assessment regarding each child's aptitude, skills, interests and abilities. Education in the junior secondary phase is generally formative - and the subject matter is differentiated. In the senior secon-
dary phase, fields of study are provided for, namely, humanities, natural sciences, general, home economics, commercial and technical. In this phase, education is mainly differentiated (Vos and Brits, 1987:105).

The secondary school is often regarded as the educational passage leading from the primary school with its general education to a tertiary educational institution with its special and complete vocational education (Van Schalkwyk, 1988:123). Secondary education, therefore, is partly general and partly particular or specialized. Apart from its general character, the secondary school should provide education in accordance with the abilities, talents and interests of pupils, while at the same time taking into account the needs of the country (Van Schalkwyk, 1988:188).

4.1.1 Age distribution and phases
The age distribution of pupils and standards in the junior secondary phase and the senior secondary phase can be tabulated as follows:

Table 4.1 Recommended phases and age distribution in the secondary level, of Indian education (Pillay & Naguran, 1976:20).

<table>
<thead>
<tr>
<th>Phase</th>
<th>Age in Years</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Secondary</td>
<td>12 - 14</td>
<td>5; 6; 7</td>
</tr>
<tr>
<td>Senior Secondary</td>
<td>15 - 17</td>
<td>8; 9; 10</td>
</tr>
</tbody>
</table>

Table 4.2 tabulates the actual number of pupils by age and standards in all Indian secondary schools. This shows the real situation in secondary schools in regarding the age distribution of pupils per standard, in order to make it possible to
have the pupils of the same age in the same standard. The tables indicate that the policy of differentiation must satisfy its educational needs by taking into consideration differences in age and the level of development of the pupils.

Table 4.2 Pupils by age and standard, all schools (South African Statistics, 1986:33)

<table>
<thead>
<tr>
<th>Age</th>
<th>Std 5</th>
<th>Std 6</th>
<th>Std 7</th>
<th>Std 8</th>
<th>Std 9</th>
<th>Std 10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>20</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>11</td>
<td>2 770</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2 776</td>
</tr>
<tr>
<td>12</td>
<td>9 459</td>
<td>2 488</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11 953</td>
</tr>
<tr>
<td>13</td>
<td>3 722</td>
<td>8 535</td>
<td>2 241</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>14 503</td>
</tr>
<tr>
<td>14</td>
<td>1 729</td>
<td>3 970</td>
<td>8 111</td>
<td>1 902</td>
<td>5</td>
<td>-</td>
<td>15 717</td>
</tr>
<tr>
<td>15</td>
<td>824</td>
<td>1 702</td>
<td>3,844</td>
<td>7 098</td>
<td>1 467</td>
<td>5</td>
<td>14 940</td>
</tr>
<tr>
<td>16</td>
<td>301</td>
<td>745</td>
<td>1 598</td>
<td>4 092</td>
<td>5 312</td>
<td>1 192</td>
<td>13 240</td>
</tr>
<tr>
<td>17</td>
<td>70</td>
<td>201</td>
<td>522</td>
<td>1 587</td>
<td>2 580</td>
<td>3 885</td>
<td>8 845</td>
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<td>18</td>
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<td>60</td>
<td>124</td>
<td>420</td>
<td>814</td>
<td>1 751</td>
<td>3 182</td>
</tr>
<tr>
<td>19+</td>
<td>5</td>
<td>7</td>
<td>32</td>
<td>108</td>
<td>216</td>
<td>593</td>
<td>961</td>
</tr>
<tr>
<td>Total</td>
<td>18 913</td>
<td>17 714</td>
<td>16 478</td>
<td>15 212</td>
<td>10 394</td>
<td>7 426</td>
<td>86 137</td>
</tr>
<tr>
<td>Median</td>
<td>12,70</td>
<td>13,75</td>
<td>14,74</td>
<td>15,80</td>
<td>16,70</td>
<td>17,65</td>
<td>91,34</td>
</tr>
</tbody>
</table>

4.1.2 The junior secondary phase in Indian education

The junior secondary phase embraces the standard five to seven range, and is regarded as the transitional stage from childhood to puberty. Education at this stage is generally of a formative nature with most of the subjects in the curriculum being compulsory (Pillay & Naguran, 1976:20). Table 4.3 shows the progres-
sion of the pupils from Std 6 to Std 10. This shows a tremendous improvement in the pupils who are moving up the educational ladder. There has also been a significant reduction in human wastage in regard to the number of pupils who repeat or drop out in the educative structure.

Table 4.3 Progression of pupils, Std 6 to Std 10 (South African Statistics, 1986:5.34; 1990:5.25).

<table>
<thead>
<tr>
<th>Year</th>
<th>Std 6</th>
<th>Std 7</th>
<th>Std 8</th>
<th>Std 9</th>
<th>Std 10</th>
<th>Percent</th>
<th>Std 6</th>
<th>Std 7</th>
<th>Std 8</th>
<th>Std 9</th>
<th>Std 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>17714</td>
<td>16478</td>
<td>15212</td>
<td>10394</td>
<td>7426</td>
<td>100</td>
<td>96.8</td>
<td>94.7</td>
<td>67.6</td>
<td>52.5</td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>18274</td>
<td>16937</td>
<td>15462</td>
<td>11138</td>
<td>7843</td>
<td>100</td>
<td>95.7</td>
<td>90.8</td>
<td>69.3</td>
<td>51.2</td>
<td></td>
</tr>
<tr>
<td>1982</td>
<td>18257</td>
<td>17309</td>
<td>16291</td>
<td>11945</td>
<td>8437</td>
<td>100</td>
<td>94.7</td>
<td>92.0</td>
<td>70.2</td>
<td>52.5</td>
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<td>16447</td>
<td>13770</td>
<td>9312</td>
<td>100</td>
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<td>90.0</td>
<td>77.7</td>
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<td>17726</td>
<td>16373</td>
<td>14275</td>
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<td>21219</td>
<td>18604</td>
<td>17469</td>
<td>14304</td>
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<td>94.1</td>
<td>78.3</td>
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<td>19875</td>
<td>18360</td>
<td>15036</td>
<td>11698</td>
<td>100</td>
<td>93.1</td>
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<tr>
<td>1987</td>
<td>21417</td>
<td>21053</td>
<td>19724</td>
<td>16288</td>
<td>12866</td>
<td>100</td>
<td>95.2</td>
<td>92.3</td>
<td></td>
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<tr>
<td>1988</td>
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<td>20259</td>
<td>20329</td>
<td>17311</td>
<td>13798</td>
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<td>94.6</td>
<td>91.9</td>
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<td></td>
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<tr>
<td>1989</td>
<td>21025</td>
<td>19965</td>
<td>19711</td>
<td>17715</td>
<td>14664</td>
<td>100</td>
<td>93.7</td>
<td>92.0</td>
<td>80.1</td>
<td>68.7</td>
<td></td>
</tr>
</tbody>
</table>

4.1.3 Standard 5: Threshold of differentiation

Standard 5 is regarded as the threshold from which the big leap into differentiation is taken. By and large, up to, and even in, Standard 5, pupils receive class instruction with all pupils following the same curriculum. After Std 5 the phase of experimentation and differentiation commences. Therefore, Std 5 is a watershed year. This necessitates the introduction of the promotion/retardation instruments to siphon off the weaker pupils.
The criteria which are used by the Department at this level include:

* the score from the school-based examination in English;
* the English attainment test score;
* the score from the school-based examination in General Mathematics;
* the General Mathematics attainment score;
* the IQ score; and
* the aggregate of the school-based examination (Anon B, 1981:8).

The compulsory examination subjects are English, Afrikaans, Geography, General Science, History and General Mathematics (Pillay, 1988:178).

4.1.4 Stds 6 and 7: The exploratory years

Stds 6 and 7 are considered to be important years in the secondary school, since pupils need to explore a wide spectrum of subjects and then make a vital decision with regard to the direction of study that they wish to pursue in the Senior Secondary Phase (Anon C, 1981:8). In these standards, pupils are offered a variety of subjects so that individual interests and aptitudes can be catered for, as far as possible. The school curriculum in these standards makes provision for the following compulsory subjects:
* English as first language;
* Afrikaans as second language;
* Mathematics and General Science (Science direction); and
* History and Geography (Humanities direction)

In addition to the above listed compulsory subjects in Stds 6 and 7, the optional subjects from which three have to be selected are: one from Technical Drawing, Industrial Arts, Needlework and Home Economics; one from Accounting and Typing; and one from Latin, Arabic, Hindi, Tamil, Talegu, Gujerati, Art, Music, Health Education and Computer Science (Pillay, 1988:178).

The compulsory non-examination subjects are:
* Right Living
* Physical Education (including Health Education)
* Aesthetic Education (including Music, Art and Manual Training)
* Library Science Education
* School Guidance (as an auxiliary service) (Pillay, 1988:178).

Pupils are also exposed to subjects in Commercial and/or Technical directions.

At present, pupils are promoted if they pass English and four other subjects, out of nine subjects offered, thus allowing the pupils to succeed in the subjects commensurate with their interests and abilities. In order to ensure that certain subjects are not neglected, the pupil has to obtain an aggregate of 35%.
On the basis of the compulsory subjects, a pupil will choose whether to follow the direction of science or the humanities, depending on his aptitudes. In the case of gender differences, provision is made for subjects which are suitable for either boys or girls. These subjects provide for individual differences among pupils.

4.1.5 The senior secondary phase

Pupils who make the grade at academic level in the Standard 7 examination, are entitled to proceed to the Senior Secondary phase in which extensive differentiation underlies the education programme. Various fields of study are offered, and approved subjects may be taken on the Higher or the Standard Grade.

The fields of study offered in phase four are as follows:

1. Humanities
2. Natural Sciences
3. Commercial
4. Home Economics
5. Technical
6. General
Table 4.4 tabulates the subjects and the grades that were being taken by the pupils from Stds 8 to 10, up to 1985:

**Table 4.4** Subjects taken by Indian pupils from Std 8 to Std 10 up to 1985 (South African Statistics, 1986:5.35; 5.36).

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Std 8</th>
<th>Std 9</th>
<th>Std 10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td><strong>Group A</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Afrikaans Second Language H G</td>
<td>7001</td>
<td>6826</td>
<td>5490</td>
</tr>
<tr>
<td>Afrikaans Second Language S G</td>
<td>633</td>
<td>454</td>
<td>1035</td>
</tr>
<tr>
<td>Afrikaans Second Language L G</td>
<td>891</td>
<td>568</td>
<td>1059</td>
</tr>
<tr>
<td>English First Language H G</td>
<td>7193</td>
<td>6979</td>
<td>5231</td>
</tr>
<tr>
<td>English First Language S G</td>
<td>589</td>
<td>361</td>
<td>1349</td>
</tr>
<tr>
<td>English First Language L G</td>
<td>743</td>
<td>508</td>
<td>1004</td>
</tr>
<tr>
<td><strong>Group B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics H G</td>
<td>5113</td>
<td>3972</td>
<td>2934</td>
</tr>
<tr>
<td>Mathematics S G</td>
<td>621</td>
<td>224</td>
<td>2466</td>
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<td>Mathematics L G</td>
<td>758</td>
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<td>708</td>
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<td><strong>Group C</strong></td>
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<td>1970</td>
</tr>
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<td>Physical Science L G</td>
<td>165</td>
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<td>135</td>
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<tr>
<td>Biology H G</td>
<td>5513</td>
<td>5997</td>
<td>3331</td>
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<tr>
<td>Biology S G</td>
<td>550</td>
<td>443</td>
<td>1491</td>
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<tr>
<td>Biology L G</td>
<td>527</td>
<td>500</td>
<td>730</td>
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<td>Subjects</td>
<td>Std 8</td>
<td>Std 9</td>
<td>Std 10</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>Group D</td>
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<td>Arabic</td>
<td>S G</td>
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<td>57</td>
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<tr>
<td>Group E</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>History</td>
<td>H G</td>
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<td>History</td>
<td>S G</td>
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<td>L G</td>
<td>239</td>
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<td>H G</td>
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<td>S G</td>
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<td>Geography</td>
<td>L G</td>
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<td>Economics</td>
<td>H G</td>
<td>488</td>
<td>486</td>
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<td>Economics</td>
<td>S G</td>
<td>69</td>
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<td>Group F</td>
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<tr>
<td>Accounting</td>
<td>H G</td>
<td>4881</td>
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<td>Accounting</td>
<td>S G</td>
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<td>964</td>
</tr>
<tr>
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<td>H G</td>
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<td>L G</td>
<td>-</td>
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<td>L G</td>
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<td>H G</td>
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<td>Art</td>
<td>H G</td>
<td>181</td>
<td>106</td>
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<tr>
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<td>L G</td>
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<td>Metalwork</td>
<td>S G</td>
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<td>L G</td>
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<tr>
<td>Needlework &amp; Sewing</td>
<td>S G</td>
<td>20</td>
<td>65</td>
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<td>Housecraft</td>
<td>S G</td>
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<td>419</td>
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<td>Housecraft</td>
<td>L G</td>
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<td>65</td>
</tr>
<tr>
<td>Speech &amp; Drama</td>
<td>H G</td>
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<td>Commercial Mathematics</td>
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110.
<table>
<thead>
<tr>
<th>Subjects</th>
<th>Std 8 Boys</th>
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<tr>
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<tr>
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<td>L G</td>
<td>32</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Motor Mechanics</td>
<td>S G</td>
<td>75</td>
<td>12</td>
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<td>95</td>
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</tr>
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<td>Fitting &amp; Turning</td>
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<td>93</td>
<td>1</td>
<td></td>
<td>99</td>
<td>-</td>
</tr>
<tr>
<td>Woodworking</td>
<td>S G</td>
<td>32</td>
<td>-</td>
<td></td>
<td>53</td>
<td>-</td>
</tr>
<tr>
<td>Welding &amp; Metalworking</td>
<td>S G</td>
<td>67</td>
<td>-</td>
<td></td>
<td>75</td>
<td>-</td>
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<tr>
<td>Motor Body Repairing</td>
<td>S G</td>
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<td>-</td>
<td></td>
<td>62</td>
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<tr>
<td>Plumbing &amp; Sheet Metalworking</td>
<td>S G</td>
<td>41</td>
<td>-</td>
<td></td>
<td>46</td>
<td>-</td>
</tr>
<tr>
<td>Bricklaying &amp; Plastering</td>
<td>S G</td>
<td>19</td>
<td>-</td>
<td></td>
<td>22</td>
<td>-</td>
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<tr>
<td>Building Construction Theory</td>
<td>S G</td>
<td>9</td>
<td>-</td>
<td></td>
<td>23</td>
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</tr>
</tbody>
</table>

4.1.6 Technical education

The secondary technical classes commence at Std 7 and continue to the Senior Certificate (Std 10) or the Senior Certificate Matriculation Exemption. The latter certificate is accepted for admission to university.

Trade training from brick laying, plumbing and sheet metalwork to electrical and radio workshop training is also provided (Solomon, 1976:44). The grades or "streams" at a Technical High School provide for students with differing standards of academic ability (Hean, 1973:24).
With technical education, the pupils start off their studies as follows:

Table 4.5 Change from academic education to technical education (Jordaan, 1982:3)

<table>
<thead>
<tr>
<th>After completion of:</th>
<th>Start off with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std 7</td>
<td>National Technical Certificate Part 1</td>
</tr>
<tr>
<td>Std 8</td>
<td>National Technical Certificate Part 2</td>
</tr>
<tr>
<td>Std 9</td>
<td>National Technical Certificate Part 3</td>
</tr>
<tr>
<td>Std 10</td>
<td>National Technical Certificate Part 4</td>
</tr>
</tbody>
</table>

then proceed to Parts 5 and 6

4.1.7 Special projects with regard to differentiation

4.1.7.1 Flexibility in secondary school timetabling

A project was undertaken by the Department of Education and Culture in the House of Delegates in order to investigate the flexibility in secondary school timetabling. The main objective which was tried out at three secondary schools was to break away from the traditional rigid 9 - period (35 minutes each) or 11 - period (30 minutes each) a day programmes at secondary schools (Anon, 1985:13). The models in timetabling that are being investigated will give pupils a number of free periods which will enable them to structure their own programmes in terms of their needs. This is of great importance for the policy of differentiated education.

This arrangement will also give teachers an opportunity to engage in group planning and curriculum development during the
course of the day. Flexible arrangement in timetabling will help in improving the quality of education. In keeping with the De Lange Commission's recommendation in respect of the devolution of power at various levels of educational management, the timetable models being investigated will allow principals a greater say in decision-making at their level of educational planning (Anon, 1985:130). This makes the way in which pupils are assigned to teachers for instruction, more varied so as to cater for differentiation.

4.1.7.2 Placement of pupils on the Lower Grade

An investigation into the placement of pupils on the Lower Grade in the junior and senior secondary phases was undertaken by the Department. This survey was undertaken in order to ascertain trends with regard to the placement of pupils on the Lower Grade in the junior and senior secondary phases. It is difficult to predict clearly and concisely any significant emergent trend with regard to the placement of pupils on the Lower Grade. What is noticeable, however, is a great deal of fluctuation with regard to placement of pupils from standard to standard, subject to subject and from school to school (Anon, 1985:13).

4.1.7.3 New promotion and placement procedures in the junior secondary phase

An investigation into the feasibility of new promotion and placement procedures in the junior secondary phase was undertaken by the Department on account of the concern over a large
number of pupils who gained Practical Course passes at schools. A new approach which considers promotion of pupils from one class to the next, and placement of pupils into Ordinary and Practical Courses, as two different issues, was tried out at a selected number of sample schools. The promotion of pupils from Std 5 to Std 6 is based on pupil performance in school-based examinations, and the placement of pupils into Std 6 Ordinary and Practical Course is based on a number of criteria including IQ and standardised attainment tests in English and Mathematics (Naicker, 1982:27).

New promotional requirements for Std 6 and 7 Ordinary Grade, where greater emphasis is placed on passing individual subjects, are also being investigated. The encouraging factor which has been created by these findings, has resulted in the application of the new promotion and placement procedures in the junior secondary phase at all schools. This is a good example of research which has a bearing on differentiated education.

4.1.7.4 The English curriculum project

Pilot investigations with regard to the English curriculum in the senior secondary phase have been completed. The curriculum project team has developed new curricula for English in the senior secondary phase and these were evaluated at a selected number of experimental schools (Naicker, 1982:27). This had enhanced the pupils' performance in other subjects where the medium of instruction is English.
4.1.8 Pre-vocational secondary school

A pre-vocational secondary school caters for senior mentally retarded pupils who cannot proceed to an ordinary secondary school and who require a vocationally orientated curriculum to prepare them for life (Singh, 1983:9). Provision has been made for senior pupils from special education to receive training at pre-vocational secondary schools. At these schools, the emphasis is on vocational training with specialist facilities being provided for motor mechanics, body repair work, spray painting, metalwork, woodwork, hairdressing and sign-writing. Arrangements are also made for "on the job training" in occupations of the pupil's choice wherever possible. These schools are established at Chatsworth, Phoenix, Pietermaritzburg and Lenasia (Ansur, 1990).

4.1.9 Computer literacy

Computer literacy was introduced in the Stds 6 and 7 curriculum of all secondary schools during 1987. Each secondary school is supplied with 12 micro computers for the purpose of "hands on" experience. To provide accommodation for the increased intake of pupils in Std 6 in 1987, the Department erected five additional prefabricated classrooms in some of the targeted schools. The establishment of computer centres cost the Department approximately R4,5 million. The changes effected to convert the classrooms into computer rooms include (Anon, 1988:23):

* installation of new cable from meter room to computer room and provision of electrical distribution board;
* provision of power skirting around the room;
* burglar-proofing of windows and doors;
* replacement of fluorescent lighting with special low brightness fittings;
* replacement of chalkboard with white marker board;
* provision of custom-built computer tables;
* provision of OHP screen (where required);
* air-conditioning of room; and
* repainting of room.

4.1.10 The expansion of the curriculum

In order to meet the needs of the pupils with diverse interests, abilities and aptitudes, the Department has expanded the curriculum.

From the beginning of 1987, Technikon (Electronics) was introduced at five secondary schools. Provision has been made for the introduction of Technikon (Electronics) and Technikon (Mechanical) at other selected secondary schools in subsequent years. Provision has also been made for the introduction of Electronics SG at two of the four secondary schools offering courses with a technical bias. Computer Studies HG and SG have been introduced in the senior secondary phase at selected secondary schools (Pillay, 1990).

Art and Speech and Drama were introduced at the beginning of 1986 in Std 8 as examination subjects.
The inclusion of the components of Indian music in the Music syllabus offered at school has been considered by the Advisory Committee.

4.1.11 Black languages

Two black languages, Zulu and Tswana, are presently offered as optional examination subjects at selected secondary schools. The project is to be extended to include other schools (Marx, 1990).

4.1.12 Extra-curricular education

The Department is supportive of extra-curricular programs which are initiated by outside agencies. Some of the extra-curricular activities include debates and speech contests, essay competitions, art competitions, junior achievement programs, quiz programs, olympiads, sports programs and national endeavours, e.g. Year of the Disabled. Participation in extra-curricular activities allows for the broadening of the scope for the general education of pupils. Pillay (1988:195) contends that the extra-curricular, co-curricular and allied activities contribute towards the well-balanced growth and development of young people and these activities are regarded by the Department as an integral part of the school program.

4.1.13 The gifted and talented child

The definition of giftedness has widened in recent years to include excellence in any service or contribution which is useful
to man. Giftedness is closely linked with the personality and intelligence of the individual. It has been found that the socio-economic level of a community has an influence upon the IQs of the school population. The upper 3 to 5% of school-age children can be considered to fall into the category of the gifted in terms of general intellectual ability. This corresponds to an IQ of 125.

Van Schalkwyk (1988:123) states that an education system should provide the opportunity for every highly gifted child to achieve optimal development in view of his particular mandate. The school system provides for the educational needs of these pupils by means of special classes, alternation of special and ordinary education, after-school instruction and a specially equipped media centre. The technique which is employed for these pupils is the enrichment of the syllabuses by increasing the amount of subject-matter and the degree of difficulty of the subject-matter.

Giftedness, in addition to the general problem-solving and reasoning ability measured by current IQ tests, may include superior potential abilities and skills in a particular academic area, in visual and performing arts, in psychomotor activities (sports of various kinds), and in social leadership. It is extremely difficult to produce tests for identifying and measuring creativity, such as the talent for originality and constructive imagination. An erroneous supposition can be created with regard to high levels of measured intelligence as the indicators of outstanding ability across the whole spectrum of human ability. For many highly intelligent children, their gift may be a burden.
rather than a delight as a result of inappropriate expectations imposed upon them by parents, teachers and others. The role of the teacher is the discovery of the potentially bright child's special aptitudes, and then to ensure that they are fostered. Frustration of potential clearly increases the risk of poor social adjustment (Ansur, 1990).

4.1.14 The pupil population

Since the take-over in 1966 to the present time, the pupil population is as tabulated below:
Table 4.6 Pupils by standards – all schools (South African Statistics, 1986:5.32; South African Statistics, 1990:5.21)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Std 5</th>
<th>Std 6</th>
<th>Std 7</th>
<th>Std 8</th>
<th>Std 9</th>
<th>Std 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967</td>
<td>47 055</td>
<td>14 320</td>
<td>12 968</td>
<td>7 949</td>
<td>5 888</td>
<td>3 779</td>
<td>2 151</td>
</tr>
<tr>
<td>1968</td>
<td>51 261</td>
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<td>17 243</td>
<td>11 681</td>
<td>9 043</td>
<td>5 759</td>
<td>3 881</td>
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<td>1973</td>
<td>64 282</td>
<td>13 633</td>
<td>16 232</td>
<td>14 127</td>
<td>9 748</td>
<td>6 456</td>
<td>4 086</td>
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<tr>
<td>1974</td>
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<td>13 441</td>
<td>12 615</td>
<td>15 126</td>
<td>11 032</td>
<td>7 380</td>
<td>4 460</td>
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<tr>
<td>1975</td>
<td>63 513</td>
<td>15 076</td>
<td>12 463</td>
<td>11 778</td>
<td>13 533</td>
<td>6 154</td>
<td>4 509</td>
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<td>1976</td>
<td>65 770</td>
<td>16 194</td>
<td>14 132</td>
<td>11 924</td>
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<td>9 386</td>
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<td>17 714</td>
<td>16 478</td>
<td>15 212</td>
<td>10 394</td>
<td>7 426</td>
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<td>88 808</td>
<td>19 104</td>
<td>18 274</td>
<td>16 957</td>
<td>15 462</td>
<td>11 138</td>
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</tr>
<tr>
<td>1982</td>
<td>91 566</td>
<td>19 357</td>
<td>18 257</td>
<td>17 309</td>
<td>16 291</td>
<td>11 945</td>
<td>8 437</td>
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<td>9 312</td>
</tr>
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<td>100 615</td>
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<td>19 760</td>
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<td>14 937</td>
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<td>1988</td>
<td>112 328</td>
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<td>19 758</td>
<td>20 642</td>
<td>19 572</td>
<td>19 207</td>
<td>17 208</td>
<td>14 370</td>
</tr>
<tr>
<td>TOTAL</td>
<td>831 285</td>
<td>411 012</td>
<td>389 247</td>
<td>341 995</td>
<td>308 091</td>
<td>221 083</td>
<td>159 887</td>
</tr>
</tbody>
</table>
4.1.15 Number of senior certificate candidates

An indication of the percentage of candidates who obtained Senior Certificate passes and those who obtained matriculation exemption is given in Table 4.7:

Table 4.7 Graph of Matriculation results

<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>A</td>
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<tr>
<td>B</td>
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<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Key:

A : Percentage pass

B : Percentage of candidates who offered matriculation exemption courses

C : Percentage who obtained matriculation exemption passes
The statistics for November/December 1983 and 1984 (in some of the more popular subjects) give some indication of the all-round improvement in the 1984 Senior Certificate Examination results:

<table>
<thead>
<tr>
<th>Subject</th>
<th>1983</th>
<th>1984</th>
</tr>
</thead>
<tbody>
<tr>
<td>English HG</td>
<td>90,5</td>
<td>93,0</td>
</tr>
<tr>
<td>Afrikaans HG</td>
<td>94,1</td>
<td>95,0</td>
</tr>
<tr>
<td>Mathematics HG</td>
<td>70,6</td>
<td>74,4</td>
</tr>
<tr>
<td>Physical Science HG</td>
<td>72,6</td>
<td>81,7</td>
</tr>
<tr>
<td>Biology HG</td>
<td>70,0</td>
<td>71,2</td>
</tr>
<tr>
<td>History HG</td>
<td>85,6</td>
<td>93,2</td>
</tr>
<tr>
<td>Geography HG</td>
<td>84,3</td>
<td>89,3</td>
</tr>
<tr>
<td>Accountancy HG</td>
<td>82,2</td>
<td>84,7</td>
</tr>
</tbody>
</table>

The placement of pupils in study directions in accordance with their interest, aptitude and ability played a significant role in the improvement of the matriculation results.

4.1.16 The Practical Course

A relatively large number of pupils (the dull - normal) constituting approximately twenty per cent of the secondary school population, with an IQ ranging from 85 to 95, are able to cope with the normal educational programme (Pillay, 1988:182). These pupils rarely advance beyond the standard eight level, and on reaching the age of sixteen years, leave school with or without a standard eight certificate. A practical course, which was implemented in 1972, allows these pupils to develop their limited academic talents and their potential to the fullest.
Pillay (1988:183) quotes Desai (1972) in stating that the "dull-normal" group has been described as belonging to the lower end of the average, and is backward and in general retarded because of poor intelligence and/or late development and/or circumstantial factors such as poor health, poor school attendance, adverse home background or environmental handicaps.

For the slow learner, a more practical and vocationally orientated course is offered from Std 6 to the terminal point, Std 8. As a further development of the system of differentiated education, the necessary planning for the extension of the practical course to Std 9 in 1978 and Std 10 in 1979, was completed in 1977. This was done to make it possible for the pupils to gain adequate basic knowledge for employment in the Commercial, Technical and Industrial fields.

The implementation of the practical course, which was designed to cater for pupils with special needs, has revealed specific problems associated with the course, as outlined below (Pillay, 1988:184):

* an abnormally high number of pupils were placed in the practical course;
* a stigma has been built round the tag "practical"
* little or no recognition was accorded to the Practical Course certificate in the labour market; and
* pupils placed in the Practical Course tend to perform at low expectation levels.
For these and other reasons associated with the Practical Course, it was decided to discontinue the course at the end of 1982. It was decided to implement a system of subject-based differentiation in both the junior and senior secondary school phases, in order to cater for pupils with special needs. As from 1983, examination subjects were offered on the Ordinary and Lower Grades in Stds 6 and 7 and on the Higher, Standard and Lower Grades in Stds 8, 9 and 10 (Pillay, 1988:184).

The curriculum structure is the same as is applicable to the ordinary course, but a subject taken on the Lower Grade does not count for matriculation exemption purposes and no conversion from Standard Grade to Lower Grade can be made (Pillay, 1988:184).

4.1.17 The Indian girl

The increase in the number of matriculating girls is attributable to a number of factors, namely, compulsory education, the prejudice against working girls which was broken down because of economic necessity, the bustling urban industrialized society which needs higher education to cope with its complexities, and modern technology which has enabled the housewife to cope with her domestic chores more easily and still have leisure time. Table 4.4 highlights the remarkable progress in high school education for the Indian girl.

The female school population has increased considerably and is now almost on a par with the male. The conservatism of the Indian parent with regard to his daughter has broken down signi-
The system of differentiated education exposed Indian girls to the choice of a more diversified and meaningful curriculum and this, coupled with the increasing independence of Indian women as a result of enhanced educational opportunities, the higher demands made by the job market and the ever-present struggle with the increasing cost of living, is enticing girls to stay longer at school (Pillay, 1988:71,72).

4.1.18 Effects of the implementation of differentiated education

The major problems experienced by school principals in the junior and secondary phase, due to the introduction of differentiated education, were as follows (Pillay, 1988:196):

* a serious shortage of specialist room;
* inadequacy of the existing staff-ratio formula; and
* the restricted number of courses offered in rural areas on account of uneconomical teaching units.

The implementation of differentiated education has also resulted in the revision of syllabuses, the issue of newtext books to pupils, and a revised and substantially increased list of inventory items and consumables for the different subjects, thus leading to a substantial increase in the budget for education. Adaptations and modifications were made on a continual basis in the light of practical experiences and problems which were encountered (Pillay, 1988:197).
4.1.19 Evaluation of differentiation at the secondary level

4.1.19.1 Introduction

Great efforts have been made by the Department to take into account the individuality of each pupil. Two phases, namely, the junior secondary phase and the senior secondary phase, have been introduced since 1973 in order to cater for the different developmental needs of children. Differentiation in the ages of children is possible through the grouping of the children in the same educational phase. In the junior secondary phase, the subject-matter is presented in a differentiated manner, taking into consideration the educational needs of the children in this phase. In this phase, the main concern of educationists is the valid assessment of the child's aptitudes, abilities and interests. In the senior secondary phase, fully differentiated education is offered through the provision of the educational program which has a wide variety of choice of curricula to ensure that every child, whether academically inclined or not, would be catered for. The replacement of the Practical Course by the Lower Grade subject is an indication of the seriousness with which the system of differentiation has been tackled.

Experimentation and differentiation commences in the junior secondary phase and is facilitated by the introduction of the promotion and retardation instruments to siphon off the weaker pupils. The weaker pupils are not dumped but are catered for in a technical and vocational stream.
The old three-stream system has been replaced by the extension of the school curriculum in order to give a better balance between academic and vocational subjects. This has resulted in cross-grouping, whereby the children are divided according to subject choice, in different groups, on the basis of their abilities, aptitudes and interests. This has also resulted in an increase in the variety of subjects the children may choose from and the diversification of the directions in which the children may study through the combination of subjects from different streams. The gender differences have a bearing on the number of subjects offered which are suitable either for boys or girls. Special projects with regard to differentiation are undertaken by the Department as an on-going process.

4.1.19.2 Grounds for differentiation

* Differences of sex
As is the case with primary education there are certain subjects that are peculiar to female pupils. Subjects like Housecraft and Needlework and Sewing are offered exclusively to female pupils. In the same vein subjects such as Woodwork and Metalwork are offered to boys only (cf. Table 4.4). These subjects are offered in the same schools. Although there may be girls taking Woodwork, for example, more boys are attracted to the subject than girls.

* Differences of aptitude and abilities
The curriculum for secondary education caters for differences of aptitudes and abilities. A variety of subjects is offered for
pupils to choose according to their aptitude and abilities (cf. Table 4.4). A pupil may choose to take a subject on the Higher, Standard or Lower Grade depending on his aptitude and ability in that particular subject.

Furthermore, a pupil has the option of choosing subjects from the humanities, natural sciences, home economics, commercial, technical and general, depending on his aptitude and ability (cf. Table 4.4).

* Differences of interest

Linked with aptitudes and abilities is interest. A variety of subjects is provided to cater for pupils' differences in interest (cf. Table 4.4). Some pupils are interested in the humanities, some in natural sciences, others in commercial subjects and others in the technical subjects. All these fields are made available to a secondary school pupil. Tests conducted by the Psychological Services of the Department assist and guide the pupil in his career path.

* Differences in age and level of development

The pupils at secondary school level are divided into the junior secondary phase and the senior secondary phase. The average age in the former is from twelve to fourteen years and in the latter from fifteen to seventeen (cf. Table 4.1). Standards are used to group the pupils together. There are those who are in Std 5 and those who are in Std 10. Pupils are grouped together according to the standard they are in.
* Abnormalities

Special education is made available for handicapped pupils. This, amongst others, covers education for the blind, the deaf, the crippled, the cerebral palsied and the severely mentally retarded.

* Education for the gifted and talented child

Enriched education is provided for those pupils who are gifted and talented.

4.1.19.3 Techniques of differentiation

* Individualization

Individualization shows itself in a number of ways. It manifests itself in terms of the various fields of study. Pupils are allowed the opportunity to choose subjects that interest them and for which they have the aptitude and ability. Within one particular field of study, pupils are further sub-divided into standards. Those pupils whose abilities are moderate take their choices on the Standard Grade.

* Grouping

Pupils in various standards and various fields of study are further grouped according to their ability, aptitude and interest. Those pupils who do not have the necessary abilities and aptitudes are made to take their subject choices on the Standard Grade or Lower Grade.
* Study directions

There are a number of study directions for the pupils to choose from as per Table 4.4. The study directions are in humanities, natural sciences, home economics, commercial, technical and general. The pupils' ability, aptitude and interest play an important role in the grouping of the pupils in the aforesaid study directions.

4.2 CHAPTER SUMMARY

The practices of the system of differentiation in the junior secondary phase and the senior secondary phase have been discussed. In the next chapter the summary, findings and recommendations of the study will be discussed.
CHAPTER 5

SUMMARY

5.1 INTRODUCTION

In this chapter an attempt will be made to summarize all issues which have been discussed in the previous chapters. General as well as specific recommendations emanating from this study will be given. In this chapter the following issues will also be discussed: problems encountered during the period of research as well as fields that can be indicated for further research.

5.2 SUMMARY

The problems of research have been stated as follows:

* What is the theoretical justification for differentiation in the school system and what are the historical perspectives of the Indian education system?

* What are the present practices of differentiation in the pre-primary and primary school system for Indians?

* What are the present practices for differentiation at the secondary level?
Derived from the problems of research, the aims of this study are fourfold and have been cited as follows:

* to determine the theoretical justification for differentiation in the school system for Indians;

* to describe the historical perspectives of the Indian education system;

* to investigate the practices for differentiation in the pre-primary and primary levels; and

* to investigate the practices for differentiation in secondary education since 1984.

It is also essential to state here that in order to accomplish the aims of this research the following methods of research were used:

* literature study; and

* personal unstructured interviews.

In Chapter II, the theoretical basis of the field of study and the historical perspectives of the Indian education system were made. This served as a general background to the exposition of the policy of differentiation in an education system. It also served as a basis for the description of the present practices for differentiation in the pre-primary, primary and secondary levels of the school system.
The principal theories for differentiated education were discussed. These were:

* the normative basis of differentiated education;

* the anthropological foundation of differentiated education; and

* the pragmatic foundation of differentiated education.

The aims of differentiated education were briefly stated as:

* education corresponding to the abilities of the pupils, so that they can attain full development;

* education which will embrace the demands made with reference to after-school vocational training;

* information to pupils with reference to their education and career choices so that the manpower needs of the country can be satisfied; and

* the transfer of a system of values and its establishment with the pupils through education on a non-differentiated foundation.

The following seven techniques for differentiation were stated and discussed. These are:
- Differentiation in courses or streams;
- cross-grouping;
- subject choices and study directions;
- differentiation in time;
- differentiation through enrichment of the syllabus;
- regulation through time-limit; and
- differentiation through special classes.

The causes of individual differences were also discussed. The contention was that these (individual differences) were attributable to the following factors:

- heredity and environment;
- race and nationality; and
- gender.

Under the scope of individual difference, the constitutive and operative definitions of the concepts: interest, ability and aptitude were given and the role each of these plays in a pedagogical-didactical situation was explained. The historical perspectives of Indian education were discussed.

In Chapters 3 and 4, differentiation in the pre-primary, primary and secondary levels was discussed. In each chapter, the general aims and objectives of each educational level are discussed. In each of the two chapters, the following issues are addressed: the phase and duration of each level and the organization; mention is made of the different types of schools on each level; the curriculum in each phase, for example the subjects offered
per standard; the manner in which examinations are conducted at
the end of each standard or phase is also discussed; the table
of the distribution of the learners; pupil-teacher ratios, and
age distribution are tabulated accordingly.

In Chapter 3, the general aims of educational levels are men-
tioned. It is contended that the pre-primary school is a place
where a group of 3 - 6 year-olds receive norm-centred, formative
education in a structured environment by means of a programme
offering a wealth of opportunities in an informal yet purposeful,
planned and organized way. It was also stated that primary
school education provides elementary or fundamental basic educa-
tion which lays a foundation and is of a preparatory nature.

The importance of school readiness for pre-primary pupils is
discussed. School readiness entails:

* such a degree of physical and psychological development that
  the child is able and willing to cope with the demands of for-
  mal education;

* good physical health;

* adequate large and small muscle development and co-ordination;

* adequate eye-hand co-ordination;

* adequate development of cognitive skills and communicative
  abilities;

* adequate independence; and

* a positive attitude towards work (Fiat Lux, 1984: 6).
The main objectives of school readiness are stated as:

* acceptance of school discipline;

* acceptance of the school system of rewards;

* ability to carry out instructions;

* acceptance of the teacher as a source of information;

* ability to pay attention;

* ability to concentrate on the task in hand;

* eagerness to learn; and

* readiness for reading and elementary mathematics.

The importance of early exposure to reading is also discussed.

In Chapter 4, the general aim of secondary school was described as the educational passage leading from the primary school with its general education, to a tertiary educational institution with its special and complete vocational education. Mention is made of the specific school levels and the duration of each phase as tabulated in Table 4.1. Mention is also made of the eight different types of schools which can be established at the secondary educational level. The projects which are undertaken by the Department are discussed in order to illustrate the practicalities of the system of differentiation at this level.
5.3 FINAL FINDINGS AND RECOMMENDATIONS

5.3.1 General recommendations

The introduction of the system of differentiated education was not new to Indian education in the Republic of South Africa. The attempt to differentiate between pupils, to arrange them in graded groups and to provide courses of study adapted to their abilities, aptitudes and interests, is not a new educational technique. What was new was the adoption of the system of differentiated education as part and parcel of the government's educational policy which helps in directing and shaping both the vocational and the educational needs of the pupils and of the country. This has minimized the problem of pupils who might be placed in the wrong stream or grouping, if psychological and educational tests were not conducted.

The traditional methods of assessment which the teachers and officials used in the past, like the formal test, the examination and the year mark, are unsuitable for the successful implementation of the system of differentiated education, as this approach is subjective, variable and often causes an inaccurate assessment of the child.

5.3.2 Findings and recommendations

5.3.2.1 Introduction

It is of paramount importance, as indicated earlier on, that differentiation should be the educational policy of all the
population groups in the RSA. In the Indian education system, the policy of differentiated education was introduced in 1973. The Department has tried to implement this policy through the introduction of innovative projects which are beneficial to the pupils. The whole educational practice is geared towards its maintenance and improvement.

The study of individual difference has its own means of assessment, namely, differentiated intelligence tests, attainment and aptitude tests which are characterized by objectivity, reliability, validity and a statistical nature. The study of individual difference is therefore basic to the method of differentiation.

5.3.2.2 Recommendations

The following issues merit closer attention by the educational authorities of the Department of Education and Culture:

* Financing and control of pre-primary education

The Department should take over the financing and control of pre-primary education, so that facilities can be provided regardless of the financial means of individual communities. At present it is solely the initiative of different communities which provides funding for pre-primary education. Parents should have a say in the control of schools and only to a limited extent contribute directly to the defrayal of educational expenses. At present the payment of pre-primary school
fees by the parents gives a head start to those pupils who are from relatively affluent communities.

* The educational structure

The school system and school phase should correspond with those for whites in the RSA. Std 5's should be accommodated in the junior secondary phase in all schools, as the lack of accommodation has made this impossible.

* Educational objectives

The accepted and proven educational aims and objectives pursued by education systems worldwide, should be adhered to.

* Medium of instruction

In this regard the status quo should be maintained, i.e. English should be used as the medium of instruction, whilst an Indian language should be offered as a subject up to matriculation level.

* Maintaining high standards

The emphasis should be on the non-negotiability of maintaining high academic standards. Certification bodies should ensure that international standards are maintained. No measures regarding the curriculum, evaluation and certification should be introduced that could lead to the Department's academic standards being called into question.
Guidance as an aspect of differentiation

Guidance should be the primary aspect of the policy of differentiation. Guidance should characterize the entire school career of the child. Guidance specialists should be responsible for the child vertically throughout the educational process. The function of guidance should be to provide the criteria for the evaluation of information and to provide knowledge of available sources of information. Guidance should help in establishing or modifying the purpose of awareness of internal and/or external changes in the child. The function of guidance is to focus on helping pupils to meet discontinuities through correct choices, and knowing how to make these choices.

5.4 PROBLEMS ENCOUNTERED DURING THE PERIOD OF RESEARCH

The research was carried out in the Republic of South Africa with reference to the Department of Education and Culture in the House of Delegates. Some of the problems encountered during the period of research pertain to centralization of the control of Indian education. This has resulted in the delay in getting the necessary permission to conduct research in the schools and to obtain the required statistical information pertaining to the research.

The latter problem was of a demographic nature, as the majority of Indian people reside in Natal. From the impression derived through the visits to the schools in Lenasia, Johannesburg, the problem was whether the sample of schools reflects the true and objective reality in Indian education.
5.5 FIELD FOR FURTHER RESEARCH

This research study should not be taken as the final word on differentiation in the school system for Indians in the RSA, as education should be seen as the dynamic encounter between the teacher and pupil and pupil and subject-matter. It is obvious that a survey study, like the one in question, has its shortcomings and limitations, the major one being that to be effective and scientifically accurate, the writer had to de-limit the field and had to concentrate on certain aspects only. Although these aspects were selected by virtue of what the present researcher considered to be their relevance to the policy of differentiated education, this does not mean that these are the only important aspects.

Consequently, it is necessary to study this subject from other perspectives in order to throw light on various aspects. The suggestions which follow do not claim to be comprehensive but aim to indicate certain lines of enquiry which would help in the better understanding of the situation and in perceiving more clearly the relevance of the many considerations advanced in this study. This will of necessity demand enquiries to be made among colleagues, parents, teachers, students and other members of the community. The suggestions should be modified and extended as appropriate.

The suggestions for lines of enquiry are:

* Are ability, interest and aptitude reliable predictors of success in the school system in particular, and in life in general?
* What role does school guidance play in the implementation and application of the policy of differentiated education in the school system?

* What role can interest groups play in differentiated education?

* What is the role of the psychological services in differentiated education?

* How can other educational strategies for innovation be used in the implementation of differentiation?

* What are the other factors to be considered with regard to the admission policies on the next rung of the educational ladder?

* Does career counselling at school on the basis of differentiation influence the choice of the university course?

* What influence does gender have on the choice of subjects and careers?

5.6 **CHAPTER SUMMARY**

An attempt has been made in this chapter to recapitulate concisely all the issues raised in the previous chapters, especially in chapters 2, 3 and 4.
The final findings and recommendations arising from the entire study have been made. Recommendations have been confined to those aspects which would be likely to improve the implementation of differentiation.

A few problems which were experienced during the period of research have been put forward. In conclusion, a few aspects for further research have been suggested.
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