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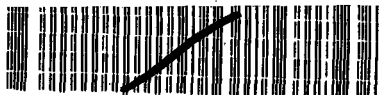
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Prof. J.P. de Lange  
Chairman of the Main Committee  
HSRC Investigation into Education

**REPORT OF THE WORK COMMITTEE:  
EDUCATION SYSTEM PLANNING**

As Chairman I take pleasure in submitting the report of the Work Committee: Education system planning to the Main Committee for consideration. The final chapter contains a summary of the report.

**MR. J.B. HAASBROEK  
CHAIRMAN**

## **STATEMENT**

This report has been prepared by the Work Committee: Education system planning instituted by the HSRC Main Committee for the Investigation into Education.

This report reflects the findings, opinions and recommendations of the Work Committee: Education system planning and, where applicable, those of groups or individuals in the work committee with regard to matters about which there are differences of opinion. The findings, opinions and recommendations contained in this report do not necessarily reflect the point of view of either the HSRC or the HSRC Main Committee for the Investigation into Education.

This report is regarded by the HSRC Main Committee for the Investigation into Education as a submission of the Work Committee: Education system planning to the Main Committee. The point of view and recommendations of the HSRC Main Committee will be contained in its final report that will be submitted to the Cabinet.

**Human Sciences Research Council**

**Investigation into Education**

**Report of the Work Committee:**

**Education system planning**

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## ORIENTATION

### THE REQUEST

In June 1980 the Cabinet requested the Human Sciences Research Council to conduct an in-depth investigation into all facets of education in the RSA. The request to the HSRC read as follows:

"Your Council, in co-operation with all interested parties, must conduct a scientific and co-ordinated investigation and within 12 months make recommendations to the Cabinet on:

- (a) guiding principles for a feasible education policy in the RSA in order to
  - (i) allow for the realization of the inhabitants' potential,
  - (ii) promote economic growth in the RSA, and
  - (iii) improve the quality of life of all the inhabitants in the country,
- (b) the organization and control structure and financing of education.
- (c) machinery for consultation and decision-making in education
- (d) an education infrastructure to provide for the manpower requirements of the RSA and the self-realization of its inhabitants, and
- (e) a programme for making available education of the same quality for all population groups.

The investigation must be conducted in the light of, among other things, the present educational situation, the population composition in South African society and the means that can be made available for education in the national economy. The investigation must cover all levels of education, i.e. pre-primary, primary, secondary and tertiary."

In accordance with the South African Plan for Research into the Human Science, the following plan of action was decided on.

- (a) Prof. J.P. de Lange, Rector of the Rand Afrikaans University would be appointed as research leader.
- (b) After the necessary consultation a high-level co-ordinating committee would be appointed to guide and co-ordinate the investigation and guarantee its scientific character. Members of the committee would include representatives of interested government departments, the private sector as well as eminent scientists from all the disciplines able to make a contribution to the development of education.



- (c) Representatives of education institutions would be invited to serve on the subcommittees and work groups of the investigation.
- (d) All population groups would be involved in the co-ordinated conduct of the investigation.
- (e) The investigation would be conducted in a spirit of positive co-ordination, i.e. the available research manpower both within and outside the HSRC and all research activities which had either already been concluded or were still going on, would be included in the investigation on a basis of voluntary co-operation.
- (f) The HSRC would undertake parts of the investigation itself, but would for the greatest part make its research structure available to contract researchers for the investigation.
- (g) Priority would be given to the most pressing problem areas so that the investigation could be expedited and interim reports submitted to the Cabinet in good time.
- (h) Where applicable, alternative solutions for problems in education would be submitted.

#### THE MAIN COMMITTEE

The Main Committee of the Investigation into Education, whose members were appointed by the Council of the HSRC, was as follows:

Prof J.P. de Lange (Chairman)	Rector, Rand Afrikaans University
Prof. A.N. Boyce	Rector, Johannesburg College of Education
Dr S.S. Brand	Head, Financial Policy, Dept of Finance
Dr R.R.M. Cingo	Inspector of Schools, Kroonstad East Circuit, Dept of Education and Training
Dr J.G. Garbers	President, Human Sciences Research Council
Mr J.B. Haasbroek	Director, SA Institute for Educational Research, HSRC
Dr K.B. Hartshorne	Centre of Continuing Education, University of the Witwatersrand
Prof. J.H. Jooste	Director, Transvaal Education Department
Prof. S.R. Maharaj	Dean, Faculty of Education, University of Durban-Westville
Dr P.R.T. Nel	Former Director, Natal Dept of Education; Dept of Indian Education

Prof. A.C. Nkabinde	Principal, University of Zululand
Mr R.D. Nobin	Inspector of Education, Dept of Internal Affairs (Indian Affairs)
Mr M.C. O'Dowd	Anglo-American Corporation of SA Ltd
Mr A. Pittendrigh	Director, Natal Technikon
Miss C.C. Regnart	Westerford High School
Dr P. Smit	Vice-President, HSRC
Mr F.A. Sonn	Director, Peninsula Technikon, President, Union of Teachers' Associations of SA
Mr J.F. Steyn	Chief Secretary, Tvl. Onderwysersvereniging; Secretary, Federal Council of Teachers' Associations
Prof. N.J. Swart	Vice-Rector, Potchefstroom University for Christian Higher Education
Mr L.M. Taunyane	President, Transvaal United African Teachers' Association
Dr P.J. van der Merwe	Deputy Director-General, Dept for Manpower; Deputy Chairman: National Manpower Commission
Prof. R.E. van der Ross	Principal, University of the Western Cape
Prof. F. van der Stoep	Dean, Faculty of Education, University of Pretoria
Prof. N.T. van Loggerenberg	Dean, Faculty of Education, University of the OFS; Chairman, SA Teachers' Council for Whites
Dr R.H. Venter	Director, Univ. Affairs, Dept of National Education
Prof. W.B. Vosloo	Head, Dept of Political Science and Public Administration, University of Stellenbosch

After the investigation had been in progress for some months, a request was received from the Department of National Education of South West Africa that it be granted observer status on the Main Committee - this was approved.

From the fifth meeting of the Main Committee Mr J.A. de Jager, Secretary of the Department, therefore also attended meetings of the Main Committee.

At the beginning of the investigation Dr S.W.H. Engelbrecht was appointed secretary and Dr F.P. Groenewald co-ordinator of the investigation. In due course the secretariat was expanded with the appointment of Dr D.J. van den Berg, after which the above-mentioned three persons acted as secretary-co-ordinators. Mr C.P. Serfontein was later appointed assistant co-ordinator. During the last phase of the investigation the secretariat was further expanded when Prof. J. McG. Niven of the University of Natal was seconded to the HSRC for three months,

from February to May 1981. The administrative staff consisted of Mrs I.S. Samuel, Mrs A. van der Lingen, Miss J.M.M. Botha, Mrs S. van der Walt and other temporary staff.

#### OPERATIONALIZATION OF THE RESEARCH REQUEST

The operationalization of the research request resulted in the establishment of 18 work committees each being responsible for a different aspect of education. Although all the work committees were not identified at the first meeting, the following work committees were eventually established. (For each work committee the name of the Chairman is given who in all cases had to be a member of the Main Committee. The Chairman of the Main Committee is ex officio member of all the work committees.)

Educational principles and policy	Prof. F. van der Stoep
Educational management	Dr K.B. Hartshorne
Education financing	Dr S.S. Brand
Education system planning	Mr J.B. Haasbroek
Curriculum development	Prof. F. van der Stoep
Guidance	Miss C.C. Regnart
Education for children with special educational needs	Dr J.G. Garbers
Building services	Mr F.A. Sonn
Health, medical and paramedical services	Mr R.D. Nobin
Demography, education and manpower	Dr P.J. van der Merwe
Teaching of the natural sciences, Mathematics and technical subjects	Mr J.B. Haasbroek
Recruiting and training of teachers	Prof. N.T. van Loggerenberg
Innovation strategies in education	Prof. W.B. Vosloo
A programme for education of equal quality	Prof. R.E. van der Ross
Legal matters	Mr M.C. O'Dowd
Educational technology	Mr A. Pittendrigh
Language and language instruction	Dr P.R.T. Nel
Education bibliography	

Only in the case of the last work committee was a chairman not appointed from the Main Committee. Miss H.J. Otto of the HSRC library compiled the bibliography for each of the work committees.

During the last stages of the investigation a synthesis committee was appointed to consolidate especially the work of three work committees, namely Education management, Education system planning and Education financing. The Chairman of the Main Committee of the investigation into Education was appointed chairman of the synthesis committee.

## THE FIELD OF THIS REPORT AND THE COMPOSITION OF THE WORK COMMITTEE

This report deals with the activities of the Work Committee: Education system planning. The work committee consisted of the following members:

Mr J.B. Haasbroek (Chairman)  
Prof. A.N. Boyce  
Dr K.B. Hartshorne  
Mr R.D. Nobin  
Prof. A.C. Nkabinde  
Mr A. Pittendrigh  
Prof. F. van der Stoep  
Prof. N.T. van Loggerenberg  
Prof. D. Vermaak  
Dr S.W.H. Engelbrecht (Secretary)

The work committee held their meetings on the following dates

17 September 1980  
30 September 1980  
11 November 1980  
12 February 1981  
7 July 1981

At the first meeting of the work committee six subprojects were distinguished that might be of importance to the investigation, and during subsequent meetings the number of subprojects was increased to fourteen. (See Chapter 1 of the report for more details in regard to the subprojects.)

At the fourth meeting of the work committee a subcommittee was appointed to plan the report of the work committee. This subcommittee consisted of the following members:

Prof. A.N. Boyce  
Mr J.B. Haasbroek  
Prof. D. Vermaak  
Dr J.B.Z. Louw

Owing to unavoidable circumstances Dr Low could not attend the meetings and Prof. F. van der Stoep and Prof. M.J. Bondesio (UP) were co-opted on the subcommittee.

In the course of time it became apparent that the Work Committee: Education system planning had a much wider field than was meaningful within the context of the Investigation into Education. If the structure of a system for the provision of education is taken into consideration, it can be stated with full justification that each one of the other work committees was also busy with education system planning. Compare, for instance: Education management (control and organization structure); Education financing (financing structure); Guidance and Curriculum development (supportive structure).

Against this background, the above-mentioned subcommittee recommended to the work committee that the work committee's report should be directed, more in particular, at the educational structure of a system for the provision of education.

Against the background of the preceding remarks, the following chapters were identified for the report:

- Chapter 1: Introduction, orientation, defining of concepts
- Chapter 2: The origin and meaning of education systems
- Chapter 3: The determinants and criteria of an education system
- Chapter 4: A critical evaluation of the present education systems in the RSA
- Chapter 5: The design of an educational structure for the RSA.

After further consideration it became clear that Chapter 4 overlapped the activities of other work committees that were also looking critically at the different structures of a system for the provision of education. Chapter 4 was therefore omitted from the draft report. The report in question therefore has four chapters and the following persons were concerned in the writing/composition of them:

- Chapter 1: Mr J.B. Haasbroek
- Chapters 2 and 3: Prof. J. Mc G. Niven
- Chapter 4: Prof. M.J. Bondesio, assisted by

Mrs J.T. de Klerk  
Mr A.W. Drost  
Mrs E.J.M. Hofmeyr  
Mr C.P. Jansen  
Mr C.P. Laubscher  
Mr S.M. Mellet  
Mr F.J. Nieuwenhuis  
Mrs P.E. Reilly  
Mr C.H. Swanepoel  
Mr J.O.T. van Schalkwyk  
Mr B.P. Weideman

#### ACKNOWLEDGEMENT

The work committee would like to thank all persons and organizations who made a contribution to the research that was undertaken. The researchers had to complete the research within a relatively short period and made valuable contributions in spite of these circumstances. The committee would also like to thank all organizations and bodies who made submissions and offered comments.

## CHAPTER 1

### INTRODUCTION AND STATEMENT OF THE PROBLEM

#### 1.1 INTRODUCTION

It is a well-known fact that the family, and at a later stage also the church, the traditional educational institutions, have for several decades been unable to perform the educational function fully in the community. It is characteristic of modern society that schools, universities, colleges and other educational institutions provide for the educational needs of society, and that each one has a specific educational task to perform. The fact that education is provided by educational institutions does not imply that the family as the traditional educational institution is deprived of its educational task or function, its task is merely supplemented by these institutions. The educational function of the family does not fall away, but the aims of the education offered by other educational institutions cannot be actualized fully in the family.

The aims of education and the actualization of these aims with the education that is provided, give to educational institutions their own special identity. The various aims pursued by the different educational institutions determine both the identity of the educational institution and the meaning and significance of the educational institution for society. It is only the educational function which is common to all educational institutions, because education is used as the means to actualize the differentiated aims.

The origin of educational systems is determined by the demands made on the community. The demands made on a community, regardless of the fact whether the community is developed or developing bring about structural changes in the community. Education as one facet of the community structure, as a result of the demands made on the community became institutionalized in order to comply with those demands by means of formal education. By the concept demands is meant problems which come into existence in the community and which

disturb and change the structure of the community, and consequently have to be resolved to stabilize the changed community structure.

## 1.2 STATEMENT OF THE PROBLEM

### 1.2.1 Research request of the Cabinet to the HSRC

"Your Council, in co-operation with all interested parties, must conduct a scientific and co-ordinated investigation and within 12 months make recommendations to the Cabinet on:

- (a) guiding principles for a feasible education policy in the RSA in order to
  - (i) allow for the realization of the inhabitants' potential,
  - (ii) promote economic growth in the RSA, and
  - (iii) improve the quality of life of all the inhabitants in the country
- (b) the organization and control structure and financing of education
- (c) machinery for consultation and decision-making in education
- (d) an education infrastructure to provide for the manpower requirements of the RSA and the self-realization of its inhabitants, and
- (e) a programme for making available education of the same quality for all population groups.

The investigation must be conducted in the light of, among other things, the present educational situation, the population composition in South African society and the means that can be made available for education in the national economy. The investigation must cover all levels of education, i.e. pre-primary, primary, secondary and tertiary."

The following are some of the implications of the research request:

- (1) Guidelines in regard to principles will have to be laid down to establish a system for the provision of education which will ensure equal educational opportunities for every inhabitant of the country, regardless of race, colour or sex. Such education will be provided at all levels of organized education (pre-primary, primary, secondary and tertiary) and will include all forms of non-formal educational and continuing education. The aim is, in this way to realize each inhabitant's potential and to improve his quality of life, to promote the economic growth of the country and to provide for the country's manpower needs.
- (2) The structures of a system of education will have to be identified to establish a system for the provision of education which will ensure equal educational opportunities, realization of the inhabitants' potential, improvement of their quality of life, promotion of the country's economic development and provision of manpower.



- (3) Determinants and criteria for a system of education will have to be established to serve as the basis for the requirements with which a system for the provision of education has to comply. The present systems of education will have to be evaluated by means of these determinants and criteria to determine what the shortages of the present system of education are and to what extent the present system of education complies with the criteria.

To sum up, it can be stated that the educational structure of a system for the provision of education, which must provide for different educational and interchangeability possibilities, will receive attention in this report. Such possibilities should benefit the inhabitants' quality of life and should comply with the demands of the country's economy and the manpower requirements.

### 1.3 METHOD

After intensive discussion of the research request and its implications, the work committee identified the following problems which would have to be investigated and described. Research reports dealing with these problems were studied and served as a point of departure for designing the educational structure of a system of educational provision. Apart from the reports on research projects which were undertaken for the work committee and which had a particular bearing on the educational structure, there were also reports of work committees dealing with the financial, control, administrative, physical and supportive structures. These structures have to be taken into consideration when a system for the provision of education is devised. The synthesizing of the different work committees' reports is, however, the responsibility of the synthesis committee.

The research projects undertaken for the work committee and the names of the researchers are as follows:

- (1) Pre-school education  
Mrs P.E. Reilly and Mrs E.J.M. Hofmeyer, SAIER
- (2) Identifisering van voorwaardes waaraan 'n onderwysstelsel moet voldoen.  
Prof. M.J. Bondesio and Dr S.J. Berkhout, University of Pretoria
- (3) Open and closed systems of education  
Mrs B.A.J. van Rensburg, University of the Orange Free State
- (4) Die administratiewe prosesse van die onderwysstelsel met verwysing na 'n nuwe onderwysbedeling vir die RSA  
Prof. H.J.S. Stone, University of South Africa
- (5) Basic needs for the establishment of a new educational system in

South Africa

Prof. G.A. Rauche, University of Durban-Westville

- (6) 'n Beskrywing van die alternatiewe aanwending van onderwysbronne met spesifieke verwysing na die betekenis van die konsep "skool" binne hierdie verband  
Prof. N. de Jager, University of Port Elizabeth
- (7) Continuing education throughout adulthood  
Prof. C.J. Millar and Prof. A.R. Morphet, University of Cape Town
- (8) Tersiere onderwys en die rasionalisering daarvan  
Dr J.B.Z. Louw and Dr G. Erens, Committee of University Principals
- (9) An analytical and critical presentation of existing educational systems in the RSA  
Prof. J.Mc G. Niven and Prof. P. Mc Millan, Dr B. Dobie and Dr G. Dale, University of Natal.
- (10) Nasionale standaarde, sertifisering en eksaminering  
Miss C. Overbeek and Dr E.P. Whittle SAIER
- (11) Die inskakeling van alle georganiseerde sektore by nie-formele onderwysvoorsiening  
Prof W. Rautenbach, University of Stellenbosch (part of the report on technical education)
- (12) Skep van nasionale navorsings- en bronne-eenhede  
Mr A.W. Drost, SAIER
- (13) Skoolplig  
Mr S. Mellet, SAIER
- (14) Voor- en nadele van 'n ten volle rassegeïntegreerde onderwysstelsel  
Dr E. Whittle, SAIER

## 1.4 DEFINITION OF CONCEPTS

### 1.4.1 Introduction

Since a system of educational provision comprises pre-school, primary and secondary as well as all forms of tertiary education and also non-formal and informal education, continuing education and forms of in-service training, it is necessary to define the relevant concepts which typify the different educational facets within a system for the provision of education, in order to obviate all possibilities of confusion in regard to meanings of concepts.

### 1.4.2 The concept formal education

Formal education covers all full-time general education from primary school to university and other tertiary education institutions as well as a variety of specialised full-time occupation-directed and professional training courses.

### 1.4.3 The concept non-formal education

Non-formal education includes any organized education outside the formal education system functioning separately or in a wider context, and which is intended to serve identifiable target students and learning objectives (Remark: Formal and non-formal education differ in respect of institutional arrangements and procedure, target students, courses and subject matter. Formal and non-formal education can be regarded as variations within a system for the provision of education. Formal education is related to the formal educational structure of the country, while non-formal education is also initiated and maintained by other agencies and forms an additional system to the formal system. Compare Bondesio's reference to Dr F.R.L.N. Eksteen: 'n Kritiese ontleding van onderwys in Suid-Afrika met spesiale verwysing na onderwys in Suid-Afrika vir Blankes teen die agtergrond van voortdurende onderwys. SAVBO No. 11. 1977.

### 1.4.4 The concept open system of education

The concept open system of education means a system of education of which the components do not form a rigid pattern within predetermined limits. This system makes provision for horizontal change and interchangeability between the components in the system of education as well as educational components outside the system of education.

(Remark: Basic education, which lasts between six and eight years, is succeeded by differentiated secondary education. The different types of education have horizontal possibilities for interchange and after completion of the secondary school, pupils can gain entrance to tertiary educational institutions.)

#### 1.4.5 The concept closed system of education

Closed system of education means a system of which the components have a rigid, vertical pattern within predetermined limits. There are no, or very few, possibilities for interchange between the components within the system of education.

#### 1.4.6 The concept system

According to Bondesio a system has the following characteristics:

- (1) A system is an entity of related matters, i.e. it is composed of related subsections to form a unit.
- (2) A system is a unit of subsections which derives its final form as a unit from principles of classification. Principles that can be distinguished are the objective for the development or existence of a system, the conditions the system has to comply with in practice and the limits within which or fields in which the system has to function.
- (3) A system reveals definite relations between both the subsections mutually and the subsections and the whole (system as a unit).
- (4) A system's activities progress in an orderly manner towards a definite objective, which must be realized.

The concept system can be defined as an orderly collection of related parts (sections) which function in cohesion with and in a particular relation to one another to perform activities with a particular aim, in an orderly way, in a particular field.

#### 1.4.7 The concept system of education

Since there are various definitions of the concept "education" and it therefore has a variety of meanings, it is necessary to define the concept "education" as such, so that it can be used to define a system for the provision of education in an accountable manner.

Education is therefore regarded as the human activities or actions by which reality is opened up, or the content of life is uncovered and made accessible to the learner, with the objective that he should learn.

As far as this definition of the concept "education" is concerned, the following must be kept in mind:

- (1) The active nature of education supposes that education can be used for the realization or actualization of various objectives (educational, formative and training objectives).
- (2) Content can have a bearing on, inter alia, subject knowledge, norms, philosophy of life, and skills which are taught to the learner. Without content, education is not perceptible.
- (3) Education is given with the intention that the pupil should learn, but education and learning are not made equivalent to one another, and learning does not necessarily follow education.
- (4) Effective education ought to lead to a particular learning effect, but learning is not necessarily the result of effective education.

Since education can also be performed outside a formal system of education, the concept "system for the provision of education" is used to qualify formal organized education, which is presented in

a previously anticipated situation by persons specially trained for the task. A system for the provision of education therefore exists in an orderly community or group context with a view to the realization of community or group objectives.

In the industrialized community more complex and more differentiated forms of education develop, with the result that different kinds of educational situations with divergent objectives develop.

It is characteristic of a system for the provision of education that

- (1) the components concerned must be established in a co-ordinated manner, and
  - (2) particular functions must be performed in respect of the components concerned so that education or instruction can be performed as the fundamental characteristic of educational situations. Before the concept "system for the provision of education" can be defined further, it is necessary to describe the educational components and the educational functions.
- (a) Educational components

Educational components are all the facets concerned in an educational situation. The following facets are distinguished: aims, learners (pupils, students) subject-matter (curriculum) teaching staff and infrastructures. The functioning of the educational components in accountable, constituted situations thus requires actions or activities to make education possible.

- (b) Educational functions

The characteristic function, action or activity of an educational situation is instruction (education). The realization of this function (instruction or education) requires the performance of other functions, actions or activities in respect of the educational components.

Three functions can be distinguished.

- (1) Anticipatory functions which comprise actions or activities in respect of inter alia planning, policy making, legislation, budgeting, curriculum composition, book selection, statistical projections (pupils/students and staff), space and institutional programmes.
- (2) Executive functions which comprise actions or activities in respect of, inter alia, administration, provision and rendering of services, stocking, secretarial services, communication, delegation and managing.
- (3) Controlling functions which comprise actions or activities in respect of, inter alia, supervision, inspection, evaluation, statistical analysis, examinations, control and orientation courses.

The existence of a system for the provision of education requires that the educational functions in respect of each of the educational components are to be executed to make possible the realization of the characteristic function of a system of education, namely education (instruction). The ways in which the functions in respect of the components are performed bring about a variety of combinations of linkage and interaction between functions and components. The result is that a variety of educational situations arise which must be arranged structurally to ensure that education or instruction will progress effectively in a system for the provision of education.

- (c) The components of a system for the provision of education

The components of a system for the provision of education include controlling and administrative, educational, physical, supportive and financing structures. These all together make possible the functioning of the system for the provision of education.

A further definition of the components of a system for the provision of education will comprise the following:

(1) The controlling and administrative structures

The controlling and administrative structures comprise the authority to take decisions in relation to the authority that must perform functions in respect of certain educational components. (See the report of the Work Committee: Education management.)

(2) The educational structure

The educational structure comprises the composition of and mutual relationship between different types of education or learning situations, i.e. the educational structure is related to educational possibilities and interchangeability (this report).

(3) The physical structure

The physical structure comprises groups of buildings and related matters. (See the report of the Work Committee: Building services.)

(4) Supportive structure

The supportive structure comprises supportive services, inter alia, the school guidance service, adaptation and auxiliary classes, medical, research and curriculum development services. (See the reports of various work committees, inter alia guidance; curriculum development and health, medical and paramedical services.)

(5) Financing structure.

(See the report of the Work Committee: Education financing.)

1.5 CONTENTS OF THIS REPORT

The work committees of the investigation into education were conceived in such a way that each of the above structures (see paragraph 1.5.7 c) was investigated by one or more of the work committees. The Work Committee: Education management investigated the control-



and administrative structures, while the physical structure was investigated by the Work Committee: Building services. Various work committees made contributions in connection with the supportive structure, inter alia the following guidance; health, medical and paramedical services; curriculum development; education for children with special educational needs, etc.

In the light of the above the Work Committee: Education system planning attended mainly to the educational structure. After a discussion of the development of systems for the provision of education (Chapter 2) and the determinants and criteria for a system of education (Chapter 3), an educational structure was proposed (Chapter 4). This proposal took into consideration basic defects in the present system for the provision of education when the "new" educational structure was designed. These defects, which often were incorporated in the other structures of the system for the provision of education, are not discussed fully again, because they have already been included in the reports of other work committees, e.g. of the Work Committee: Education management which identified the defects of the present administrative and control structure.

## CHAPTER 2

### THE ORIGIN, DEVELOPMENT AND NATURE OF SYSTEMS OF EDUCATIONAL PROVISION

#### 2.1 ORIGIN AND DEVELOPMENT OF SYSTEMS OF EDUCATIONAL PROVISION

Even within primitive societies, formal, if rudimentary provision is made to ensure that all members of the community or tribe receive the training necessary to make them useful members of the community, to steep them in the beliefs and mores of the tribe and thus to ensure the preservation and continuity of those beliefs. In Western Europe it was the church which perceived its role in the Dark and Middle Ages, to preserve civilization and particularly its Christian foundation and to ensure its transmission to succeeding generations. The Renaissance with its rekindling of the flame of knowledge gave impetus to education of an elitist nature which provided for the upper sections of a rigidly stratified society. It was during the Reformation that Calvin stressed the responsibility of the state in providing education for its youth.

It was, however, not until the eighteenth and nineteenth centuries when a combination of factors resulted in the establishment of the formal provision of education by state authorities that a move took place for the establishment of national systems of education. Philosophical works and the growth of both liberalism and nationalism in Europe played a large part in this, with further pressure resulting from the development of the Industrial Revolution, and the growing demand for more better trained workers. The day of the craftsman trained by a master-craftsman was passing as more and more people were drawn from the rural environments to the fast growing towns and cities where literacy and capacity to reckon were an essential basis for successful employment and progress in the growing world of industry and commerce. The essential curriculum was the three R's provided by members of institutions established and financed either wholly or partly by the state.

In the development of the colonial world of the nineteenth and twentieth centuries, the same pattern was followed. Christian

conversion could only successfully follow upon the achievement of literacy and early missionary activities provided for both conversion and education. The bursting of knowledge upon the underdeveloped, colonial world together with the arrival within it of the twin forces of industrialization and urbanization raised political and economic aspirations and resulted in the demand for more education. This demand was usually for the traditional bookish academic education which permitted escape from the drudgery of rural agriculture hopefully to white collar employment in the urban centres. As in Western Europe, the colonial powers found themselves, usually not very willingly, obliged to participate in the provision of educational services.

The post-World War II era saw the dawning of the period of secondary education for all in the developed world. In the underdeveloped world the cry was for education for all and following it the cry for political participation and finally political independence. Thus was the Third World born with a seemingly insatiable demand for education, a demand which it has been unable to fulfil.

Apart from the demand of the individual for free and compulsory education at primary and secondary level, the business community both commercial and industrial, has stridently clamoured for education to provide for the manpower needs of growing economies. As a result modern states have been obliged to provide more complex forms of education for more people for a steadily increasing duration. The result has been that highly developed nations in Western Europe are now having to look carefully at the strain which these growing demands for educational extension and diversification have placed upon their financial and manpower resources. Flowing from this the idea of the twelve-year system of compulsory education is beginning to be questioned with the expression of ideas in favour of a shorter period of compulsory education with compensatory opportunities for readily available lifelong or continuing education as and when desired.

## 2.2 THE DEVELOPMENT OF EDUCATIONAL SYSTEMS IN SOUTH AFRICA

It is surprising to many to find that formal steps towards the

provision of a system of education were taken in South Africa at about the same time that they were being taken in Europe. Thus in the decade in which financial provision on a very modest level was for the first time made available for educational purposes by the Privy Council in England, Rose-Innes was appointed to the grand sounding title of Superintendent General of Education in the Cape Colony. During the nineteenth century all four of the states which comprised South Africa took steps to set up their own systems of educational provision with greater or lesser degrees of success. Thus it was, at the time of Union in 1910, that the provision of school education, which, like language, was a sensitive issue close to the hearts of all inhabitants, was left to the responsibility of the provinces. The only mention of education in the Act of Union was that education "other than higher" should remain with the provinces. A Union Department of Education was indeed created which had responsibility originally for higher education, with technical and vocational education and what came to be termed "special education" being added later.

It is vital in the present investigation to realise the importance of these developments. Firstly, there is the matter of the recognition in both the Union and Republican constitutions of the dual levels of legislative power and from this the jealously-guarded right of the provinces not only to control but to legislate for certain aspects of their functioning. In political and social terms "provincialism" has been an important force in the growth of South Africa. It is certainly far less powerful today than it was at the time of Union, but it is still a force which must be treated with respect in any proposals for change.

The second point of importance is the idea of divided control of education which arises from the first. Thus, different levels of governmental control have been responsible for different areas of educational provision. The original Act seemed clear; education "other than higher" was to be a provincial matter, but within the first decade of the establishment of Union, compromises were being made with regard to educational provision. How could the provinces possibly hope to provide a system of schooling unless they had

responsibility for the training of their own teachers? Thus, a precedent was established in that the provinces assumed responsibility for an educational function which was undeniably higher education. There followed, as mentioned above, the transfer for administrative and financial reasons of technical, vocational and special education to the control of the central department.

Thus the five subsystems of education provided for at the time of Union were being moulded and were evolving in response to new determinants which had not been discerned in 1910. While the politico-historical determinants to which the lawgivers in 1909 gave attention, were still present, the more pragmatic factors of administration and finance soon began to impose change upon the system of educational provision. In the early provision of education in the Union of South Africa, it is important to remember that the provinces were responsible for all general school education for all the population groups within them. In addition to this it should be borne in mind that there were no facilities for consultation between any of the five subsystems until the establishment of the Interprovincial Consultative Committee in 1936, which was not restricted to educational consultation.

During the decades of the fifties and sixties, political determinants again assumed a dominant role in the change of the system of educational provision. Stemming from political policy and reinforced by the findings of the Tomlinson and Eiselen Commissions, active steps were taken to set up new educational subsystems to provide for each population group. Act 47 of 1953 (the Bantu Education Act) was the first piece of legislation formally to remove provision of school education from the provinces to the central government, placing schools under the direct control of the state. It was followed by the Coloured People's Education Act (No. 47 of 1963) and Act 61 of 1965 by which the Department of Indian Affairs was created. This series of education acts has been most significant in the history of the provision of education, for in each case responsibility for school education of a particular community, was transferred from the provinces, not to the central department of education (by this time known as the Department of Education, Arts

and Science), but to a new department of state under separate ministerial control. The effect was for the subsystems engaged in the provision of education to proliferate to eight. The final chapter in the spate of educational law-giving which characterised the 'fifties and 'sixties, was the series of three acts which were introduced in 1967 with the purpose of rationalizing the system of White education, and introducing a policy of national education, of ending dual control of education, and of providing for an extended and higher level of technical vocational education. These matters were contained in Acts 39, 40 and 41 of 1967. To Act 39 of 1967 (the National Education Policy Act) amendments were approved in 1969 and 1974 which provided a national policy for teacher training, as well as for changes in the structure and organization of the National Education Council. It is stressed again that this series of legislative Acts which sought to establish national education policy and a national education council applied to the White sector only.

The problem of five subsystems of education lacking any advisory or consultative mechanism, had thus been solved by providing the means for consultation and co-ordination for provincial subsystems having diminished powers over educational provision. At the same time new subsystems for the provision of education for the vast majority of the population, between which there was, once again, no provision for consultation or co-ordination, were created.

It is important to realise that in the introduction of the new legislative measures, distinct differences were instituted in the way in which the subsystems of educational provision were to function and to be controlled. Thus each of the four provincial subsystems of education for the White group is subject to control at two levels; central, through the Minister of National Education and Parliament and provincial, through the Administrator and Provincial Council. On the other hand, as far as Black, Coloured and Indian subsystems are concerned, full control has rested in the hands of a Minister and a central department only. This is a question which makes difficult the restructuring of the system in such a way that centralization and decentralization can be reconciled.

A variation in the pattern has developed within the subsystem which provided education for Blacks. Education which is provided for Blacks living within the body politic of "white" South Africa is provided by the Department of Education and Training under the provisions of the Education and Training Act (No. 90 of 1979). This is distinct from the education provided for the seven Black National States (formerly termed "homelands") which have their own departments of education which operate in terms of their own legislation. The Department of Education and Training provides services to the education systems of the national states including the work of examination and assessment of learners, particularly at the Std X level. The three Black republics which have been granted independence, viz. Transkei, Bophuthatswana and Venda, are not included in this, having their own educational legislation and departments of education.

There are currently fifteen subsystems responsible for the formal provision of education in the Republic of South Africa. While the provincial subsystems of education are not formally involved in the provision of adult education other than for specific provision of in-service and vacation courses for teachers, all systems are involved in the provision of non-formal education. There is a merging of formal and non-formal sources in the production of a complex pattern of non-formal education. This non-formal system of educational provision lacks co-ordination and information dissemination regarding its offerings is inadequate. It is to be noted that within the Dept. of Education and Training the Adult Education Section employed 4 476 teachers in 1980 offering courses to 43 017 learners while 9 288 adult students participated in an adult literacy scheme in the same year.

In the White sector, universities are autonomous but draw heavily on the State for financial support. In the Black sector, universities have rather more limited autonomy for the appointments of professors, registrars and assistant registrars are subject to the approval of the Minister of Education and Training.

Stress is laid upon the matter of non-formal and higher education provision and control. The four separate systems which South

Africa inherited at the time of Union have grown into a complex of subsystems each serving a separate population group. The only sector in which there is real co-ordination is that serving the White group. In the growth of the total system of educational provision in the Republic of South Africa, it is necessary to stress the importance of historical, political, constitutional, administrative and financial determinants. These are powerful factors and it may be assumed that they will be resistant to change in any new plan for change in the system of educational provision.

### 2.3 THE DEMAND FOR EDUCATION IN GENERAL

In the main in the Western world in which the White subsystem of education has strong roots, the greatest demand for education has resulted from industrialization and its accompanying urbanization. Prior to this there had been a formal system of education which was not state provided or supported through which members of the privileged sectors of society obtained an education which fitted them for the university, the church, the army or as privileged landowners. The lower classes probably became literate, and developed those skills which were necessary for their calling in life either as craftsmen or as agricultural labourers. The family and the community, e.g. the craft guild, were important sources of education as was the Christian church.

Industrialization changed this dramatically. New techniques demanded new skills which in turn demanded more education, the basis of which in all societies was literacy and numeracy. In England the state made the first financial grant to education in the late 1830's and 1870 saw the acceptance by Parliament of the Elementary Education Act. The demand for increasing education mounted steadily and it was only the post-war economics which in 1918 frustrated the Fisher Education Bill and the extension of secondary education. Hadow and the reports on the Education of the Adolescent in 1926 as well as Spens and his report on Secondary Education in 1938 paved the way for the 1944 Butler Act and secondary education for all immediately after the conclusion of the Second World War.



In the meantime there had been an increasing demand for non-formal adult education. The Workers Educational Association among others provided courses covering a broad spectrum for the working class in society and stimulated the universities both ancient and red-brick, to undertake on an individual or institutional basis, the provision of courses of teaching to meet the new demand. Within a single century the educational provision in Western Europe and North America had been transformed as a result of the demands which arose from within the societies themselves.

#### 2.4 THE CHANGING DEMAND FOR EDUCATION IN SOUTH AFRICA

The factors which have resulted in the development of education in the first and second worlds have also been present in South Africa. Industrialization and urbanization have been powerful instruments for change throughout society. The problem has been compounded, however, by the fact that society has not been homogeneous. It has been a plural society with communities within it at different levels of development. It has not been a matter of privileged and working classes within the same population group. It has been a matter of different population groups in different relationships based on the possession of political power.

If one considers the basic relationship of Black and White in South Africa, one is immediately conscious of the pressure of history in the meeting of representatives of the then most highly developed civilization in the world with members of a society which was nomadic and which lacked the power of dominance over the former. The result was the classical colonial situation in which the representatives of the dominant group assumed responsibility for the weaker, and, having established ascendancy sought to make decisions for the latter in terms of governmental control, religious conversion, education, employment and the like. The assumption seemed to be natural that the dominant group in paternalist terms should make decisions for the others.

As long as the relationship existed in an almost exclusively rural society there was little problem. Such societies are conservative,

the forces for change are weak, the exposure to external influences and pressures are minimal and society remains stable. It exhibits the characteristics which kept feudal Europe in a state of stable equilibrium from the days of Charlemagne to those of the French and Industrial Revolutions in the late eighteenth century. The factors which made for a stable society in Europe were present in Africa. Education comprised the 3 R's and a biblical education for the masters, and a biblical conversion and the acquisition of such skills as were necessary for the servant. For the tribal free man, the basis of his education was tribal law and lore, moves to his religious conversion and exposure to improvements in his system of agriculture as well as a rudimentary knowledge of hygiene and health science.

The effects of industrialization and urbanization as well as the reverberations of political change in Europe were not localised in that continent. Mineral discoveries, the development and extension of modern means of transport, the establishment of towns and cities as well as the consequent growth of industries and commerce destroyed the social fabric of the majority of inhabitants in South Africa in a similar, but different way from that which had occurred in Europe and North America. The peasant farmer in Europe moved with his family to town. The peasant farmer in South Africa became an urban migrant, moving between country and town, and carrying the seeds of discontent and enticement between the two, thus accelerating the drift to urban centres. Not unconnected with this was the sense of escape from the drudgery of peasant subsistence farming. The result was loss of roots without the establishment of new alternatives as had been the case in the Northern Hemisphere. Even in Europe the transition had not been wrought without frustration and disturbance.

In Africa and particularly South Africa the original moves to provide education more especially for the Black people were undertaken by denominational agencies as the basis of Christian conversion. At the time of Union these bodies had established a working relationship with the systems of education which operated at provincial level. The missionary was, however, concerned with the

rural Black, and not with his counterpart who had moved to towns and whose educational needs were different and aspirations changing.

The full effect of industrialization was not experienced until after the economic depression of the thirties and the outbreak of the Second World War which had the effect of pushing South Africa into the twentieth century as a growing industrial society. The result has been not only an economic revolution, but also a social one and the whole structure of Black society has changed. So long as the Black worker was a migrant offering his labour to industry and commerce for prescribed periods before returning to what was his residential base in the rural areas, the old social order was perhaps tenable on the basis of the forces of history in society. Today, however, the situation has changed to that which characterize the nations of the Northern Hemisphere in the last century. The Birmingham, Bradfords and Leeds of England are today the Sowetos, Umlazis and Langas of South Africa with one very significant difference; the latter lack the means of production which the industrial growths of the Northern Hemisphere possessed at the same stage of development. The industries found in the Sowetos, Umlazis and Langas are therefore service industries concerned with supplying the needs of the immediate local community. When it is realized that the number of children at school in Soweto exceeds the total number of children at school in the rest of the Transvaal, the scale of the problem is revealed. Government as a provider of schools was at first unwillingly brought into the area of Black education. Political motives hastened the process in the early fifties by effectually removing religious interests from participation, while demographic factors, economic growth and urbanization have created the situation which pertains today.

With this growth has gone a steady change in the demand for education. The pressure for more education has been present throughout. Education has been seen by the indigenous people of Africa, as it was earlier among the growing industrialized classes in Europe, as a means of escape. It provided escape from rural drudgery to the better life, based very largely upon an academic curriculum as the sine qua non for entry to "white collar" employment.

Coupled with the fact that systems of educational provision for groups other than White, have not reached the stage of offering a full primary and secondary education to all, and reinforced by the strong support for traditionally-based academic curricula in South Africa, the demand has been for an education for all which is the same as that offered to the White learner. Further support for this attitude has come from within the White group which has, throughout the century valued inordinately, both for social and economic reasons, an academic education giving access to "matriculation". At the same time employers within industry and commerce have been stressing the need for educational change in order to meet more adequately the national demand for trained or trainable manpower.

Within the decade of the 'seventies, therefore, three readily discernible educational forces have come to the fore which form the basis of the present investigation and which demand a new system of educational provision the basis of which will have to be laid in the early eighties. These forces are:

- 2.4.1 The growth of fifteen educational subsystems in South Africa each providing under different control, by different means and without professional co-ordination, other than that flowing from the Committee of Heads of Education and the Joint Matriculation Board, for the education of different communities within the country.
- 2.4.2 The growing demand from communities, not only of adults but of learners, for a new educational deal in which there must be equality of educational provision. Curricular differences and particularly the matter of language medium have been literally burning issues in the manifestation of this force, as events in Soweto and elsewhere in 1976 and again in 1980 have shown. Coupled with this has been a demand particularly from the learners for curricular relevance, a strong pointer to changing demand for education.
- 2.4.3 The steady increase in the demand from all sectors of the economy for trained manpower. The phenomenal growth of the economy in 1979 and 1980 has focused particular attention upon this demand.

While it is certain that economic growth will follow the usual cyclical pattern of growth and recession, there is no doubt that the existing unco-ordinated system of educational provision cannot possibly cope with the demand for trained manpower into the twenty first century.

The determinants of the system of educational development in South Africa have in large measure been historical, political, financial and administrative. The social and economic resolution which has characterize the 'sixties and 'seventies has suggested new determinants for education in which cultural, professional and economic factors have come to play a much larger role alongside the ones already there.

It is necessary to look not only at what the determinants and criteria of a system of educational provision are in general, but, in endeavouring to assess critically the deficiencies of the existing system in South Africa, to suggest a hierarchy of determinants of educational provision upon which a new system can be created. This new system has to meet three basic criteria, viz: to provide the development of a society in which -

- . the quality of life of all inhabitants is steadily improved;
- . there is equality of educational provision and access to education;
- . the productivity and the means of production are extended through the education and training of manpower.

## CHAPTER 3

### THE DETERMINANTS AND CRITERIA OF A SYSTEM OF EDUCATION

#### 3.1 INTRODUCTION

In the century and a half during which national systems of education have been evolving, increasing attention has been devoted to the factors which determine a system as well as to those criteria by which a system can be judged or evaluated. This has formed a large part of the work of more recent students of comparative technique in education starting with Nicholas Hans and growing in importance among his successors.

Hans it was who asserted that a national education system constitutes an outward expression of national character. He isolated natural, religious and secular factors in the determination of education systems. This early attempt at classification of determinants reveals why each factor is a determinant, but does not assess the extent of importance of each. Moehlman, basing his work on the morphology of Herskonits postulates the following determinants:

- i. Material culture and its sanctions
- ii. Social institutions
- iii. Man and the universe
- iv. Aesthetics
- v. Language

He went further than previous comparative educationists, in that he relates the determinants to paramount issues which emerge in educational systems.

Vernon Mallinson laid emphasis on "natural tradition" or the basic underlying force as well as on "national character", which determined the kind of education a country enjoys. He goes on to warn against attempts to use education deliberately to change existing patterns of culture which the education system serves, for he maintains that it is bound to fail, and that only slow change can

be brought about. Behind the national character, Mallinson recognises specific determinants of this ground, motive or force, "heredity, environment, social heritage and education, which point at once to what must always be borne in mind all the time, viz. that the determinants are in their turn influenced and altered by the educational system. Joseph Lauwerys states that "education is the institutionalised expression of its social philosophy and believes that the predominant modes of thought in a culture can be linked to every aspect of educational organization within that culture.

The concept of ground motive has particular relevance for South Africa for in a plural society it is vitally necessary that there should be cultural contact and understanding between people. It is probably safe to say that there is in general an inadequate knowledge and understanding of such forces which determine the nature of other groups within the community. It is necessary to develop the ability to step outside our own world-view and to develop a frame of reference for the examination and understanding of other cultures.

Bereday, in introducing the need for systematization and analysis of determinants, stressed the need for interpretation. The present theorists, however, carry the matter a stage further. They recognize that the establishment of determinants is merely an initial exercise. It is the ascertaining of the relevance of determinants that requires attention. This task has become more and more difficult with the increased complexity of society, the increasing store of knowledge, the increasing numbers to be educated and the everincreasing rate of change. In this connection Edmund King considers that there should be provision within the system for obtaining information as the basis for informed rather than irrational decision-making. In discussing the "extreme multiplicity of interacting causes or forces which occur in the ecological context," he sees the need for continuous gathering and analysis of information upon which to frame strategy for continuous decisions in education. This process, he avers, should be outside or above the official administration.

Brian Holmes stresses the need in assessing the relevance of educational determinants for predictive ability. He postulates that

- i. determinants can only be assessed for specific situations;
- ii. the essential need is to identify all the determinants in a particular situation;
- iii. all variables have to be assessed to establish which are of the greatest significance in the specific case.

He classifies possible determinants under the headings of "ideological factors", "institutional factors", and "miscellaneous factors not under the control of man". This accords with the concepts of external and internal determinants of an educational system.

In South Africa one of the early workers in the field was E.G. Malherbe who, quoting Kandel, states that "more adequately than any other phase of national life does the educational system express the innermost beliefs, ideals and aspirations of a people --- A nation's school system is but the reflex of her history, her social forces and of the political and economic situations that make up her existence." He goes on to state that "not only, however, is the educational system the reflex of the nation's whole life, the medium through which a nation expresses its soul, but it can also become the active creator and moulder of the nation's ideal character". Stone has compiled a list of determinants for a system of education which is based on the 15 modalities of H. Dooyeweerd. This is generally comprehensive but one must bear in mind the caveat of Holmes in examining all the determinants in a particular situation. Vermaak in a recent work has viewed determinants as a limiting factor in an educational system with particular reference to economic and demographic factors.

This brief introduction is not intended to be exhaustive but rather to provide a general background to the study of the importance of determinants as factors in the growth of education systems. More detail reference can be obtained through consultation of works quoted in the bibliography.



In terms of the present investigation a valuable contribution has been made by Bondesio and Berkhout, and specifically at the post-secondary level by Louw. Reference will be made to these contributions in what follows.

In endeavouring to establish general determinants for an educational system attention will be given to problem areas which have to be borne in mind in their application in general. The criteria by which a system of education is evaluated will be similarly dealt with. In order to understand any education system it is necessary to establish and describe all the determining factors (cultural, historical, geographical, socio-economic, political, etc.) that influence the particular system. It will be necessary in the final resort to endeavour to assess both the determinants and the criteria which are critical for the development of an educational system for South Africa.

### 3.2 DETERMINANTS OF SYSTEMS OF EDUCATION

#### 3.2.1 Definitions

##### i. Determinant

A factor, or influence which by its presence, affects changes or confirms the activities of persons, institutions or organizations in the achievement of their particular purposes and objectives.

##### ii. Determinant of systems of education

A factor or influence which affects, changes or stabilizes education provision within a society. These determinants are derived from natural, cultural (including political, religious, social, economic and historical), as well as professional and administrative factors operative within society. They prescribe the nature of the educational system and make, or should make, provision for its change as society evolves.

Determinants may be classified as external or internal determinants

depending upon whether they act upon or within a system of education. They may further be classified as general, on-going or functional determinants as well as critical determinants of an urgent nature.

### 3.2.2 Classification of determinants

#### 1. General

Bearing in mind the development of comparative studies in education to which passing reference has been made in the introduction, consideration has been given to the work of Stone, Bondesio, Berkhout and Louw in the formulation of the present classification of determinants of systems of education. It must be accepted that a broad general classification of determinants, while being of some value in the overall analysis of systems of education, has somewhat limited value. It cannot be encyclopaedic in respect of all aspects and all situations; one must note the strictures of Holmes that it is not only essential to identify all the determinants in a given situation, but it is necessary also to evaluate their significance in such situations.

#### ii. Determinants of particular relevance to the present investigation

The terms of reference given to the investigation as well as the Principles for Educational Provision in the RSA as formulated and accepted by the Main Committee, both contain determinants for the education system. Full details are to be found in the introduction to this report. They may be summarized in the following general terms:

The system of education must strive for the realization of the potential of all inhabitants through the provision of equal educational opportunities and the maintenance of educational standards for all. Positive recognition must be accorded to the needs of the individual as well as of the community in the promotion of economic growth through the provision of trained manpower. In a plural society due recognition must be given to the common good which requires a common education, as well as to the understanding

and appreciation of the rich diversity of the cultural background of society, including both religions and languages. All this should contribute to the improvement of the quality of life of all inhabitants.

In the organization of the system of education it is necessary that there should be a positive relationship between its formal, non-formal and informal aspects, making necessary the harmonious division of educational powers and responsibilities, including the financing of education, at centralized and decentralized levels. The responsibility of the state is recognized in the provision of formal education, with the right of participation and choice within it of the individual, the parent and organized society. At the same time, the state and the private sector have a shared responsibility for non-formal education, and provision must be made for the establishment and subsidizing of private education. There is thus a recognized need for consultation, participation and co-ordination in educational decision-making.

In the provision and maintenance of the system of education, the status of the educator has to be clearly recognized, while the effectiveness of the provision of education is seen to be dependent upon on-going research.

### iii. Classification

It should be noted that within education systems, no phenomenon or feature is likely to be the product of a terminant. In each situation a complex of the determinants is present. Thus all the determinants in this classification are in effect co-determinants.

#### A. NATURAL DETERMINANTS

This group relates directly to the natural environment of a society or nation and includes, therefore, those components of a physical nature including geographical and population features.

## 1. Geographical factors

- i. Climate has an effect upon the nature of educational provision and services as well as length of school day and of compulsory education.
- ii. Physical features such as mountains, rivers, deserts and the like affect geographical communication, the distribution of population, and hence the demand for education.
- iii. Agricultural and mineral wealth directly influence the economic strength of a nation and hence its ability to provide educational services for its people. This also determines regional and local potential demand for education.
- iv. From this will arise the recognition of growth and decay points which will have a profound influence upon the provision of education.
- v. Geographical factors as determinants of education are given expression to in terms of the effectiveness or otherwise of economic planning.

## 2. Demographic factors

- i. Knowledge of the gross population figures as well as of the percentage of the population which is of school-going age determines the extent of educational provision to be made and the projected cost of such education. Population migration patterns, both internal and external (emigration and immigration) are important determinants. Such statistics also form a basis for the calculation of the provision of education, both formal and non-formal at the post-secondary level.
- ii. The composition of the population (male, female, population, cultural, language and religious groups) determines the homogeneity or heterogeneity of the society and has implications for educational provision.
- iii. Teacher-pupil ratios are "partly" determined on the basis of knowledge of demographic factors and this in turn determines institutional design and affects curriculum, and methodology as well as the

recruitment and training of teachers.

Reference should be made to the report of the Work Committee:  
Demography, education and manpower.

## B. CULTURAL DETERMINANTS

This group of determinants relates to the life of the people within the society, community or nation.

### 1. Historical factors

#### i. Historical continuity

No state, either developed or developing, is able to institute an entirely new educational system. The whole of society is to a greater or lesser measure controlled by its historical continuity. Education as a social institution is no exception, and educational change as a result is often slow. Aspects of this effect of historical continuity are inherent in ii and iii below.

- #### ii. Historical practices and attitudes to education on the part of a society or a group will help to determine the nature of educational provision which is immediately required for it. Critical analysis of such attitudes will reveal the need for change in certain areas and provide a starting point for educational planning.

#### iii. Historical provision of education

The provision of education within a nation may be generous, adequate or inadequate. Such provision is likely to continue unless a detailed appraisal is made of it. In any event changes in such provision often tend to be slow.

#### iv. The effects of a plural society

In developed countries plural societies will either endeavour to achieve assimilation of diverse elements by instituting a uniform system of education, or to respect cultural differences by a greater

or lesser measure of educational differentiation. Such practice will normally be based upon equality of educational provision of and access to education for all learners. Plural societies in less developed nations have at times tended to produce separate educational systems based upon an unequal distribution of resources. This was a feature of education under the British colonial system which inevitably caused problems in the post-independence days. Where a plural society exists, as in South Africa, in an environment in which there are both developed and less developed sectors, the separation of systems continues despite efforts to equalise educational provision. Such inequality of provision leads to frustration, division and confrontation.

## 2. Linguistic factors

### i. National languages

In homogeneous societies such as France, the language of the people and of commerce is the national language and this automatically becomes the medium of instruction and the core of the curriculum. However, even in such homogeneous states the languages of the Basques and the Bretons become both a political and an educational issue. In developing nations the option has at times been exercised, e.g. in India and Kenya, to recognise the international language as the national language. Where two languages exist with parity of esteem in a single nation, bilingualism is the normal result with well-known implications for the educational system.

### ii. Regional languages

In a plural society additional languages may well be present and these tend to become regional languages, as is the case in many African countries. Zambia, for example, has four regional languages in addition to English as the national language. This situation has important consequences for curriculum development, and the result may well be a curriculum which is heavily weighted with linguistic content. Similarly it may result in some learners being more heavily burdened with language studies than others.

### iii. Languages of specific cultural groups

The case of the Basques has already been mentioned. Similar problems exist in Wales and Scotland. The problem becomes more serious when a community or group achieves political independence. At this point the curriculum is changed to accommodate the group language as the medium of instruction.

Refer to the report of the Work Committee: Languages and language instruction.

## 3. Social factors

- i. Social mobility has long been a factor in curriculum development among the White group in South Africa. Since other education subsystems make use of common curricula and syllabuses, particularly at secondary level, it is a factor which helps to determine all education in the school sector. It does not apply to nearly the same extent at post-secondary level. All systems recognized social mobility as a factor in the educational process; some take greater notice of it than others. It is a factor which tends to promote uniformity and rigidity of approach. (See the report of the Work Committee: Curriculum development.)

### ii. Attitudes to and demands for education

Where a full system of primary and secondary education is available to all learners in developed Western societies, the attitude to education and the demand for it tends to vary from apathy on the part of the slower learner to enthusiasm on the part of the above-normal learner. In developing societies where education is seldom available for all, the attitude to and demand for education is generally more positive. (See the report of the Work Committee: Innovational strategies in education.)

### iii. Accessibility to and availability of education

Where education is not accessible to all learners, critical decisions have to be taken on the basis of a variety of selection procedures as to who shall be educated and who shall not. The selection

procedures are generally based on academic merit, with the result that in such cases the curriculum at the secondary level particularly tends to be narrowly academic. Where education is not available to all learners of school age, it is necessary for the State and non-formal agencies to provide compensatory basic education for adults. See Chapter 4 of this report.

iv. Relevance of education within the social context

Where education is not seen to be relevant within the broad life of society, including economic development and vocational opportunity, there has been a marked tendency to reject it by learners in the Western World. This has been particularly true of the post-secondary level, although in both Western Europe and North America, the movement has spread to the secondary school level. In most cases the result has been educational change particularly of curriculum. It should be noted that the learner is not always the best judge of relevance in education. Events in South Africa in the last two years have proved the efficacy of this strategy for educational change and point to the need for on-going professional curriculum review in all systems. See Chapter 4 of this report.

- v. Aims of education should not only be relevant; they should be formulated with the involvement of communities to whom they are to apply; they should seek to provide equality of provision as well as of access to all within a society; they should take account of the features of life common to all inhabitants, as well as making provision for cultural, religious and linguistic diversity within the society. (See Principles for Educational Provision in the RSA and the report of the Work Committee: Curriculum development.)
- vi. Educational systems in general tend to propagate middle class values and standards as being expressive of the aspirations of the majority in a society.
- vii. Education in relation to other social problems

Education may be used and also ill-used as a method of approach to other social problems, and this may produce an overemphasis which



affects the organization and content of education. Examples of this are the introduction of environmental preservation, road safety and driver instruction programmes.

viii. The developmental level of cultural components of society, where there are large differences as, for example, in developed and developing sections of a society, may result in educational differentiation. Where such conditions occur, it is necessary to provide compensatory educational programmes in an endeavour to achieve equality of educational opportunity. Such practices have been found necessary in both developed and developing societies e.g. Zambia and the USA.

ix. The desire for a common system of education

Where more than one system of education is in operation in a society, the recipients of the less well developed system(s) tend to reject the offerings made to them in favour of a common system of education irrespective of its relevance. Failing this, their desire is for a system of education which is the equal in every way of that which is held to be the best developed and most prestigious.

x. Attitudes to the education of men and women

Not all societies or cultural groups have accorded the same recognition to women as to men in terms of education, although this is changing. This affects enrolments and curriculum differentiation. Refer to Principles for Educational Provision in the RSA.

xi. Discriminatory practices within society may be carried over into the educational system with the attendant failure to present equality of educational provision to all learners. Refer to Principles for Educational Provision in the RSA.

xii. Involvement of the parent community

All systems of education endeavour to greater or lesser degree to involve parents as an essential part of the process of education. This involvement may be either voluntary or compulsory. A danger

exists in that this involvement may extend beyond the involvement in the educative process resulting in interference in such areas as professional control and the appointment of staff.

Refer to Principles for Educational Provision in the RSA and to the report of the Work Committee: Education management.

- xiii. Crime, violence and poverty are aspects of all modern societies and, in particular, manifest themselves in urban agglomerations. The result, as far as education is concerned is firstly the need for compensatory educational programmes and secondly the effect upon the preservation of conditions in which learning can take place. Disruption of schooling and the outbreak of violence in educational institutions has become a feature of modern education in the last two decades.
- xiv. Adolescent unemployment, which may or may not be associated with crime and violence, is a feature of modern industrialized, urban life which also exercises an effect upon education. Included here are a growing proportion of adolescents who have been educated to a high level. It may have the effect of influencing the curriculum in providing alternatives with a vocational bias to existing courses, or of extending the period of schooling. It has important consequences in relation to relevance of the curriculum. In developing nations such as Nigeria this problem resulted in political disturbance for there was little evidence of articulated and co-ordinated planning between the education system, manpower development and employers.
- xv. The recognition of cultural diversity and the neutralizing of conflict within society is a sensitive area and one to which educationists are giving and must continue to give increasing attention. It is a factor present in all plural societies, and even relatively homogeneous developed societies are becoming rapidly aware of its significance as a result of large-scale immigration policies. The essence of the matter is to provide within the system of education, emphasis upon those aspects which seek to build a common highly regarded citizenship while at the same time providing an understand-

ing through awareness of cultural differences which exist within society. This may result in adaptation of the curriculum or through attempts at assimilation through the provision of common schools.

- xvi. The redefinition of the role of the family as a result of industrialization and urbanization is a factor which has been present in all societies throughout the present century. The demand for increased educational opportunity has changed the curriculum and extended both the period of compulsory schooling and the school day. It has in developed societies added a social welfare function to the professional roles of teachers and educational administrators.
- xvii. Leisure time has increased in most societies in direct proportion to industrial and commercial development and urbanization. The result has been demands made upon educational systems to adapt to this situation by curriculum change and the extension of extramural activities offered by institutions.
- xviii. The influx of foreign elements into a homogeneous population increases the need to take account of cultural diversity (see (xx)). Where such elements are easily culturally assimilable into the population, the problem is one of adjustment rather than of marked change. Where the cultures are fundamentally different, eg. Puerto Ricans in New York, or Pakistanis in England, then there is need for educational adaptation. The United States provides a remarkable example of the assimilation of foreign elements into its educational system in the nineteenth and twentieth centuries with large-scale population movement from Europe. Today, countries such as New Zealand are having to adapt their educational systems to accommodate new elements within the population. Israel is an example par excellence of this. In South Africa the arrival of large numbers of Portuguese settlers is an illustration of this. See report of the Work Committee: Demography, education, and manpower.
- xix. The provision of and demand for further and adult education is a feature of all educational systems. It is offered by formal and

non-formal means and responds to popular demand. Where the school system is developing and society contains elements within it which have lacked exposure to formal school education, the demand for non-formal alternatives increases both in quantity and range of offering. Such demands create pressures upon formal and non-formal sources of education and make essential some form of planned co-ordination of resources of continuing and life-long education.

- xx. In the face of social change, the decision-making processes within families and communities are changing with the result that new pressures are exerted upon educational systems which demand alternatives. A manifestation of this is the challenge to the curriculum on its relevance to present social needs. These pressures are felt at tertiary and secondary level particularly, but there is evidence also of its presence at primary level.
  
- xxi. The effect of competition within a materialist society places a strain upon systems of education. Two at times conflicting requirements are present in all educational systems. The first is to provide equality of educational opportunity for all, and presupposes that all learners will be exposed to a variety of educational experiences which will enable each to realise his maximum potential. This egalitarian provision does not always accord with the desire of the community to encourage talent and leadership potential. This latter tends to rest particularly upon academic distinction and selection which is elitist and which is relevant to traditional academic practice. It is a requirement of modern education systems that they should accommodate both the egalitarian and the elitist requirements in their provision.
  
- xxvi. The changing social order is something to which educational systems must adapt. After a long period of stability in developed societies which extended from the onset of the initial industrial revolution to the period after the second world war, great social change has occurred within these societies in the last three decades. Growing affluence increased leisure time, and the development of new attitudes to family life and the traditional values have all been challenges to the social order. Education in this situation has been required

to reassess aims and objectives and to review practice. The problem has been more acute in developing societies where the growth of the system of education has lacked the fairly long period of stability which has been a feature of developed communities. Where developed and developing components exist within a single society, the problems of educational adjustment are particularly serious and pressing, for education is the means by which a society secures its preservation and development.

- xxiii. The recognition accorded to the teacher in society is a fundamental factor in the acceptance and standing of the system of education. This in turn rests upon his academic and professional standing in terms of his qualifications and of the responsibility which he carries within the system. In developed societies this is reflected in the balance of professional responsibility between the teacher and the administrator. In developing societies where the problem frequently lies in the inadequate academic and professional preparation of the teacher, the administrator, in the form of the circuit inspector, has to exercise the dominant role. The essential requirement here is to raise the level of competence of the teacher through in-service, part-time and correspondence courses of both academic and professional nature. See report of the Work Committee: Recruitment and training of teachers.

#### 4. Economic factors

It should be noted that while economics is an important factor within the area of cultural determinants, it also has an important function within political and administrative determinants (see Sections C4 and E2 (iii) of this classification).

- i. The provision of manpower and the creation of employment opportunities

In equipping the products of the educational system to fit into the society which it serves, the system of education must not only take into account its responsibility in preparing the learner for vocational choice, it must also heed the demands of both the public and private sectors of it for the provision of manpower. The rate of

development of knowledge, as well as the changes in technology and technique, make it essential that the curriculum be held under constant review in order to satisfy these demands upon the educational systems. This also has important connotations for the provision of guidance services within the system. See the report of the Work Committee: Financing of education.

ii. Economic value of education and the demand for it

In a plural society at different stages of development, education has a varying and variable value. It is necessary that this should be constantly evaluated in educational planning, for it is obvious that, from the value accorded to various levels and types of education, demand will fluctuate. This is particularly relevant at secondary levels and affects both formal and non-formal sources of education. See the report of the Work Committee: Education financing.

iii. Industrialization and urbanization of society

As industrialization and with it, urbanization proceeds, so the demand for education and the provision of it must change. The simple rural curriculum which made provision for rural science, agriculture, and associated skills changes with a demand for metalwork, technical drawing, economics and accounting. At the post-school level the change is even more dramatic with the consequent rapid changes in courses and curricula offered at this level by a variety of institutions. (See the reports of the Work Committee: Demography, education and manpower.)

iv. The development of attitudes to work

It is important that in its responsibility for the growth of the individual, the system of education should make provision for the encouragement of positive attitudes to work which will find fulfilment in the provision of manpower as set out in 4(i) above. This will not remain static for as a society develops so aspirations will change and with them attitudes to particular kinds of work. An example of this has been the negative attitude in developing socie-

ties to agriculture with a veneration for "white-collar" employment. As industrialization has proceeded, there has come a positive acceptance of "blue-collar" vocations. (See the reports of the Work Committee: Technical education of the Urban Foundation.)

## 5. Central directing motives

Historically in the Western world education has always had a basis of religious belief stemming from the religious background of society. Indeed from mediaeval times it has been the church which has so often been the educational agent of society. It was only with the development of nationalism and liberalism in the eighteenth and nineteenth centuries that secular systems of education developed. The developing countries have inherited this basis of education from their colonial past. In the communist world belief in a political ideology has deliberately been fostered to supplant religious commitment. However, basic to all educational systems is an underlying acceptance of faith or belief in an ideal.

### i. The predominant religions

Hans and others stress the importance of the religious factor and the influence which all major religions have had in the determination of the education systems in areas of their acceptance. A feature of the importance of the Christian religion has been the effect of denominationalism within it. Thus, the Calvinist influence is at variance with the Catholic and the Anglican with the Seventh Day Adventist. In plural societies it is essential to recognize the importance of an underlying religious factor in the determination of the education system, but this should not be exclusive. Thus in South Africa it is essential that the complex of religious backgrounds, including Christian, Jewish, Moslem and Hindu, should be recognized in the determination of educational policy.

- ii. Denominationalism has resulted in the growth of subsystems of education expressive of both the religious belief and history of a community. Jewish, Anglican, Roman Catholic, Hindu, Moslem, Methodist and Lutheran traditions and beliefs are preserved within their

particular school systems. Such diversity should not be discouraged for it enriches the cultural heritage of the society. Provided that such schools and systems maintain acceptable standards of educational provision, they should receive support, as contributing to the educational and cultural development of the community.

iii. The influence of a dominant religion and denominationalism within it

At times where a state religion exists this has tended to be exclusive and to make educational policies somewhat narrowly sectarian. Such a policy pertained in Italy under the Fascist regime. In England, on the other hand, while an Anglican system of religion exists, the state system of education does not in any way seek to be prescriptive concerning religion, other than that there should be "a daily act of corporate worship" in schools.

iv. Denominational multiplicity makes it impossible for a system of education to recognize all religious sects. The system of education must take into account the main religious beliefs of the major groups which comprise society. Other than this there should be freedom to establish schools subject to the provisos included in 5(ii) above.

v. Religious factors may have an important bearing on the determination of educational aims and objectives. In a plural society it is desirable that such influence should not be exclusive, but should be couched in such terms that the diversity of religious interests can be accommodated. See Principles for Educational Provision in the RSA.

C. POLITICAL DETERMINANTS

1. Historical factors

i. The historical perspective of provision of education and the system by which this has been carried out within a society, exerts a powerful influence upon the development of and immunity to change in



the control of education.

- ii. Similarly, historical and traditional influences may determine the desirable model of education, the acceptance of which within society renders difficult change and renewal within the system.

## 2. Political decision-making factors

- i. Constitutional and legislative instruments set up a framework within which a system of education must develop. The nature of such instruments determine whether the system will be open or closed, and set the conditions for and extent of change which is possible within the system. The power given to the responsible authorities at all levels is most important.
- ii. The educational beliefs and policies of the dominant political authority exercise considerable influence on the design and functioning of the educational system for which that authority is responsible. An example of this has been the attitudes to comprehensive schools by successive Labour and Conservative administrations in England and Wales.

## 3. Organizational and administrative factors

- i. The nature of devolution of the management processes

Stemming from 2 above, the character of the educational administrative process is determined, and the system of education may be subject to centralized or decentralized control and decision-making. This has important consequences for many aspects of the system of education outside the purely administrative, and affects curricula, evaluation and assessment, and the status of the teacher amongst others.

- ii. The relationships which exist between political authority and the various levels of educational administration determines in no small measure the nature of the educational system. An example of this is the relationships which exist between the Central Committee of the Communist Party of the Soviet Union and the All-Union Ministries

of Education as well as those of the Republics. This may be contrasted with the relations between the Secretary of State for Education and Science and the Department and Local Education Authorities in England.

#### 4. Economic factors

- i. The wealth of the nation in terms of Gross National Product and the percentage thereof which is allocated to education

This includes the provision of funds for education and their allocation to all groups, both population and level of education within the nation. Besides controlling all educational development within the State, this determines the provision of equality of educational opportunity.

- ii. The need for trained manpower in the development of the economy

This may result in political pressures being exercised on the system of education to meet new situations in the life of the nation. Depending upon the nature of political control such changes may be brought about by professional consultation, or by direct executive action.

#### 5. Theoretical political factors

- i. The growth of nationalism in Europe in the last two centuries resulted in the growth of national systems of education which have endeavoured to meet the needs of society as determined by the political decision-makers. Professional influence in this process has depended upon the nature of political control. This has been manifested in the state's acceptance of responsibility to provide education in the form of finance, plant and personnel. It has also determined its attitude to private systems of education.
- ii. Socialist theories have been responsible for the steady increase in the numbers receiving education until the concept of the universal right of the individual to education has been recognised by the achievement of compulsory education.

It may be noted that both egalitarian and elitist approaches to education are present in these two factors.

D. **PROFESSIONAL DETERMINANTS**

1. **Biotic factors**

These are concerned with the physical well-being of the learner and include:

- i. Health, medical and paramedical services, the presence or absence of which determine the physical conditions under which education takes place, as well as the provision for the physical care and supervision of the learner. See the report of the Work Committee: Health, medical and paramedical services.
- ii. In developing communities to a much greater extent than in developed societies, malnutrition is a condition which determines the effectiveness of any system of education. In both developing and developed systems of education, school feeding schemes may be necessary to ensure the effectiveness of educational provision. See the report of the Work Committee: Health, medical and paramedical services.

2. **Psychic or psychological factors**

These are concerned with the psychological well-being of the learner.

- i. The provision of psychological services may result in the need to develop new or alternative courses or curricula. The absence of such services may result in educationally-unsound decisions or provisions being made for learners. See the report of the Work Committee: Guidance.
- ii. Guidance services in providing for curriculum choice within institutions and influencing career choice beyond them may exert considerable influence on the efficient functioning of educational processes. See report of the Work Committee: Guidance.
- iii. The need for a variety of forms of special education to cater for differing requirements of children with specific learning problems exercises a very significant influence upon the processes of education and the means by which they are implemented. See the report of the Work Committee: Education for children with special educational needs.

3. **Curriculum factors**

- i. The methods by which and the responsible authorities through whom

the curriculum is developed. These may be professional, administrative or examination authorities. There is extensive evidence of the necessity to institute a professional service at regional and national levels for curriculum development. See the report of the Work Committee: Curriculum development.

- ii. Language, including both the medium of instruction and other languages, is a powerful influence within and upon systems of education. Thus in the USSR, the principle of mother tongue instruction is upheld consistently. The presence of Russian as the second language promotes the policy of Russification within society. The language factor is also important in determining the balance of the curriculum. (See report of the Work Committee: Curriculum development.)
- iii. The needs of the economy may call in question the need for a sound general education preceding specialization and result in the introduction of more specialist vocational courses at too early a stage.
- iv. Dominant political ideologies may exercise an adverse effect on the curriculum and result in the introduction of courses which it is difficult to justify professionally. Such pressures must be professionalized by requiring that curriculum development should be the responsibility of well-qualified professionals.
- v. The rapid growth of knowledge and its almost equally rapid obsolescence can result in courses and curricula becoming overfull or outdated. It is necessary therefore that provision should be made for their regular review.
- vi. The aims of education must be reflected in the curriculum at whatever level they apply. Consequently, not only the curriculum, but also the aims of education must be subject to review. This is of particular concern in a plural society where curricula may be designed without consideration of the particular aims of a cultural group within society.
- vii. The evaluation and assessment procedures applied both to the curriculum and to individual learners exercise a powerful influence on educational procedures and systems. In general it may be said

that evaluation procedures should not determine the curriculum, but that it should be the other way round. After nearly half-a-century of debate on this issue, there are still evidences of overemphasis on evaluation procedures to the detriment of both the learner and the curriculum.

#### 4. Community factors

Relationships between professional educators and community interests, including parents, employers, professional associations and the community in general are important in the determination of educational systems. Where they are lacking or inadequate, wrong or faulty professional decisions and action may be taken. Where they are too strong and come to dominate the educational process, professional interests may suffer adversely.

#### 5. Teacher and teacher supply factors

- i. The recognition accorded to the teaching profession by a particular society determines the attitude of that society to education and therefore its preparedness to accept professional leadership and guidance in educational matters.
- ii. Recruitment, the success of which depends on the professional status of the teacher, is vital for the development and renewal of the system of education. It is necessary that recruits of sound academic quality be obtained, and that there is a sufficiency if an educational system is to progress. Educational manpower is the key to the whole problem of economic and social progress in the RSA. If such manpower is not obtained the entire strategy for educational reform and improvement will be vitiated. (See the reports of the Work Committee: Demography, education and manpower and of the Work Committee: Recruitment and training of teachers.)
- iii. The training of teachers, at initial, in-service and further training levels, must seek to develop academically and professionally well-qualified practitioners, who have a critical awareness of educational issues and problems. Where teacher training courses are of poor quality or sub-standard the growth and development of the

system is problematical. Where the qualifications of teachers are inadequate or there are a large number of untrained teachers, educational systems will tend to be static, with excessive central control and minimal application of professional decision-making at the micro-level. It is necessary in such situations to provide for the upgrading of teachers' qualifications and competence.

- iv. Following from the above, a well qualified professional staff permits the delegation of increased decision-making powers to the teacher at micro-level. Such a situation makes for flexibility and professional involvement in the development of the system of education to meet particular needs.
- v. The maintenance of educational standards is an essential factor in the determination of an educational system. Such standards may be externally, internally or individually assessed. It is desirable that teachers should play a significant role in this process, where they have the qualifications and experience. (See report of the Work Committee: Curriculum development and of the Work Committee: Recruitment and training of teachers.)
- vi. It is necessary that teacher efficiency should be evaluated if educational standards and progress are to be maintained. The more highly qualified the teaching staff and the more complex the educational process the more difficult and more sensitive does the task become. The assessment of efficiency is a feature of any hierarchical organization, but in professional situations such as teaching it has to be approached with professional caution. Such assessment is essential in career promotion and the growth of the system.

#### E. ADMINISTRATIVE DETERMINANTS

##### 1. Historical factors

The administrative development of an educational system, like its political growth, may as a result of traditional acceptance, be seen as the most desirable, if not the only, model. It may thus become resistant to change in the face of demands for change from other determining factors.

## 2. Systematic factors

- i. Organizational pattern and the relations between macro-levels, meso-levels and micro-levels of educational administration determine flexibility and rigidity of the system of education. They also determine the administrative vis-a-vis the professional influence in educational provision.
- ii. Economic and financial  
The financial allocation to education and the relative distribution to administrative and professional functions determine whether equality of educational provision can be achieved.
- iii. Flowing from the above, the system of education is determined by the parameters within which planning takes place, and the attitude of planning authorities to educational change. Of vital importance in educational planning is the provision of building and equipment.
- iv. Similarly in the implementation of the system, its nature may be defined by administrative attitudes to such professional activities as curriculum development, examination and assessment procedures and teacher training.
- v. Evaluation is a determinant in two respects:
  - of organizational and administrative procedures and their importance relative to professional issues;
  - of the learner's achievement and potential and resulting certification.

### 3.2.3 Notes

1. From the foregoing it will be seen that the first two groups of determinants, viz. natural and cultural, are essentially external to the system itself apart from certain demographic factors. The last two, viz. professional and administrative are determinants which operate internally within the system. The remaining group (C. Political Determinants) lies between the internal and external determinants and is essentially concerned with linking the educational desires and aspirations of a society with their implementation and realization in practice.

2. A further set of determinants which may be termed "Change Determinants" is inherent in each of the categories delineated. Such determinants may be external or internal resulting from geographical, demographic, historical, social, economic, religious political, professional or administrative pressures for educational change within a system. Usually such determinants will have within them a combination of factors which indicate the desirability of or necessity for change within an educational system. A fundamental determinant within this group is the results of educational research.
3. Educational systems are established and evolve inter alia in response to a complex of determinants. The same determinants may not always be obvious or indeed, present. Aspects of educational systems may be determined by factors not appearing within this classification. It is always necessary to ascertain the nature and relevance of determinants in any particular situation.

### 3.3 CRITERIA FOR A SYSTEM OF EDUCATION

#### 3.3.1 Definitions

From the original definition it is accepted that a system of education is a complex of elements in mutual interaction. It is inextricably bound up with many aspects of society, and it cannot exist in isolation from society. Bondesio and Berkhout state that educational systems originate through the collective provision of education within a society. It follows, therefore, that a system is designed - or grows, is probably a more accurate term - in response to the needs of society, and will contain within it the peculiar stamp of that society. However, educational systems do control common elements within which there may be considerable differences due to the differing nature and needs of societies, and the differing determinants of education within them.

If a "criterion" can be defined as "a principle, rule or standard by which a person, activity, institution, organization or qualifi-



cation is judged", then the criteria for a system of education must include a diverse range of components. These include the nature and purpose of the education to be offered, the organization and management of the process of education, the standards achieved and the provision for change and renewal built into the system. To this end four categories of criteria are delineated in relation to a system of education.

These are:

- (i) instructional criteria;
- (ii) institutional criteria;
- (iii) systematic structural criteria;
- (iv) functional criteria.

A peculiar feature of an educational system is that a society, or community, depending on the governmental provisions within a state, determines the nature of the education which it desires. At whatever level this decision is taken, most usually by the representatives of the society influenced to greater or lesser degree in the modern world by a professional bureaucracy, the direct implementation takes place at institutional level in schools, colleges, universities or through non-formal agencies of education which develop for the purpose. An infrastructural system in support of this implementation is necessary, linking the decision-making level with the implementation level. This accords with the usual three-tier model postulated for educational systems in which macro-levels, meso-levels and micro-levels are recognized. This will be returned to in consideration of the criteria.

### 3.3.2 The classification of criteria for a system of education

#### A. INSTRUCTIONAL CRITERIA WHICH ARE AN ESSENTIAL PART OF THE EDUCATIONAL STRUCTURE OF THE SYSTEM

They include:

- (i) The principles upon which the education offered is based, which involves the determination of educational goals and objectives. Included amongst these goals are the following functions of education:

- a. the cultural function
- b. the economic function, including the provision of manpower
- c. the citizenship function
- d. the selection function
- e. the stratification function which recognizes different abilities among individuals
- f. the leisure time function.

Goals are not essentially determined by the educational system, which acts as the instrument by which the goals are to be realized. However, a system of education will develop, review and renew them through interaction with the decision-making levels of the society. Goals are an essential part of educational policy and are frequently enshrined in legislation and regulations.

- ii. The curriculum which comprises the principles of what is to be taught. It is seen as a convergence point between what is desired of an educational system and the manner in which effect is given to these desires. Bondesio and Berkhout view criteria relating to the curriculum as having a prime function within the educational system. "Die kurrikulum (word) as middel beskou om die doelstellings te verwirklik; dit vorm die inhoud van standarde wat geïmplementeer word; is ontmoetingspunt tussen die een wat onderrig en die een wat leer, en word beskou as een van die belangrikste insette in die ontwerp van die onderwyskundige struktuur van die onderwysstelsel."

### iii. Standards

This group of criteria link with the goals set, the curriculum and the teaching methods used, as well as the infrastructure existing within the system. Standards are concerned not only with, for example, the manpower requirements of the state which the education system endeavours to meet, but also the social demands made upon it. Contest mobility, as manifested by competition within society, as well as sponsored mobility in the provision of equal educational opportunities for all, affect the maintenance of standards, dependent upon the educational philosophy of the particular society.

## B. INSTITUTIONAL CRITERIA

These criteria are concerned with the implementation of instructional criteria at the micro-level or institutional level. Fundamental in this category are:

### 1) Staffing criteria

Included within this group are two categories of personnel, viz:

- a) those who teach, and
- b) those who perform functions which make teaching possible.

It is significant that these two categories are not found in watertight compartments, for professionally trained and experienced teachers are found at all levels of an educational system playing a large variety of roles.

In respect of specific criteria, Bondesio and Berkhout note that

- the educational system is labour intensive;
- only relatively highly-trained manpower can be made use of, and this is costly in terms of finance;
- the provision of teaching staff does not compete with other occupations, although in the current shortage of manpower in the RSA, the educational system is being increasingly raided to provide skilled, rapidly trainable manpower for other occupations. In addition, throughout the world chronic shortages of teaching manpower exists in specific subject areas e.g. Mathematics and Science;
- the demand for education in South Africa is steadily increasing, and with it the demand for trained staff. This must be seen in the light of the report of the Work Committee: Demography, manpower and education where it is noted that the demand in certain sectors of the population is likely to be reduced over the next forty years, while the overall increase in demand will continue.

To these must be added criteria connected with the standards and levels of teacher training.

ii. Criteria concerned with the learner

Without learners there would be no justification for the existence of an educational system. At the same time in modern society the learner is not restricted to the school pupil or the university or college student. The concept of "the learning society" envisages all members of society as "learners", giving rise to the provision in response to demand of "life-long" or "continuing" education involving both formal and non-formal aspects of the educational system. Included in the criteria which involve the learner directly are:

- a) admission requirements;
- b) compulsory education;
- c) control of attendance (including retention rate of the institutions);
- d) grouping procedures for various educational purposes;
- e) examinations and certification.

C. SYSTEMATIC STRUCTURAL CRITERIA

This group of criteria provide the link between the decision-making process within society regarding the goals set for education, and the implementation of instructional strategies at the institutional level included in A and B above. This group can be said to cover the infrastructure of the educational system.

They include:

i) Physical criteria

The nature and standard of physical facilities within and through which the process of education is implemented.

ii) Organizational and management criteria

These are concerned with the manner in which the educational system is articulated, managed and controlled from the highest decision-making level (political) through a succession of management levels to the implementation of the instructional processes at the institutional level.

Mention has already been made of the three-tier model of administrative control. The criteria in respect of these levels may be

briefly summarized as follows:

a. Macro-level

This concerns the highest level of control structure including administrative and management services, support services, financial services and the provision of the necessary educational infrastructure, including planning and research.

b. Meso-level

Deals with a particular section or subsystem of the educational system. It may include a level of educational administration and control, or relate to an institution in which a particular part of the total educational system is in operation.

c. Micro-level

At this level, criteria are concerned with the structured collection of teaching/learning situations within the education system. Functions here include control, administration, support and educational provision.

iii. Educational criteria

See A and B above.

iv. Financial criteria

This group covers a complex of operations which include

- criteria regarding the overall financing of the total educational effort of the state, and the percentage allocation of GNP to education;
- allocation procedures to levels and subsystems within the system including both formal and non-formal sectors;
- budget control of the responsibility and accountability for financial allocations;
- financial services covering both capital and recurrent expenditure including salaries and pensions.

v. Criteria covering educational support services

These criteria include those which relate to the provision of ser-

vices which give support to the process of education taking place under A and B above. They cover

- research and planning
- medical and paramedical services
- psychological services
- remedial education services
- guidance services
- building services.

vi. Criteria relating to the non-formal provision of education

The non-formal system of education in a modern developed state is a highly complex undertaking. A wide variety of organizations is involved. They possess instructional components, they exhibit structural form in respect of organization, in that there is greater or lesser degree of management structure and financial provision. They may be either formally or non-formally provided. There may be greater or lesser degree of co-ordination of these components, thus being in closer relationship to the overall system of education or sporadic and diffuse and bearing little relationship to the organized system of education. Where formal co-ordination requirements are imposed, the offering of education in this area becomes more systematized and less wasteful of resources. It may, however, have the effect of inhibiting voluntary non-formal contributions to the educational system. Care must therefore be taken to ensure that any co-ordination mechanism should encourage rather than inhibit involvement of non-formal sources of education.

The complexity of the non-formal educational operation means that it extends from offerings which are systematized and can be recognized as being part of the educational system to a peripheral fringe of sporadic offerings which seem to have little relationship to a formally structured system of education. As traditional adult education programmes expand to make meaningful the concept of the "learning society" with its requirement of continuing education, this complexity is likely to increase, making more necessary some form of co-ordination of activities.

D. FUNCTIONAL CRITERIA

This group of criteria, unlike those in the first three groups is

not so much concerned with the structure of the system of education as such, but rather with its functioning. It is thus related to structure, but is essentially concerned with processes within the structure.

In the present situation when an investigation is launched in which specific terms of reference are laid down which require that an educational system shall achieve certain goals or render certain functions, these terms of reference provide functional criteria for the system. Similarly where principles of education have been agreed as giving expression to these terms of reference, these two provide functional criteria for the system.

As in the case of determinants of education, this group of criteria covers a very wide field and it is difficult to provide exhaustive coverage. It is necessary in terms of King's and Holmes' postulations to relate specific criteria to specific educational practice in order to analyse and determine their relevance and importance within the educational system.

Included in this group of criteria, are:

- i. The system of education meets the needs of the individual as well as those of society and the economic development of the country, taking into account its manpower needs.
- ii. A unifying criterion is that the system of education is based on substantial, continuing consensus, that it should not be exclusive and that it must make claim to rationality.
- iii. The system must live with conflict under control. Few conflict situations are settled by any decision, and therefore provision must be made within the system for consultation and adjustment.
- iv. The system of education must actively endeavour to integrate the needs of the community with the requirements for production. It must endeavour to establish effective communication with all sectors of the community.
- v. A system of education should result from a genuine concern for the real social and economic evolution of the community.

- vi. It should be suited to the needs of the mass, as well as encouraging competition in the development of knowledge, skills and leadership.
- vii. There is a common good that requires a common education. That common good is an enlightened citizenry and the system of education makes its distinctive contribution to the common good by teaching each generation to use knowledge for rational deliberation.
- viii. The school system must help young people to make the transition from adolescence to constructive adult life.
- ix. The system of education must afford positive recognition of what is diverse in the religious and cultural way of life and the languages of the inhabitants.
- x. A dynamic system of education must have the means to monitor its educational effort.
- xi. The education system must give positive recognition to the freedom of choice of the individual, parents, and organized society.
- xii. The system must provide for the training and selection of professional staff with particular reference to the encouragement of leadership potential.
- xiii. The system must recognize and promote the professional status of teachers and lecturers.
- xiv. Education must be recognized as a life-long continuous venture, if it is to improve the quality of life and the human condition.
- xv. The system of education should seek to improve its effectiveness by demonstrating its faith in the ability, interest and devotion of its members to continue, and to promote the interests of education. Where staff, through lack of adequate training are unable to do this, the system should seek to provide opportunities for necessary upgrading of staff.
- xvi. The system of education should make provision for equal educational opportunities for all learners, including access to education.
- xvii. A system of education should be able to anticipate and to respond appropriately to changes in society.
- xviii. A system of education must make appropriate provision for research



in experimentation with and application of new methods and techniques best suited to changing conditions.

- xix. The system must achieve positive relationships between formal, non-formal and informal aspects of education within it and between it and society.
- xx. The provision of formal education should be a responsibility of the state, provided that the individual, parents and organized society have a voice in this responsibility.
- xxi. The system of education should make provision for shared responsibility in the matter of non-formal education.
- xxii. The system of education should make provision within it for the growth and subsidization of efficient systems of private education.
- xxiii. In providing for the education of all inhabitants, the system of education must allow not only for centralized control, but for effective decentralization of power to permit meaningful participation of regional communities and interests in the development and functioning of the system.
- xxiv. The system of education must make provision for the funding of education in such a manner as to provide for the equality of educational opportunity for all learners.
- xxv. The system of education must make positive provision for the maintenance of educational standards.

### 3.4 CONCLUSION

The evolution of the modern system of education particularly in the post-World War II era with new determinants and criteria is perhaps best summarized by Banathy.

"The post-World War II emergence of the technological society, with its explosion of information and knowledge, has caused the development of variations in the (traditional) structure of the systems complex. New curriculum representations have emerged, coupled with instructional systems technology, and media-oriented methodology, with ... attention given to individual differences. Recently, however, the instituted variations appear to experience increasingly more difficulty as we accept (a) cultural pluralism as

a viable societal arrangement, (b) experience diversification of lifestyles, and (c) aspire to improve the quality of life and the human condition.

This emerging image of education leads ... (to)the need for an organisation of education at the societal level. For this we have to find ways to design and implement (new) learning systems. ... Two conclusions can be inferred. First, we should revise and restructure our present procedures so that the available resources are exploited to greater advantage; and second, we should make a stringent effort to search out unsuspected educational potential incorporated in other social institutions and the overall societal structure."

- \* Banathy, A.L. The School: An Autonomous or Co-operative Social Agency. In: Rubin, L. Critical Issues in Educational Policy. Boston: Allyn and Bacon, 1980: 118.

## CHAPTER 4

### THE DESIGN OF AN EDUCATIONAL STRUCTURE FOR THE RSA

#### 4.1 INTRODUCTION

The origin, development and nature of systems for the provision of education and the determinants and criteria that determine them, were examined in the preceding two chapters. As was stated in the introductory chapter, the main focus of this report is on the designing of an educational structure for the RSA. The preceding two chapters therefore served as the basis for what is to follow in the subsequent paragraphs.

#### 4.2 THE AIM OF THIS CHAPTER

The aim of this chapter is of a dual nature.

- a) To submit alternative designs of educational structures, and
- b) to illustrate the ways in which the designs took shape. The latter is rather an implicit than explicit aim of the chapter.

The following can serve as a definition of an educational structure (see also Chapter 1):

The educational structure is the combination of different types of educational/ learning situations and the relation between them. This structure shows the different educational possibilities as well as the possibilities for interchange that there are in the specific system of education.

#### 4.3 EXAMPLES OF EDUCATIONAL STRUCTURES

There is a large number of such structures available. Most examples have one serious defect, namely that there is no clear-cut distinction between formal and non-formal education.

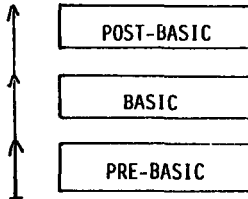
#### 4.4 GENERAL ASSUMPTIONS THAT PERTAIN IN THE DESIGNING OF ALTERNATIVE EDUCATIONAL STRUCTURES FOR THE RSA

The following assumptions pertain:

- a) That change (modernization, innovation) is an objective of the investigation;
- b) that the existing educational infrastructure will serve as a point of departure for change;
- c) that the change to a new structure will take place over a period of time;
- d) that the design and proposed alternatives represent the final objective rather than the intermediate ones;
- e) that the change is from a relatively closed to a more open educational structure (in the educational sense);
- f) that the designs do not actually clash with the principles that have already been formulated for the provision of education;
- g) that alternative designs give expression to the principles for the provision of education;
- h) that the educational structure will be adaptable;
- i) that basic education is determined curricularly in terms of accepted educational aims;
- j) that basic education, compulsory education and free education are related but non-synonymous concepts;
- k) that education is a continuous matter and terminal education should consequently be avoided as far as possible;
- l) that together with the above assumption (4.4K)
  - (i) the formal educational structure will certify in a direct manner and
  - (ii) certify in an indirect manner by determining entrance levels from non-formal to formal education and vice versa, and
- m) that, seen as a whole, the same type of educational structure will be applicable to everybody.

#### 4.5 A DRAFT LEVEL MODEL

In the design of an educational structure a three-level model is used. On the vertical axis a distinction is made between basic, pre-basic and post-basic education. These three concepts are determined curricularly



##### 4.5.1 Basic education

Basic education is the minimum education that should be provided to achieve and establish literacy. In other words, during this phase of education the learner must learn to read, write, reckon, speak and listen, so that secondary experience will be accessible to the learner, and can be opened up more easily and at a faster rate by the teacher in the subsequent phases of education. Basic education is not necessarily the same for children and illiterate adults. Knowledge of the subject-matter as well as the acquisition of other skills enjoys greater priority in the post-basic period than before that time. In other words, after basic education the learner should be prepared for further education.

These aims are, therefore, delineated educationally, without denying that educational or other aims such as knowledge of nutrition, health, citizenship, civic rights, etc. cannot and will not also be achieved in this educational phase. Emphasis, however, falls on what is educationally basic, so that all the other differentiated aims can receive the necessary attention in post-basic education.

##### 4.5.2 Post-basic education

Post-basic education is characterized by a high degree of differentiation. This part of education (formal and non-formal) is subject to a high degree of change owing to the varying demands of the community that has to be served. The differentiated aims of the community must

be satisfied in particular in the post-basic educational phase in so far as they can be satisfied by education. The more sophisticated and differentiated a community is, the more sophisticated and differentiated the post-basic education will have to be, and its duration might even be lifelong.

#### 4.5.3 Pre-basic education

Pre-basic education starts with birth and ends with the learner's joining basic education at the age of about six or seven years. If pre-basic education is received at an institution, the traditional difference is made between crèches (0-3 years) and nursery schools (3-6 years). This institutional difference frequently causes the opinion that there is a clear-cut difference between care (0-3 years) and education (3-6 years). In both cases education is provided and the children learn. In this way different educational aims are realized. In dealing with alternatives in the provision of education, the finer differences can be maintained, just as finer differences are possible in the case of basic and post-basic education, but without losing sight of the fact that provision of education is the basis of the investigation. The aims of pre-basic education are consequently delineated in this context to the development of the small child so that he can derive the full benefit from the more formalized basic education. In other words, the child must be prepared for school.

Each of the levels mentioned above can and will inevitably differentiate further on the vertical axis. This differentiation increases on the post-basic educational level. Since an educational structure is very complex in its final form, the model is initially kept as simple as possible. This simple three-level model is regarded as the basic framework on which different alternatives of educational structures can be built.

The full potential of vertical interchangeability of learners is represented on the vertical axis of the model. Specific points of input and output, the duration of each level and questions such as whether the level is part of formal or non-formal education, whether it is free, whether it is compulsory, etc. are all detail that will give a specific form to the educational structure. Since the detail

can cause confusion, it is necessary at this stage to explain a few concepts that will be used in the subsequent explanation. Additional explanation of concepts will be added in the course of the report, since many concepts are clearer in the context of the explanation than at this stage of the chapter.

#### 4.5.4 Explanations of words

##### a) Education, formal, non-formal and informal

- (i) Formal refers to the recognizable form or formalizing aspect which means that formal education is linked to recognized educational institutions such as schools, institutes, colleges, technikons, universities, etc. which all together form the system of education of the country.
- (ii) Non-formal education refers to all education which falls outside the scope of the above-mentioned system of education.
- (iii) Informal refers to the spontaneity or unintentional character of education, as it is, for instance, sometimes found in the family situation.

##### b) Free education

"Free education" and "scope" which can be regarded as free, may differ from one country to the next. In this chapter free education is defined as the education which is provided within the formal and non-formal system of education and for which the government accepts the responsibility for financing both capital and running expenses.

Since the concepts "capital" and "running costs" can be interpreted in either a narrow or a broad sense, that which is regarded as "free education" may differ. In other words, educational expenditure and how it is calculated (composed) will be the content of what is regarded as free education, if the government accepts responsibility for it. For the purposes of this chapter, educational expenditure is composed of the following items:

Salaries of teachers and administrative staff;  
government contribution to pension fund, medical fund and gratuity;

housing subsidy;

bursaries and loans for the training of staff;

running and capital expenditure in respect of buildings and other physical facilities (e.g. books, stationery, etc.);

subsidized transport and hostel accommodation, and financing of education auxiliary services.

c) Semi-free education\* (Subsidized education)

"Semi-free education" is defined as the education for which the government bears a varying percentage of the educational expenditure, as these were calculated above.

d) Compulsory education

Compulsory education is applicable when the children of a country are compelled by law to attend school for a certain period of time. This compulsory education is usually defined within certain age limits and is usually not applicable to adults. Different countries have different limits for compulsory education, with the result that the lower and top limits for compulsory education differ between countries.

The lower limit of compulsory education is usually fixed on the basis of educational motivations, while the top limit is also determined by factors like available funds, educational personnel, physical facilities and general and particular manpower requirements of a country.

The lower limit of compulsory education varies between five and seven years, while the top limit of compulsory education varies between the ages of eleven and eighteen years. The top limit in most African countries is approximately 14 years, while it is 15 years in overseas countries.

e) The relation between basic, compulsory and free education

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\* In determining what is free education, the principle is that the government's contribution and not the individual's is taken as the starting point. In any calculation the individual does make a direct contribution, for instance in terms of food, clothing and housing supplied to the learner by the parent. If the private sector provides "free" education to employees or other individuals, the education, in terms of the definition, is not typified as free either.



These concepts are often used incorrectly as synonyms, with the result that the necessary distinction and the relation between them must be examined.

In the provision of education, the position usually is that basic education is both compulsory and free. In other words, where there is compulsory education in a country, the basic phase of the education will be made compulsory and it will also be provided free. Compulsory education can, however, last longer than basic education. In other words, although compulsory education can last longer than basic education, it will always be free<sup>4</sup>. Free education can last longer than compulsory education, while the opposite is not found in practice. The set-up can be shown schematically as follows:

EDUCATION	DURATION		
Basic education	X		
Compulsory education	X	X	
Free education	X	X	X

In conclusion another remark has to be made in connection with the three concepts: Basic education is determined curricularly, while compulsory and free education are determined by factors of feasibility outside the system for the provision of education.

In the practice of system design, this must be kept in mind, as conflicting points of view in regard to compulsory and free education may be the cause of a re-definition of basic education in order to accommodate the differences between the points of view. Such a situation would be undesirable because points of view in connection with free and compulsory education would then be interpreted outside the context.

#### 4.6 A DRAFT INTERCHANGIABILITY MODEL

##### 4.6.1 Introduction

In the exposition of the above three-level model the terms "input" and

<sup>4</sup>Free education and what is understood by it, may differ from one country to the next one.

"output" were used to indicate that in any representation of an educational structure a systematic approach is unavoidable. The input, flow-through and output of learners form an integral part of any system for the provision of education with the result that a flow diagram is a good way to represent the flow-through. The flow-through of learners can occur in two directions namely vertically and horizontally. The "flow" is also regulated and the mechanisms used for the regulation are called channelling mechanisms. Depending on circumstances, these mechanisms should be used in such a way that the educational structure can be used optimally to realize the anticipated objectives.

The present formal educational structure is characterized by

- . limited linkage with non-formal education;
- . limited output points to differentiated vocational practice;
- . limited horizontal interchangeability, in other words the system is virtually closed;
- . an inflexibility to be able to accommodate large percentages of failures (drop-outs), in other words, the system has the potential of being blocked, and
- . poor standardization of certificates, since input and output points are not very well co-ordinated between formal and non-formal education.

In order to try to obviate all these negative characteristics, a modular educational structure with optimal interchange at horizontal and vertical levels and degrees is represented within the formal educational structure and between the formal and non-formal educational structures.

#### 4.6.2 Explanations of words

- a) Vertical interchangeability means the successive completion of a particular grouping of years of study by a learner for the achievement of a specific scholastic exit point within a particular field of study at a particular educational institution.
- b) Horizontal interchangeability means the changing of the field of study

or the level of study. After horizontal interchange has taken place, a learner reaches a scholastic exit point, without loss of years of study, in another level of difficulty, another subject or another educational situation, different from that which was his original entrance point.

c) Closed and open systems of education

A closed system of education is characterized by fixed vertical interchangeability channels with few horizontal possibilities of interchange and little interaction with vocational practice.

An open educational system is characterized by ample horizontal possibilities of interchange between different educational levels and also between the formal educational structure and the vocational practices.

d) Non-terminal education emphasizes the principle and possibility of continuing study and training within and between the formal and non-formal educational structures of a system for the provision of education.

e) Level and degree of education

Apart from the three phases basic, pre-basic and post-basic, the word level is used in the chapter to indicate also a finer differentiation of vertical progress in the interchangeability. This practice is not unusual because primary, secondary and tertiary educational levels are typical of the present educational structure. This present division into levels is, however, not preferred, because it is also linked to types of institutes which, in future educational development, will represent only a few types of institutes which will come into existence particularly at the post-basic level, within both formal and non-formal education.

The concept "grade" is used to indicate the degree of difficulty at a particular level. In this way horizontal differentiation is obtained at a particular level, which can also reflect the degree of assistance and of vocational directedness and the output point from formal education.

### Example

Instead of talking about the present Std 8, Higher Grade, where "standard" represents the progress level and "Higher Grade" indicates the degree of difficulty, it is proposed that we talk about Level 10, Grade 1. In short: level means progress level and grade means degree of difficulty.

- f) A module is regarded as a complete interrelated unit of knowledge, including before and after tests to determine whether certain skills have been mastered.

"A module is a self-contained set of learning experience intended to facilitate the student's attainment of a stated set of objectives:"\*

A rounding off module is regarded in this study as a finishing course to couple a particular level and degree of scholastic skill to viable vocational possibilities and training.

A modular structure is seen as a framework on which various levels and grades of courses can be arranged in the form of completed units.

## 4.7 A PROPOSED MODULAR EDUCATIONAL STRUCTURE

### 4.7.1 Introduction

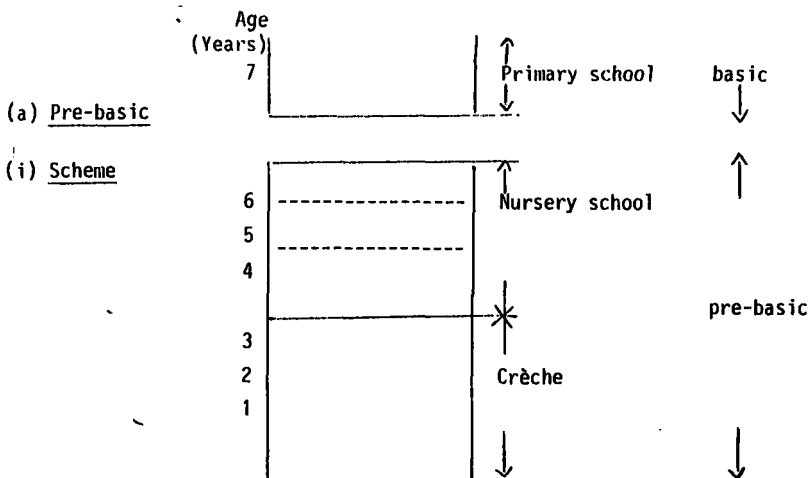
For the purpose of this exposition the successive educational levels pre-basic, basic and post-basic are discussed separately.

#### a) Pre-basic

- (i) Scheme (see following page)

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\*Hall, G.E. et al. as quoted by N.J. de Jager in Pedagogiekjoernaal 1 (1), p.64.



(ii) The necessity of pre-basic education

The necessity of pre-basic education is based on the assumption that if this phase is institutionalized, its result is school readiness and the latter is an essential part of the effective use of basic education in particular. In other words, to avoid dropping out, failing and a wasting of money, manpower and time and a blocking of the system during basic education, it is a fundamental prerequisite to prepare the individual for school. The greater the difference between life at school and at home, and the more frequently the parents are away from home so that they are not able to attend to their children's education, the more pressing is the need for deliberate intervention from another source to prepare the learner for formal basic education. It is an accepted statement that the return on an investment in basic education, shows a positive correlation with the investment in pre-basic education in a community where a partial institutionalizing of pre-basic education has become essential.

Within the South African context, the following additional arguments can be put forward to endorse the merits of pre-basic education:

- The educational system as an institutionalized form for the provision of education is part and parcel of the Western culture, but it is foreign to the African culture;
- the symbol form in which secondary experience is cast (i.e. knowledge

about things which are themselves not present in the situation) is abstract and foreign to many pupils, since this is not characteristic of many cultural groups in the RSA either;

- . the subject-matter that is taught is foreign to their culture;
- . the language by which the subject-matter is taught, sometimes is not the mother tongue and/or by the time the learner enters school the language has not been learnt adequately and/or the language does not have a big enough vocabulary to transfer the knowledge, and

In conclusion, the handicap of the environment and the educational miscarriage in the case of especially Black children living in urban areas are two of the primary causative factors why dropping out during the first four years of basic education in a particular age group is as high as 58 %.

The question therefore is not whether pre-basic education has any merits, but rather to what extent an investment should be made in it, in order to cut down the potential losses in the rest of the educational system. The following alternative designs, together with the necessary supporting arguments, are submitted in this connection:

(iii) Alternative systems

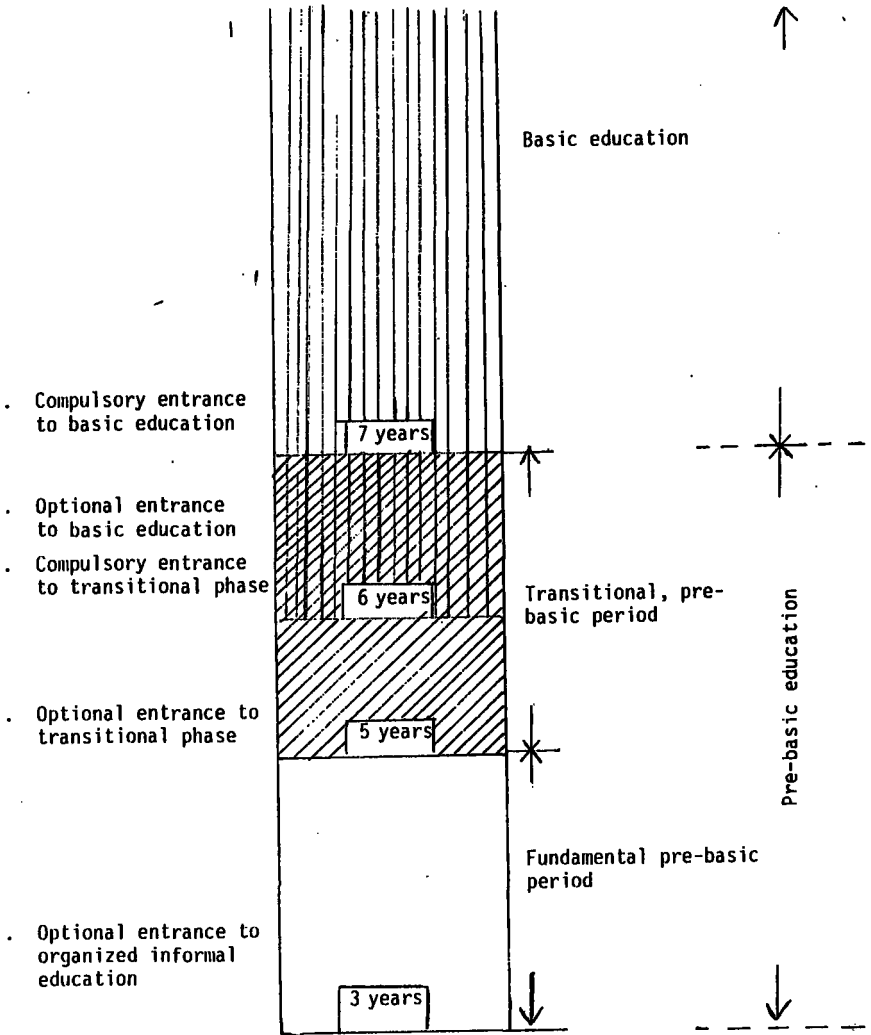
Alternative A (Pre-basic education):

Proposal:

The entrance age to prebasic education should be three years and the duration three to four years, depending on the child's readiness to proceed from pre-formal to formal education.

This period of pre-basic education must provide for two distinct phases in the educational continuum as shown in Diagram A.

DIAGRAM A



## Elucidation of Diagram A

Pre-basic education includes a period of organized informal education and a traditional pre-formal period.

### Organized informal education

(1) Aim

Promotion of optimal development and early prevention of factors which constrain development.

(2) Nature of the programme

A comprehensive informal educational programme which can be enriching and compensatory and which includes nutrition, medical and welfare services according to the needs of the community being served.

(3) Placement

Separate pre-basic schools.

(4) Duration

No more than three years. Since entrance at three years of age is optional, children may enrol for shorter periods.

(5) Not compulsory.

(6) Not free.

Elucidation of Diagram A is continued

### Transitional period

(1) Aim:



It is aimed specifically at readiness for formal schooling.

(2) Nature of the programme

A pre-formal programme based on experience, with emphasis on the development of skills and attitudes essential for formal learning and which includes supportive health, orthopedic, orthodidactic and welfare services as required.

(3) Placement

It can be presented in pre-basic classes attached to basic schools or in existing pre-primary schools.

(4) Duration

At least one year, with six years as the entrance age and at most two years with five years as the entrance age.

(5) Compulsory for one year from six years of age.

(6) Free.

SUPPORTING ARGUMENTS

A. Arguments for admission to pre-basic education at three years of age

- . It is an undisputed fact that children cannot derive benefit from formal education before they have developed specific physical and intellectual skills, basic linguistic skill and certain socio-effective attitudes and values.
- . These skills, abilities and attitudes develop gradually, from birth, owing to a complex interaction between inherent abilities, maturation and environmental factors.
- . The latest literature indicates that a very important part of this development takes place during the first four years of life, because during these years the foundations of language, perception and reasoning are laid and the attitudes towards the self, others and things are formed. There is a great possibility that deprivation of experience during this critical period will lead to a cumulative learning handi-

cap, because without a sound basis in the above-mentioned fields, the child is progressively less able to comply with the increasing demands made on him and he therefore develops feelings and attitudes which are such a handicap to learning that they cause the learner to leave school early.

Preventive action by the government in order to develop the human potential to the utmost, will have the most fruitful effect during this formative period of rapid growth.

The American experience with pre-primary intervention programmes proved that

- (1) one year of pre-primary experience which starts at five years of age, is "too little too late" in terms of its long-term effect;
- (2) a comprehensive programme which includes dietary, medical, welfare and educational services is necessary to achieve the greatest success in respect of the realization of learning potential in both the short and the long term.

These findings are supported by experience in Cali, Columbia, where deprived children between the ages of three to eight years were included in a multidisciplinary treatment programme for varying periods. It was found that inclusion in the programme for even only nine months before primary school entrance, yielded significant increases in ability, but these increases were slight in comparison with the increase in the ability of pupils who had been included for periods of two, three and four times as long. McKay, Sinostra and McKay found that combined dietary health and educational treatments between the ages of three and a half and seven years could prevent serious losses of cognitive ability, with a significantly greater effect if the treatment was commenced earlier. (Outman, L.R. Continuity in early childhood experience. Viewpoints in teaching and learning Vol. 55 No 3, 1979).

#### Arguments for a transitional class (phase)

The introduction of a transitional class attached to the school for basic education has the following advantages:

- (1) It makes provision for smooth transition from the informal to the formal system.
- (2) It makes provision for continuity between pre-basic and basic education. (It should be noted that continuity between pre-primary and primary education has become a debatable point in most countries of the world today.)
- (3) It ensures that entrance to formal education is based on readiness rather than on chronological age.
- (4) It is an ideal opportunity for identifying
  - exceptional children
  - immature children
  - pedagogically neglected children
  - sensory handicapped children, etc.
- (5) The system is flexible enough to make provision for preventive and remedial intervention before basic education commences.
- (6) The system can be adapted according to the needs of the child, rather than to expect of the child to adapt to the needs of the system.
- (7) Teachers teaching the lower levels of basic education will have their task simplified because this system will ensure that they have relatively homogeneous groups of pupils to teach.
- (8) Failing at school ought to decrease during the period of basic education, as well as at the higher levels of the system of education.
- (9) Educational expenditure ought to decrease in the long term owing to the decrease of the need of expensive remedial programmes when the grades or standards have to be repeated.

#### ALTERNATIVE B (Pre-basic education)

##### Proposal

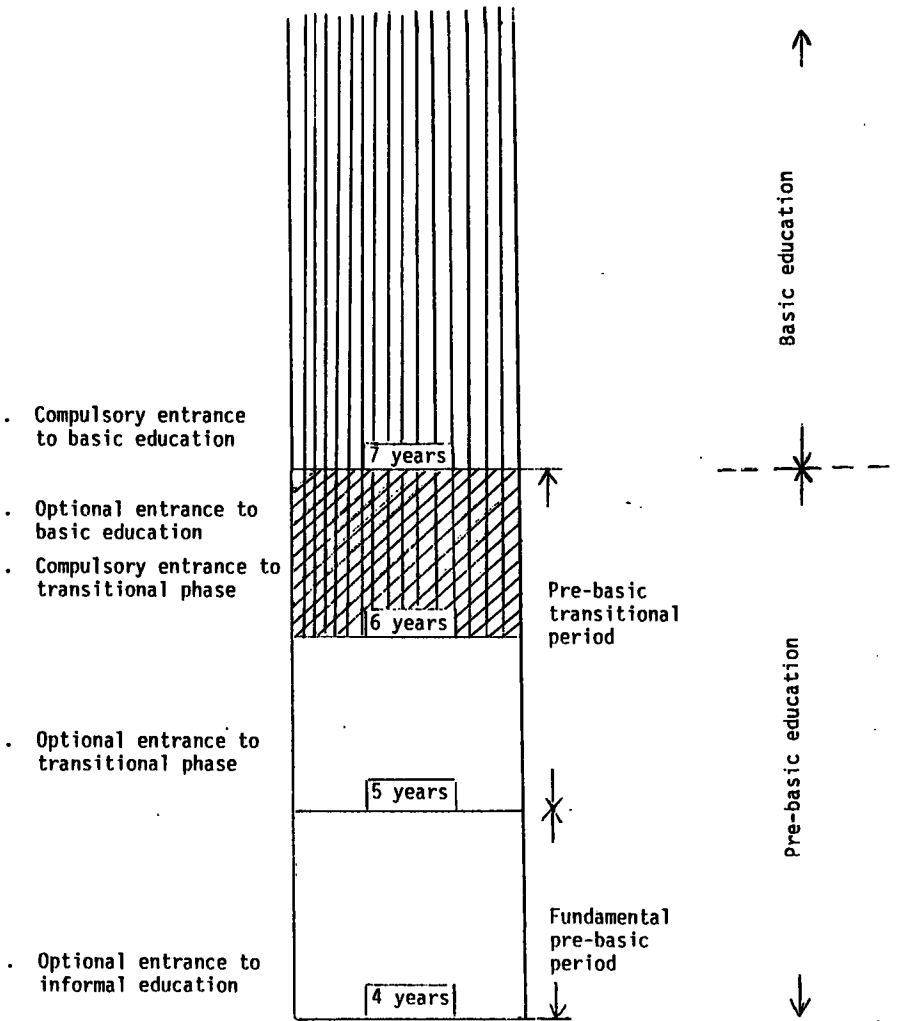
The admission age for pre-basic education should be four years and the duration two to three years, depending on the child's readiness for the transition from pre-formal to formal education.

This period of pre-basic education should make provision for two separate phases in the educational continuum as indicated in Diagram B.

##### Elucidation of Diagram B

Pre-basic education comprises a period of organized, informal pre-basic education and a pre-formal transitional period.

DIAGRAM B



### Informal pre-basic period

(1) Aim

To promote optimal development and to prevent at an early stage those factors which handicap development.

(2) Nature of the programme

A comprehensive informal educational programme which may be enriching or compensatory and which includes nutrition, medical and welfare services, according to the needs of the specific community.

(3) Place

Separate pre-basic schools

(4) Duration

A maximum of two years (since entrance at four years of age is optional, children may enrol for shorter periods).

(5) Not compulsory.

(6) Not free.

### Transitional period: pre-basic

(1) Aim

Specifically aimed at readiness for formal education.

(2) Nature of the programme

A pre-formal programme based on experience with emphasis on the development of skills and attitudes which are necessary for formal learning and which includes supportive, health, orthopedagogic, orthodidactic and welfare services as required.

(3) Place

May be presented in pre-basic classes attached to basic schools or in existing pre-primary schools.

(4) Duration

A minimum of one year, with six years as admission age and a maximum of two years with five years as admission age.

(5) Compulsory for one year from six years of age.

(6) Free.

## Arguments for Alternative B.

This system will be less expensive than the system proposed in Alternative B, because it shortens the pre-basic period of education with one year.

## ALTERNATIVE C (Pre-basic education)

### Proposal:

Basic education should include a bridging period, of at least one year or at the most three years for the purpose of achieving school readiness.

### Elucidation

(1) Aim

It is aimed at the achievement of school readiness for all children before formal education is started.

(2) Nature

It is the development from a playful attitude to work to a scholastically oriented attitude to work and will also include health services.

(3) Place

At the present primary school.

(4) Duration

It can start at five years (reached on January 1) but becomes compulsory at six years (reached on January 1) owing to which, and according to the child's development and attainment of school readiness, such a child will not be younger than six years and not older than eight years on his entrance to formal education. The duration will vary from one to three years.

(5) This bridging period is therefore compulsory and free.

### Arguments

On the basis of the assumption that school readiness is the pre-requisite for successful schooling, especially during basic education, and that an environmental handicap is the main reason for not having achieved school readiness in time, the following is submitted as the arguments for such a system for the RSA with its plural population:

- (1) Environmental deprivation is found among all population groups and there is a growing tendency towards it because more mothers with young children are compelled to work for economic reasons.

- (2) The situation of the Black population group is more problematic because the traditional Black culture does not prepare the child in good time - for Western-oriented education. Special and early preparatory assistance is necessary because a backlog of this kind is not easily overcome.
- (3) The high failure rate (see the attached tables\*) for the Black population in particular, but also to a lesser extent, for the Coloured and Indian population is indicative of economic loss owing to the additional and unnecessary expenditure caused by repetition at school. The high failure rate also results in a loss of manpower through the increase in the number of unskilled workers due to premature school leaving, while the resultant unemployment has serious political implications as the unemployed are easily influenced to commit acts of terrorism, as was proved during the Soweto riots.
- (4) Learning problems as well as exceptional giftedness can be identified sooner and can be channelled in good time.
- (5) The particularly informal nature (pre-formal) of pre-primary education, provides the child with an excellent opportunity to make a smooth transition socially to the formal situation of primary school education, which raises school readiness to a specific readiness for life.
- (6) Formal education can commence immediately if all children will in future be school ready on their entrance to formal education. This will favour faster academic progress during formal education.
- (7) An evaluation for subsequent specialized choice of subjects is made easier and more reliable by thorough preparation.

(iv) Proposals for pre-basic education

It is proposed that Alternative A be preferred for the following reasons:

- (1) The principle that pre-primary education for children from three years to compulsory school-going age, should be part of the system of education already accepted in the RSA.

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\* TABLES 4.1 (See pp. 83, 84)

The following tables show the course from Grade 1 to Std 2 for all population groups, according to the expected age from compulsory school age and indicate what percentage pupils reached Std 2.

Scheme C

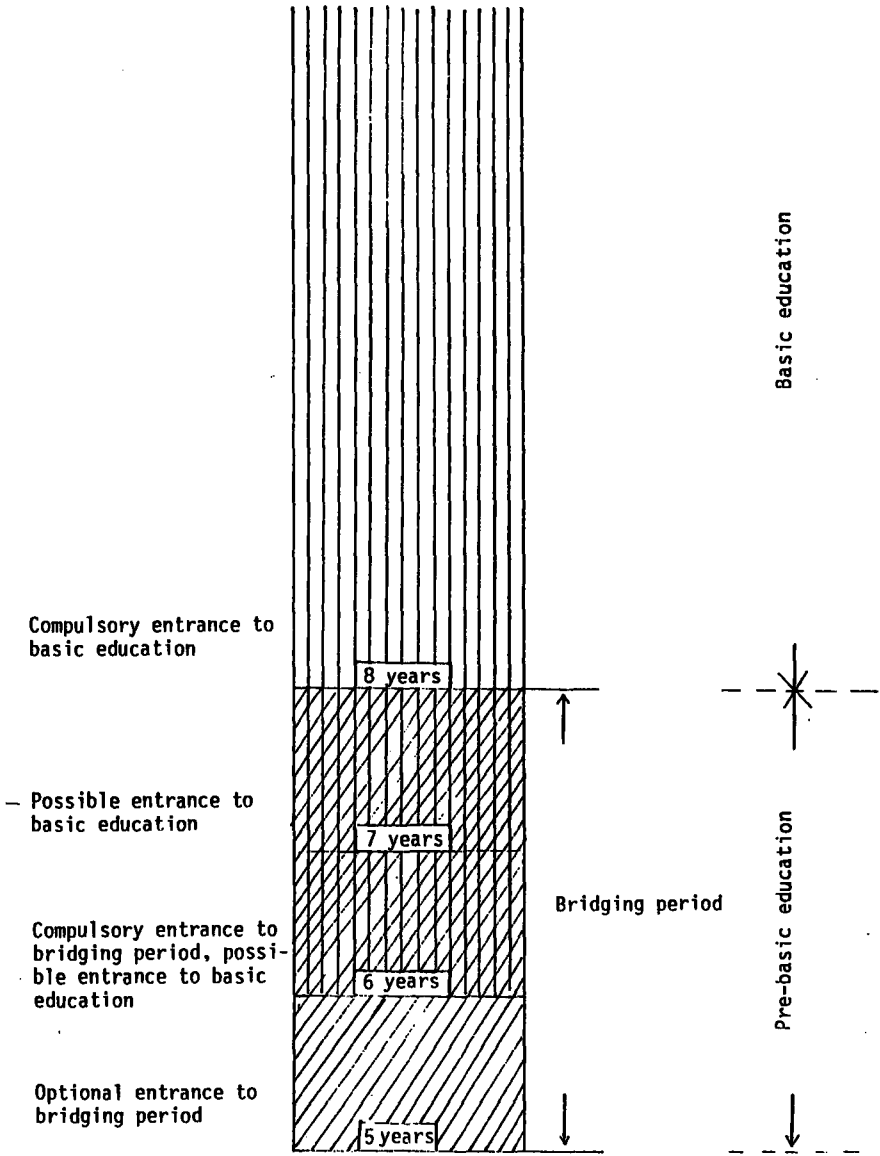




TABLE 4.1

PROGRESS OF PUPILS FROM GRADE 1 TO STD 2 FOR ALL POPULATION GROUPS: 1974-1977

WHITES (1)

YEAR	NUMBER OF PUPILS				PERCENTAGE			
	GR 1	GR II	STD 1	STD 11	GR 1	GR 11	STD 1	STD 11
	7 years and younger	8 years and younger	9 years and younger	10 years and younger	7 years and younger	8 years and younger	9 years and younger	10 years and younger
1974	85 024				100			
1975		81 902				96,33		
1976			80 677				94,89	
1977				78 541				92,38

COLOUREDS (2)

YEAR	NUMBER OF PUPILS				PERCENTAGE			
	GR 1	GR 11	STD 1	STD 11	GR 1	GR 11	STD 1	STD 11
	7 years and younger	8 years and younger	9 years and younger	10 years and younger	7 years and younger	8 years and younger	9 years and younger	10 years and younger
1974	81 919				100			
1975		58 828				71,81		
1976			49 357				60,25	
1977				42 808				52,26

- (1) Department of Statistics. Report No 21-02-09 - Education - Whites 1974  
 " " " Report No 21-02-10 - " " 1975  
 " " " Report No 21-02-11 - " " 1976  
 " " " Report No 21-02-12 - " " 1977
- (2) Department of Statistics Report No 21-03-08 - Education Coloureds and Indians 1974  
 " " " Report No 21-03-09 - " " " 1975  
 " " " Report No 21-03-10 - " " " 1976  
 " " " Report No 21-03-11 - " " " 1977

INDIANS (2)

YEAR	NUMBER OF PUPILS				PERCENTAGE			
	GR 1	GR II	STD 1	STD 11	GR 1	GR 11	STD 1	STD 11
	7. years and younger	8 years and younger	9 years and younger	10 years and younger	7 years and younger	8 years and younger	9 years and younger	10 years and younger
1974	20 032	20 134	18 219	17 661	100	100,5	90,95	88,16.
1975								
1976								
1977								

BLACKS (3)

YEAR	NUMBER OF PUPILS				PERCENTAGE			
	GR 1	GR 11	STD 1	STD 11	GR 1	GR 11	STD 1	STD 11
	7 years and younger	8 years and younger	9 years and younger	10 years and younger	7 years and younger	8 years and younger	9 years and younger	10 years and younger
1975	300 545	196 131	153 168	126 229	100	65,3	51,0	42,0
1976								
1977								
1978								

- (2) Department of Statistics. Report No 21-03-08 - Education - Coloureds and Indians 1974  
 " " " Report No 21-03-09 - " " " 1975  
 " " " Report No 21-03-10 - " " " 1976  
 " " " Report No 21-03-11 - " " " 1977

- (3) Department of Bantu Education - Annual report 1976  
 Department of Education and Training - Annual report 1977  
 " " " " - Annual report 1978  
 " " " " - Annual report 1979

(Transkei and Bophuthatswana excluded)

- (2) There is already a sophisticated structure for the implementation of non-compulsory, non-free pre-school programmes for children from three years to the compulsory school-going age.
- (3) Although it is true that there are very few pre-school facilities for Black, Coloured and Asian children, it is also true that provision will have to be made in due course for the urgent need for daily care for these groups. Pre-basic education, as it is defined in this document, incorporates care and education in one service.
- (4) This alternative makes provision for identification and intervention in the early, formative years and it therefore has greater educational potential and preventive value than the other alternatives.

(b) Basic education

The aim of basic education is to achieve basic literacy<sup>\*</sup>, so that the learner will be receptive of further education/training.

(i) Compulsory education and financing of the educational phase

Compulsory free education is proposed for all children who have reached the lower limit of compulsory education. No other alternative is proposed in respect of the principle of compulsory education and free education in this phase of basic education.

(ii) "Input age"

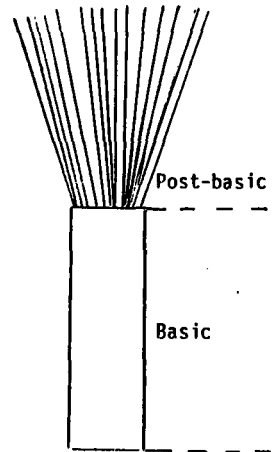
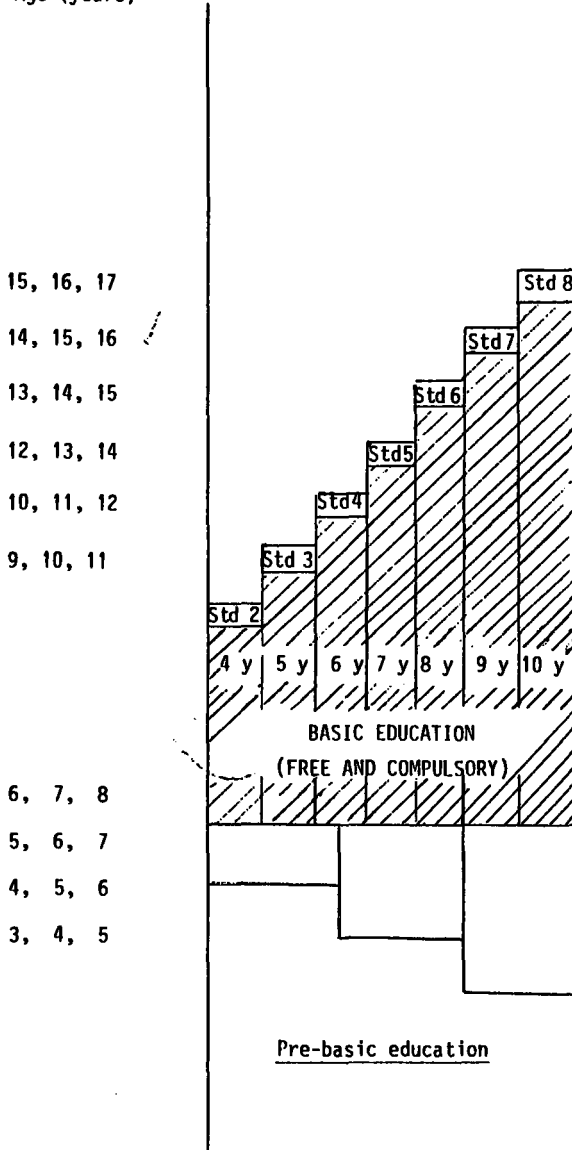
The input or starting age for basic education of all children is at present six years of age. A further definition of the lower limit of compulsory education is essential for application of compulsory education. If the chronological age limit is marked off and implemented too strictly, without taking school readiness or other factors into consideration, it may result in no educational progress being made. The choice of the alternatives for pre-basic education will undoubtedly determine the lower limit of basic education, with the result that it can only be proposed that the limit should be flexible, with the lower limit of approximately six years and the top maximum limit of eight years.

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\* See Appendix A regarding literacy

(iii) Alternatives for basic education (start and duration) Scheme:  
 (According to present division into standards)

Age (years)



(iv) Duration

A duration of six years of full-time formal education is proposed, as it is regarded as adequate to obtain basic literacy, provided the learner was ready for school on his entrance, and had "normal" mental abilities.

(v) Representation of the interchange of pupils in basic education, according to a modular educational structure

Age in years	Present equivalent	Proposed levels	Proposed degree				
			↑	↑	↑	↑	↑
12, 13, 14	Std 4	6	60	61	62	63	64
11, 12, 14	Std 3	5	50	51	52	53	54
10, 11, 12	Std 2	4	40	41	42	43	44
9, 10, 11	Std 1	3	30	31	32	33	
8, 9, 10	Gr 2	2	20	21	22		
7, 8, 9	Gr 1	1		11			
6, 7, 8				10			

(vi) Aim of the modular educational structure

To ensure maximum interchangeability and to prevent the system from blocking during the basic educational phase through failure;

to offer the maximum opportunity for compensatory education (orthopedagogic and especially orthodidactic assistance as well as any other kind of assistance) which will combat dropping out and will improve the rate of progress;

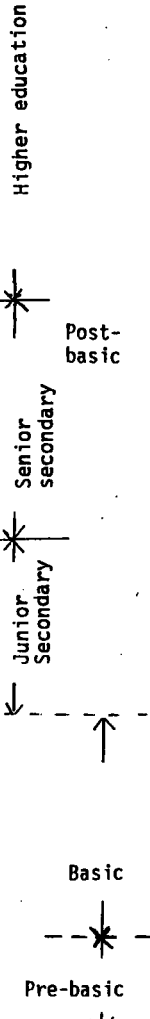
to offer the highly gifted child from the start the opportunity to master the basics sooner and to offer the less gifted child after level 1 the advantage of additional support.

(vii) Elucidation of the functionalization of the modular educational structure (formal)

Level and grade of education are the two concepts which define vertical and horizontal interchange. The following levels are proposed for the formal

SCHEME: Division into levels

Present equivalent	Learner's age (years)	Proposed new division	
Post-graduate	24	16	Level 16
Third year	23	15	Level 15
Second year	22	14	Level 14
First year	21	13	Level 13
	20		
	19		
Std 10	18	12	Level 12
Std 9	17	11	Level 11
Std 8	16	10	Level 10
Std 7	15	9	Level 9
Std 6	14	8	Level 8
Std 5	13	7	Level 7
Std 4	12	6	Level 6
Std 3	11	5	Level 5
Std 2	10	4	Level 4
Std 1	9	3	Level 3
Grade 2/Sub B	8	2	Level 2
Grade 1/Sub A	7	1	Level 1
Pre-primary	6	0	Level 0



educational structure in order to standardize the concepts standard, sub-standard, grade and year of study. Furthermore, it is also regarded necessary to deal with the functioning of the modular educational structure (formal) as a whole, although the aspect (phase) under discussion, is basic education.

Proposed grades of differentiation

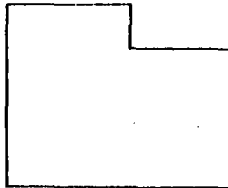
Grade 0

Enriched degree of difficulty for gifted pupils at school or purely academic degree of difficulty at the university.

Grade 1

Normal degree of difficulty at school, with a normal measure of assistance. At a high level this grade is indicative of high academic standards coupled to a great measure of vocational orientation.

SCHEME



12.0	12.1	12.2	12.3
11.0	11.1	11.2	11.3
10.0	10.1	10.2	10.3

10.2 means level 10, grade 2, written briefly as 102 (read 10 two)

9.0	9.1	9.2	9.3	9.4
8.0	8.1	8.2	8.3	8.4
7.0	7.1	7.2	7.3	7.4

A.n means level A, grade n, written briefly as An.

6.0	6.1	6.2	6.3	6.4
5.0	5.1	5.2	5.3	5.4
4.0	4.1	4.2	4.3	4.4
3.0	3.1	3.2	3.3	
2.0	2.1	2.2		



## Grades 2, 3 and 4

Degrees of increasing assistance according to poor achievement during basic education or degrees of vocational channelling in post-basic education.

Special education, in other words, education to learners with special needs and who are institutionalized separately, functions on the same educational structure of interchange, since the same principles of vertical and horizontal differentiation of grades apply to them.

### Leaving the system and/or phase of the system

Leaving the system or phase of the system occurs in conjunction with certification. It is possible that the following certificate can be issued at the end of formal basic education (indirectly also non-formally - according to assumption 4.4 k p. 63) namely Certificate A, which implies basic literacy. Some of the modules, e.g. 64, is a rounding off module. Its aim is meaningful entrance to non-formal education, i.e. vocational training. Although it has been proposed, module 64 is, normally regarded as an unrealistic output point, owing to the age. Other modules envisage the continuation of formal education.

Additional output points from the formal educational structure are proposed at different levels. Since the interchangeability of learners is dealt with as a whole, there will be a return at a later stage to the junior secondary, senior secondary and higher levels of education in order to discuss matters such as the duration, compulsory education and free education.

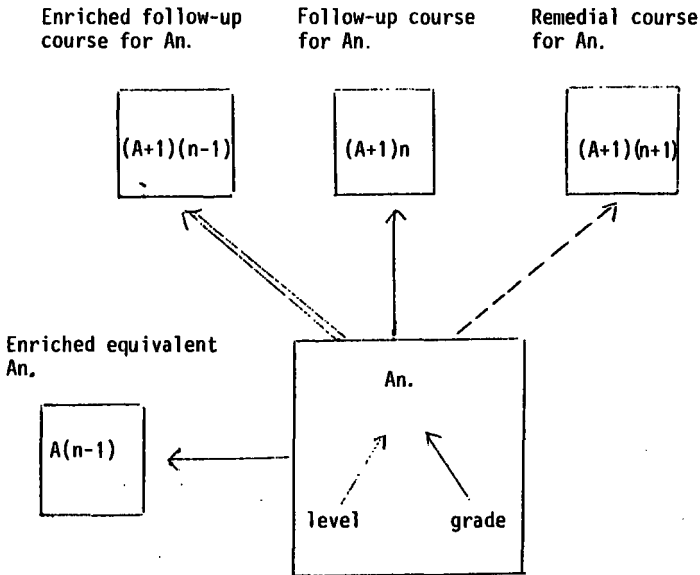
### Proposed additional output points from formal education

Output from the formal educational structure should occur, preferably after a rounding off module in order to link the learner's standard of education already achieved, to appropriate vocational possibilities and/or possibilities of vocational training (non-formal education).

The same principle applies when the learner enters the formal educational structure from the non-formal. An input module (orientation module or bridging module) which should preferably be linked to the formal educational structure then becomes operational. To be more exact, the module is linked to the institute within the formal educational structure. This matter will be discussed more fully when the interaction between the formal and non-formal structures is dealt with.



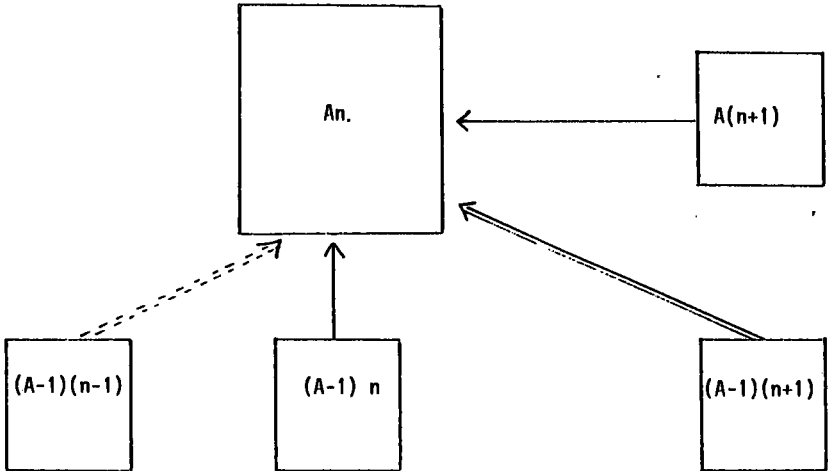
SCHEME: LEAVING MODULE An



Explanation of symbols

<u>Achievement level</u>	<u>Mechanism</u>	<u>Meaning</u>
50-70 %	→	Pass: Progresses to the same grade in the next year of study or to a higher grade in the same year
70 % +	⇒	Pass with distinction: progresses to a higher grade in the next year of study (optional) or to the same grade in the next year of study
Less than 50 %	⇨	Does not comply with the pass requirements: progresses to a lower grade in the next year of study (he therefore does not fail)

SCHEME: ADMISSION TO MODULE  $A_n$ .



Example:

If  $A_n$  module represents 72, i.e. level 7, grade 2 then

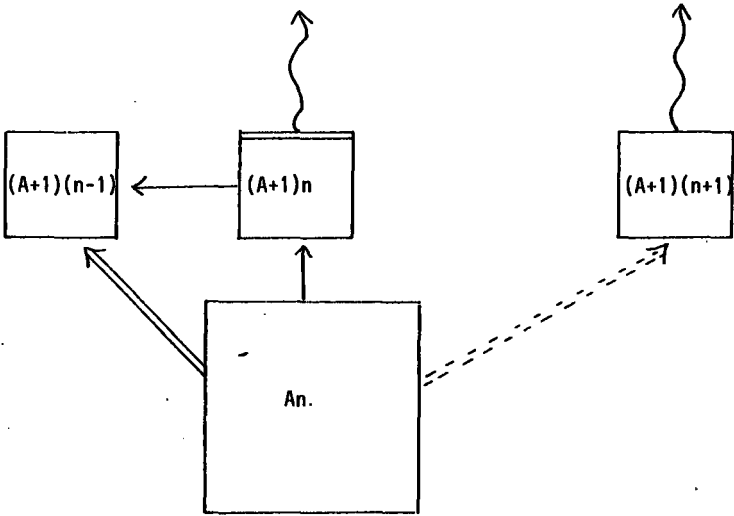
$A(N+1)$  is module 73

$(A-1) n$  is module 62

$(A-1) (n+1)$  is module 63

$(A-1) (n-1)$  is module 61

SCHEME: LEAVING SYSTEM after MODULE  $A_n$



Explanation of symbols



Leaves system only via a rounding off module



A rounding off module  
(graded according to the highest module passed)

As has already been said, the aim of the rounding off module is to link the level of education the learner has already achieved to appropriate vocational possibilities and/or possibilities of further training in the non-formal educational structure.

Since rounding off modules represent the level of education of the preceding modules, they cannot be failed. The aim of a rounding off module is purely to operationalize the learner's achieved level of education, so that he can proceed to viable vocational possibilities.

### Concluding remarks concerning basic education

Basic education should be the focal point of any long or short term educational reform strategy. Basic education is the basis of any design which may be brought in at post-basic levels. It forms the basis of the non-formal system and determines to a great extent the effective functioning, utilization and inclusion of alternative educational possibilities by means of communication media, correspondence courses, etc. If any investment is to be made in education by the government, then this phase and pre-basic education should enjoy the highest priority. (See Schemes on the following two pages).

#### (c) Post-basic education

##### (i) Introduction

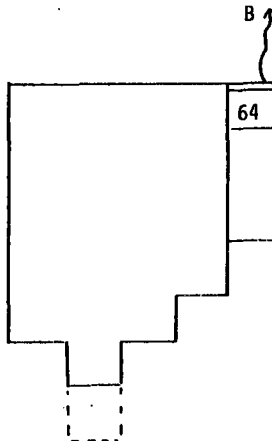
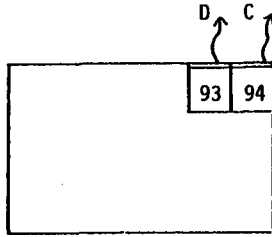
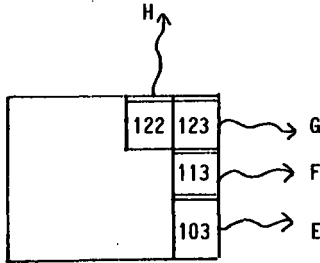
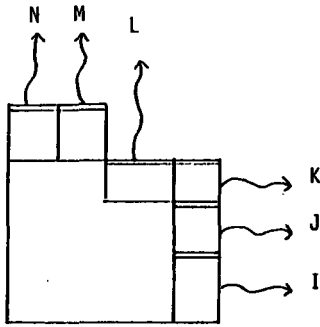
A classification of levels into three groups is proposed. The groups will be called junior intermediate, senior intermediate and higher education. Recommendations are also made in respect of each grouping (phase).

##### (ii) Groupings (phases)

###### 1. Junior intermediate

- . Duration: Three years
- . Free or not: Preferably free
- . Compulsory education: Compulsory education is not really necessary during this phase, since it can be a handicap to interchange to non-formal education in the early stage after basic education. Free education is more important in this phase than compulsory education, since most learners will in any case continue studying after an initial period of compulsory education, without any compulsion from the government. If compulsory education is introduced, it should not apply to any learner for longer than the end of this phase, since the possibility of horizontal interchange between formal and non-formal education will be seriously impeded.

SCHEME: OUTPUT POINTS



SCHEME: SUMMARY: A MODULAR EDUCATIONAL STRUCTURE FOR INTERCHANGEABILITY WITHIN FORMAL EDUCATION

Learner's age	LEVELS		Position in a modular system		EDUCATIONAL PHASE
	Present	New	N	M	
24	4 yr.	16			<p>Key:</p> <p>↑</p> <p> = module</p> <p> = rounding off module</p>
23	3 yr.	15			
22	2 yr.	14			<p>~ = Possibility of leaving</p>
21	1 yr.	13			
20	MILITARY SERVICE				<p>~ = Possibility of leaving</p>
19					
18	Std 10	12			<p>POST-BASIC EDUCATION</p>
17	Std 9	11			
16	Std 8				
15	Std 7	9			
14	Std 6	8			
13	Std 5	7			
12	Std 4	6			
11	Std 3	5			
10	Std 2	4			
9	Std 1	3			
8	Grd 2	2			<p>Basic education</p>
7	Grd 1	1			<p>Pre-basic education</p>
	Pre-school				

- Interchangeability possibilities: See preceding exposition.
- Entrance requirements:\* The successful completion (qualifying) of modules 60, 61, 62 and 63.
- Requirements to qualify:\* The successful completion of each potential module at Levels 7 to 9 indicates that the learner will qualify to a particular successive level and/or grade.(See preceding exposition of interchangeability possibilities.)
- Differentiation: The aim of this chapter is to indicate the differentiated interchangeability channels, rather than to discuss curricular differentiation in detail. Since the special nature of the junior secondary educational phase will be determined curricularly, a single recommendation in regard to curriculum and incidentally also differentiation, is important. It is recommended that during this phase the learners should come into contact with a wider basis of subject-matter, of which a reasonable choice can be made in respect of subjects on entering the senior secondary phase. Differentiation in regard to aims and extensiveness of the curriculum in relation to basic education, is therefore proposed. This recommendation applies more particularly to Grade 0, 1 and 2 at the different levels, than to Grade 3 of, for instance, Level 9 because the latter grade does not envisage a continuation of education in the formal structure, but entrance to a vocation and/or vocationally oriented education in the non-formal structure.

## 2. Senior intermediate

- Duration: Three years.

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\* See channelling mechanisms for additional requirements which may be implemented- Par. 4.10.

- Free or not: Free (Free education is defined in a limited way with stimulation of certain fields of study.)
- Compulsory education: None
- Interchangeability possibilities: See the preceding exposition and the following exposition of differentiation.
- Entrance requirements: The successful completion (qualifying) of one of the following modules, namely 90, 91 and 92.
- Requirements for qualifying: The successful completion of each potential module at levels 9 to 12 indicates that the learner qualifies for a particular successive level and/or grade. The preceding exposition of interchangeability possibilities also indicates the "output" or potential output points. As is clear from the scheme, output points D, E, F, and G represent a great variation of linkage between formal and non-formal education as well as with vocational practice.

This linkage potential or possibility of variations of output points will be more pronounced in the case of certain types of institutes (according to the present infrastructure) than in the case of others. In other words, some schools (formal education) have greater interchangeability possibilities owing to their nature, to non-formal education and the vocational field than others, for instance the present academic high schools. It is our task to equip the academic schools (formal) with a comparable horizontal interchangeability possibility. It is proposed that the "entrance" requirements for qualifying for transfer from academic schools to non-academic schools be revised radically and that output points from non-academic schools also be examined. The "entrance" requirements for qualifying for transfer from non-formal education to formal non-academic education ought to be revised in order to improve linkage with formal non-academic education during the senior secondary phase.

- Differentiation: The real scope of possibilities for differentiation will emerge during this phase within both formal and non-formal education. Since on the one hand differentiation was dealt with by various committees and subcommittees and on the other because the complex nature of differentiation during this phase of education justifies a



separate and penetrating investigation, no more than a few guidelines are provided.

- . The possibilities of differentiation should be determined curricularly and constantly renewed.
- . Any innovative strategy should be based on well-designed curricula in order to ensure the educational nature of the innovation.
- . The priorities in respect of the possibilities of differentiation should be determined together with the present and expected manpower needs of the country. In other words, differentiation at this and subsequent educational levels (higher education) should be effected with due consideration for medium and long-term economic planning, since the manpower that is provided, is a key factor in this type of planning as it has a bearing on education. The operative principle during this phase should be that the possibilities of differentiation of the education that is provided should be determined primarily by the general needs of the country and not by the needs of the individual.

Any system of differentiated education should be flexible enough to adapt in good time to changing requirements. Apart from the structural adaptability that a system of education should have, a well-trained teaching staff is a key factor for adaptability at the level where it matters, namely execution. If the training of the staff is too instrumental by nature (knowing techniques without a proper theoretical basis) it will be difficult to effect any change in good time as "innovation" requires a bigger base than "instrumental" control of the practical aspect. Innovation (change), also in respect of differentiation, should be executed and therefore staff of a high quality is important. Since the frequency, scope and nature of change at the different levels of formal and non-formal education differ, the training of staff should reflect this differentiation.

### 3. Higher education

Duration: Varying. The duration will inevitably vary, depending on the level and degree of expertise and/or skill to be achieved and "maintained" by means of retraining. ("Maintenance" as a principle is characteristic of any retraining programme that can take place at

any level or grade and is not limited to higher education. In practice this type of education takes place in the work situation, since most types of institutions at the higher level do not, at this stage, exploit the possibilities.)

- . Free or not: Subsidized selectively according to the manpower needs of the country. By this is meant that fields of study instead of institutions are subsidized.
- . Fields of study: None.

Entrance requirements. Requirements existing at this level are extensively differentiated. This differentiation must be linked to the differentiation of fields of study offered at the level of higher education. This situation is already in existence and therefore a term such as university entrance requirements is often misleading, as the requirements are linked to a type of institution and not to the fields of study offered at the educational institutions. The more extensive the variety of fields of study in terms of type of field of study, levels and grades, the greater the possibilities of varying the entrance requirements. By establishing certain types of fields of study, which are differentiated in respect of levels and grades at certain types of institutions, a unique character has been given to higher educational institutions. This character is reflected, inter alia, in differentiated entrance requirements. This practice facilitates horizontal interchangeability from universities to technikons and colleges, but interchangeability in the opposite direction is not easily accomplished. This gives a closed character to the universities. The result of this practice is that types of institutions at the higher educational level offer similar fields of study which differ only in terms of level and grade, but for the rest they are comparable and can lead to a mutual recognition of modules. This mutual recognition of modules is essential to make possible the horizontal interchangeability between the above-mentioned types of institutions of higher education. The only problem is that the distinctive nature of such institutions, is reduced to different levels and grades, in terms of their educational function, and not in terms of types of fields of study which are characteristic of, for instance, a college.

taken in differentiated grades. These requirements correspond to admission to the type of institution rather than to fields of study offered at the institution concerned.

• The recognition of modules (credits) in fields of study (horizontal)

If modules in fields of study are not recognized mutually, the horizontal interchangeability between institutions, on the one hand, and between fields of study at a particular institution on the other hand remains limited. The latter interchangeability, i.e. between fields of study at a particular institution are more easily "opened" in practice, because supervision in regard to the standard (grade) and co-ordinated curricular design rest with the executive level (i.e. the people who have to introduce and implement the field of study) rather than with the management level of the institution. It is more difficult to execute the same functions between institutions, because they have to be described and defined in a contract. In this way "new" authoritative relationships are established by contract, which must inevitably limit one of the two parties' competency to take decisions, while the execution and the responsibility for its quality (grade) are under new supervision. The latter way of gaining recognition for credits (subjects) is usually accompanied by time-consuming and drawn-out negotiations, without the guarantee that the system in reality contains a "more open" horizontal flow.

Possible solutions

If entrance requirements are laid down jointly with requirements for the fields of study, instead of admission to a type of institution, they can be differentiated more extensively after Level 12, especially for institutions with a more comprehensive character.

or

A more open possibility is proposed for conditional admission based on counterachievement. If a learner completes a particular course (e.g. B.A.) successfully, without having complied with the specific initial entrance requirements (e.g. university entrance), the qualification obtained (e.g. B.A.) can be valid retrospectively as a way to comply with the initial entrance requirements (viz. university entrance).

• Indirect certification - Learners are admitted to a particular,

If the justification for the existence of institutions is based on this alone, it can hardly result in the full utilization of existing infrastructures and manpower of higher education, especially when a need for educational change is anticipated. Instead of channelling learners to institutions, a redefinition is required of functions, levels and grades at which functioning is permissible. In other words, these institutions' functions can be defined more comprehensively. In this way the existing sources of education can be used to better effect and more effective new ones can be created. The inadaptability of especially universities to introduce courses which will satisfy needs from the practical world, is to be found, on the one hand, in rigid entrance requirements and on the other in established opinions concerning the levels and grades at which functioning is permitted. This inadaptability is reflected, inter alia, in the limited horizontal interchangeability between institutions at the higher educational level. A clear definition of the aims of each type of institution at the higher educational level is important, as well as those of institutions of a more comprehensive nature. This definition should include more than a distinction in terms of levels and grades, but should be reflected particularly through the curricula of distinctive other fields of study.

Qualifying: After a certain duration and after successful completion of modules, a learner achieves a qualification (degree or diploma) of some kind.

• Interchangeability possibilities. Interchangeability possibilities at higher educational levels are examined last as there are many problems in this connection. The question arises: What determines (promotes or handicaps) the horizontal and vertical interchangeability possibilities at this educational level?

Factors that determine (promote or handicap) the existing interchangeability

• Entrance requirements (vertical)

Entrance requirements are determined by complying with certain levels and grades in subjects in the preceding phase of education, plus the combination of requirements of subjects (subject sets) which can be

corresponding field of study offered to them at a lower level (or grade) to enter a corresponding course offered at a higher grade via the successful completion of a bridging course. This course then serves as indirect certification of a particular level and grade laid down as entrance requirement for various institutions at the higher educational level.

If the differentiated nature of higher education and the entrance requirements derived from it are taken into account, the present narrow instrument for entrance to higher education, (viz. the JMB) will have to be renewed, not only as far as its name is concerned, but also in respect of its function. This innovation will have to rely on both a new description of its function and on proper curriculum development.

Since the horizontal interchangeability possibilities have to be determined curricularly, it remains in actual fact a task of drawing up curricula to identify the potential interchange in the light of the country's educational needs. In order to illustrate the range of the types of institutions functioning at the higher educational level and the implied interchange potential (especially horizontally) the existing scheme of the present South African system of education can be examined.

#### 4.8 INTERACTION BETWEEN FORMAL AND NON-FORMAL EDUCATION

##### 4.8.1 Introduction

It is important to point out at the beginning that non-formal and formal education have a defined distinction that can be changed by re-defining.

In the second phase, the line between these two distinguishable facets of a system for the provision of education is vague.

In the third place, a shift from formal to non-formal education and vice versa can take place. This tendency is found frequently, as courses offered in non-formal education, are developed to a fully fledged course in formal education. It is also possible that courses in formal education are replaced by courses which are more applicable to the practice in non-formal education (cf. training in the chemical

industry in West Germany).

In the fourth place, the types of institutions that serve formal education have been determined formally, in a historical sense. The educational functions of the institutions are therefore interpreted very conservatively which means that new educational obligations cannot be accommodated within the existing form. Institutions in formal education are less adaptable than those in non-formal education. One result of this is that the scope of non-formal education will in all probability increase very rapidly. Another result of the above-mentioned statement is that the "output points" (see A, B, C, etc.) to non-formal education are less of a problem than the "input points" into formal education from non-formal education. The task therefore is to find meaningful "input points" into formal education via non-formal education. These "input points" will change to the extent that non-formal education becomes more differentiated and sophisticated, and therefore any design in this respect will be tentative. It is also expected that the flowback to formal education will be fairly limited.

(See Schemes on following two pages.)

Depending on the corresponding levels and grades in non-formal education, the following "input points" to formal education as well as "output points" to non-formal education are proposed.

#### 4.9 CONCLUDING REMARKS CONCERNING INTERCHANGEABILITY

- (a) In the practice of educational provision possibilities of interchangeability can be designed and provided without guarantee that the "openness" of the system will have the desired effect. The problem is in the channelling of individuals in appropriate directions that correspond to their individual abilities and the needs of the country. In order to illustrate how this can be done, a few channelling mechanisms will be discussed, which can regulate the "flow" or interchangeability.
- (b) The differentiation of levels and grades can be a problem that can handicap or promote the practicability of the draft proposal. The aim is that especially the degrees of differentiation can be changed, depending on circumstances (e.g. enrolment, teaching staff, physical facilities, differentiation of the labour market, etc.). This matter can be elucidated by means of various inputs in the synthesis committee.

SCHEME: OUTPUT POINTS TO NON-FORMAL EDUCATION

Learner's  
age (ideal)

LEVELS

Present

New

Position in a modular

24	4th year	16		NON-FORMAL EDUCATION																																							
23	3rd year	15																																									
22	2nd year	14																																									
21	1st year	13																																									
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11	Std. 3	3																																									
10	Std. 2	4																																									
9	Std. 1	3																																									
8	Grd. 2	2																																									
7	Grd. 1	1																																									
	Pre-School																																										

SCHEME: INPUT POINTS TO FORMAL EDUCATION

Learner's age (ideal)	LEVELS:		Position in a modular system															
	Present	New																
24	4th year	16																
23	3rd year	15																
22	2nd year	14																
21	1st year	13																
20	MILITARY SERVICE																	
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8	Grd. 2																	
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01																		
6	Pre-school																	

NON-FORMAL EDUCATION

**Explanation**  
 ↑ Entrance section  
 \* via bridging course



- (c) No mention has been made of teacher training. Since a separate committee dealt partly with the matter, it is left at that. A single remark in this connection is, however, justified, namely in-service training and retraining (without any formal qualifications being obtained) and further training (with obtaining of qualifications) are matters which should be provided and revised within a formal structure on a continuing and planned basis, in order to "maintain", improve and renew the quality of the functioning of the system of education.

#### 4.10 CHANNELLING MECHANISMS

##### 4.10.1 Definition and elucidation

Channelling mechanisms are means which regulate the input, flow-through and output of learners in the educational structure. These means can be built into the educational structure or can be added to it. The essence of the matter is, however, that the means function between two points, viz. input and output or rather entrance and qualifying and can be used in alternative ways to the advantage of the individual and the manpower needs of the country.

The following remarks are essential in order to obviate any misunderstanding:

- (a) These means are no new discovery.
- (b) They will not cause the sudden transfer of academic education to technical and agricultural education.
- (c) They are not all in the hands of the main provider of education, viz. the government.
- (d) The ways in which they should be used should -
  - (i) occur within the framework of the postulated framework of principles for the provision of education,
  - (ii) occur within the democratic form of government of the country and both the above-mentioned requirements inevitably limit the use of the means.
- (e) The ways in which they can be used in conjunction, can be unique (new) in order to satisfy unique needs of the country;
- (f) The use of these means forms a key factor in the design and implementation of innovative strategies.

- (g) The placing of the means at certain levels in the administrative control structure (education management) gives substance to the levels and from the management point of view will determine the adaptability of the system of education. For instance\*, the concepts centralized or decentralized education will derive their meaning from where the competency to take decisions is placed, in respect of, e.g. entrance requirements.

#### 4.10.2 Rationale

Channelling mechanisms are an essential part of a system for the provision of education (although part of the means is not under the control of the bodies that provide education). This system helps to satisfy the changed needs, of both the individual and the country.

Channelling mechanisms are also used to ensure the optimal utilization of the existing sources of education.

#### 4.10.3 Identifying channelling mechanisms

The following channelling mechanisms have been identified:

- (a) Entrance requirements
- (b) Interchangeability
- (c) Qualifying requirements
- (d) Differentiation
- (e) Compulsory education
- (f) Age
- (g) Bursaries
- (h) Tuition fees
- (i) Conditions of service and salaries
- (j) Sex
- (k) Vocational guidance
- (l) Ethnicity
- (m) Facilities
- (n) Subsidy system
- (o) Bridge courses
- (p) Establishment of private organizations that are responsible for a part

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\* See Bondesio M.J. en Berkhout S.J. Identificering van voorwaardes waaraan n onderwysstelsel moet voldoen, pp. 43-53.

of vocational instruction

- (q) Educational ceiling
- (r) Handicap and disability
- (s) Mother tongue
- (t) Selection
- (u) Mass media
- (v) Curriculum

#### 4.10.4 Elucidation and functioning of the channelling mechanisms

##### Introduction.

Only a few channelling mechanisms will now be elucidated to illustrate their functioning. Neither the list of channelling mechanisms mentioned, the alternative uses, the practicability nor the desirability of these can be regarded as complete. Practicability and desirability are usually determined by the combination of channelling mechanisms as well as by external determinants.

##### (a) Entrance requirements

###### (i) Definition

Entrance requirements are all the criteria according to which an individual can be judged before he/she is permitted to receive education in a specific educational institution, field of study, level (phase) and degree.

###### (ii) Identification of entrance requirements

- . Age
- . Ethnicity\*
- . Religious convictions
- . Language
- . Culture

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\* See Ethnicity as a channelling mechanism p. 114.

- . Citizenship
- . Residential area
- . Handicap
- . Quota
- . Financial ability
- . Readiness (standard achieved)
- . Compulsory education
- . Social acceptability (record of good behaviour)

It will be found from the preceding exposition that some mechanisms that were mentioned under entrance requirements, were also mentioned separately as "independent" channelling mechanisms. This practice does exist and will be clearer from the examples.

(iii) Functioning of the criterion "age" as entrance requirement at different levels of the educational structure

- 1) Pre-basic education. See exposition Par. 4.5.3.
- 2) Basic education. See exposition Par. 4.5.1.
- 3) Post-basic education

At present age, as an entrance requirement, is taken into consideration in the case of

- . entrance to non-formal education within the field of activity (in-service training) and
- . university entrance.

Entrance to in-service training is determined directly by labour legislation which directly determines the minimum age for entrance to the labour market, and in this way also determines entrance to non-formal education. The moment when the limits of compulsory education are revised, an anomaly will become evident, since the limit for compulsory education can be lower than the limit for entrance to the labour market (by implication non-formal education).

The latter, namely university entrance is applicable to individuals who are conditionally admitted to a university at 23 years of age if a Std 10 certificate without entrance requirements has already been obtained. Exemption from additional entrance requirements which are, for instance applicable to certain fields of study, is still applicable.

#### Some alternatives in respect of age as university entrance requirement

##### Alternative A

- Maintenance of the status quo
- Principles 3 and 4\* will possibly be realized

##### Alternative B

Abolition of the entrance requirement of 23 years. The abolition of this entrance requirement will make the facet educational structure more closed. Such abolition can serve as a channelling mechanism to other higher educational institutions.

Principles 3 and 4\* are realized with more emphasis on the present manpower needs of the country.

##### Recommendation

Alternative B is recommended with an additional alternative to keep the way open to university courses. If a candidate completes an appropriate course at another tertiary institution, the qualification obtained in this way should be able to serve as entrance qualification instead of a Std 10 certificate (university entrance grade).

#### Functioning of the criterion "language" as entrance requirement at different levels of the educational structure

##### Alternative A

Maintenance of the status quo

- Pre-basic education

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\* See Principles of education, Appendix B

- . Instruction in the mother tongue is accepted as a sound, generally recognized principle of education. Hence the application of language as an entrance requirement for these two phases of education.

- . Post-basic education

Language as an entrance requirement, selectively applied to senior secondary and higher levels of education.

Principle of education\* applicable: No 2.

Alternative B

- . Abolition of language as an entrance requirement at all levels of education.
- . This alternative embodies Principle 3\* and as an additional argument, it can be stated that learners not only get an earlier opportunity to master another language, but that it can also result in a better relationship between different language groups.

Alternative C

- . Pre-basic and basic education

The same as Alternative B

- . Post-basic education

Selectively applied to junior and senior secondary levels of education and abolished at higher levels of education.

(b) Interchangeability requirements as a channelling mechanism

See the preceding exposition of possibilities of interchangeability which was incorporated in the concept modular educational structure.

(c) Requirements for qualifying as channelling mechanisms\*\*

(i) Definition

Qualifying is the criterion that is used to determine whether an individual may (can) leave a particular level and grade of the educatio-

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\* See Report of the Work Committee: Principles for the provision of education in the RSA, appendix B.

\*\* See Report of the Work Committee: Curriculum development.

nal structure.

(ii) Identification of requirements for qualifying

- . Standard - See interchangeability of, for instance, Module 81 to Modules 90, 91 and 92 on p. 96
- . Age - See top limit of compulsory education
- . Completion of period of compulsory education
- . Unsuitability (e.g. physical, mental, moral)

(None of these requirements for qualifying will be elucidated further.)

(d) Differentiation as a channelling mechanism\*

Differentiation as a channelling mechanism that functions to transfer individuals from one field of study, course or educational institution to another field of study, course or educational institution and in this way to make provision for both the individual differences of the learners and the manpower needs of the country.

(e) Compulsory education as a channelling mechanism

This matter as well as the proposed alternative use of the mechanism has already been dealt with. (Compare also, for additional elucidation, age as entrance requirement.)

(f) Bursaries as a channelling mechanism

(i) Elucidation

Bursaries function as a channelling mechanism that transfers persons to fields of study for which bursaries are readily available.

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\* See Report of the Work Committee: Curriculum development.

### Alternative A

Present system - Bursaries serve in the present system as a channelling mechanism (mainly at tertiary level), where individuals are channelled to certain educational institutions and fields of study. Bursaries are awarded, planned, implemented and checked by the body/bodies that award the bursaries. These bodies are from both the private and the public sectors.

### Alternative B

Increase of bursaries - It was evident from the Investigation into Education that there is a need for more and better bursaries in fields where there are serious manpower shortages. "The private sector can also make available non-contract bursaries for the training of scientists and technologists at all tertiary institutions."\*

Together with the matter of more, better and even non-contract bursaries, the following needs which have been mentioned in the same report\*, come to the fore:

- "(d) The private sector can do much more to make known, systematically and in a wider field for instance the industrial world and the role played in it by the basic and applied sciences. Pupils should visit important industries and scientific organizations (.....) more often (.....) while the private sector can assist with the financing thereof, for instance ...
- (e) The private sector ... provision of audio-visual aids.
- (f) The provision of (non-contract) bursaries for teachers who wish to receive further training.
- (g) Provision of more funds to enable teachers, students and scholars to attend conferences."

### Recommendation

Alternative B is recommended as greater involvement by the private

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\* See Work Committee: Teaching of the natural sciences and Mathematics.



sector in the provision of education at, especially, the higher levels of education can make a meaningful contribution

- . to relieve the financial pressure at this level, and
- . to encourage the introduction of appropriate courses.

(g) Financing as a channelling mechanism

(i) Elucidation

Financing and the control over it remains one of the most effective ways to channel individuals. Education institutions that depend on government subsidies to render educational service are very sensitive to this mechanism. If the subsidy is decreased, the tuition fees are increased. If the latter are increased, learners are channelled to less expensive courses. Tuition fees are, therefore, a channelling mechanism.

The following alternatives have been made applicable especially to the higher levels of education.

Alternative A

Present system - The tuition fees of some courses (e.g. the natural science fields) are higher than those of other courses and steer people away from such courses to courses with lower tuition fees or to educational institutions where tuition fees are settled through service (e.g. colleges of education). The different educational institutions determine, implement and check the tuition fees themselves. The determination of the tuition fees is to a very large extent influenced by the government's subsidizing of the educational institutions concerned.

Alternative B

Lowering of tuition fees for courses in fields where the manpower needs are serious

The tuition fees for courses in which persons are trained for fields in which a serious shortage of manpower is experienced, can be drastically lowered so as to enable less well-off students to qualify in these

fields.

On the other hand, tuition fees can be used as a means of persuasion by drastically increasing the tuition fees in fields where there is an over-production.

(This procedure will however in the present dispensation of calculation of the subsidies, have a negative rather than a positive effect on the finances of a higher institution.)

Recommendation:

It is recommended that the actual manpower needs as well as the projections be determined through research and that Alternative B be implemented on this basis.

(h) Salaries and conditions of service as a channelling mechanism

(1) Elucidation

Strictly speaking, this mechanism falls outside the control of the system of education (educationally) and serves rather as persuasion (suction power) to particular fields of study, according to the visualized and actual benefits it might have for the individual.

No alternative or further elucidation is given.

(i) Sex as a channelling mechanism

(1) Elucidation

This channelling mechanism will not be discussed, owing to a lack of information.

(j) Vocational guidance as a channelling mechanism

(1) Elucidation

Vocational guidance can be used as a mechanism to channel pupils through persuasion to certain fields of study and educational institutions so that the individual's and the country's needs will be realized. (For further elucidation, alternatives and recommendations in this respect, compare the final report of the Work Committee:

Guidance.)

(k) Ethnicity as a channelling mechanism

(1) Elucidation

Ethnicity can serve as a channelling mechanism to channel individuals to separate educational institutions (not different educational structures). Since the decision concerning the implementation of the mechanism falls outside the educational system, the design of alternatives serves a limited aim. It must be pointed out, however, that if it should fall away as a channelling mechanism, some of the educational principles\* will be affected.

(1) Bridging courses (modules) as channelling mechanisms

(1) Elucidation

Bridging courses can be used as channelling mechanisms to assist learners who have a backlog owing to military service, cultural factors, late development, - problems that may crop up during the transfer from formal to non-formal education, etc.

Alternative A

Present system - No meaningful courses of this type have been identified in the present system for the provision of education. The only ones that do function are language courses which are offered in language laboratories. These language courses, in their present or future form, can only be regarded as part of a bridging course.

Alternative B

Introduction of bridging courses at different levels

• Pre-basic to basic education

See alternative proposals in respect of pre-basic education.

• Post-basic education between senior secondary and higher levels of education

By the introduction of bridging courses between senior secondary (Std 10)

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\* See Work Committee Report: Principals for the provision of education  
Appendix B

and, for instance, universities, pupils who have not yet achieved the necessary standard owing to factors like cultural backlog, slow maturation, etc. can be offered the opportunity to eliminate this backlog. According to Rautenbach it is advisable "to establish limited bridging courses to help disadvantaged students to gain entry into the institutions without clogging it up ..."\*

Another alternative for the above is the following:

"It appears that the possibility of a thirteenth school year, specifically with an eye to university entrance will have to be examined in a changed educational dispensation .... The thirteenth school year can be linked to ordinary secondary schools, as well as to possible secondary provision of education at the non-formal level."\*\*

#### For persons who wish to return to formal education

Provision can be made by means of the bridging courses for persons who left the system of formal instruction earlier to be channelled back to some form of formal education. "It is also expected that the vast majority of people who use supplementary education will try to continue their education in some field of career education."\*

#### Implications

It is essential, as far as the provision of education is concerned, to provide for the great diversity of our community and the wide spectrum of cultural development.

The implementation of bridging courses can help to fit more learners into the required system.

Although the introduction of such courses have financial implications, the dividends can be worthwhile.

#### Recommendation

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- \* See Rautenbach, W.L. The design of an effective educational system for Science and Technology, pp. 14, 25 and 39-40.
  - \*\* See Report of the Work Committee: Teaching of the natural sciences and Mathematics.

The introduction of bridging courses is strongly recommended.

(m) Establishment of private organizations responsible for a part of the vocational training

(1) Elucidation

Subsidized private organizations and industrial institutions can make a great contribution towards vocational training and in this way to the transferring of learners from the academic course to vocation-oriented training.

Alternative A

Present system - A problem of the present system is that a large number of the learners receiving academic training at the post-basic level of education should in reality receive vocational training.

Alternative B

Introduction of private organizations, and involvement of industry

Rautenbach suggests: "The establishment of subsidized private organization(s) on similar lines to that of ORT - Israel - would help to establish, with strong support from industry, commerce, etc., prestigious Career High Schools and 5 year colleges for teacher training. These institutions can be used as pace setters in the rapid development of career education in South Africa."\*

A further possibility is the use of industrial institutions. According to this a vocational school (senior secondary phase or five years from Std Seven) is placed next to the industrial institution. The industry, is responsible for a large part of the pupils' training through the provision of facilities, machinery, instructors, etc.

Implications

The implications of the introduction of Alternative B can be so far-reaching that further investigation is necessary to project these

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\* See Rautenbach, W.L. The design of an effective educational system for Science and Technology, p. 26.

implications. The problem of a constant, i.e. stable provision of education is also important and therefore alternatives in this connection have to be considered carefully.

Recommendation.

It is recommended that further investigation be done to determine the implications of the introduction of private organizations.

(n) Educational ceiling as a channelling mechanism

(1) Elucidation

This channelling mechanism will be neither considered nor discussed, as it is a direct contradiction of assumptions of 4.4.e and 4.4.k (see p. 63.)

(o) Handicap and disability as a channelling mechanism

(1) Elucidation

Handicap and disability are channelling mechanisms which transfer children to other types of educational institutions on the basis of their handicap and/or disability. For further details the final report of the Work Committee: Education for children with special educational needs can be consulted.

(p) Mother tongue as a channelling mechanism

(1) Elucidation

This mechanism has already been discussed under entrance requirements and will not be elucidated further.

(q) Selection

(1) Elucidation

Selection differs from entrance requirements in the sense that selection is done from a group of learners who have already complied with entrance requirements. Reasons for selection can differ. Usually selection is done when an exceptionally large number of entrants want to follow a special type of course with limited education facilities,

such as medical training.

Selection is usually done at the post-basic level at senior secondary and higher education levels. Selection as a channelling mechanism is effective to make education costs effective, since only the best achievers are permitted to follow a certain course. It can also be a way to regulate the market of certain types of high-level manpower and in this way to obviate professional competition. Whatever the case may be the merits of selection as a channelling mechanism are undoubted, but the reasons why selection takes place can be examined.

No alternatives are offered in respect of selection, nor will any further discussion of selection take place.

(r) Mass media as a channelling mechanism

(1) Elucidation

The mass media function as a channelling mechanism that can persuade individuals at all levels of education to follow a particular field of study, which is necessary for the progress of the country. This mechanism is complementary to vocational orientation within formal education.

Alternative A

Present practice - Individuals can already at pre-school level be influenced by the TV, radio, etc. to be interested in a particular field. At the basic level the same applies and as the individual masters reading techniques, he can read newspapers, periodicals and books which can subsequently channel him to a particular field. The reaction to the appeal by the mass media still rests with the individual.

Alternative B

According to Rautenbach\* (Effective use of the media, especially, TV, should be made in informing the public about these matters") the different media can play an important role to persuade people to follow a specific field.

The important role the mass media and the private organizations can

\* Rautenbach. The design of an effective educational system for Science and Technology. p. 28.

play, is also evident from the following:

\* "There is a need for:

- (a) The co-ordination of a variety of actions described by the private sector, government sector, professional associations and mass media for the promotion of the natural sciences and the teaching thereof.
- (b) .....
- (c) The promotion of the image of science and technology among the youth and the general public by the mass media such as the SATV ..."

#### Recommendation

It is recommended that the mass media provide information in connection with vocational fields in a co-ordinated and continuous basis, which can serve as a supportive service to vocational orientation at school.

(s) Curriculum (curriculum development) as a channelling mechanism

(1) Elucidation

Curriculum development forms the ground plan of the possibilities of interchangeability within the educational structure. Few channelling mechanisms can be implemented without curriculum implications of one kind or another being encountered. All aims which have to be realized through the teaching of subject-matter, will be reflected in the curriculum and for that reason the input of curriculum design as a direct or indirect channelling mechanism can hardly be overemphasized.

In practice curriculum development functions, inter alia, closely with matters such as standard, qualifying, examining, certification and admission to courses.

The result of this is that curriculum development acts as a channelling mechanism only if matters such as standard, etc. are linked to it. In a certain sense curriculum therefore forms the synthesis field of the implementation of certain entrance requirements, the composition of bridging courses, the design of curricular differentiation possibilities and the establishment of standard, with the result that examples

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\* Work Committee Teaching of the natural sciences and Mathematics



of the implementation of this mechanism are very comprehensive and should rather not be elucidated here.

## CONCLUSION

### 4.11 Recommendations recapitulated

1. Basic education should be the focal point of any reform strategy in education in the long or the short term.

#### Reasons

- . Basic education forms the basis of any design that may be represented at post-basic levels, within both formal and non-formal education.
  - . The utilization of alternative educational possibilities, e.g. correspondence courses, television and radio is to a large extent dependent on basic education.
  - . Basic education is the condition for real differentiation in education in order to reconcile individual aptitude and abilities with the differentiated needs of the country.
2. A school career of six years is proposed for basic education, provided the learners are ready for school.
  3. A bridging period of at least one year is proposed for the interim to prepare children for school. (Compare alternative C.)
  4. Pre-basic education should receive very high priority in the consideration of a new educational dispensation, in order to prevent a high rate of failures or drop-outs during basic education.
  5. In regard to interchangeability, it is recommended that
    - . the concept modular educational structure be considered as the model by which other alternatives can be judged in order to test the assumption of flexibility (Paragraph 4.1);
    - . the types of educational needs of the country be determined carefully so that in terms of type and scope of need, differentiation, provision and channelling can be done curricularly;

- . additional output and input points of the formal system of education be investigated, especially at senior secondary and higher levels of education;
  - . each output point from formal education be accompanied by certification;
  - . each input point represent indirect certification (recognition) of non-formal education, via a bridging course or without it;
  - . bridging courses be accepted as part of a system for the provision of education;
  - . bridging courses usually be linked to the institution (or type of institution) entered by the learner;
  - . entrance requirements at the higher level be revised in order that it may serve as a more effective channelling mechanism;
  - . recognition of modules (credits) between higher levels of education receive the necessary attention, so that horizontal interchangeability can be ensured, as well as a reconsideration concerning the utilization of high-level manpower and the introduction of expensive infrastructures at the institutions.
6. In regard to non-formal education it is recommended that it be regarded as an essential part (growing) of a system for the provision of education and that it should therefore form a part of any planning in connection with the provision of education. The unstable nature of non-formal education should be examined to determine what part of non-formal education is indeed stable and can be regarded as a meaningful partner of formal education.
7. In respect of channelling mechanisms, it is recommended that a full investigation be undertaken in close co-operation with educational management experts (administrative and management structure specialists), experts in the curricular field and designers of innovative strategies.

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## APPENDIX A

### HSRC-INVESTIGATION INTO EDUCATION

#### WORK COMMITTEE: LANGUAGES AND LANGUAGE INSTRUCTION

#### EDUCATION FOR LITERACY

Compiled by W.N. Fourie

#### 1. THE PROBLEM

Although the term literacy is a very broad one, in using the term we usually think of proficiency of adults (18 years and over) with regard to the basic reading and writing skills in the mother tongue.

The question of illiteracy in the RSA has been the focus of academic concern since 1942 (2, p. 3). Then it was already emphasized that the standard of literacy is very closely related to the social, economic and cultural aspects of a particular community or society.

Today the problem of a great number of adults who cannot effectively read or write is as real as it was in 1942. When, for example, the Black population of South Africa is looked at, then it appears that practically five million adults have not mastered the language skills of reading and writing.

The Riekert Report found that a large percentage of the working population of South Africa, in terms of the norm of educational level only, do not possess the knowledge or skill to perform in the labour market in particular and in the economic system in general (7, p. 23). According to the report these people are not functionally literate. That is to say they do not have the ability as such to read, write, talk, listen and calculate in order to cope with the normal everyday demands of the modern world with any sort of ease.

In the same connection the Wiehahn Report recommends that by the expansion of adult education programmes the functional efficiency of employees, particularly in literacy and numeracy, should be raised since this is a prerequisite for the effectiveness of training in industrial relations (9, p. 63).

In a developed economic system such as that of the RSA the question is there-

fore not whether literacy training should be undertaken in all seriousness, but rather the extent to which such work can be undertaken with greater success.

A further related problem which should enjoy high priority is the language medium in which the population, and in this context specifically the Black population, should learn to read and write.

## 2. AIM OF THE REPORT

This very brief consideration of the state of literacy in the RSA has the following aims:

- . To indicate the extent of illiteracy in the RSA.
- . To consider the implications in terms of language medium and work on literacy.
- . To make recommendations in respect of a possible national strategy relating to the promotion of literacy.

## 3. WORK ON LITERACY IN THE RSA

### 3.1 Definition of the concept

The concept of literacy does not imply a simple dichotomy. People are not simply literate or illiterate. Literacy can in truth be seen as a continuum stretching from pre-literate to highly literate.

On the whole three general categories of literacy can be identified, namely:

- . Illiterates. These are the persons that are unable to read or write in any language.
- . Semi-literates. These persons are able to read and write in a very limited way. Because the reading and writing skills have not been permanently acquired, the semi-literate can easily revert to a state of illiteracy.
- . Literates. These persons have permanently acquired reading and writing skills. There are, however, different levels of proficiency among literates.

In respect of the literate category the following broad levels of proficiency can be identified:

- . Pre-literacy. This is the first level of progress on the road to literacy. The person is beginning to acquire a knowledge of basic language and arithmetical skills which are needed in order to master literacy. Seen in scholastic perspective it means a functioning at about junior primary level. It is obvious that this level offers no guarantee that the basic skills are permanently established and the person can thus quite easily revert to a state of illiteracy.
- . Basic literacy. Where the basic skills of literacy are unstable at the pre-literacy level, the acquisition of the skills of literacy are permanent at the basic literacy level. Here there is no question of regression from the skills to a level where the person must re-learn the skills. Basic literacy therefore is the level where a person can read and write a short simple communication relating to his everyday life.
- . Functional literacy. (Career literacy). The level of basic literacy which can be established does not mean that the person is necessarily prepared for the demands on literacy which are imposed by the multiplicity of occupations and community connections/links. Basic literacy is actually the pre-requisite for the attaining of the level of effective functional literacy. Functional literacy is linked to a specific milieu or work environment. On the subject of this level of literacy Powell says: "... functional literacy means the reader has skills at a level which matches the readability level of the work material" (6, p. 6).

The functional level of literacy, in contrast to basic literacy which is generalized and stable, is linked with a variety of situations since it is related to specific demands.

In regard to the proficiency level of functional literacy, Kesting (5, p. 155) distinguishes six further stages or levels, namely:

- . Elementary functional literacy.
- . Intermediate functional literacy.
- . Advanced functional literacy.

- . Elementary creative literacy.
- . Intermediate creative literacy.
- . Advanced creative literacy.

From the above description of the concept of literacy it becomes clear that this is not a simple area of study. The question that arises when the promotion of literacy is referred to, is to which level or levels of literacy priority should be given.

### 3.2 Literacy statistics in the RSA

In the above discussion of literacy it was indicated that the first level of proficiency, namely pre-literacy, does not guarantee a permanent acquisition of reading and writing skills. Pre-literacy denotes a proficiency in reading and writing at the junior primary school level. As a minimum requirement for literacy at least four years of successful formal schooling is proposed (UNESCO). Therefore in order to provide any statistics it was decided to look at age group 20 years and over who have educational qualifications of Standard 3 (basic literacy) and higher (cf. Table 1).

From the summarized information in Table 1 the following deductions can be made:

- . White men and women in urban and non-urban areas maintain, in terms of the other population groups, a particularly high degree of literacy.
- . Asian men maintain a higher level of literacy in urban and non-urban areas than both Black and Coloured men.
- . Coloured women in urban areas are more literate than Black and Asian women. In the non-urban areas the Asian women are the more literate group.
- . In respect of the total of urban and non-urban groups it is clear that the Black population have the greatest need for improvement of literacy, and this need is greatest in the non-urban areas.

TABLE 1: THE PERCENTAGE IN THE DIFFERENT POPULATION GROUPS (AGE 20 YEARS +) THAT HAVE ATTAINED-STD. THREE AND HIGHER AS SHOWN IN THE 1970 CENSUS ON EDUCATIONAL QUALIFICATIONS

Population group		Urban			Non-urban			Total		
		Men	Women	Total	Men	Women	Total	Men	Women	Total
Whites	N	950 961	999 947	1 950 908	153 108	144 563	144 563	1 104 069	1 144 510	2 248 579
	T	937 947	983 262	1 921 209	148 001	140 924	288 925	1 085 948	1 124 186	2 210 134
	%	98,63	98,33	98,48	96,66	97,48	97,06	98,36	98,22	98,29
Coloureds	N	312 883	358 129	671 012	115 579	98 642	214 221	428 462	456 771	885 233
	T	226 304	254 628	480 932	33 886	29 942	63 828	260 190	284 570	544 760
	%	72,33	71,10	71,67	29,32	30,35	29,80	60,73	62,30	61,54
Asians	N	130 499	129 301	259 800	18 250	18 590	36 840	148 749	148 749	296 640
	T	111 763	77 593	189 356	12 853	7 722	20 575	124 616	85 315	209 931
	%	85,64	60,01	72,88	70,43	41,54	55,85	83,78	57,68	70,77
Blacks	N	1 803 802	1 139 602	2 943 404	1 661 153	2 503 127	1 164 280	3 464 955	3 642 729	7 107 684
	T	777 257	640 179	1 417 436	336 525	533 981	533 981	870 506	1 113 782	2 287 942
	%	43,09	56,18	48,16	20,26	21,33	20,90	32,14	32,23	32,19
	N	3 198 145	2 626 979	5 825 124	1 948 090	2 764 922	4 713 012	5 146 235	5 391 901	10 538 136
	T	2 053 271	1 955 662	4 008 933	531 265	712 569	1 243 834	2 584 536	2 668 231	5 252 767
	%	64,20	75,45	68,82	27,27	25,77	26,39	50,22	49,49	49,85

N = Total number in group.

T = Number with Std. 3 or higher.

$$\% = \frac{T}{N} \times \frac{100}{1}$$

### 3.3 Implications for choice of language

From the statistics in Table 1 it is clear that the Black population has the greatest claim to priority in regard to the promotion of literacy. The Coloured and Asian population groups also need serious attention in this connection. Both of the latter population groups however have a lesser problem since one or both of the official languages can be used as the medium in a literacy programme.

The situation among the Black population group is not quite so simple. On the whole the Black population is not as ready as the Coloureds or Asians to accept one of the official languages as the spoken language. The mother tongue or another Black language remains the spoken language in most cases.

On the basis of what is known about the treatment of reading, particularly the fact that proficiency in reading goes together with the reader's ability to read with meaningful anticipation, it can be set as a condition that in order to become literate in a target language, the reader must have a command of the spoken language.

Language is an integral part of the personality and culture of a person. It is therefore self-evident that an illiterate person, if he be confronted with a totally foreign language medium, will experience considerable problems in learning to read and write the particular language. From a linguistic and an educational viewpoint it is therefore desirable that a person should be made literate in his national language or mother tongue.

This point of view is subscribed to by Unesco and various local promoters of literacy. Ryan (7, p. 23) refers to this when he explains:

"Recognizing this relationship, international meetings have recommended that initial literacy should wherever possible, be achieved in the learner's mother tongue" (cf. also 1, p. 39).

There are, however in the RSA, as also in Nigeria, Ghana, Zimbabwe and other African and South American countries, certain practical considerations that go to make the ideal of mother tongue literacy not always attainable.



In the case of South Africa there are a variety of Black languages and dialects almost all of which have a comparatively recent orthography. It is self-evident that it will be so that there should be provision of textbooks, narrative reading material, periodicals, etc. on a limited scale (cf. Table 2).

TABLE 2

A SECTION OF THE AVAILABLE TITLES IN THE LANGUAGES OF THE RSA: 1980

Subject	Afrikaans	English	S. Sotho	N. Sotho	Tswana	Venda	Zulu	Xhosa
Religion/theology	226	76	6	3	5	2	20	11
Education	800	304	49	25	15	1	10	16
Agriculture, Forestry, Stock Breeding, Hunting and Fishing	26	53	-	-	-	-	-	-
Homecraft	38	41	-	-	-	-	-	-
Entertainment, games and sport	13	15	-	-	-	-	-	-
Literacy texts	591	88	1	30	18	13	16	9

The available reading matter is of a reasonably high standard and the content is unsuitable for the newly literate.

The Black worker in the RSA is also faced with the reality that most employers are White and that one or both of the official languages are requirement for employment.

This aspect contributes largely to the fact that literacy activities in the RSA have one of two policy views relating to the language medium of a programme:

- . A start is made with mother tongue literacy up to a certain level, after which there is a switch to literacy in one of the two official languages, or
- . There is a concentration on literacy in one of the two official languages from the outset.

The latter approach is not altogether unacceptable provided the person has a good command of the spoken language, that is to say the person must be in a position to listen with discrimination and communicate meaningfully in speech. Provided the above-mentioned speech skills can be adequately acquired in the foreign language, it is enough for the successful learning of the literacy skills (reading and writing) of the language.

In this connection it is necessary to emphasize that the provision of literature for the newly literate is a most important aspect of the furtherance of literacy. Whatever the language medium, care must be taken to see that there is adequate reading matter for the newly literate adult before the literacy programme is completed. It is particularly important that this reading matter is brought within the reach of the newly literate so that he has the opportunity to utilize and consolidate his newly acquired skills.

### 3.4 Promotion of literacy in the RSA

In a multiracial country like the RSA with a relatively high illiteracy figure (cf. Table 1) it is almost a matter of course that different sectors of the community have developed a tender conscience about the promotion of literacy. The State, welfare organizations, churches, private groups and employers are separately and jointly responsible for the elimination of illiteracy in the RSA. In the light of the latest information it is calculated that in the age group 15 years and over, there are 5 678 000 illiterates in the RSA. The question which therefore follows is what is being done about the situation.

#### 3.4.1 Non-formal education

The promotion of literacy up to the level of basic literacy and the lower levels of functional literacy falls within the sphere of non-formal teaching within the framework of the co-ordinated provision of education. The promotion of literacy is thus a matter in which the State as well as the private sector has a financial responsibility.

A survey by the HSRC (4) revealed to what extent the State and the private sector are actually involved in literacy work (cf. Tables 3 (a) and 3 (b)).

TABLE 3(a): INVOLVEMENT OF EDUCATION DEPARTMENTS

	Education and Training	Bophuthatswana	Ciskei	Gazankulu	KaNgwana	KwaZulu	Lebowa	Qwa Qwa	Transkei	Venda	Total
Number of illiterates in area of responsibility	2 930 000	249 000	181 000	137 000	48 000	911 000	475 000	44 000	580 000	123 000	5 678 000
Number of adults in literacy courses	8 921	17 776	2 000	6 500	0	0	3 000	922	0	3 500(3)	42 619
Number of official centres	183	125	76	205	0	0	110	37	0	98	839
Number of instructors	541	920	266	382	0	0	112	60	0	196	2 477
Ratio:Instructor/learner	1 : 16	1 : 20	1 : 30	1 : 17	-	-	1 : 26	1 : 15	-	1 : 18	1 : 17
Number of professional staff at head office	2	1	1	1	-	-	1	1	-	1	8
Number of supporting staff	49	0	4	10	-	-	0	2	-	0	65
Ratio of professional supporting staff/number of centres	+1 : 4	1 : 125	1 : 19	1 : 19	-	-	1 : 110	1 : 12	-	1 : 98	1 : 12
Budget and % of education budget	R519 000 0,4 %	R750 000 1,6 %	R100 000 0,9 %	R85 300 0,8 %	0	0	R46 000	R96 000	0	R30 000	R1 626 300

In the light of the number of illiterates in South Africa the picture in terms of enrolments is not promising. Furthermore the dark side of the picture is the fact that in most cases the drop-out figure is unknown, or what the pass rate is, or what the actual standard is of the literacy that is achieved.

From what has just been said and taking into account what has been said about the different levels of literacy as well as the figure for the incidence of illiteracy, the deduction can be made that the following problems relating to programmes and activities to promote literacy are identifiable:

- . The different promoters of literacy are exerting themselves for different target groups in the community but there is no adequate co-ordinated planning.

TABLE 3(b)

TOTAL ENROLMENTS AT CENTRES FOR LITERACY CLASSES DURING 1980

<u>Sector of the community</u>	<u>No. of candidates</u>	
1. Official centres of Black states	33 689	
2. Department of Education and Training	8 921	
3. Department of Coloured Affairs	250	44 889* (48,72 %)
4. Department of Prisons	2 000	
5. Department of Forestry and Water Affairs	20	
6. Mining groups	35 000	
7. Private groups (chiefly in conjunction with churches and volunteers)	10 000	47 255** (51,28 %)
8. Trade and industry	2 255	
Total	<u>92 144</u>	

\* State involvement

\*\* Involvement of private groups.

- . In connection with the different target groups it is clear that there is no uniformity or planning in respect of the level of literacy that is envisaged.
- . The fact that a great deal of voluntary help is made use of in work on literacy puts a question mark on the effective training and functioning of instructors for work on literacy.
- . In the private sector employers are not prepared to do work on literacy during working hours (4). This attitude is related to the fact that the private sector makes provision for 51,28 % of the total number of candidates for literacy without any fixed formula for compensation.
- . Voluntary workers can be a threat to the continuity of the work unless there is proper control over them.

Seen against the background of the high priority which the Wiehahn and Riekert Reports give to more effective training and the level of literacy, against the demand for more effective and adequate communication in the employment situation in general, it is essential to undertake the promotion of literacy in a more co-ordinated fashion.

In this connection it is necessary to give attention to a recommendation of the Bullock Report. This report states that it is particularly important that there should be co-ordinated collaboration between voluntary organizations doing work on literacy and the State (3, p. 281).

#### 3.4.2 Involvement of universities

The important role played by universities in general in the work on literacy cannot be underestimated. The previously mentioned survey by the HSRC has brought to light in this connection that universities in South Africa are involved in work on literacy in a modest way. The chief reason for this state of affairs is in all probability the subsidy formula for universities, which makes it at present impossible to appoint suitable people for the task.

It is important to emphasize that universities, especially in a regional connection, can make a substantial contribution to research and the development of an experimentation with literacy programmes. In this connection one thinks of the development of complete programmes which are used by a

a variety of organizations and which can be applied in urban areas as well as in the country.

Seen against the background of literacy activities in South Africa there exists a serious need for a global strategy for the promotion of literacy that will define the collective and separate areas of operation of the State, the private sector, universities and statutory research organizations.

#### 4. RECOMMENDATIONS

- 4.1 In the light of the available information a statutory national literacy committee must be planned for. This Committee will inter alia plan for and co-ordinate action on all programmes and efforts directed to the development of basic literacy for adults in the RSA and the dependent national states. This body should be representative of all recognized interested organizations concerned with the promotion of literacy.
- 4.2 Programme developers and literacy organizations must be encouraged to give attention to the development of supplementary programmes in Afrikaans and English to meet the needs of target groups, notwithstanding their involvement in a literacy course in a mother tongue.
- 4.3 A national clearinghouse for literacy materials must be established. The main purpose of such clearinghouse will be to organize and make available simple reading matter for the newly literate, the provision of material and information to programme developers, and the development of an infrastructure for the distribution of reading material to adults who have a need for simple reading matter with an adult content.
- 4.4 By means of a revised subsidy formula universities must be put in a position to provide staff for research, and to undertake development of and experimentation with literacy programmes on a co-ordinated basis.
- 4.5 The role of the media must be positively brought to the attention of promoters of literacy in order to ensure the successful launching of literacy programmes.
- 4.6 In the light of the general need for formal education of the working population programme developers must be encouraged to draw up literacy

programmes in such a way that the newly literate are prepared for registering for a more advanced official qualification.

- 4.7 In all cases at the end of a literacy course use must be made of an officially recognized objective test to determine the level of literacy that has been achieved.
- 4.8 Employers must be encouraged (by means of one form of State subsidy or another) to put workers who desire it, in a position to achieve at least the level of basic literacy.

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## APPENDIX B

### PRINCIPLES FOR THE PROVISION OF EDUCATION IN THE RSA

The principles, on which consensus was reached and which are recommended, are as follows:

#### Principle 1

Equal opportunities for education, including equal standards in education, for every inhabitant, irrespective of race, colour, creed or sex, shall be the purposeful endeavour of the State.

#### Principle 2

Education shall afford positive recognition of what is common as well as what is diverse in the religious and cultural way of life and the languages of the inhabitants.

#### Principle 3

Education shall give positive recognition to the freedom of choice of the individual, parents and organisations in society.

#### Principle 4

The provision of education shall be directed in an educationally responsible manner to meet the needs of the individual as well as those of society and economic development, and shall, inter alia, take into consideration the manpower needs of the country.

#### Principle 5

Education shall endeavour to achieve a positive relationship between the formal, non-formal and informal aspects of education in the school, society and family.

### Principle 6

The provision of formal education shall be a responsibility of the State provided that the individual, parents and organized society shall have a shared responsibility, choice and voice in this matter.

### Principle 7

The private sector and the state shall have a shared responsibility for the provision of non-formal education.

### Principle 8

Provision shall be made for the establishment and state subsidisation of private education within the system of providing education.

### Principle 9

In the provision of education the processes of centralization and decentralization shall be reconciled organizationally and functionally.

### Principle 10

The professional status of the teacher and lecturer shall be recognized.

### Principle 11

Effective provision of education shall be based on continuing research.