

UNIVERSITY OF LIVERPOOL

**A COMPARATIVE STUDY OF
VOCATIONAL/TECHNICAL EDUCATION IN
ZAMBIA AND ZIMBABWE
1900 - 1987**

**THESIS SUBMITTED IN ACCORDANCE WITH THE
REQUIREMENTS OF THE UNIVERSITY OF LIVERPOOL
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GLOSSARY

ANC	African National Congress
B. Tech	Bachelor of Technology
BSAC	British South Africa Company
CDU	Curriculum Development Unit
CIDA	Canadian International Development Agency
DACUM	Developing A Curriculum
DTEVT	Department of Technical Education and Vocational Training
EEC	European Economic Community
FAO	Food and Agriculture Organisation
FEEB	Further Education Examination Board
HNC	Higher National Certificate
IMF	International Monetary Fund
MTB	Management Training Bureau
NA	National Archives
NACC	National Advanced Craft Certificate
NC	National Certificate
NCC	National Craft Certificate
ND	National Diploma
NFC	National Foundation Course
NHD	National Higher Diploma
NID	National Intermediate Diploma
NVTDC	National Vocational Training Development Centre
OECD	Organisation for Economic Cooperation and Development
SIDA	Swedish International Development Authority
TTC	Technical Teachers College
TTI	Trades Training Institute
UDI	Unilateral Declaration of Independence

UNDP	United Nations Development Programme
UNESCO	United Nations Education Scientific and Cultural Organisation
UNIP	United National Independence Party
USAID	United States Agency for International Development
UZ	University of Zimbabwe
VTC	Vocational Training Centre
ZANLA	Zimbabwe African National Liberation Army
ZANU	Zimbabwe African National Union
ZANU (PF)	Zimbabwe African National Union (Patriotic Front)
ZAPU	Zimbabwe African People's Union
ZCCM	Zambia Consolidated Copper Mines
ZIMDEF	Zimbabwe Manpower Development Fund
ZINTEC	Zimbabwe Integrated Teacher Education Course

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ABSTRACT

A COMPARATIVE STUDY OF VOCATIONAL/TECHNICAL EDUCATION IN ZAMBIA AND ZIMBABWE: 1900 - 1987

This thesis undertakes the collection, analysis and evaluation of information concerning the development of vocational and technical education in Zambia and Zimbabwe. Tracing the history of vocational education from 1900, the work emphasises the separate racial provision of education, including vocational, until both countries approached their respective Independence periods.

Six years after Independence, vocational and technical education in Zambia occupied a focal point in the country's attempt to firstly achieve an economic transformation and secondly, absorb the growing number of unemployed school leavers from the system of general education. After abolishing the system of apprenticeship, government vocational institutions became the major point of training for formal sector employment skills. Yet this inner reform has been diluted largely by an economy unable to sustain the high recurrent costs required by institutional training.

The most striking feature of vocational and technical education in Zimbabwe is how little the structure has changed from the pre-independence period. Whilst the racial balance of trainees has moved in favour of Africans, early political rhetoric in favour of changing the approach to skill training has failed to materialise.

Conservative forces in both countries have managed with assistance from external aid programmes to retain a formal system of vocational and technical education very similar to that which existed before independence. Educational provision for those who have dropped out of school or are unemployed is grossly deficient.

In conclusion, the thesis proposes three action areas; emphasising a closer partnership of public and private sector training institutions which will tackle the issue of making better use of existing institutional capacity and expanding more directed opportunities for skill training, linking national development goals with well-researched and developed national vocational curricula rather than the perceptions or overseas examination systems; ensuring better coordination between the education/training system and the ongoing requirements of the employment system and making training more sensitive to sectorial needs, particularly towards the majority of people who live and work in rural areas.

Brian Follis
July 1990

INTRODUCTION

This thesis will trace the growth and development of vocational and technical education in Zambia and Zimbabwe. A major contention in this study is that the experiences of and insights into the development of vocational education in one country have considerable transfer value to another if they can be properly identified and described. In this context, research tasks involve a combination of data collection, review and analysis of selected issues from organisational structures and curriculum matters in vocational education in terms of:

- i) the styles and strategies employed in these issues and the factors and constraints that affected their success or failure
- ii) the relevance and transferability of findings from one system to another.

The study also takes into account the prevailing socio-economic environment in which this sector of education has developed and under which it is presently undergoing change. Selected historical, social, political and economic factors that have led to the present positions will also be reviewed.

It is anticipated that the main outcome of this study will be a collection of styles, strategies and experiences within vocational education in Zambia and Zimbabwe and evaluated in terms of their relevance to both nations.

Worldwide, the terms 'vocational education' and 'technical education' are often used synonymously with each other. In the following study, where there is no need to discriminate between the various sectors of education and training preparing persons for specific fields of employment, the term 'vocational education' will be used. When the

various disciplines making up vocational education need to be highlighted, then sector terms such as technical, agricultural and commercial education will be stated.

Educational development will be interpreted as the betterment of education through programmes which are planned and implemented for purposive change. The sequence for discussing the national topics and problems within this study is, wherever possible, set in a common pattern but may be varied to suit particular historical or contextual events. Information is organised in a progressive manner, moving from general to particular issues. For example, the early chapters sketch in general regional developments, highlighting political and economic changes. Both these points are taken up later and are seen as highly relevant to the possibilities and constraints of vocational education.

The thesis has been divided into seven chapters. The initial chapter looks at the various approaches to comparative education and sets out the particular method adopted in this study.

Chapter Two examines briefly the period prior to European migration into Central Africa, the activities of the early missionaries, British South Africa Company and settler expansion into the Rhodesias; moving on to further development of the Rhodesias between 1923 and 1953 and factors leading up to the Federation and African opposition to that structure of government. Finally, this chapter closes with the emergence in 1964 of Zambia as an independent nation and the UDI period in Rhodesia leading to eventual Independence in 1980 as the Republic of Zimbabwe.

Chapter Three takes as its starting point indigenous education in that part of Southern Central Africa, later to become the geographical focus of this study. Links are drawn between this traditional form of

education and the transmission of culture from one generation to another. Recognising the common factors of British South Africa Company administration and church influence on education, the study follows the largely non-secular provision of early attempts to formalise education and how it was strictly divided along racial lines.

The period between the first Phelps-Stokes Report of 1922 and the Federal period involved both administrations taking a greater share of the responsibility for education and was a phase in which several influential investigations into the future of education took place.

Education in the Federal period was dichotomized by the affairs of African education remaining with the three territorial governments while European, Asian and Coloured education became a responsibility of the new Federation. Education during this period was largely centred around the development of the primary sector. Part way through the Federal period of government there also occurred the establishment of the University College of Rhodesia and Nyasaland which, during a later period, became the university of Zimbabwe.

Following Zambian independence in 1964, the inherited education system characterised by divisiveness and inequality, was high on the Government's list of reforms. Central planning and control was a significant feature of subsequent reforms with educational planning being an integral part of a series of National Development Plans. In line with the Government appointed Judges Commission and its 1962 report, the dual system of education, along with increased government responsibility, continued in Zimbabwe throughout the UDI period. The concluding part of Chapter Three examines the role and organisational structure of education in post-independent Zimbabwe.

Chapter Four begins by looking at early vocational opportunities in Northern Rhodesia and how the traditional colonial approach to this sector of education was reformed to meet both new political ideology and a future nation which would be less dependent on its agricultural economy. The emphasis is placed on the way the new government challenged the obstacles to alternative methods of vocational education and how these subsequently changed the direction of skilled manpower training.

Chapter Five continues with an interpretation of vocational and technical education data from Zimbabwe. Particular attention is given to the role of apprenticeships, both before and after independence, and how this method of training has influenced the style of vocational education. Early post-independence direction for vocational education was clouded by uncooperative industrialists, inexperienced administrators and educators along with international donors who had varying perceptions about the particular role of vocational education.

In Chapter Six, the emphasis passes from area studies to a simultaneous examination of the development of vocational education in Zambia and Zimbabwe. Special emphasis is brought to bear on such issues as the origins and expansion of vocational education, curriculum development, relationship with industry and the expenditure and allocation of resources.

The final chapter, Seven, moves towards a simultaneous comparison of the developments in each system of vocational education and the effects these have had on the larger context of national development.

First-hand knowledge of Zambia and Zimbabwe and their respective systems of education and training were gained during the period 1985-1987 when the writer was on assignment from the British Government

(ODA) as a Technical/Vocational Curriculum Development Adviser to Zimbabwe's Ministry of Labour, Manpower Planning and Social Welfare.

The method chosen to explore the national issues was through a dialogue with responsible officials for education in Lusaka and Harare, frequent visits to institutions and companies and extensive use of the National Archives in Harare.

The writer hopes that the study will assist in raising the level of understanding of formal vocational and technical education in Zambia and Zimbabwe. Stopping short as it does of the ministerial reassignment of tertiary education in Zimbabwe and the increasingly bitter civil unrest in Zambia in the latter part of the decade, it provides comparative insight and indications for those in both nations responsible for planning and implementing formal manpower development programmes.

CHAPTER ONE: METHODOLOGICAL PERSPECTIVES

1.1 Comparative Methodology

Comparative education has, over the past two decades or so, become a field of considerable complexity and diverse practices. A systematic review and analysis of the whole range of methods now available to the researcher would constitute a task beyond the scope of this study. Thus, the following selective review confines itself to comments on the extent and nature of procedures that were considered and, in some instances, used for this study.

In examining the growth and development of vocational education in Zambia and Zimbabwe, or indeed elsewhere, it is necessary, as Nicholas Hans reminds us, to:

"develop a methodology of comparison, partly to facilitate the process and partly to avoid undisciplined use of generalisation and transfer".¹

With this clearly in mind, the choice and adoption of a suitable method must play an important role in assessing both the process and eventual outcomes of the study. The first chapter describes a variety of different methods. It is important to stress that they have their own strengths and weaknesses, and that such strengths and weaknesses should be seriously considered by students of comparative studies.

This study is essentially an attempt to juxtapose two neighbouring states in order to examine similarities and differences in the development of their vocational education system.

Tracing the legacy of comparative education, Mathew Zachariah suggests that:

"the field of study came into being in large part as a consequence of the development of national systems of education".²

Certainly, interest in comparative education in the nineteenth and early twentieth century was directed towards the emerging national systems of education in Europe and North America. However, education, particularly since 1945, has become an essential feature in Africa for social change and national development and as a consequence has attracted a growing number of educationalists in pursuit of the various characteristics which make up Africa's national systems of education.

Generalisations abound as to the nature of comparative education. For example, Kandel, in one of his numerous papers on international and comparative education said that comparative education sought:

"to analyse and compare the forces which make for differences between national systems of education".³

With a similar concentration to Kandel on historical events and the influence of cultural forces, Vernon Mallinson expresses comparative education as:

"a systematic examination of other cultures and other systems of education deriving from those cultures in order to discover resemblances and differences, the causes behind resemblances and differences, and why variant solutions have been attempted (and with what result) to problems that are often common to all".⁴

Harold Noah and Max Eckstein differ from the views of Kandel and Mallinson when they placed comparative education at the:

"intersection of the social sciences, education and cross-national study".⁵

Noah and Eckstein favour an approach which is both systematic and wherever possible quantitative in its investigation of explicitly stated hypotheses.

Brian Holmes rejects the views advocated by Kandel and Hans that a starting point for comparative inquiry should be a search for antecedent causes of social events. For his part, Holmes has adopted a much more pragmatic view of the value of comparative education, suggesting:

"a science of education giving directive power"

which in turn, can lead to:

"the possibility of using comparison with more rigour and precision in the reform and planned development of education".⁶

Although Holmes does not always see merit in the historical investigations of earlier exponents of comparative education as a positive contribution to improving other systems of education, he does commend some of Michael Sadler's work. In a lecture at Guildford in 1900,⁷ Sadler emphasised that the major value of comparing systems of education is not the possibility of borrowing selected parts but the potential insights which help toward a more effective analysis of the home system. Having defined the role of comparative education as he sees it, Holmes outlines the underlying principles of his 'problem approach' method. As a basis for this method, Holmes looked at the work of John Dewey on reflective thinking which is expressed in the following pattern:⁸

- 1 confusion, perplexity or problem
- 2 hypothesis or solution formulation
- 3 problem intellectualisation or analysis

- 4 analysis and specification of context
- 5 logical deduction of consequences
- 6 practical verification

Holmes, in 'Problems in Education', clarifies, in his terms, Dewey's earlier pattern of reflective thinking:

"In the face of a perplexing situation possible solutions may immediately spring to mind. Further reflection involves a process of intellectualisation out of which the problem to be solved becomes clearly formulated. This stage directs attention to data of a certain kind, namely those which are relevant to the problem. Out of it emerge refined or new possible solutions which are then put forward as hypotheses to be tested one after another. Testing involves making logical deductions from the hypotheses within the context of relevance factors and then (ideally) comparing the predicted events with the actual events which are observed to flow from a selected course of action. Agreement between predicted and observed events provides verification of a hypothesis, an explanation of the event, and constitutes a successful resolution of the confused situation. It also provides a springboard for further action. Disagreement between the two types of events (predicted and observed) constitutes a refutation of the hypothesis, but should lead to re-examination of the degree to which all the stages of reflective thinking have been satisfactorily completed."⁹

The above considerations of the problem approach method involve a number of linked processes beginning with a detailed preliminary identification of the problem, diagnosis of the needs to be met by a solution and the eventual finding of a solution which appears to satisfy the necessary established criteria. The process involves convergent and divergent thinking which, when used in combination, help to solve the problems. For this reason, Holmes believes that this Deweyan method of reasoning is particularly useful for:

'classifying data of different kinds,'¹⁰

which, in turn, will lead to accurate predictions of how best to tackle reforms in education systems. The pragmatic paradigm for curriculum development advocated by Dewey will emerge later in

the work, firstly in early attempts to promote African education and secondly in post-independence rhetoric surrounding educational and industrial development. Also, later chapters will examine the considerable opposition in the two countries to alternative curricula.

Edmund King, a contemporary of Holmes, also views the major purpose of comparative studies of education as reformatory. King, however, hopes that education issues and problems can be more readily approached with the assistance of 'practical' analytical information gathered as a result of comparative studies. In this pragmatic approach, King stresses that no successful reform in an educational system can result from study in the sterile conditions of a laboratory.¹¹ This thinking is representative of much of King's work on comparative education with its continuing scepticism towards practitioners who insist on applying rigorous scientific methods to all studies in the field of comparative education. King favours no distinct dogmatic methodology but research methods which are readily applicable to both the context and level of study. Altbach and Kelly sense a broadening of views toward comparative education when they suggest that:

"scholars in comparative education have recently adopted a range of methodologies and approaches to develop innovative ways of dealing with complex research issues and in analysing educational data creatively in a cross-cultural frame",¹²

In the vanguard of emerging post-war views on comparative education was George Bereday. Bereday attempted to develop a methodology which is distinctly comparative. In the preface to his book, 'Comparative Method in Education',¹³ Bereday sees comparative education in common with other comparative

disciplines such as comparative law, comparative government and cross-cultural studies in anthropology.¹⁴

Supporting comparative studies in education both for intellectual value and practical application, Bereday proposes a clear model for carrying out comparative inquiry. According to Bereday, a starting point is to divide the inquiry between area studies concerned with two or more countries simultaneously. He then suggests that both studies should be further sub-divided, with area studies having descriptive and interpretative phases and comparative studies divided between juxtaposition and comparison.¹⁵

The initial restrictions placed upon the researcher following the Bereday model are kept to a minimum allowing immediate collection of country data which, at the later period, can be interpreted and evaluated. These considerations have formed a large part in the preparatory background work in Zambia and Zimbabwe and later in the compilation of this study.

Bereday argues the case for a thorough understanding of the educational systems in the region of study as an indispensable basis for the later comparative exercise. Whilst encouraging detailed work in the area of scholarship by extensive travel throughout the region, collecting data first-hand and recording visual impressions, Bereday also stresses the dangers of cultural and personal biases. Failure to comply with caveats of this nature will, he says,

"cut one off from the true nature of the educational system under observation as effectively as blindness."¹⁶

Trethewey, in his book, 'Introducing Comparative Education', alerts us to several other pitfalls which lie in wait for students of comparative education. Of particular relevance to this study is his point concerning the accuracy of information compiled and published for both national and international consumption. Sometimes, he suggests:

'that a government's determination to present itself or its nation in the best possible light, may lead to the falsification of educational statistics and information for international consumption, or to the presentation of material on selected bases or under particular interpretations of what is required'.¹⁷

To some extent, inconsistencies of this nature can be tempered by making independent checks and looking carefully at the basis and method of compilation.

Closer international understanding as a product of comparative studies into education was a goal recommended by Joseph Lauwerys in the 1964 'Year Book of Education'.¹⁸ Helping towards this end has been the steadily increasing international and national agencies dedicated towards the collection and collation of educational statistics and publication of articles on aspects of international education. Some of these organisations are able to sponsor regular conferences or seminars on topics of international interest which, in turn, allows more educators to travel and observe other systems of education.

This section has been concerned with a discussion of a range of possible comparative methodologies open to the researcher. For the purpose of discussion, they were identified with major exponents of comparative studies. Each writer is essentially concerned with a different aspect of the way in which comparative studies can be arranged and planned. Particular

attention was drawn to the following three writers and their styles of approach:

- Holmes - early appreciation of a problem
- Noah-Eckstein - formulation of hypothetical relationship
- Bereday - data collected through area studies followed by a comparative analysis

Since, as previously indicated, different methodologies have different potential for investigating various situations, it is important at the outset of a comparative study to select an approach to suit the aims of the study.

Adopting a straight forward 'problem approach method' to investigate the growth and development of vocational education in Zambia and Zimbabwe requires an early identification of the major issues facing this sector of education. The reason for this is the need to form a concise hypothesis at the initial stage of the study. In short, it pre-supposes extensive pre-assignment experience of geographical, historical, cultural and economic features of the area of study.

As far as the approach recommended by Bereday is concerned, the focus on the formation of a hypothesis is delayed until a later stage. This allows complex and often ill-defined problems to be explored prior to establishing a precise hypothesis.

On the basis of this, it is considered that the more flexible Bereday approach, with its initial area surveys, will widen the scope of this study uncovering consequences that ought to be considered in the final appraisal and eventually produce an

increase in the general understanding of the compared situations.

1.2 Characteristics of Vocational Education

As already indicated in the introduction to this chapter, vocational education is a term widely employed to refer to education leading to specific employment goals.

Primarily, vocational education is both a discipline and an institution in society. It encompasses all levels of education and training, embraces a broad spectrum of individual, economic and social needs and manifests in a diversity of forms. Vocational education has characteristics that make it different from general education. These characteristics include: vocational orientation, practical skill standards, logistics, maintenance, post school placement and related vocational success. Together these basic characteristics of vocational education represent parameters that vocational curriculum must meet in preparing people for useful and gainful employment.

Traditionally, vocational education, particularly in the twentieth century, has been biased toward the student. A major concern of vocational education has been to provide a means for each student to achieve curricular outcomes. However, the ultimate success of vocational programmes should not be limited to what transpires in an institutional setting. Vocational education must be judged on the success of graduates in performing previously taught skills and standards in the world of work.

Vocational education has historical roots in social and economic developments with a legacy going back into antiquity. Looking to time more recent, Mallinson, in his survey of vocational education in Europe, says that:

'only in the nineteenth century did formal schooling for vocations other than medicine, law and theology, become a reality'.¹⁹

Within a similar time frame, formal and structured vocational education has gradually taken on greater responsibility in Africa for changing social and economic conditions. Resultant vocational instructional programmes have enabled people to acquire the knowledge and skills needed for employment, changes in technology and changes in society. Moreover, instead of following traditionally prescribed tribal patterns of life with an inherently limited number of employment possibilities, education has opened up new roles and opportunities for individuals and communities. But despite a growing recognition of the importance of people as individuals rather than masses (stressed, for example, by Zambia's explicit ideology of African Humanism), development of vocational education projects has sometimes been conceived in only narrow economic terms with strong emphasis towards supporting the modern sector of industry and commerce. Turning to this point in his book, 'Education and Development in Africa', A.R. Thompson suggests:

'In the new era of economic planning with targets being defined in terms of growth in national income, social aspects of development tended to be lost sight of and salvation was sought through those sectors of national economy which promised the greatest returns in the shortest period of time. Development policies consequently focussed primarily on the modern industrial sector and were largely dominated by the requirements of the articulate and progressive urban populations'.²⁰

The situation described by Thompson is reflected in both Zambia and Zimbabwe where the major elements of formal vocational

training have been directed towards supporting modern industrial technology. At a time when an increasing number of school leavers in both countries are seeking first time employment, it is appropriate to examine the events and policy decisions which have led to the present system of vocational education and training in the forementioned countries.

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CHAPTER TWO: THE SETTING

2.1 Company Rule 1889 - 1923

During 1888, representatives of Cecil Rhodes, chairman of the De Beers Company, negotiated with the Matabele king, Lobengula, an exclusive mineral concession covering the area south of the Zambezi.¹ One year later, a charter establishing the British South Africa Company was completed in London. This gave the company the exclusive right to develop mineral resources and the right to govern a large area extending from the Transvaal northwards to the Congo and from Angola to Portuguese East Africa,² and indelibly marked the future historical development of central southern Africa.

The area north of the Zambezi, modern day Zambia, was less accessible to Europeans moving from both South and East Africa. There was also less confidence in the existence of mineral resources north of the Zambezi. Because of the two approaches to this part of Central Africa the area was brought under British Control in two separate areas, Northwest Rhodesia and Northeast Rhodesia.

The Northwest area was subject to a series of controversial mineral concessions and treaties between the dominant indigenous ruler, Lewanika, individual mineral prospectors and the British South Africa Company from 1889 until the final treaty of 1909 which gave the company exclusive mineral rights, land, and the responsibility for administration. Unlike the adjacent territory to the west, Northeast Rhodesia was only subjugated after some ten years of conflict between the forces of the

British South Africa Company and regional tribes, notably the Bemba, Ngoni, Yao and Arab slave traders.³

The dual administration of the two areas was finally brought together in 1911 when Livingstone, the point of entry in the extreme south, became the administrative centre for Northern Rhodesia. The sprawling territory across the central African plateau occupied some 290,000 square miles of sparsely populated country.

The British South Africa Company, together with British government commissioners, continued to control the affairs of both Northern and Southern Rhodesia until 1924 and 1923 respectively. With increasing European migration into Southern Rhodesia during the first decade of the present century the British South Africa Company came under increasing pressure to release more unassigned land. This dispute was interrupted by the First World War, but in 1918 a Judicial Committee of the Privy Council declared that the British Crown owned the balance of unassigned land. Following this decision, the company became anxious to relieve itself of its administrative responsibilities. In 1921, the British Government set up the Buxton Commission to inquire into the problems of the future status of both territories.

South of the Zambezi two alternatives were offered to the white settlers: Responsible Government or union with South Africa. A referendum held in October 1922 chose to adopt the former option. By 'Letters Patent'⁴ of the 1st September, 1923, a new constitution giving Southern Rhodesia 'Responsible Government' under the British Crown was instituted. It provided a

Legislative Assembly elected by the franchised European population, which had wide ranging autonomy. External affairs remained under British control. G. Bennett, writing on this transitional period comments:

"From its inception through the Pioneer Column of 1890, Southern Rhodesia always retained a peculiar status, Whitehall never controlled it either fully or effectively. From being initially part of the personal empire of Cecil Rhodes and his British South Africa Company, it passed in 1923 to the anomalous and contradictory status of a self-governing colony. While the British Government retained nominal powers of review over legislation affecting the African population, it was never able to exercise this power openly".⁵

Unlike Southern Rhodesia, the northern territory had not attracted as many settlers. Consequently, its economy was far less developed and was considered unable to support its own internal administration. However, the territory was a source of African labour for both the extractive industries of Katanga and those south of the Zambezi. The Buxton Commission recommended that Northern Rhodesia should become a Protectorate under the British Crown which would take over the British South Africa Company's administration duties including the control of land. A Legislative Council was established which included elected representatives. In theory there was to be no discrimination, except in the case of liquor and arms, between the races.

2.2 British Rule 1924 - 1953

Northern Rhodesia's development during the British Colonial Office rule was largely based on the wealth derived from the discovery and development of the copper resources along the border with the Belgian Congo. Substantial benefits from the early exploitation of the 'copperbelt' went outside the country:

to Southern Rhodesia, South Africa, taxes to the British Government and continuing royalty payments to the previous company administration.

In 1931, the world market for copper collapsed due to the effects of the world depression and over-production in the late 1920's. Some of the smaller mines closed; for the larger ones it was a temporary setback with extraction and refining commencing on a large scale by the middle of the decade. Further advances in the copperbelt were assured by worldwide rearmament programmes of industrialised nations. The demand for the non-ferrous metal continued through the Second World War and by 1945 Northern Rhodesia was firmly established as one of the world's leading copper producers. In addition to copper, underground mines sunk around Broken Hill yielded rich new supplies of lead as well as zinc and vanadium.

Development of the copper industry drew both more European and African workers to the area. Ndola, strategically placed on the 'line of rail', became the commercial centre of the copperbelt. In 1935, the capital was moved closer to the economic hub of development with Lusaka succeeding Livingstone as the administrative centre.

From the mid 1920's the traditional social structure of Northern Rhodesia began to change with men seeking waged labour away from their village areas. This change in the work pattern was largely as a result of the need to pay poll tax, which had replaced the earlier hut tax, and the growing demand from the Africans for the increasing influx of European-made goods.⁶

Whilst some limited provision was made for African workers to live with their families near their place of work, there was a general preference by employers in the modern sector for highly mobile African labour. Keeping ties with their original villages, it was assumed, would enable the workers to eventually retire to their places of origin. Also, in times of recession, as happened during the slump of 1931-33, African workers could return to their villages. Andrew Roberts suggests that:

"Colonial governments in both Eastern and Southern Africa regarded settled communities of urban, 'semi-civilised' Africans as a threat to white domination".⁷

It was not until the early 1950's that permanent and organised African settlements, with supporting infrastructures, began to be established in the vicinity of the mines. Stabilising the African workforce was assisted by the growing mechanisation in the mining industry. The advent of machines required African workers to learn new and more complex skills and, in turn, there was more of an incentive for the employer to retain these skills at a particular mine by providing urban living conditions.

African reaction to social change led to welfare associations being established in several towns along the 'line of rail' in the early 1930's. However, it was during the later period, 1939-45, that African opposition to colonialism became more organised through the development of more effective welfare societies, culminating in strike action in both mines and railways. Formal African trade unions were established, with some assistance from the British trade union movement in 1947. The majority of the skilled white settlers were employed in the mining industry and enjoyed a monopoly of the skilled opportunities, a situation largely achieved and supported by

discriminatory labour, residential movement and educational legislation. The disparity between the remuneration of the skilled and that of the unskilled workers was quite as glaring in Northern Rhodesia as in Southern Rhodesia, and was essentially due to the same factor, the colour bar. The European Miners Union continued to block the gradual advancement of the African worker, demanding that employers also implement 'equal pay for equal work'.

Commenting on this period of industrial conflict, E. Berg and J. Butler, suggest that whilst African trade unions had a limited involvement with nationalist aspirations, their impact on industrial relations and working conditions was significant:

"The formation of the Railway African Workers' Union represented the end of an era of Rhodesian history when African workers were men without power. They had been unable effectively to change their living and working conditions. They had virtually no hope of promotional, economic, social advance. They had been a working caste. After the rail strike of 1945 the workers became conscious of themselves as a pressure group."⁸

The growth of African movements persuaded most European settlers in Northern Rhodesia to form closer association with the much larger white settler regime in Southern Rhodesia. Attempts at closer links with the south had been, to a great extent, interrupted by the Second World War. Settler opinion in Northern Rhodesia had hardened in favour of amalgamation as far back as 1930 when the British Labour peer, Lord Passfield (Sidney Webb), issued his uncompromising 'Memorandum on Native Policy in East Africa'.⁹ This document clearly indicated that future British policy to its African territories included the paramountcy of native interests. Accordingly, in the post war period, renewed moves were initiated towards closer links with Southern Rhodesia which led in 1953, against African opinion, to

the joining of both Rhodesias with Nyasaland to form a Central African Federation.

2.3 Responsible Government 1923 - 1953

Once established, Responsible Government in Southern Rhodesia was particularly concerned about the land tenure situation. The policy of encouraging European agricultural settlement meant that further land for this purpose was needed. The Carter Report of 1925 ¹⁰ (published in 1931) resulted in the Africans' right to purchase land being severely restricted and emphasised the policy of land segregation between the races. The Carter Commission recommended that out of seventy-five million acres of unapportioned land outside the native reserves, just over forty-eight million acres should be purchased only by Europeans and just seven million acres by Africans. The European purchase area was not only larger than the native area, it included all the urban centres and agricultural land in the medium and high veld areas. Arrighi describes the segregation of land into black and white areas as the "pauperization and the proletarianization of the peasant blacks".¹¹ This redistribution of land took place at a period when the African population was around one million and the white population numbered fifty thousand.¹² The Land Apportionment Act of 1931, which enacted many of the recommendations of the Carter Commission, resulted in Africans being excluded from purchasing or renting property in the emerging cities of Salisbury (Harare), Bulawayo, Gwelo (Gweru) and Umtali (Mutare). In effect, this meant that Africans, employed in an urban area, remained there on a very temporary basis. Sir Robert Tredgold commented that the Land Apportionment Act was a 'White Man's

Magna Carta'.¹³ Robert Blake contends that the Carter Report and following legislation profoundly affected race relations during the succeeding decades:

"The fact remains that under the first Land Apportionment Act, and its successors which tended to be even more rigid and meticulous, many thousands of Africans were compulsorily moved from land which they had occupied for generations. No wonder that the measure became the very symbol and embodiment of everything most resented in European domination."¹⁴

Expectation by the early settlers of discovering a 'Second Rand' in Southern Rhodesia proved to be somewhat disappointing. Although gold was not recovered in great quantities, other mineral deposits: asbestos, beryllium, chrome, copper, iron and nickel were commercially exploited. Following the world wide slump of the late 1920's and early 1930's, the economy of the country gradually improved. This improvement was closely connected with demand for both fuel and foodstocks in the expanding copper industry of Northern Rhodesia. Wankie, (Hwange) in the southwest of the country, was developing as the largest coal producing area in Africa. Transportation of both coal and agricultural produce to the copper mining areas and the export of the raw materials further boosted the established rail network.

During this period of economic recovery, Godfrey Huggins (later Lord Malvern), the first British born Prime Minister of Southern Rhodesia, took office. One significant piece of early legislation brought onto the statute books by Huggins and his party, The Rhodesian Party, was the Industrial Conciliation Act (1934). This measure, based on similar legislation in South Africa, was designed to shelter the white artisan from African competition. European trade unionists were anxious to safeguard

their standard of living by monopolising the skilled and semi-skilled jobs at artificially high rates of pay. Commenting on this period, and in particular the relative affluence of the white artisan, A. J. Hanna states:

'In the building, engineering, printing and railways, wages were two-and-a-quarter times those paid in London.'¹⁵

The act of 1934 and the revised version enacted in 1945, authorised employers and employees to set up Industrial Councils which, when approved and registered by Government, had power not only to negotiate agreements between the parties concerned but to ask the Ministry of Labour to make them legally binding, enforceable by the courts upon the entire industry. In effect, the Councils and Minister acting together were given powers of delegated legislation. These powers denied apprenticeships and other regular training programmes to Africans. The term 'employee' was explicitly stated not to include a 'native'.

Blake describes the Act, along with the Land Apportionment Act and the later Native Registration Act (1946) as "one leg of the tripod supporting white supremacy".¹⁶

Contemporary comments by a Rhodesian settler help to understand matters during the period just before the Second World War:

"The dominating psychological factor in racial prejudice is fear, fear of the black man's rivalry, fear of his political rivalry, fear of his overwhelming numbers. In the circumstances this is not surprising though at the moment there is no more substantial ground for it than the white man's own sub-conscious guilty feeling. If the native were admitted to full partnership it is at least doubtful whether it would be possible to maintain the standard of living of all whites at the present level, under the existing economic system. It is undoubtedly the indirect appreciation of this fact that is behind the determination to keep the native out of the skilled labour market at all costs."¹⁷

The 1945 Industrial Conciliation Act continued to deny the term employee to the African sector of the labour force. The African's status was more aligned to that of a servant without any claim to the rights of an emancipated worker.

During the post-war period, white immigration in Southern Rhodesia increased but the rate of growth was insufficient to support the manpower demands of the economy. Consequently, some African workers, especially in the heavy metal and construction trades, were given opportunities previously reserved for the white artisan. In both 1945 and 1948, African workers in commerce, industry and on the railways took industrial action. These events, together with the forming of African trade unions in Northern Rhodesia, persuaded the Southern Rhodesian Government to provide a system of determining African conditions of employment. The 1948 Native Labour Board Act established a National Labour Board which fixed minimum conditions of employment. The Act was later modified, setting up separate boards for individual industries. No direct African representation was permitted on these boards. In 1954 the Government finally recognised a limited number of trade unions but it was not until the introduction of the new Industrial Conciliation Act of 1959 that Africans were included in the term 'employee'.

2.4 Federation 1953 - 1963

Consideration of forming closer political and economic links between the Rhodesias, and to a lesser extent Nyasaland, dated back to the period of control by the British South Africa Company. These early discussions were largely directed toward

amalgamation of the territories. Amalgamation was viewed by most white settlers as a method of effecting cooperation to develop the area. However, the Rhodesia-Nyasaland Royal Commission of 1939 (The Bledisloe Report) clearly rejected both amalgamation and federation largely on the grounds of differing measures of responsibility granted to Africans in the two territories. The report specifically mentions the restrictive tendencies imposed on African employment opportunities by the 'Industrial Conciliation Act' and the policy of 'Parallel Development'.¹⁹

Undeterred by the Bledisloe Report, the white protagonists revived the movement for closer union soon after World War Two. Both post-war leaders of the Rhodesias, Welensky and Huggins, were strong supporters of a unitary state, preferably one which would not include Nyasaland and its large African majority. Initial doubts about a closer union by the British Labour Government subsided, and the Colonial Office was soon urging the two leaders to consider some kind of federal system of government. Negotiations for the proposed scheme were interrupted by the change of government in Britain. The new Conservative Government gave further encouragement to the scheme and accelerated the pace of negotiations toward federation against widespread African opposition who feared further entrenchment of white settler rule. The Federation of Rhodesia and Nyasaland, under the leadership of Roy Welensky, became a reality in September 1953. After the political conflicts leading up to Federation the initial period of the new structure was reasonably calm.

The Federal Government assumed responsibility for technical aspects of development, economic and financial matters, communication, defence, customs and immigration, non-African education at all levels, higher education for all races and public health. The individual governments continued to exercise power over all 'African affairs', including land, agriculture and education, and responsibility for local government, housing, mining, labour and internal policing.

Economically, the new Federation was booming with the gross national product rising from £350.6 million in 1954 to £448.7 million in 1956.¹⁹ Power relationships in the Federation were strongly biased in favour of Southern Rhodesia because of the large number of white settlers. As a consequence, manufacturing import substitution industries were largely established in Southern Rhodesia. This policy certainly helped to sustain the later Smith regime and conversely continues to hinder industrial development in Zambia. Major development plans were closely linked to the increase in availability of electrical energy. In 1955 a decision was made to build the Kariba dam and associated hydroelectric generating stations. Power from the project was required both for the expanding copperbelt and manufacturing industries in Southern Rhodesia. During the mid 1950's small inroads into the structure of 'Parallel Development' were made. Of particular importance were the amendments to the Land Apportionment Act which in turn allowed the establishment of a multi-racial University College in the European area of Salisbury.

Initial euphoria with the system of Federation shared by most Whites in Northern Rhodesia started to fade away as Southern

Rhodesia became the dominant partner, both politically and economically. This period also coincided with increasing global trends towards decolonisation: (India 1947, Burma 1948, Sudan 1956, Ghana 1957, Malaysia 1957, Nigeria and Belgian Congo 1960). African opposition to Federation, particularly in Nyasaland and Northern Rhodesia, increased rapidly. In 1959 a faction of the African National Congress (ANC), led by Kenneth Kaunda, formed the United National Independence Party (UNIP) which started to exert pressure on the British Government for secession from the Federation and the granting of a new constitution reflecting the African majority. A conference held at Victoria Falls in June 1963, and presided over by the British Minister with responsibility for Central African Affairs, R. A. Butler, agreed to set up governmental committees to arrange the details of transition from Federation to individual governments. These details largely concerned the continued joint ownership of Kariba hydroelectric stations, Rhodesia Railways and Central African Airways. On 31st December, 1963, the Central African Federation was formally ended.

2.5 Post-Independence - Zambia

Independence for the new state of Zambia was declared on 24th October, 1964. Zambia chose to become a Republic within the British Commonwealth; Kaunda became Head of State as well as chief executive. Although independent, the newly created State was a long way from being a unified nation. The ruling party UNIP was regarded by the opposition ANC as essentially a 'Bemba Party', whilst many looked upon the ANC as only representing 'Tonga' interests. Further opposition came from the traditional rulers in Barotseland who, under the previous colonial regime,

had maintained a certain degree of autonomy. Following eight years of political conflict, a new constitution was approved in Parliament in December 1972 which made Zambia a 'one-party participatory democracy'.

In 1964, Zambia inherited a substantial and prosperous industrial base. This prosperity was based almost entirely on copper and other metal production. From Independence until the early 1970's, Zambia's GDP expanded rapidly in real terms and was mainly linked to higher copper output and the increase in world copper prices.²⁰ This apparent wealth made possible an import orientated economy and provided the revenue for the support of an extensive infrastructure and public service. In order to gain control of the mining industry, the Government in 1969 acquired a 51 per cent interest in the equity of the companies. The Government's major economic objectives were to increase production and employment and to Zambianize middle to higher level management positions in the mines. In turn, revenue from the industry was to be channelled into social projects (health, education and housing). Since the early 1970's, the wide fluctuations in the copper price have had their effect on economic growth. During the period 1968-72, the Government also took majority shareholdings in many leading commercial organisations including banks and insurance companies. Further economic problems arose during this period from the decision by Rhodesia to declare a state of unilateral independence. As a result of subsequent United Nations backed economic sanctions and the closing of its northern border, the illegal regime swiftly undermined Zambia's export links through to the port of Beira in Mozambique and the South African ports.

An alternative route to the Indian Ocean seaboard was effected in 1975 when the Chinese assisted TAZARA railway was completed. This line joined Zambia with Dar es Salaam. However, recurrent operating costs have continued to beleaguer this venture. Other schemes designed to reduce dependence on transport links with Southern Rhodesia included the oil pipeline from the Indian Ocean (Tazama), upgrading of the Great North Road and the formation of Zambian Airways, the latter with assistance from Alitalia.

Jan Pettman points out that although this contingency planning:

"diverted resources away from planned development it did accelerate disengagement away from the South and in doing so marked the progressive dismantling of central Africa as an economic unit, and provided Zambia with a more secure national foundation for its economy".²¹

However, in 1974 the price of copper plummeted whilst oil prices increased. This combination resulted in a crippling shortage of foreign exchange, reduction of imports and increased inflation.

Whilst economic diversification and import substitution have been a feature of National Development Plans, the mining sector and copper mining in particular, despite its declining ore grades, continue to dominate the GDP. In 1980, minerals still accounted for 98 per cent of Zambian exports.²² The agricultural sector is underdeveloped and the inadequate expansion of food production has necessitated substantial imports of basic foodstuffs which, in turn, have adversely affected Zambia's balance of payments position. Figures issued by the FAO in 1974 underline the weakness of the agricultural sector. Sixty-nine per cent of the population were involved in agriculture, but its contribution to the GDP was only 6 per cent

and its share in the value of trade exports was a mere 1 per cent.²³

Marcia Burdette points out that:

"the fatal flaw in a strategy of import substitution and heavy export reliance appeared after 1975. The bottom began to drop out of the copper market. This meant a crucial shortage of foreign exchange to purchase the supplies vital to import substitution industries and also luxury goods needed to satisfy the increasing consumer demand from the wealthier sections of society."²⁴

Attempts by the Zambian Government to halt the decline in revenue from its mineral exports have been unsuccessful as commodity prices are negotiated and set on external metal exchanges, price levels being determined by supply and demand. In the case of copper, the increased use of fibre optics and electronics in the communication industry will probably mean the continuing decline of the profitability of the copper industry. Moreover, economically recoverable reserves of copper are expected to be nearing exhaustion by the end of the 1990's. Given this situation, the mining industry is attempting to diversify its mineral recovery programme with considerable investment in plant and equipment for increasing its yield of cobalt and zinc. A mineral exploration programme has been launched to prospect for chromium, nickel, iron, tin, tantalite, uranium and oil. Also, large phosphate deposits were found in eastern Zambia in early 1982 which, if developed, will provide a valuable agricultural input. By the late 1970's the cumulative effect of continuing to rely on the vulnerable export sector to provide the finance for further development projects was that Government and State controlled industries began to turn more to debt financing to keep both industry and State solvent. In relative terms, Zambia's debt situation is amongst the worst in

the world. Figures from the World Bank indicate that the total debt at the end of 1987 was US\$6.4 billion, reflecting a debt growth of 14 per cent over the previous year, making Zambia's debt over 3.5 times the country's GDP.²⁵

Waged employment in the formal sector has, due to the present state of the mining industry, declined in recent years. During the period 1975 to 1983 there was a 7.8 per cent reduction in formal employment.²⁶ Since the mid 1970's, the main burden for generating formal employment has fallen to the public sector. However, as Zambia's economic crisis deepened in the early 1980's, the Government has been forced to reduce the number of civil servants. Currently, nearly all vacant posts in the public sector are frozen. Between 1980 and 1987, GNP per capita is estimated to have declined in real terms by an annual average of 4.4 per cent; during the same period Zambia's population increased by an annual average of 3.5 per cent.²⁷ As a result of the prolonged recession, more and more people are having to rely on the informal sector for a meagre living. The situation is further accentuated by the growing number of young people who are unable to find either school places or regular waged employment.

During the period 1985-87 the Government introduced a number of unpopular fiscal measures in response to the deepening economic crisis, which resulted in outbursts of civil unrest. In December 1985, students demonstrated against the reintroduction of boarding school fees for pupils at primary and secondary schools and student boycotts led to the closure of the university in May 1986. In short, Zambia is experiencing a high population growth rate at a period when formal employment

opportunities are falling. The corollary of this desperate situation is taken up in Chapter Four, section 4, when the increasing amount of people turning to the informal sector is discussed.

The growing economic difficulties have tended to temper economic nationalism and open up the economy to increasing foreign investment. These steps, incorporated in the 1977 Industrial Development Act, have included lessening income taxes, customs and excise taxes and a loosening of some foreign exchange controls. A new policy towards commercial agriculture has been implemented. These new policies are very much in line with the suggestions of the IMF and other commercial interests. Burdette concludes that:

"the political class in Zambia began to be entrapped in a new dependency this time upon the financial institutions of the West".²⁸

Recently, and as a reaction to the combined problems of a deepening recession, the Government, with World Bank support, has espoused a development strategy which puts more emphasis on the promotion of small-scale industries. The argument for encouraging small-scale industries is the belief that they require less capital, use locally produced inputs and because they tend to use labour-intensive technology. The problem with this new strategy is that policy is not accompanied by the necessary services and infrastructure for its implementation.

Although by 1986 there had been a slight improvement in the world market price for copper, Zambia's debt crisis worsened considerably. The interest bill alone represented 40 per cent of the Government budget compared with 15 per cent in 1980.²⁹

The major cause of this enormous debt burden is the interest payments to foreign institutions on borrowings made during the 1970's and early 1980's. These debts have been aggravated by successive devaluations of the Kwacha. Faced with falling export revenues and hard currency repayments, Zambia increasingly encountered severe shortages of foreign currency. Encouraged by the IMF to stabilize its currency dealings (reduction of the blackmarket), in 1985 Zambia introduced regular foreign currency auctions. These auctions favoured those organisations able to successfully bid for foreign currency. For those companies unable to acquire hard currency it meant a restricted flow of essential components, which resulted in layoffs and short-time working.

During this period, the rate of exchange moved from 3 kwacha : 1 pound sterling to approximately 33 kwacha : 1 pound sterling.

³⁰ Many companies, successful at the foreign exchange auctions, found it more profitable to import goods and sell them at inflated prices rather than invest the money in Zambian production. Coupled with a reduction of food subsidies on staple maize products and a fall in the real value of earnings, increased social and political tension, culminated in the December riots of 1986. In sterling terms, a skilled urban worker's wage during this period was £15 or less per month.³¹

In the aftermath of the riots, food subsidies were restored and the foreign exchange auctions abolished leading to a break with both the IMF and World Bank in May 1987. Following the breach with the IMF, Zambia pursued its own 'National Economic Recovery Programme' with the theme of development from its own resources. The break with major multi-lateral agencies and shortages of foreign exchange, have hit education in Zambia very hard but

rural areas, as we shall see in succeeding chapters, have been much more seriously affected by shortages than urban areas.

2.6 Rhodesia - UDI

Following an intensive series of negotiations between the British Government and the Rhodesia Front Party led by Ian Smith, ties with Britain were severed on 11th November, 1965, when a Unilateral Declaration of Independence (UDI) was promulgated. The British Labour Government had offered formal Independence if certain principles were fulfilled. The first and most important of these was 'The principle and intention of unimpeded progress to majority rule'. Other principles centred around the need to reduce racial discrimination in all aspects of life. Implementation of such principles would have required a radical change in Rhodesia, a change not just in the legal constitution but a whole new way of life for the minority white population, the majority of whom were not prepared to accept a change of this nature.

Resultant action by the British Government included a set of mild sanctions, i.e. expelling Rhodesia from the sterling area; ban on the purchase of Rhodesian exports. These were later reinforced by United Nations sanctions (made mandatory in 1968), notably the oil import embargo.

Writing on sanctions applied to Rhodesia, Jorge Jardim supports the widely held view of their ineffectiveness:

"The support given by the international oil companies was undoubtedly the most decisive factor. Without their encouraging assurance it is improbable that UDI would ever have been declared. Supplies were made in such a way, over twelve years, that it is impossible to accept that the governments which had responsibility for making sanctions effective could claim ignorance as to what took place."³²

These early skirmishes gave way to a bitter internal armed struggle between the nationalist movement and the Rhodesian Government forces. By 1979 the conflict had resulted in the deaths of 27,350 people and the uprooting of around one million Africans.³³ Following the end of Portugal's sovereignty in Mozambique, which resulted in increased armed incursions by Zanu forces along Rhodesia's eastern border and increasing economic difficulties, the Rhodesian Front Government sought to settle the conflict through an internal settlement. The Government policy of conceding too little too late proved to be unacceptable to the Patriotic Front (Zanu and Zapu). As the struggle intensified, the United States and Britain, with tacit support from South Africa, swung towards opposing the rigid and intransigent Rhodesian regime. On the 21st December, 1979, at Lancaster House, London, the UDI chapter closed with the Rhodesian Front Party reluctantly accepting the principle of majority rule. Four months later, April 1980, the Zanu (PF) party, under the leadership of Robert Mugabe, won a landslide electoral victory.

2.7 Post-Independence - Zimbabwe

At Independence, the Zimbabwean Government acquired a relatively advanced, diversified, integrated, and dynamic capitalist economy. The settler economy had well-developed manufacturing and commercial agricultural sectors, the latter having both export capacity and a near self-sufficiency in domestic food production. Zimbabwe also had an active mining industry which produced and exported gold, asbestos, nickel, copper, silver, tin, iron ore, cobalt, chromium and coal. However, there also existed extreme inequalities in the distribution of income, land

and capital. Given this situation, the Government embarked upon a programme of 'Growth with Equity'.³⁴ The objective of the regeneration programme was to bring about a substantial rate of economic growth and to direct the pattern of growth to bring about a more equitable distribution of the factors affecting that growth.³⁵

With the lifting of sanctions and a large inflow of economic aid, the economy expanded rapidly, allowing the Government to embark on its equity programme. Major thrusts were directed toward land resettlement schemes, Government involvement in manufacturing, mining and commercial ventures and a large increase in the provision of school places, the latter providing schooling for the age groups denied education during the war years. The Civil Service and Public Sector grew rapidly as more and more jobs became available to Black Zimbabweans.

In 1982, the economy began to slow down as the effect of the international recession grew. Commodity prices fell dramatically, inflation increased, and coupled with the first of three consecutive years of drought, the Zimbabwean economy began to falter. Thus, only a few years after Independence, the Government found itself having to repay foreign debts and to struggle with recurring public deficits. Zimbabwe has made a determination to service its debt repayments and has done this at some cost to its own economy by import compression. Committed to social reform, the Government was forced to adopt a fiscal policy which included: devaluation of the currency, increased taxation, budget deficits and, in 1984, a severe restriction on the outflow of remittances from profits, dividends and capital was introduced. By 1985 there had been

major progress in restoring a reasonable balance of payments position, but the budget deficit remains high. A recent World Bank report suggests:

"In view of the severe constraints and difficult environment, a remarkable amount was achieved in the first five years of independence".³⁶

Later in the World Bank report, suggestions are made that if economic growth is to be sustained, some of the Government's social reforms may have to be tempered. It points in particular to the rapid increase in the provision of school places and the increasingly high cost to the public sector.

Zimbabwe, like Zambia, is a member of the South African Development Co-ordination Conference (SADCC) which seeks to reduce the economic dependence of Southern African countries on South Africa. Also, both nations are members of the Preferential Trade Area for Eastern and Southern African States.

Although few firm conclusions can be drawn from these first years of Independence, the issues of land redistribution and full employment are bound to loom very large in any discussions involving the political and economic future of Zimbabwe. The land issue which lay at the heart of the independence struggle is viewed by some politicians as the panacea for Zimbabwe's worsening unemployment problem. With its popularity at a low ebb there are increasing calls for the Government to step up its sluggish land redistribution and settlement programme. The Government is also considering a number of measures to restructure the economy, including some trade liberalisation and relaxing the restrictions on financial remittances. Until these measures are taken and so long as so much control is exercised

over parastatal organisations and indirectly, private companies, economic stagnation is likely to continue.

It is clear that the formal economy will not generate anything like enough jobs for the 300,000 secondary school leavers with 'O' Level and 'A' Level qualifications who will flood the market annually from 1990 onwards. But it is equally clear that very few of these school leavers seeking employment in towns and cities as bank clerks, computer programmers, technicians and salesmen will be satisfied to take up peasant farming with a few hectares of land in rural areas. There is no doubt that the escalating number of job seekers is encouraging the Government to look again at the academically biased secondary curriculum, especially as the 'O' and 'A' level pass rates decline year by year.

References: Chapter Two

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- ² The Charter was granted to the British South Africa Company by the British Government on 29th October, 1889.
- ³ Unlike the Ndebele tribe of Matabeleland and the ruler of the western area of Northern Rhodesia, Lewanika, who signed mineral concession documents, tribes in Northeast Rhodesia never accepted the sovereignty of the British South Africa Company nor the British monarch.
- ⁴ The 'Letters Patent' created a Legislative Assembly of thirty members. The electoral franchise was based on property qualification together with a literacy test. Electors had to be British subjects and over twenty-one years of age. Formally there was no racial discrimination but in practice the electorate was almost exclusively white.
- ⁵ G. Bennett, *British Settlers North of the Zambezi, 1920 - 1960*, in *Colonialism in Africa 1870 - 1960*. Ed. L.H. Gann and P. Duignan, Cambridge University Press, 1970, p. 58.
- ⁶ On the issue of poll taxes, B. Davidson points out that they were previously introduced in the Cape Colony by Prime Minister, Cecil Rhodes, in 1894. B. Davidson, *Africa in Modern History*, Penguin, London, 1978, p. 110.
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- ¹⁸ Document 4A. The Movement for Union of the Rhodesias. From Rhodesia-Nyasaland Royal Commission Report (March 1939). The Bledisloe Report, p.479.
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CHAPTER THREE: EDUCATIONAL GROWTH – ZAMBIA AND ZIMBABWE

3.1 Pre-European Education

The UNESCO International Standard Classification of Education defined education as:

"Organised and sustained communication designed to bring about learning.",¹

Both Zambia and Zimbabwe, as elsewhere in other parts of Africa, experienced traditional education prior to European migration into Central Africa. Such education was characterised by the daily requirements of a largely subsistence agricultural population and the established customs of tribal life. The form that education took was that of observing and following the examples and practices of older members of the family group and by information imparted through traditional stories. This combination of practice and verbal inculcation gave the African child a learning experience designed to fit him or her for adult life in society which was not technologically as differentiated as its modern equivalent.

Because of the nature of traditional African society, both politically and socially, a person's position in life was largely dependent upon ascriptive criteria such as sex, age, group, etc. This in turn required an education system which was non-elitist, prepared to educate young people for a fixed position in society. However, Helen Callaway, writing on indigenous education in West Africa, warns against assuming that all traditional learning was of a universal nature.

"Although certain characteristics may have been universal in Africa, as indeed in all societies, it is obvious that indigenous education varied to the same extent that societies differed from each other. A child growing up in a hunting band of Mbuti Pygmies learned a different body of knowledge and a different set of

skills from a child of the agricultural, politically centralised kingdom of the Ganda."²

Traditional education tended to be an integrative function for early African society, directed towards the transmission of tribal culture from one generation to another whilst also flexible in its response to serve local communities. Furthermore, early African education included certain elements of the modern definition: 'organised, sustained and designed', but it was less individualistic and more collective in character.

Papa Gueye N'Diaye writes that:

"African education was a long conscious process of intellectual and cultural levelling in the sense that its contents and style were generally approved by all."³

Yet there was no strong institutional base, apart from the tribe, upon which African traditions could develop during and after the colonial period. Those African traditions which were preserved have been through the family and village society rather than through educational structures.

3.2 Early European Influence on African Education

In both Rhodesias, formal education, prior and during the period of British South Africa Company rule, was almost entirely in the hands of churches and missions. North of the Zambezi, François Coillard of the Paris Evangelical Missionary Society established a mission station and evangelically based school in 1885 at Sefula, Barotseland. South of Zambezi, a mission station and associate school were built at Inyati, Matabeleland, in 1859, some thirty-one years before permanent European settlement. The view adopted by Groves⁴ and later by

Bone⁵ was that all these early attempts to introduce formal education were largely ineffective due to opposition by the traditional leaders. Another contemporary writer on educational affairs in Africa, Foster,⁶ suggests a deeper root cause of this early rejection of European education, maintaining that educational establishments alone do not provide enough impetus for social change unless they are preceded by or associated with other major changes in the economy or the political system. It is significant that African interest in western education did not dramatically increase until after the establishment of European settlement and the strengthening of political control.

Post 1899, the British South Africa Company recognised the socializing benefits to be gained by allowing the indigenous African access to a course of study at an approved mission school. The company encouraged the building of permanent schools by awarding land grants to various missionary societies. In addition to religious instruction, the curricula at these early mission schools tended to emphasise the basic skills of reading and writing along with practically-orientated building work.

The first attempt in the northern territory to establish schools for Africans outside the missionary sector occurred in 1907 when the Barotse National Trust Fund (agreement between BSAC and Chief Lewanika) founded an elementary school in Barotseland. In the southern territory, H. S. Keigwin, then Native Commissioner for Sinoia, proposed the setting up of two Government schools. These schools would concentrate on developing village industries, pottery, weaving of soft fibres,

building skills and agricultural work. The latter study was carried out on attached farms which sought to make the two schools self-sufficient in food stocks. The two schools, Domboshawa in the Chindamora Reserve, Mashonaland, and Tjolotjo, Gwai Reserve, Matabeleland, were opened in 1920 and 1921 respectively.⁷

Tardiness on the part of colonial authorities in both territories to become directly involved in indigenous education contrasted with contemporary education in Francophone Africa. Writing on educational developments in Guinea, 1900-43, R.W. Johnson relates the strong metropolitical feelings against clerical education during the first decade of the twentieth century.⁸ This resulted in French colonial administration being virtually required to laicise education. With this background of a secular approach to education, the Lieutenant Governor of Guinea, in 1909, set the following three main aims of colonial education in that territory:

- i) "the formation of native auxiliaries - telegraphists, interpreters, clerks, etc. destined to assist us in our administration
- ii) "the formation of skilful artisans."
- iii) to make the school an instrument for the diffusion of our civilisation"⁹

The third aim is a well-documented article of French colonial policy. However, the first and second aims are at striking odds to the situation in British Central Africa, where skilled jobs were, for the next forty years, the preserve of the White settler.

Early British policy on African Education was characterised as 'adaptive', a policy evolved from the Educational Committee of

the Privy Council to the Colonial Office in 1847 and the Phelps-Stokes reports of 1922 and 1925.¹⁰

The essential thrust of the latter reports was that the African had to be transformed and this would be largely accomplished through education. Unlike the contemporary French model, it would not be education directed towards assimilation of European culture, but a system emphasising 'education for life', meaning education which had agriculture and rural skills as the mainstays of its curricula. Lewis Gann¹¹ in his book, 'History of Northern Rhodesia', gives an interesting insight into the progress of Africans in the civil administration of the northern territory around 1930. He notes that, as a direct result of pressure from the British Labour Government for more employment opportunities for Africans, the colonial administration graded the various categories of workers which it employed. Unfortunately, Gann does not record the number of workers in each category.

5th Grade: compositors, printers, binders, telegraphists, telephonists, motor mechanics and clerks

4th Grade: tailors, storemen, linesmen, road dip tank foremen

3rd Grade: post, telegraph and district messengers, policemen, prison warders

2nd and 1st Grade: these two grades were for workers with no particular skills"

Resultant action from the Phelps-Stokes Commissions and other missionary conferences of this period on the future policy of African Education brought about increased Government support for this sector of education.¹² This support took the form of annual grants for approved missionary schools rather than the direct provision of schools for Africans. Post 1923 saw both

the northern and southern territories lay the foundations of administrative departments of African education. By 1930, Northern Rhodesia had its first fully-fledged Department of Native Education. Two years earlier, a separate department of Native Education was established in Southern Rhodesia.

Implementation, in the Rhodesias, of policies advocated by the Phelps-Stokes Commissions included the setting-up of basic teacher training programmes. Early initiatives in this field included the Jeanes schools, named after Anna Jeanes, a Philadelphian philanthropist who had supported a programme of community development in the Southern States of America. Helped by American finance, eight Jeanes centres were eventually established in east and central Africa.¹³ This approach to education, emphasizing community development rather than the individual, was well-suited to the programme of African education which both Rhodesian administrations had in mind.

The Government of Northern Rhodesia became involved with the Jeanes school at Mazabuka in 1929 and the Government school at Domboshawa (males) and mission school at Hope Fountain (females) became Jeanes centres in Southern Rhodesia. After completing a two year course of study, the Jeanes' teachers joined village schools, teaching community skills (agriculture, health and building). As academically biased educational facilities in both countries increased, the popularity of the concept of adaptation and 'education for life' waned with the Jeanes experiment ending in the early 1940's.

Up until 1939, when the Government opened a secondary school in Munali, near Lusaka, there were no officially recognised secondary schools in Northern Rhodesia. In the same year, missionaries without Government assistance, established the first secondary school in Southern Rhodesia for Africans at St. Augustine's Mission, Penhalonga, near Umtali. Goromonzi School, Mashonaland, was the first Government secondary school in the territory. Opened in 1946, the school provided Africans with a four-year secondary course of study leading to the Cambridge School Certificate. Richard Hall¹⁴ offers some insight into the number of Africans attending school in Northern Rhodesia during the early 1940's. In the period, 1939 to 1943, enrolments increased in Government and aided schools from 42,283 to 93,505. Hall notes that in the entire territory there were only thirty-five African secondary school students and that the vast majority of pupils attending primary schools were enrolled in the first three grades.

As in many countries, 1945 was the beginning of a new chapter for Central Africa - new wave of European settlers, renewal of African political awareness, new technology, etc. It would therefore seem appropriate to pause and acknowledge one of the main players in the previous seventy-five years.

There is no doubt that many of the school programmes which were available to Africans in Northern and Southern Rhodesia in 1945 evolved as a result of missionary endeavour. Whilst the direct contribution of the church towards education, particularly vocational, has now lessened, their past help, despite different regulations and budgetary provisions, contributed considerably more than the parallel Government system to

establishing Africans in a potential position where they could compete for places with their white counterparts. Also, as we shall see in the next section, the church was instrumental in establishing private schools for the White sector of the community.

3.3 European, Asian and Coloured Education (1900 - 1953)

European education in the Rhodesias started at the turn of the century as White settler migration increased. Early elementary schools were begun under the auspices of various mission and parental organisations. The first formal school for Europeans was opened in 1892 in Salisbury by the Dominican order. Plumtree School, south of Bulawayo, and Chaplin School, Gwelo, were opened by the BSAC administration in 1902 and 1903 respectively.

In Northern Rhodesia, with its smaller White settler population, European schools were established at a slower rate than in the south. Indeed, Hall¹⁵ recalls that in 1925 the number of school age children was around 900 with more than one-third of this group not attending any form of formal schooling. He goes on to suggest that the situation was a result of parental poverty and indifference to education. As late as 1935, an Inter-Government Conference on education, held in Salisbury, continued to recommend that pupils in Northern Rhodesia and Nyasaland wishing to further their education beyond Standard VII, should do so in the Southern Rhodesian education system.¹⁶ Children from the northern territory were financially assisted by bursaries from the British South African Company.¹⁷ These early European secondary schools

offered courses which were heavily biased toward academic study and prepared students for the South African Senior Certificate of Education.

With growing concern about the narrow parameters of European education, an HMI Inspector from the Board of Education in England and Wales, H.F.B. Fox, carried out an investigation into education in Southern Rhodesia. His terms of reference were to examine:

The efficiency, adequacy and suitability of the present system of education for meeting the needs of those entering the professions, industry, commerce, agriculture and mining.¹⁸

Fox's brief also included looking into the suitability of the very formal examination system.

The resultant report, published in 1936, stressed the need to provide facilities:

'more suitable to the needs and capacity of a very large number of children',¹⁹

Solutions were largely centred around a 'tripartite system of education', academic high, technical and modern schools. To a large extent, the main recommendation anticipated the theme of the Spens Report into the structure of education in England and Wales in 1938. Following some initial reluctance to change, the main recommendations of the Fox Report were included in the Education Act of 1938.

Unlike the British model of tripartite secondary education with its separate and divisive hierarchy of schools, Southern Rhodesia chose to adopt a bi-lateral approach with a particular secondary school offering both 'academic' and 'modern' streams. A technical curriculum was implemented at the

Bulawayo Technical School. The established liberties of the European sector of the population ensured parental choice of secondary curricula for their children. However, the modern and technical curricula remained an unpopular choice; figures issued in 1951 show that while 57 per cent of Europeans chose to enter academic classes, only 31 per cent selected modern classes and 12 per cent entered the technical school.²⁰ Parental freedom in choosing a particular secondary school for their children was affected by the post-war influx of European immigrants to Southern Rhodesia. The Education Amendment Act, 1951,²¹ brought into effect residential zoning restrictions, limiting the choice of Government secondary schools to those available in the immediate vicinity of the pupil's home.

Responding to increasing immigration and a rising birth rate, the Government of the northern territory decided to provide additional secondary school facilities in the main urban areas. By 1951, there were seven Government schools where pupils could take the Cambridge School Certificate and two years later pupils were able to sit for the Higher School Certificate.

During a period when curriculum changes were having increasingly important effects on the lives of pupils in the European sector of education, Asian and Coloured (i.e. mixed-race) children had no opportunities for secondary education in both Northern and Southern Rhodesia. A report published in 1934,²² recommended that compulsory education be applied to all Coloured children between the ages of 7 and 15 years, living within a three mile radius of a suitable school. The same committee saw no differentiation between the various types of Coloured children. This recommendation was incorporated into

the Education Act of 1938. However, it was not until after the end of the Second World War, with a Commission of Inquiry into the social welfare of the Coloured community in Southern Rhodesia, that steps to implement the 1938 Act took place. The Commission of Inquiry in 1946, under the chairmanship of Justice Hugh Beadle, recommended the Government to provide a separate secondary school for the Coloured community. Bulawayo, with its heavy concentration of Coloured people, was chosen as the site for the new school. With an original emphasis towards the teaching of handicraft skills and the 'modern' curricula, the Founders High School at Barham Green, Bulawayo, opened in 1952.

As the Federal period approached, there is an impression that the relative positions and programmes for African, European and Coloured education were 'comfortably in place', a favourable position, politically and administratively, to launch the Federal experiment.

But also, as we shall see in the next section, the onset of the Federal phase brought doubts and agitation for fundamental changes to the structure of education. For Zimbabwe in particular these conflicts and strains are still very apparent today.

3.4 Education during the Federation Period (1953 - 1963)

The introduction of Federation in 1953 brought changes to the administration of education in both Northern and Southern Rhodesia. All affairs concerning African education continued

to be the responsibility of the three territorial governments. In the case of Northern Rhodesia and Nyasaland, Federation ensured that the British Colonial authorities could influence the future development of this sector of education.

European, Asian and Coloured education in the three countries of the Federation became the responsibility of the Federal Government through its Education Department. The headquarters of the Department was based in Salisbury and was responsible for future educational development, administration and the inspection of school facilities. The Federal authorities also sought to control the future development of higher education. However, this did not prove acceptable to the British Government who favoured the development of higher education along multi-racial lines.

African education in the southern territory during the Federal period was largely centred around the development of the primary sector. A five year plan, 1956-1961,²³ emphasised the allocation of resources towards achieving primary education for all African children in urban areas to at least Standard 3. This plan brought about a broad base and a tiny apex in African education. The Rhodesian Education Commission of 1962, chaired by A. V. Judges, a professor from London University, highlighted the fact that the transitional rate from primary to secondary school was only 15.7 per cent.²⁴ This figure contrasts with a total primary school enrolment ratio of 110 per cent of the primary school age group.²⁵

The Commission was largely a result of the increasing pressures to reappraise the future direction of education, not only in the Federation but across the whole of the continent. The focal point for this exercise was the 1961 UNESCO sponsored conference in Addis Ababa.

Terms of reference of the Judges Commission included the relationships between State and State-aided schools, allocation of resources and the various varieties of primary education. Included in the Commission's 147 recommendations were several which attempted to redress the imbalance in the allocation of resources between African and European systems of education. Commenting on teacher training programmes, the report made one of the first clear statements that future policy in this sector of education should be along multi-racial lines.²⁶ Three years after the publication of the report the Government of Rhodesia announced its 'ten year' plan for African education. Continuing along separate racial lines, the long term plan sought to achieve two years of secondary education for at least 50 per cent of African pupils by 1975.

Educational opportunities for Africans in Northern Rhodesia during the early period of Federation were mainly limited to primary schooling. Combined efforts of Government and Missions concentrated resources on expanding primary education and lower secondary. By the end of the Federal decade (1963), some 23,000 pupils were completing Standard 4 of primary school, whilst 843 pupils successfully passed Form II of the secondary education system.²⁷ This pattern of development mirrored the contemporary model in Southern Rhodesia during the same period. The Northern

Rhodesian Department of African Education was upgraded to become a full Ministry in 1964.

Significant developments during the Federal period affecting European, Asian and Coloured education were centred around attempts to reduce the various anomalies which existed between the three territories of the Federation. These included compulsory education, fees, length of schooling, curriculum and the extent of Government control over the private sector of education.

Following investigations into the suitability of the European school curriculum, Frederick Bray, Head of the division of Technical education in the Federal Ministry of Education, criticised the system of bi-lateral schools. Bray's report²⁰ contended that pupils in the bi-lateral schools who opted for the less academic stream were only being marginally exposed to studies which would equip them for craft level vocations and further technical studies at Bulawayo or Salisbury Technical Colleges. The report proposed that within the European sector of education there should be more provision for additional specialist technical schools. However, the Federal Ministry of Education was not prepared to move away from its policy of bi-lateral schools. Arguing that the sparseness of the European population in many parts of the Federation made it essential that manpower and physical resources be concentrated, the Ministry did take the point that more emphasis should be placed on the acquisition of technical skills rather than an assimilation of technical knowledge. Towards achieving this aim, the South African National Technical Certificate was replaced with the more practically orientated City and Guilds of

London Institute curriculum for those students attempting technical subjects.

An important educational landmark achieved during the Federal period was the opening of the University College of Rhodesia and Nyasaland at Salisbury in 1957. Established with the assistance of British aid and a special relationship with the University of London, the University College provided the first experience of non-racial higher education in the Federation. Beginning with specialist degree courses in Arts, Science and Education, the curriculum contrasted with the more general programmes offered at South African universities. The University College continued its association with British higher education when, in 1963, a Medical School, affiliated to Birmingham University, was opened to train doctors for the expanding health services of the region.

A constituent part of the University College was the Rhodes-Livingstone Museum at Livingstone and the Rhodes-Livingstone Institute in Lusaka. In the latter years of Federation, when national independence for Northern Rhodesia was becoming a reality, the Lusaka institution was incorporated as a founding institution in the new University of Zambia.

History will probably credit the establishment of the University College as the major controversial issue to have been resolved during the Federal period. However, doubts expressed by Frederick Bray in 1958 as to the direction that vocational education should take, is one of the rare public statements questioning the purpose and nature of this sector of education. Certainly his successors in Zimbabwe have avoided seeking

answers to this issue. This point will be returned to in Chapter Five when other aspects of vocational education are introduced.

3.5 Development and Organisation of the Zambian Education System

The average level of education of the Zambian population at the time of Independence was amongst the lowest of British dependencies in Africa. Therefore, one of the priority areas for investment in post-independent Zambia was the education system.

Following Independence in 1964, the Zambian Government has adopted a series of development plans. Responsibility for the planning and coordination of national development is the National Commission for Development Planning, in the Office of the President. Each of the five national development plans have emphasised various priorities for the development of education. The Emergency Development Plan (1964), the Transitional Development Plan (1965-1966) and the First National Development Plan (1966-1970) focused on the need to expand the number of school places available across all sectors of education. The Second National Development Plan (1972-1976) concentrated on both qualitative and quantitative features. The Third National Development Plan has moved towards a change in the structure of education and continues to seek a higher quality of education.

The Emergency Development Plan of 1964 made provision for the previously segregated schools of the former Federation to be open to all races. During this initial phase of educational development, plans were laid down to have at least four years primary education for every 7 year old child by 1970. In the same development plan, secondary education was made available to

students who had successfully completed the full seven years primary period and passed the secondary selection examination. Duration of the 1965 secondary model was five years leading to the University of Cambridge School Certificate. The previous provision of a sixth form was discontinued; entry into higher education was in future to be made from the five year secondary course.²⁹

Prior to and for several years after Independence, technical education was provided at the basic level by Government, local councils and mission stations which operated trade schools. Admission to these schools was usually gained following the completion of primary education. Courses offered at these schools tended to be limited to those connected with the building industry: carpentry, joinery and masonry. Floating between the pure academic secondary school and the trade institutes were several World Bank funded secondary schools with technical and agricultural departments. Notably, Hillcrest (Livingstone) and David Kaunda (Lusaka) successfully operated this model of secondary education for longish periods supplying a large proportion of the intake to the Natural Science/Engineering Departments at the University of Zambia and the Zambia Institute of Technology. However, in the tight fiscal situation of the past twenty years, most of the practical facilities at these schools have suffered through lack of maintenance and a shortage of spare parts.

Government departments, other than Education, and parastatals (Posts and Telecommunications, Zambia Railways, Government Printer) also offered trade training, mainly for their own requirements within their particular organisations. Initially,

entry requirement for these 'in-house' institutions was the Primary School Leaving Certificate but as more students attained this level of schooling the entrance level was raised to Junior Secondary Certificate and eventually to the Higher Secondary qualification.

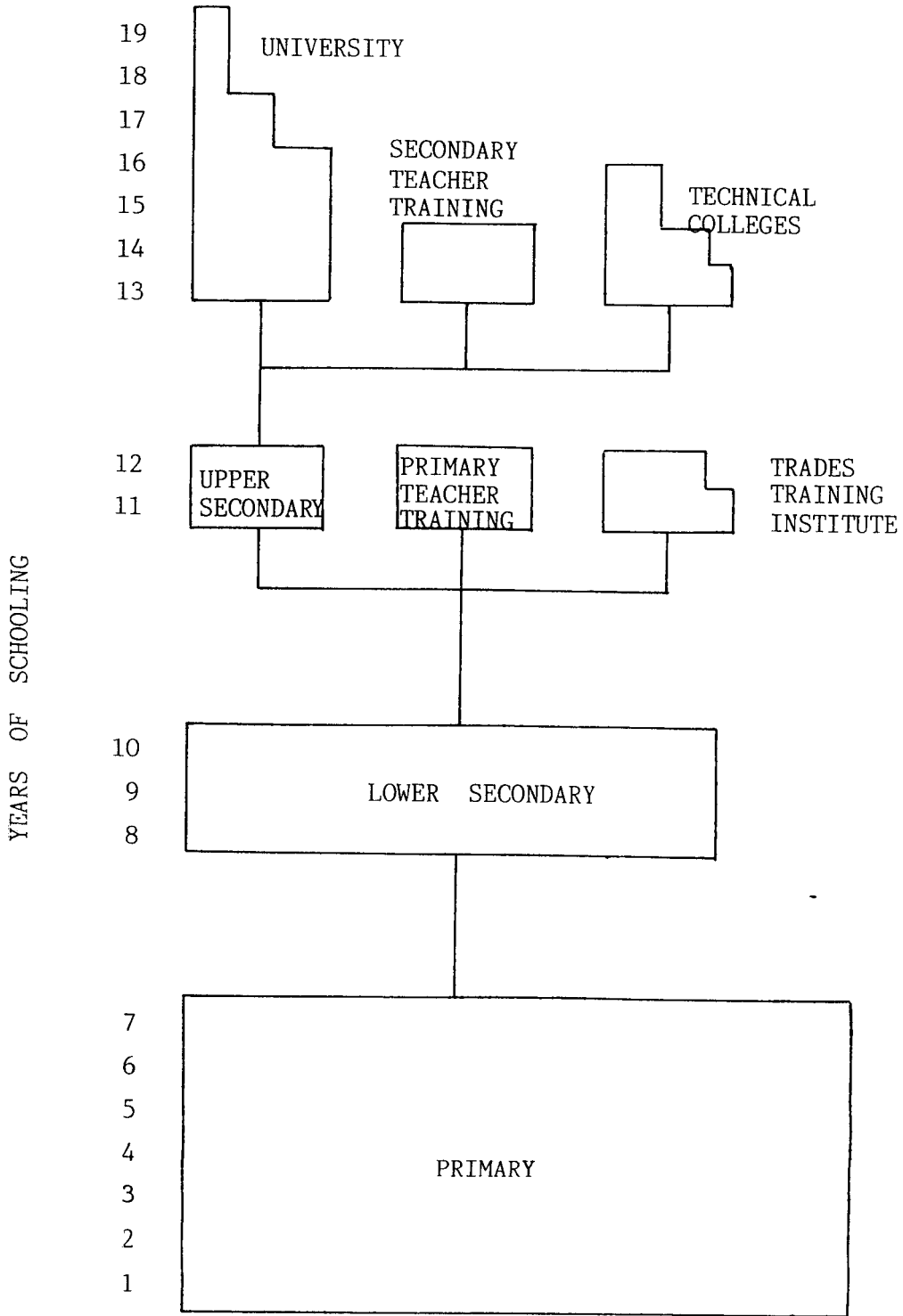
In order to support the system of apprenticeship training the Northern Chamber of Mines, through the Copperbelt Technical Foundation, established teaching centres at Kitwe, Ndola, Chingola, Luanshya and Mulfulira (1955). The centre at Ndola was, at a later period, developed as the Northern Technical College. These early technical centres were used to provide theoretical technical training for apprentices employed in the copperbelt mining industry. Other institutes opened in Lusaka during the late Federal period were the National Resources College and the Oppenheimer College of Social Service. Entry requirements varied from Primary School Leaving Certificate to the completion of full secondary education according to the particular area of specialization. Duration of study ranged from two to four years in which time students would study such subjects as: mathematics, physics, trade theories, engineering drawing, etc. Since the nationalization of the mining industry (1969), the parastatal authority, Zambia Consolidated Copper Mines Ltd. (ZCCM), has continued to support education through its Copperbelt Education Trust which administers eight primary schools in various towns in the Copperbelt and Mpelembe secondary school at Kitwe. These schools were established mainly for the children of expatriate workers. In addition, ZCCM runs inservice courses for its personnel at training centres in mining areas.

Supporting the quantitative expansion of education in the period shortly after independence were teacher training programmes which previously offered two year courses but, because of the growing demand for teachers, these courses were changed to one year's formal training followed by a further year of supervised teaching in a designated school. These measures helped to maintain a high ratio of trained to untrained teachers in the primary schools. In 1965, the balance in favour of trained teachers was 30 : 1.³⁰ During the same period, expansion in the secondary sector was assisted by the recruitment of expatriate teachers from Britain and other countries, mainly Commonwealth ones.

After more than twenty years of independence the education system of Zambia had evolved with a structure offering pupils seven years free primary education (Figure 3.1). During this initial phase of education, pupils follow the standard Zambia Primary Course of Education. At the end of Grade 7, pupils sit for the Primary School Leaving Examination which is used for both certification of the primary course and as a measure of which pupils will transfer to the secondary system.

The secondary phase of education in Zambia is divided into two parts: Grades 8 through to 10 are classed as lower secondary whilst Grades 11 and 12 are upper secondary. Entry into the lower level is usually undertaken at 14 years of age. The transition rate for primary to lower secondary education at the end of the 1970's was approximately 18 per cent.³¹

Figure 3.1 Zambian Education Structure (1984)



n.b. From 1984 admission to both TTIs and TTCs has been from Grade 12

A measure of the difficulties facing Zambia in accommodating its increasing young population in secondary education can be obtained by comparing transition rates from primary to secondary education during an earlier period. Transition figures from the Rhodesian Education Commission (1962) and quoted earlier in Chapter Three show that some twelve years later the chances of pupils passing from primary to secondary school had increased by less than 3 per cent. One of the consequences of this situation will be examined later in Chapter Four, the section dealing with non-formal education.

During the 1970's the curriculum of the lower secondary schools was changed to include the study of basic commercial and technical skills which were designed to help students enter the employment field. These studies included technical drawing, woodwork, metalwork, homecrafts, commerce and agriculture. Other subjects covered during this phase were English language, geography, civics, history, Zambian languages, mathematics, science, religious education, music and physical education. At the conclusion of Grade 10, students sit the Junior Secondary School Leaving Examination. This certifies their level of achievement during the lower secondary phase and serves as a selection test for promotion to upper secondary education. In 1978 the transition rate between the two secondary levels was approximately 50 per cent.³² Prior to 1981, students in upper secondary schools followed a course of study leading to examinations for the Cambridge Overseas School Certificate. The Ministry of General Education has now assumed responsibility for the Zambian School Certificate.

Between 1964 and 1979, enrolment at primary and secondary schools increased by over 200 per cent and by 1981 there were 1,068,318 pupils in the primary sector with 98,862 in the secondary sector (both lower and upper).³³ However, plans to introduce compulsory education have largely been shelved, with overcrowding and lack of facilities and financial support resulting in up to one-third of children in the rural areas being denied schooling.³⁴ Comparative to Africa as a whole, Zambia's enrolment figures are:

Table 3.1: Number enrolled in the three stages of education as a percentage of age group.

Education Sector	Zambia	Africa
Primary	96.0	79.3
Secondary	16.0	19.0
Tertiary	2.0	1.7

Source: UNESCO Statistical year book 1983.

Since 1984 the number of options for those students not selected for upper secondary schools nor joining the labour force has been reduced. Prior to 1984 the Department of Technical Education and Vocational Training offered Grade 10 school leavers entry into a wide range of vocational courses at the various Trades Training Institutes. Entry to this level of training is now restricted to students who have successfully completed Grade 12. Similarly, the previous Grade 10 qualification which was required for entry to one of the twelve primary teacher training colleges and the two Colleges of Agriculture at Monze and Mpika has been raised to Grade 12.

Tertiary education in Zambia is provided in two types of institution: the University of Zambia and various specialised institutions. Access to the university is based on the results of the upper secondary course of study. All students enter the School of Natural Sciences, School of Humanities and Social Sciences, or the School of Education for the first year. On completion of this initial year they can then move on to other specialist faculties. First degree courses take four years to complete except for engineering and mineral sciences, which take five years, and medicine which takes four years to B.Sc. and then a further three years to complete the full medical degree. The university also offers post-graduate courses, leading to both higher degrees and post-graduate certificates and diplomas. Senior teachers for Grades 11 and 12 of the secondary school system are graduates from the School of Education at the University. Zambia has three secondary teacher training colleges, located at Kitwe, Kabwe and the TVTC college at Luanshya. The diploma course lasts for two years and graduates of the colleges are eligible for appointments to one of the junior secondary schools. Two other Lusaka colleges, Evelyn Hone College of Applied Arts and Commerce and the Natural Resources Development College, offer teacher training courses specializing in music and agriculture respectively.

Administration of the education system in Zambia is largely centralized, although the local authorities are being encouraged to take a more active part in supporting primary education. In August 1982, the Ministry of Education was divided into two, forming the Ministry of General Education and the Ministry of Higher Education. Although seen by the Government as a major

reform of the public administration controlling education, G.F. Lungu, in his critique of educational administration in Zambia (1986), suggests that the change:

"did not significantly improve the effectiveness of the national system's administration",³⁵

Curricula for all schools, colleges and institutes are prescribed by the two Ministries. The awarding authority for examinations is the Zambia Examinations Council although it is the Ministries of Education which are responsible for conducting the annual assessments. Appointments to the teaching service are undertaken by the Teaching Services Commission with the Ministries staffing sections responsible for the placement of new recruits to the various regions.

The nine provinces in Zambia have their own educational divisions. Responsible for each division is a chief education officer who, in turn, is responsible for district education officers. Each division has an inspectorate headed by a regional inspector of schools who reports to the regional chief education officer whilst maintaining professional liaison with the central inspectorate. Under the Third National Development Plan (1980-1984) regional education divisions have become more involved in the administration, planning and development of primary education. Chief education officers are now responsible for both capital and recurrent expenditure in their particular regions. Both primary teacher training colleges and those institutes dealing with adult education are also responsible to the regional office. The relationship between institutions offering technical education and vocational training and the regional divisions is less well defined. Currently, these

institutions report on most matters to the director of the Department of Technical Education and Vocational Training.

Since Independence, the Zambian Government has been largely responsible for the financing of education. Until recently, the role of private education has been minimal. However, as the annual birth growth rate has increased, and Government revenues have fallen, both private education and the introduction of parental contributions towards education have been introduced.

Government expenditure on education in 1970 was 4.7 per cent of GNP. By 1980, this figure had risen to 5.1 per cent of GNP. In comparison, the average expenditure for countries in Africa during 1980 was 5.7 per cent of GNP.³⁶

Table 3.2 shows the allocation of recurrent expenditure among the various purposes and levels of education. In monetary terms, actual spending on education, along with other social services, has decreased dramatically since the mid-1970's. Clark and Allison³⁷ point out that between 1976 and 1981 Government spending on education fell from K55 million to K24 million as population increased. Educational development in Zambia has been assisted with foreign aid from both multilateral and bilateral donors. Included in the former category is the World Bank which has undertaken four educational projects since Independence. These developments have been targeted towards: expansion of university education, teaching of practical subjects in secondary schools, establishing education service centres, expansion of boarding facilities at tertiary institutes and the upgrading of facilities at agricultural training centres.

Table 3.2: Educational Expenditure - Zambia 1980

i) Public current expenditure on education by purpose (%):

Admin	Salaries	Materials	Scholarships	Welfare	Others
17.0	63.3	2.6	2.0	5.5	9.6

Adapted from UNESCO 1983 Statistical Yearbook pp. IV-24

ii) Public current expenditure by level of education (%):

	1970	1980
Primary	44.2	45.3
Secondary (total)	30.3	25.5
Tertiary	13.0	18.0
Not Distributed	12.5	11.2

Adapted from UNESCO 1983 Statistical Yearbook pp. IV-36

Other multilateral agencies which have been involved in the development of the education infrastructure are UNESCO, UNDP and EEC. Emphasis by these agencies has been towards staff development programmes. Bilateral aid for education has been received from numerous western European nations, North America and eastern bloc countries. The nature of bilateral aid has covered a wide range including the provision of buildings, experts, teachers, scholarships and complete training packages. Despite this external assistance, the Government has found it difficult to maintain a system of free education. In 1986, the

Government for the first time introduced school fees for secondary boarding places. The fee, 100 Kwacha per term, is not high but is outside the reach of many rural families who rely on boarding schools for their children's secondary education.

3.6 Education in Rhodesia during the UDI Period

During the early stages of UDI, African education was organised along a pattern of three years lower primary, three years upper primary, two years junior secondary, two years senior secondary and finally a 6th form of two years duration. Unlike the European sector of education, where promotion from one grade to the next was almost automatic, the African pupil's progress was dependent on examination success at each level of education. Operating parallel to the various stages of secondary education was a system of teacher training programmes. Education was provided by both government and non-government bodies (mainly mission). The latter group provided education for 90 per cent of the total African school enrolment of 663,371 (1965).³⁸

Four years after the 1962 Judges Report, the Minister of Education, Mr. A.F. Smith, proposed to the Rhodesian Parliament a new plan for African education (Ten Year Plan for African Education). Included in these proposals was a commitment to allocate 2 per cent of GNP to this sector of education and increase the salaries of teachers in African schools. The former proposal was in line with the Judges Commission Report which recommended the expansion of Government responsibility but without departing from the dual system. A further point in the plan was the proposal that there ought to be a significant input into the provision of education by local government councils.

This proposal, directed mainly at the primary schools, has been maintained and increased by the present Government.

The Government suggested that those students who graduated from the primary phase of education, but who failed to secure a place in a secondary school, should continue their education through correspondence courses. A controversial part of the plan, as far as the Africans were concerned, was the suggestion to emphasise trade, industrial and agricultural training within the post-primary education system. This proposal was to be carried out at F1 and F2 schools.³⁹ The antagonists of this proposal saw little point in being directed towards vocational secondary education if, on completion, there were no opportunities for skilled employment in the modern sector of industry because of the racial policy. The plan also proposed a rationalisation of the thirty-three African teacher training colleges (two Government and thirty-one mission) by combining the various religious denomination colleges into four 'United Colleges' plus the two Government colleges.

Whilst the Government saw the plan as going some way to satisfying the main criticism made by the Judges report, (differential opportunities and resources between ethnic groups) critics of the plan viewed it with suspicion. W. A. Hoskins,⁴⁰ a contemporary commentator on the Ten Year Plan, pointed out that the reduction of places in teacher training colleges would severely limit this type of training for African students, adding that if the Government's plan for near universal primary education was to be fulfilled it could only be accomplished with more untrained teachers. Writing mid-way through the Ten Year Plan, M. W. Murphree states that educational expansion had fallen

far short of the goals which had been set. At primary level, only 43 per cent of schools offered a full seven years' course in 1971, against a target of 100 per cent. The percentage of children proceeding to any post-primary education in 1971 was 19.3 per cent, a reduction of 5.8 per cent since the plan's inception in 1966. The percentage transition from primary to the two years' junior secondary course was only 4.1 per cent in 1971 instead of the planned 37.5 per cent.⁴¹ Apart from any genuine commitment towards reform from the Rhodesia Front Government to make the 1966 plan work, the Government was faced with serious demographic and growing financial problems. The African annual birth growth rate was 3.9 per cent per year and this produced an age structure whereby 50 per cent of the population was under 16 years of age.⁴² By the early 1970's the Rhodesian economy was beginning to feel the first strains of economic sanctions, with some of the financial burdens being transferred to the African sector of the population in the form of cutbacks in public expenditure.

Throughout the period of UDI, the State maintained education largely along racial lines. Apart from sharing a relatively small audio-visual services centre, the two divisions of education functioned as separate entities, having their own administration, organisation, operating instructions and traditions of service. A small challenge to this dual policy on education occurred in 1962, when legislation was enacted that permitted independent schools to accept students of different races. Continuing opposition throughout UDI by the Rhodesian Front Government and the financial limitations of the African community to find the necessary school fees for the independent

schools, severely restricted Africans from taking advantage of the 1962 legislation. During the financial year 1976/7 only 319 African pupils were attending independent primary schools and 277 Africans were in the independent secondary sector.⁴³

In 1979, just prior to Independence,⁴⁴ the dual system of education was unified by the 1979 Education Act. The 1979 Act provided for three main categories of schools: Government, community and independent or private schools. Besides unifying the two systems of education, the Act also partially abolished racial discrimination in education, consolidated the administration process under a Minister and Secretary of Education, created a unified teaching service and provided for the establishment of a National Education Advisory Board along with counterpart Regional Boards and School Advisory Councils.

The concept of 'Community Schools' proved to be a controversial point. Community schools were former Government primary and secondary schools which were purchased, usually at well below their market value, by European communities or groups of parents. Whilst ostensibly non-racial in their admission policies, there were parts of the 1979 Act which permitted School Boards certain powers in regard to the admission of pupils. Although each community school had control over its admission policy, it continued to receive a per capita subsidy from Government for its enrolled pupils. The controversy over Community Schools, which numbered forty-eight by 1980,⁴⁵ continued into the beginning of the independence era. However, the Education Amendment Act 1981, included legislation

withdrawing Government financial support from these schools, eventually resulting in this type of school becoming defunct.

A significant and lasting change in the control of vocational and technical education had its origins during the UDI period. Escalation of the Independence war in the mid-1970's began to disrupt the flow of skilled White immigration into Rhodesia. Responding to the growing shortage of skilled manpower, the Government appointed a Commission of Inquiry into technical and commercial education.⁴⁶ The subsequent report was critical of a situation where technical and commercial education were the responsibility of a sub-division in the Ministry of Education.⁴⁷ Accordingly, the Commission concluded that a new independent ministry should be created having overall responsibility for the training and development of human resources. The Commission went on to suggest that the new ministry be known as the Ministry for Training and Development of Human Resources.⁴⁸ Although the Commission recommended that the new ministry be established by 1st July 1975, the Government did not act in this matter for a further four years. Change in the control of technical education was announced by the Joint Minister of Education, Mr. R. Cronje,⁴⁹ in a statement to the House of Assembly on 21st July, 1978. In a wide ranging statement on education, including the announcement of a reunified administrative structure in the Ministry of Education, the Joint Minister expressed concern at the continued division of responsibility for manpower planning and training between the Ministry of Manpower and Social Affairs and the Ministry of Education. Concluding, the Joint Minister stated:

"As a result it has been agreed that the advantages which the Cameron Commission (1974) foresaw in establishing a new Ministry would largely be achieved if responsibility for technical education was to be transferred from the Joint Ministers of Education to the Joint Ministers of Manpower and Social Affairs and it has now been accepted by the Prime Minister that this reassignment of functions will take effect from 1st July, 1978.⁵⁰

The rationale for the ministerial shift of responsibility for technical education was apparently to deal with a local manpower problem. However, the change should also be seen in the context of a growing global pattern whereby national bodies, other than ministries of education, are becoming more involved in this sector of education. This international trend was reported at a UNESCO symposium on technical education held in Berlin from 14th to 18th April, 1980. A large majority of the reporting countries indicated that they had established, enlarged or improved policy bodies to focus specifically on technical and vocational programmes.⁵¹

Of course, international influence on the style of education in Rhodesia was not a new phenomenon. However, up until this point, most of the imported ideas, advice and many of the resources had come from either South Africa or Britain. More evident in post-independent Zimbabwe is a widening of the international theme. In part, this reflects Zimbabwe's emergence into the international community; but it also demonstrates once again the need to quickly strike a balance between the pull of foreign influences and what is relevant and can be realistically resourced and sustained in Zimbabwe. Moving into the next section we will see how Zimbabwe, especially in its first five years of independence, was inundated with foreign perceptions of 'relevant education'.

3.7 Development and Organisation of the Zimbabwean Education System

The administrative complexity within African education and between African and European, Asian and Coloured education provided the new Government of Zimbabwe with considerable problems when faced with the need to expand and rationalise the system of education along democratic rational policy objectives. The Government's solution to these problems, and indeed to overall development issues, was stated in the document 'Growth with Equity'.⁵²

Although certainly not a detailed plan for a new pattern of education, 'Growth and Equity' did attempt to set out the general guidelines for post-independence education:

- a) education must cover a wide spectrum with both the content and form adopted responding to the imperatives of excellence and relevance, i.e. high standards and quality, as anywhere else in the world, yet at the same time imbued with local values and combined with practical knowledge of concrete conditions";
- b) "investment in education be rationally planned and fully integrated with investment in other socio-economic activities in the public and private sectors so that the outputs of the system can become involved in productive economic development activities in a growing and expanding economy";
- c) "education is an important Government instrument for achieving equity; this means relatively more educational opportunities should be created in rural areas where an increase in the general level of education will contribute to more rapid adoption of improved agricultural methods and higher productivity of the rural people"⁵³

Essentially, the Government sought to maintain the standards of education whilst at the same time expanding opportunities in education, especially in the rural areas; also integrating investment in education with the real

needs of the nation. Following close on the document 'Growth with Equity' was the publication of the 'Transitional National Development Plan, 1982/3 - 1984/5'. In addition to repeating the broad aims of post-independence education, the National Plan stated the strategies which would be adopted to achieve these aims:

- a) "free tuition at primary level to enable all children to attend school";
- b) "extension of secondary facilities to rural areas. Each district will have at least one Government secondary school. Local authority and mission schools will also be expanded to cope with the growing demand for secondary education. Greater emphasis will be placed on the development of rural day secondary schools as opposed to boarding schools as a means of providing secondary education to larger numbers at affordable cost. However, boarding secondary schools will be developed where concentration of specialist personnel and equipment is essential, for example, the senior secondary sector";
- c) "Emphasis on the development of relevant curricula at all levels linked with the extension of distance education teaching methods in order to reach a wider clientele. Government aims to develop modular structured material for secondary school level so that opportunities for secondary education can be greatly expanded";
- d) "emphasis on scientific, technical and productive education at all levels so that education can become a more effective factor in development. In this regard, close links will be maintained between educational planning and curricula and the manpower requirements of the economy. Reform of the structure of education in order to enable Government to attain its objectives more efficiently"; and
- e) "streamlining and decentralizing education administration in order to attain efficiency."⁵⁴

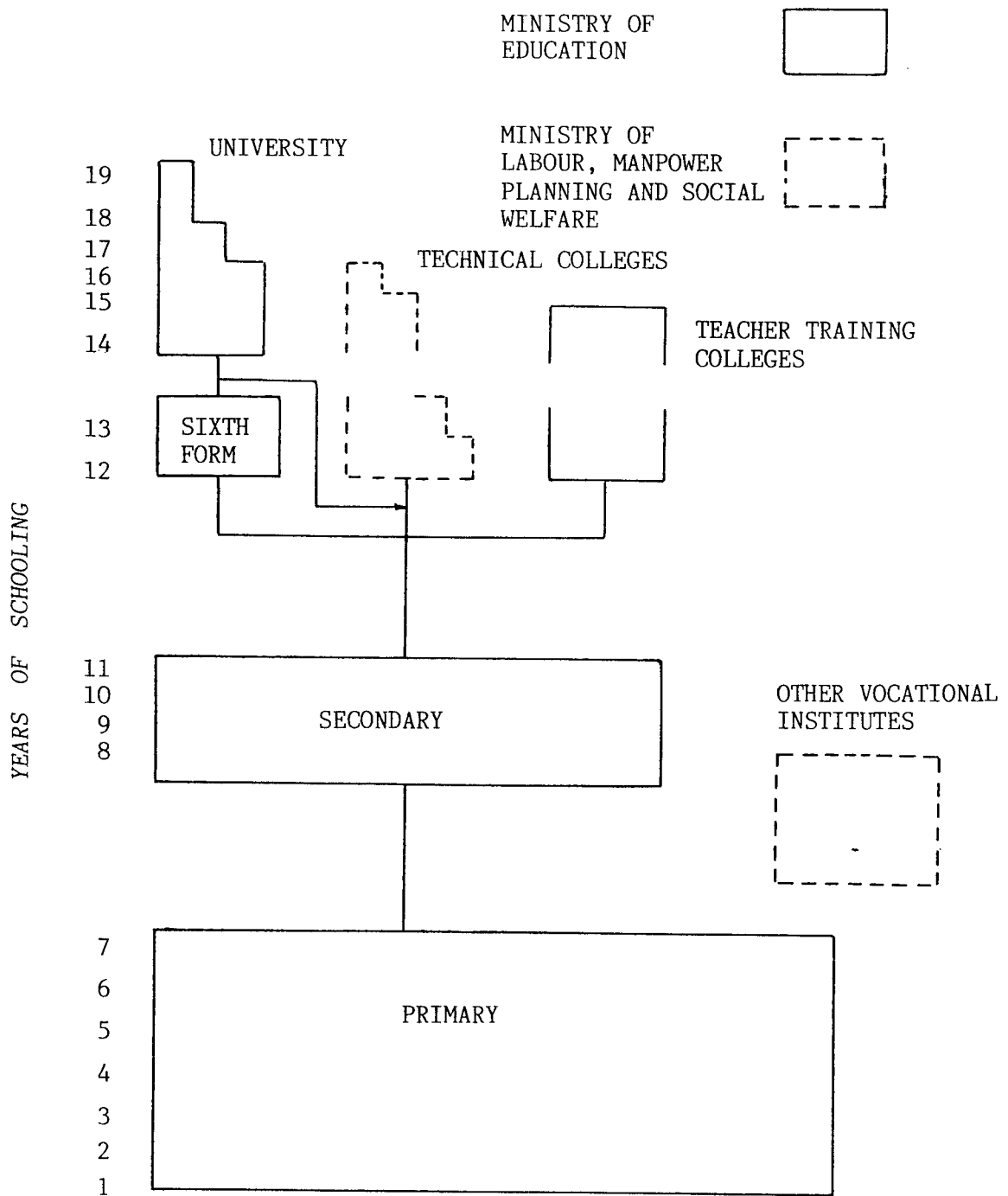
However, the major themes and reforms which emerged in a series of scattered documents were, because of their vagueness, susceptible to divergent interpretation. A sector analysis, undertaken by senior staff from the Ministry of Education and Culture and UNESCO⁵⁵ found students, parents, teachers and

headmasters wanted more clearly defined aims and objectives in terms of their implementation at the school level. These doubts surfaced at a period when such terms as 'self-reliance', 'productive work', 'cultural identity', 'rural development', etc., were often used in official speeches without there being any guide as to how they should be put into practice. The sector analysis report made a strong recommendation that to successfully implement Government policy, greater attention should be given to systematic, coordinated and comprehensive planning.⁵⁶

Emerging from the first few years of Independence was a structure of education, Figure 3.2, which included a seven year primary course. In theory, primary education is free but not compulsory. Parents are, however, required to pay a general purpose fee which varies according to the primary school grade and the range of facilities available. The most profound change in the primary sector of education has been the sharp increase in pupil enrolment.

Prior to Independence in 1979, 820,000 children were enrolled in primary schools; by 1985 this figure had risen to 2,229,396.⁵⁷ Although the number of primary schools to cater for this dramatic increase in enrolments had also risen, some children, particularly in rural areas, are accommodated by double session arrangements. Transition from primary to secondary schooling is achieved through a Grade 7 examination in English language and mathematics. The rate of transition is one of the highest in Africa: 85 per cent.⁵⁸ Resultant high educational costs, especially at the first level of education, has generated a considerable amount of debate as to whether Zimbabwe can

Figure 3.2 Zimbabwean Education Structure (1984)



continue to afford its present 'open door' policy to education. An inquiry into financing education, 1982,⁵⁹ doubted whether the present structure would continue to be financially viable. It recommended that the aspirations of pupils and the needs of the nation could be better met by providing six years of primary education followed by three years of secondary schooling, with an additional two years for selected students.⁶⁰ The report emphasised the need to reduce education costs by increasing the teacher pupil ratio and a longer academic year.⁶¹

Following a model adopted by other countries in Africa, notably Tanzania, the report strongly recommended the need to move away from using each level of education as a step to the next level and called for job training for all school leavers who are not selected for advanced academic education. This latter exercise would be undertaken in conjunction with the Ministry of Manpower Planning and Development⁶²

At both the practical and theoretical level, the 1982 inquiry into the methods of financing education was greeted with alarm by liberals as bureaucratic interference in the implementation of the 'Growth With Equity' strategy. Some five years on from the publication of the 1982 report, education in Zimbabwe continued to emphasise academic work. Nevertheless, statements from the Ministry of Education in 1986, and reported in the national press, gave the first public warning that fundamental structural changes would be adopted during 1988.⁶³

For the first three years of Independence the seven year primary course was followed by two parallel lower secondary streams preparing students for the GCE 'O' level examination. These

were: the four year academic course, Forms I - IV and the five year course, Forms I - V, the latter including practical subjects. For selected students these two courses were followed by one or two years of upper secondary education preparing for the GCE 'M' level and 'A' level examinations. The one year GCE 'M' level course was originally conceived for students who could continue their education in South African tertiary institutions. Streaming of secondary students into either academic courses for brighter students or a more practically orientated course for slower learners was considered an inequitable dual structure irrelevant to development needs. An end to the dual structure was instituted in 1984 when students entering the secondary sector joined a single four year course of study. The internal examination after Form II, the Junior Certificate of Education, has been retained but there appears to be some doubt as to its significance as a poor performance in this particular examination does not automatically mean an end to a student's school career. The secondary curriculum has a compulsory core of four subjects: English language, mathematics, science and an African language, in practice either Shona or Ndebele. Additional subjects which may be studied include metalwork, woodwork, technical drawing, religious studies, geography, history and social studies. For the majority of secondary students the completion of Form IV is the end of their secondary education. In 1985 the transition rate from Form IV into the two year sixth form was 6.4 per cent.⁵⁴

One of the consequences of the expansion of both the primary and secondary sectors of education was the employment of a large number of untrained and less qualified teachers. In addition, a

large number of experienced primary school teachers were transferred from their posts in the primary sector to fill the gap in secondary schools. In late 1982, figures issued by the Ministry of Education and Culture showed that the primary sector employed a total of 45,467 teachers of whom 52.1 per cent were considered qualified. By comparison, secondary schools during the same period had a complement of 88.0 per cent trained teachers.⁶⁵

To counter both a shortage of teachers and the existence of a large proportion of untrained teachers, the Ministry of Education and Culture launched in 1980 the Zimbabwe Integrated Teacher Education Course (ZINTEC). The course is designed to train a teacher in four years through an initial sixteen weeks residential training course at one of the regional ZINTEC colleges. This is followed by ten terms of supervised teaching in rural schools during which time the trainees receive distance learning materials. The final sixteen weeks period is spent at the training college during which the trainee teachers take their final examinations. In addition to the four ZINTEC colleges, there are a further eight colleges offering conventional teacher training courses of two years college based studies and two years of supervised teaching practice.

The programme has had its problems, mainly with regard to supervising trainee teachers during their in-service training period. Nevertheless, the techniques adopted (stronger bias towards actual teaching) have been successful enough to influence the more traditional methods of college based teacher training.

The University of Zimbabwe has always been a multi-racial institution since its establishment by Royal Charter in 1955. It is now an autonomous institution constituted under the laws of Zimbabwe, University of Zimbabwe Act (No.2 of 1982), and is directly funded by the Treasury. Enrolment in its nine faculties has increased from 1,873 in 1980 to 4,742 in 1985.^{ee}

Admission to the University is largely based on the results of previous academic work. Normal entry into a general degree programme is successful completion of at least two 'A' level courses. Duration of undergraduate programmes ranges between three years in the faculty of arts to six years in the faculty of medicine. In addition to its under-graduate programmes, the University offers opportunities for post-graduate studies leading to diplomas, master and doctorate degrees, obtained through either part-time or full-time study.

Most ministries involved in industrial activities, major parastatal agencies and private industrial organisations combined their training programmes on the basis of a block release system with those of the technical colleges. The seven technical colleges are now controlled by the Ministry of Higher Education (previously the Ministry of Labour, Manpower Planning and Social Welfare until 1988). These colleges offer both the student sponsored by industry and the private financed student a wide range of art, commercial, engineering and science courses at levels ranging from certificate to degree (refer to Chapter Five). In addition to their cooperation with formal training institutions, a number of public, parastatal and private companies operate their own training centres to provide specialized skill training. These include Post and Tele-

communications, Transport, National Railways of Zimbabwe, Zimbabwe Electrical Supply Authority, Air Zimbabwe and several companies involved in the mining industry.

Administration of general education was, for the first three years of Independence, the responsibility of the Ministry of Education and Culture. Government changes in early 1984 resulted in the responsibility for culture being reassigned to the newly established Ministry of Youth, Sport and Culture. The Ministry of Education was headed by a Minister of Education who was both an elected member of parliament and a member of the ruling party's Politburo. Assisting the Minister in his political duties was a Deputy Minister who sat in the Senate. The education system was administered by a Secretary for Education assisted by three deputy secretaries who were responsible for Education and Services, Professional Staffing and Teacher Training, and Administration, Finance and Planning. Regional educational offices are located in each of the six administrative regions where regional education officers are based.

Since Independence, Government recurrent expenditure on education and training has increased at an extremely rapid pace. While in 1979 public expenditure on education accounted for slightly more than 13 per cent⁵⁷ of total recurrent Government spending, by 1986 this figure had risen to 20 per cent.⁵⁸ The increase in expenditure on education and training which has taken place in the last seven years can be attributed to the sharp increase in enrolments in primary and secondary education from 1980 and subsequent increased subsidies to private education and large increases in African teacher salaries which

took place between 1979 and 1981. Table 3.3 shows the allocation of recurrent expenditure in the Ministry of Education's 1986/7 budget. This financial vote, like all others for education since 1979, was the largest of all fiscal allocations to ministries.

**Table 3.3: Education Expenditure - Zimbabwe 1986/7
(Ministry of Education)**

Purpose	Amount Z\$	%
Administration	70,036,000	9.94
Examinations	3,183,000	0.45
Audio-Visual Services	702,000	0.10
Literature Bureau	253,000	0.04
Teacher Education	26,507,000	3.76
Secondary Education	96,676,000	13.72
Primary Education	89,557,000	12.71
Grants to Private Registered Schools	417,503,000	59.27
TOTAL	704,417,000	99.99

Adapted from Estimates of expenditure year ending June 30th 1987, presented to the Parliament of Zimbabwe, 1986, Government Printer, Harare, 1986, p.89.

n. b. The allocation to the private sector represents government capitation grants.

Following on from the 1982 report, highlighted earlier in this chapter, have been warning flags indicating the resultant strain on national resources. All indications suggest that the Government will devolve increasingly more cost for the expansion of primary education on citizens through local authorities and community based organisations. Presumably, as more upward

pressure is felt on secondary school places, more direct costs will fall on the community.

Substantial external assistance to education and training has been made available to the Government to assist in the expansion of the various sectors. The main sources of this financial and technical assistance are the United Kingdom, USAID, West Germany, Sweden, EEC, Australia and various agencies of the United Nations. Although foreign aid to education has declined in percentage terms from its peak allocation of 24 per cent of total aid disbursements in 1980 to 10 per cent in 1985, the actual monetary value has risen to Z\$34.7m or 6.4 per cent of the education budget.⁶⁹

How this external funding is used and its affect on the structure and curriculum of vocational education will be considered further in Chapter Six.

Substantial progress has been achieved in both Zambia and Zimbabwe in the reduction of previous educational disparities between ethnic groups and between urban and rural areas. Priority in the allocation of resources has been directed at the deficit areas of education. Whether Zimbabwe can continue to support open access to both the first and second levels of education and Zambia reverse its static enrolment figures and declining expenditure in these sectors of education is dependent in part on future events in the Southern African region. Economies of individual countries have become more interdependent than ever before and whatever happens to regional political and economic conditions will have a profound impact on both nations' national budgets and also their ability to provide

universal quality education. Changes in the world economy have put Zambia under great stress. The situation has been aggravated through planned political and military destabilization in Southern Africa. Tensions have diverted funds away from social projects to increases in military expenditure. Also, both nations continue to be vulnerable to the consequences of further refugees crossing from Mozambique and Angola and the economic restrictions which South Africa can impose through its intimidatory border closures with Zimbabwe.

In some respect, it would be true to say that up until the respective Independence periods in Zambia and Zimbabwe, vocational education was closely linked with the structure of general education. Structural changes to education during and following the change of political power lessened this interdependency. Therefore, having established the general character and direction of education over the period, we shall, in the succeeding chapters, move on to consider development in the particular sector of vocational education.

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Printer, Harare, 1986, p. iii

⁶⁹ Ministry of Finance, Economic Planning, Status report on external development assistance to Zimbabwe, 1980-85, Government Printer, Harare, June 1986, pp.3-5

CHAPTER FOUR: VOCATIONAL EDUCATION AND TRAINING IN ZAMBIA

4.1 Historical Background

The origins of vocational education and training in Zambia were closely associated, as was general education, with the arrival of Christian missionaries in the area. The missionaries required skilled manpower to construct churches, mission stations and schools, as well as needing ordained and lay ministers to teach the fundamentals of the Christian religion. As an expediency, therefore, isolated efforts were undertaken by mission schools, such as agricultural classes run by The London Missionary Society at its Abercorn Mission in 1914. Jesuits established early practical training schools for carpenters and bricklayers in 1923 at Kawimbi, and later on similar institutions were established at Mbereshi by the Congregationalists, and Sefula by the Paris Missionary Society.

By the 1940's, most mission schools had attached to them carpenters' and builders' workshops. Until 1935, when the training centre at Munali was started, vocational training was not supported by the Government. It was not until the 1950's that Government schools, especially those in the Copperbelt and along the line of rail, had attached to them facilities for carpentry and brickwork. These facilities were largely used by pupils in the primary school curriculum with the level of training being more of an introductory course to the building crafts than a course designed for industrial skills. When, in the early 1950's, carpentry and brickwork instructors began to graduate from the Government school at Munali, the Government accepted limited responsibility for vocational training. During

this early post-war period, the Munali school in Lusaka became the Hodgson Technical College, offering both CGLI craft courses and a technical instructors' course. Graduates from this institution provided the later DTEVT with its initial cadre of professional staff. Nevertheless, racial discrimination ensured that the Hodgson graduates in the 1950's never found appropriate places in industry.¹ In this period the Government also established the trades schools at Mwekera, Luanshya, Mufulira and Kitwe.

Trade schools never received a very high status in society tending to attract only those pupils who were unable to gain places on general education courses. Also, owing to Zambia's history of racial and social discrimination, the tradesman produced by the trade school was judged inferior to the product of an organised apprenticeship programme. In 1958, there were some fifteen trade schools, all of which were under-enrolled, having an average annual entry of fifteen students.² With increasing pressure for more general school places, the colonial authorities decided to utilize the underused trade schools for general education purposes. Shortly after independence only Lukashya, Livingstone and Kabwe Trade Schools remained open.

At Independence in 1964, Zambia inherited from Britain the apprenticeship system of training skilled technical manpower. The new Government viewed this traditional mode of training as racially tainted and inappropriate to its new social and economic conditions. In particular, their first concern was that future industrialisation of the country could not be achieved by solely relying on private companies to determine the number of apprentices trained. Secondly, it was considered that

the proportion of time allocated to actual training in a period of apprenticeship was insufficient. There also appears to have been concern about the rigid preconditions of entry to apprenticeships in several 'modern' trades in regard to age and education. Mudenda and Bardouille, commenting on the apprenticeship system in the mid-1960's and its abolition, suggest that:

"The system was generally unsuccessful because most of the masters were white expatriates who were indifferent towards the interests of Africans."³

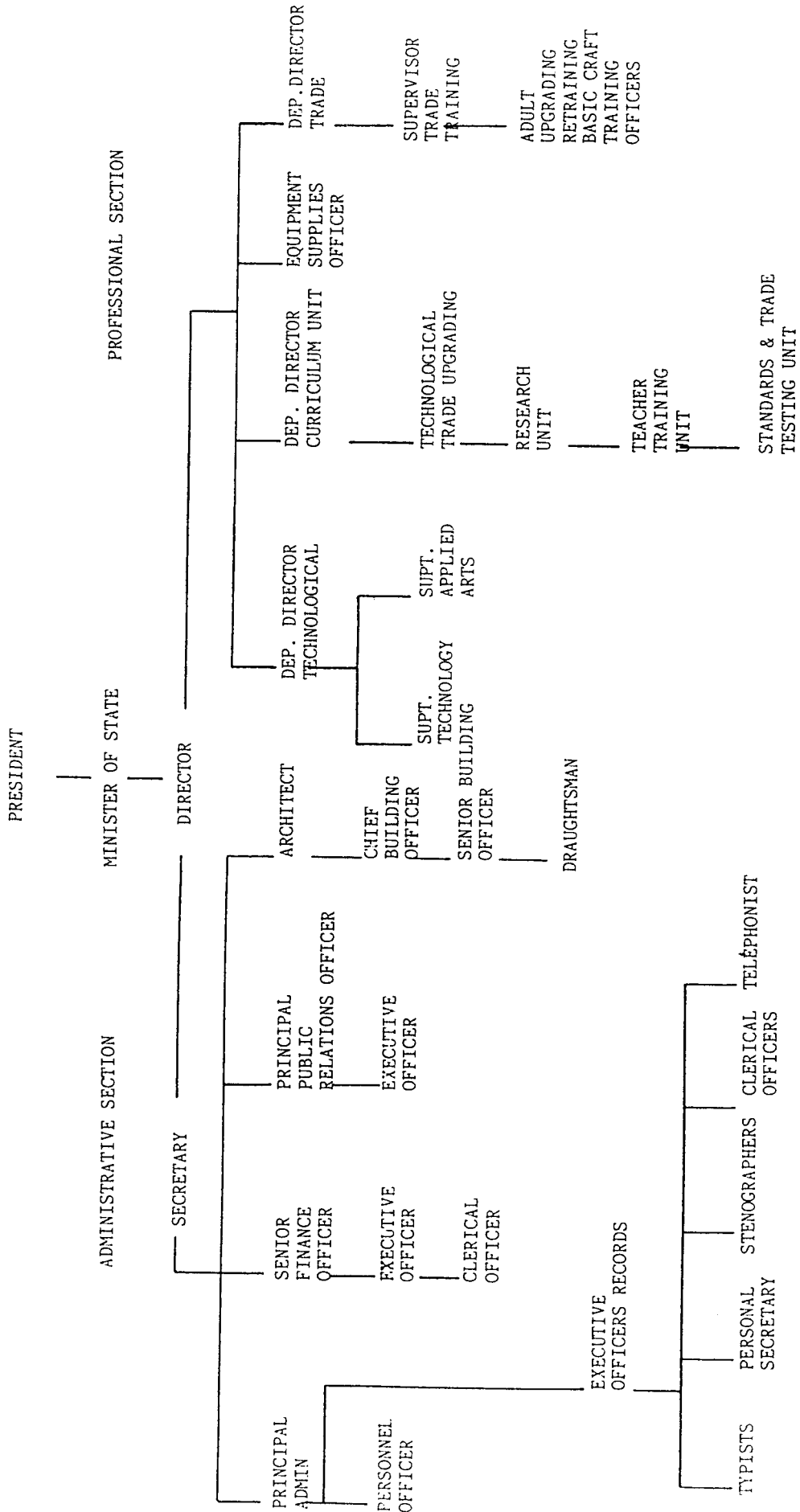
Continuing Government dissatisfaction with the methods used to train sub-professional manpower resulted in the appointment of Mr. W.A.B. Saunders, Principal of the Northern Alberta Institute of Technology, to advise the President on the future of technical education and vocational training. Following the Saunders Report of November 1967 into the future of technical and vocational training, the Zambian Government formally decided to establish a technical education system aimed at providing comprehensive training programmes. The system of apprenticeship, based on sponsorship, was discarded in favour of institutional training with no further apprenticeship indentures registered after March 1970.⁴

4.2 The New Training Plan

In January 1968, the President established the Commission for Technical Education and Vocational Training in the Office of the Vice-President. Because of the slow rate of progress made in formulating new training programmes, responsibility for the new Commission was transferred in late 1968 to the Office of the President, with a Minister of State, V.S. Musakanya, being

responsible for Technical Education and Vocational Training. The executive side of the Commission was headed by the Director of Technical Education and Vocational Training who was supported by several deputy directors responsible for the various levels of training, liaison with industry and the design and production of training programmes. (Figure 4.1). Continuing discussions with the Canadian Government during 1968/69 resulted in a technical assistance agreement. At the same time, the Commission for Technical Education and Vocational Training obtained the services of Dr. Ross Ford. Ford, one-time Director for Technical Education of the Canadian Federal Government, was appointed as Presidential Adviser for vocational and technical education. To assist the Commission in its work, a Technical Education and Vocational Training Advisory Board was established comprising of Commission members and others who were appointed for their special knowledge of matters related to technical education and vocational training and others who represented the interests of employees. Although the Commission was responsible to the Minister of State to ensure that its actions were in accord with Government policy, the Commission was given wider powers than a normal government department. The Commission was empowered to determine national standards and curricula in the fields of technical education and vocational training, to determine the remuneration and allowances of persons undergoing training courses, to ensure that employers made use of educational training institutions approved by the Commission, and also had the power to raise or make loans for training purposes. The Commission was also responsible for registering private training institutes ensuring that their

Figure 4.1 Organisation Structure: Commission for Technical Education and Vocational Training (1970)



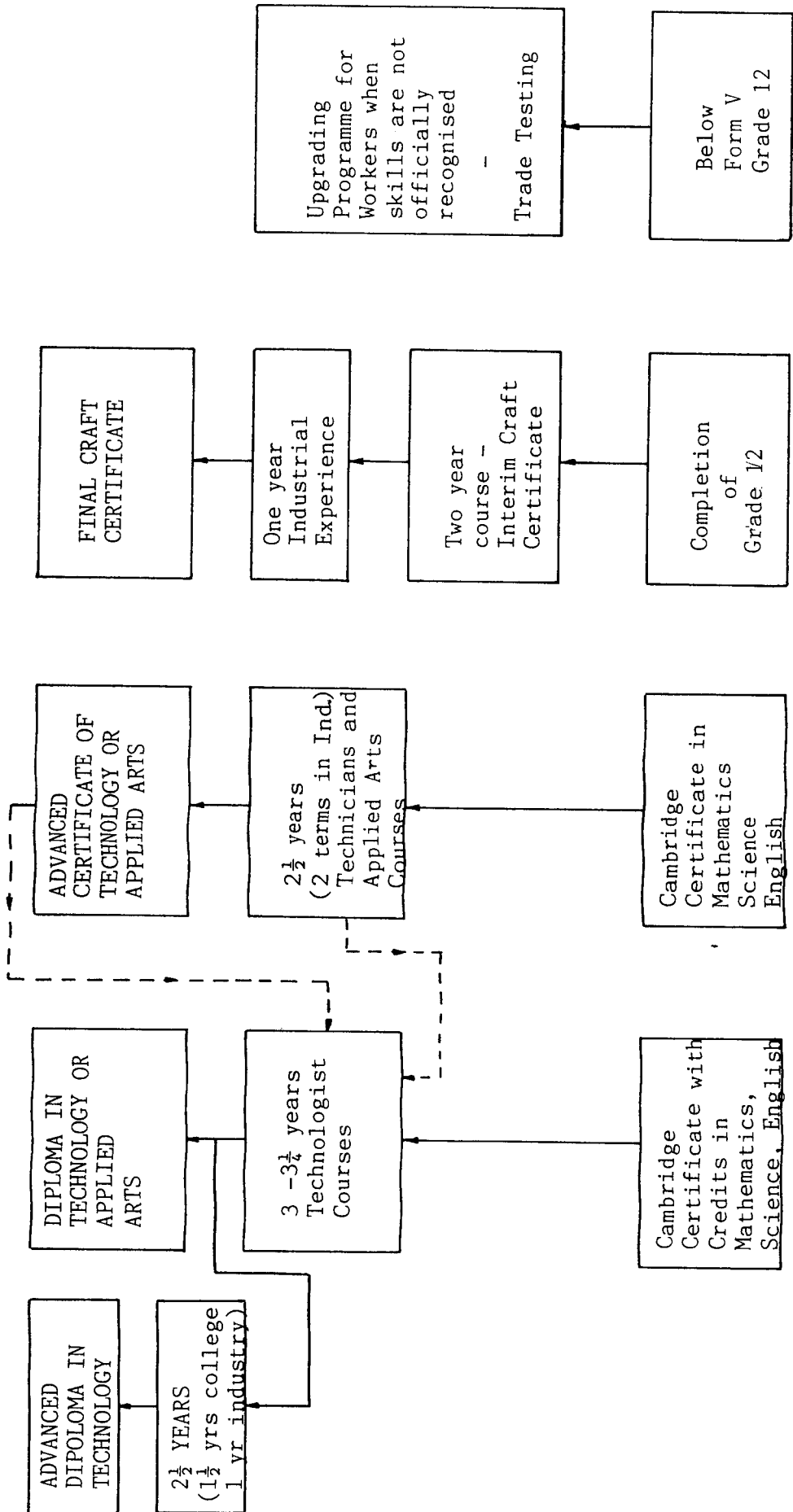
standard and training programmes were in accordance with the Commission's own programme standards.

The new plan for developing technical education and vocational training was conceived, having distinct levels of manpower training: technologist, technician, craftsman, semi-skilled or operator. Apart from an increasing standard of entry to the various training courses and certain modifications to curriculum content, the four tier training system has remained almost intact since its inception in 1970. (Figure 4.2).

The Technologist programme was designed to provide participants with an advanced knowledge of the technology of their field, approaching professional level or assistant engineer status. Courses, which take place at one of the higher institutions, are provided in the engineering fields of aeronautics, construction, electricity, electronics, laboratory technology, mechanical and mining. Technologist courses take between three and four years to complete according to the particular discipline and include periods of industrial attachment. Successful students are awarded a diploma in technology. Since the inception of the new training plan, diploma courses have been extended to cover paramedical, journalism and business studies areas.

Initially, entry into diploma courses was restricted to secondary school students who had completed Grade 12 and been successful in mathematics and science at 'O' level. Current entry requirements are 'O' level credits in mathematics, science and English language or, as in the case of mechanical and mining courses, entry is through the successful completion of the appropriate technician's course.

Figure 4.2 Structure of Technical Education and Vocational Education in Zambia (1984)



The direct entry technician programmes have a higher content of practical work and less theory than the technologist programmes. Technician courses are conducted at one of the higher institutions over a period of two-and-a-half years, which includes two terms of industrial attachment. On successful completion of the course, students are awarded an advanced certificate which, after several years industrial experience, qualifies him/her to act as a supervisor or direct the activities of craftsmen, operators or semi-skilled workers. Originally, candidates only had to have completed Grade 12 and studied mathematics and science to be eligible for entry into a technician course of study. Present regulations for direct entry to this level of course are three 'O' levels: mathematics, science and English language at pass grade. In theory, it is possible to gain admission to a technician's course on successful completion of a craft course; however, this mode of entry is becoming an infrequent occurrence due to a diminishing number of places coupled with an increasing demand by young people for this type of training.

Trade courses were designed to develop full occupational competence to industrial standards enabling successful students to be employed in industry as craftsmen and carry out skilled work with a minimum of supervision. Initially, the duration of trade courses was two-and-a-half years with one additional year spent in industry. The first six months of training was essentially an induction period during which students were acquainted with common engineering materials and processes. Largely as a result of changes in the secondary curriculum, where more emphasis is now given to physical science and to a

certain extent craft skills, the six months induction period of the trade course was dropped in 1980. Currently, trainees follow an institutionally based course at one of the seven Trades Training Institutes for a period of two years. Trainees who satisfy the requirements of the two years course are awarded an interim craft certificate. In order to obtain the full certificate, trainees are placed in industry for a further period of twelve months. On satisfactory completion of this period of industrial experience trainees are awarded a full craft certificate and are eligible to be employed as craftsmen in both the private and public sectors of industry.

The 1970 training plan envisaged the provision of facilities whereby semi-skilled craftsmen and operators would have both the opportunity to develop their largely unrecognised skills and, through a nationwide trade testing network, officially upgrade their skills. The development aspect of the plan was planned to offer two services: firstly, a basic educational upgrading in language, mathematics and science; secondly, instruction in more advanced practical skills and theory of their occupation. These services were to be available through part-time or short full-time courses to any employed person who wished to upgrade his or her skills or technical knowledge. Both the trade testing and personal development elements of the plan were designated to be carried out as a special feature of the Trades Training Institutes. Due almost entirely to budget restrictions, only the trade testing aspect of this part of the training plan has been effectively implemented. Most skilled and technology training leading to occupational competence has taken place, to a limited degree, in private institutions. The number of trade

tests carried out in 1983, the latest published statistics, show that 6,425 workers undertook trade tests for the purpose of upgrading their skills, with 2,908 being successful.⁵

Unfortunately, there is no follow-up data showing how successful the upgraded workers were in having their new qualification recognised by employers.

Although the 1970 plan was mainly concerned with the development of training courses for those occupations which are normally categorised as 'technical', it did take account of a wide range of occupations outside this sector of employment. These can be characterized by varying mixtures of special knowledge and practical skills including employment clusters such as: business studies, visual and creative arts. Diploma and advanced certificate courses for this 'non-technical' area have almost exclusively been centred on the Evelyn Hone College of Applied Arts and Commerce, Lusaka, and the Zambia Institute of Technology, Kitwe. Basic certificate courses are run at some of the Government Trade Training Institutes and private institutions. To achieve full job competence in this wide sector of employment, courses vary in duration from a ten weeks institutional catering certificate course to a diploma in journalism which takes three years.⁶

Central to the issue of the introduction of the intensive national programme of technical and vocational education was the provision of adequate staff. Six years on from Independence, those Zambians educated and technically trained to assume positions in tertiary colleges had almost all been recruited by the private sector and were becoming established in responsible

posts in industry and commerce. Largely because of differentials in the conditions of service between the public and private sectors, very few Zambians were attracted into the teaching profession. Thus, from the very outset the new vocational initiative was locked into employing expensive foreign nationals at all levels: course design, administration, inspectorate and course delivery. As in the school sector, limitations set by failure to secure a stable local teaching force drastically reduced national input into the emerging vocational curriculum and retarded the build up of an experienced cadre of Zambian teachers.

The initial response of the Commission to the development of staff was the commencement of a number of training courses for new recruits and upgrading courses for staff already employed in the Trades Training Institutes. These courses were held at Lusaka TTI, the National Institute of Public Administration and the Natural Resources Development College. Seen in 1970 as a short interim measure, expatriates were recruited to supplement Zambian resources (Table 4.1).

A more permanent solution to Zambian requirements for indigenous technical and vocational teachers was achieved in 1975 when, with assistance from the Swedish International Development Authority (SIDA), a technical and vocational teachers college was established at Luanshya in the Copperbelt region of the country.

The college was designed to serve the requirements of commercial and industrial arts teachers for the Trades Training Institutes, Technical Colleges, and a limited number of secondary schools.

Table 4.1 Teaching Staff by Institution, Sex and Nationality

INSTITUTION	Approved Establi- shment	Post Filled				Total
		Zambian		Non- Zambian		
		M	F	M	F	
Evelyn Hone College of Applied Arts and Commerce	168	14	8	78	19	119
Zambia Institute of Technology	168	4	-	82	4	90
Northern Technical College	54	8	-	37	-	45
Zambia Air Services Training Institute	36	13	-	10	1	24
Nkumbi International College	25	5	-	12	5	22
Technical & Vocational Teachers College	25	5	-	17	5	27
Kabwe Trades Training Inst.	58	45	-	-	-	45
Livingstone Trades Training Institute	52	40	-	-	-	40
Lukashya Trades Training Institute	32	24	-	3	-	27
Lusaka Trades Training Inst.	30	18	1	2	-	21
Mansa Trades Training Inst.	21	15	-	-	-	15
Choma Trades Training Inst.	19	7	-	7	-	14
Luanshya Trades Training Inst.	17	7	-	4	2	13
Kasiya Secretarial College	4	1	-	-	5	6
TOTAL	709	206	9	252	41	508

Source: Annual Report 1976, Department of Technical Education and Vocational Training, Ministry of Education.

Although the new plan for training was to be both implemented and administered by the Government, financial contributions to the cost of institutional training were to be made by industry and commerce. Contributions were in the form of a training levy to a central fund administered by the Commission, with financial dues calculated on a percentage of an employer's pay roll. Provision was made for those sections of industry that were already undertaking training programmes to suit their own special requirements to be reimbursed from the central fund to meet the cost of approved training programmes.

Physical development of the training plan was initially focused on establishing the headquarters of the Commission in Lusaka. The headquarters of the Commission, headed by the Director, consisted of two sections: the professional group, which was responsible for the control of institutions, their planning, curricula and liaison with industry, whilst the other section provided administrative support (Figure 4.1). The commission were anxious to dispel the image of technical institutions with sub-standard accommodation and training facilities. At the craft level the Commission's resources were concentrated on upgrading and extending the existing Trades Training Institutes at Livingstone, Lukashya, Mansa, Kabwe and Lusaka and supporting the efforts of the Jesuits in building a TTI at Choma. As a result of this upgrading programme new Trades Training Institutes planned for Chipata, Mongu and Solwezi (towns in provinces with chronic poverty and unemployment) were to be delayed until 1972.⁷ Contrary to the early low standing of the Trades Training Institutes, the Northern Technical College at Ndola, which was chosen to be the centre for technician

training, had a different image. Its higher status was due in part to the previous social discrimination which existed between Trades Training Institutes and Technical Colleges. Nevertheless, the College required upgrading and extending to meet its intended larger intake of full-time trainee technicians. Plans for upgrading NORTEC were conceived during the First National Development Plan and inherited and updated by the Commission for Technical Education and Vocational Training. However, due to financial problems, the commencement of the development of the College through the Zambia World Bank Project did not materialise until the mid 1970's. Previous to 1970, Zambia had never provided in-country opportunities for the training of technologists; therefore, within the context of the new plan it was decided, with the assistance of the Canadian International Development Agency (CIDA), to establish the Zambia Institute of Technology at Kitwe for this purpose.

The programme for the development of technical and vocational education which was conceived during the First National Development Plan (1966 - 1970) was, however, only ready for introduction at the start of the Second National Development Plan (1972/76). Consequently, the new training plan had to compete for funds at a period when the Government was emphasising a wide ranging expansion of all sectors of education in both qualitative and quantitative terms.¹³ In addition to calls for increased expenditure on education, the early 1970's was the start of a continuing fall in the Government's revenue from the major foreign exchange commodity, copper. Therefore, although supported in various capital projects by foreign aid donors, the technical and vocational development programme has

been constantly set back by lack of finance, especially unrealistic recurrent budgets.

An illustration of the frustrations and restrictions imposed on curriculum implementation by shortage of recurrent funds can be gauged from the following: At Lusaka TTI in 1986, welding and fabrication classes were having to use reclaimed sheet metal from old cooking oil drums for their welding exercises. Also the amount of welding practice was limited due to unreliable supplies of acetylene gas. Consequently, students were unable to complete their metal fabrication exercises because the reclaimed metal was suitable only for basic joining exercises.

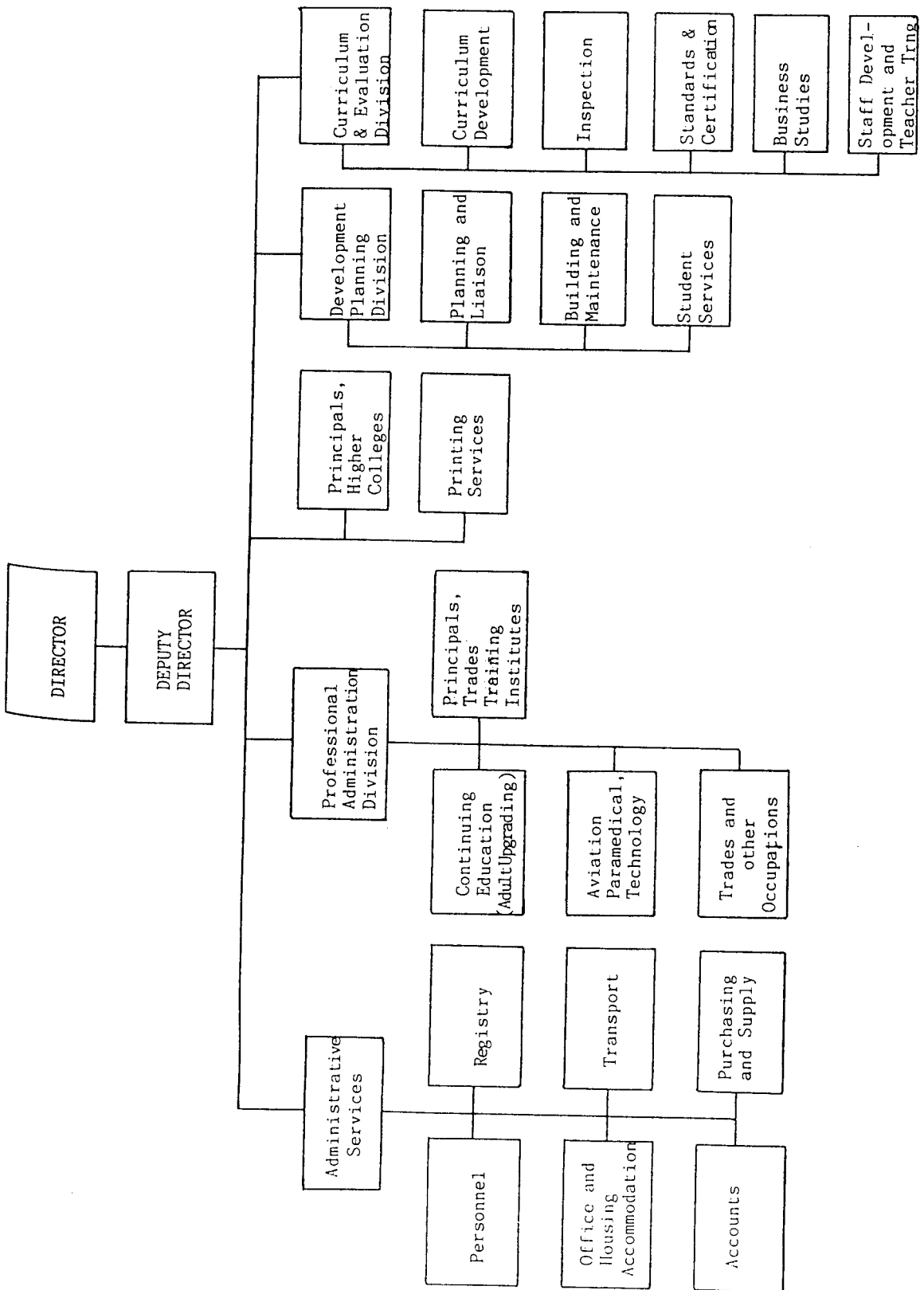
The separation by foreign aid donors of capital assistance, with which most agencies were keen to become involved, and routine costs which they generally try to avoid, is considered in more detail in Chapter Six.

4.3 Organisation of Technical Education and Vocational Training

Due in part to the Commission for Technical Education and Vocational Training's inability to attract sufficient annual budgets to implement the 1970 training plan, together with the loss of the Commission's politically powerful Minister of State, V.S. Masakanya, the Commission was replaced in 1972 by the Department of Technical Education and Vocational Training (DTEVT). During its short existence, the Commission was able to initiate some of the fundamental changes advocated by the earlier Saunders Report. Both standards of proficiency and methods of certification were drawn up by the Commission. A development plan was also completed for existing and future institutes. Unfortunately, this reorganisation of vocational

and technical education coincided with a worsening economic situation which involved the Ministry of Finance imposing financial curbs on public expenditure. More specific problems for the Commission were its inability to attract qualified staff in suitable numbers for its headquarters in Lusaka and training institutes throughout Zambia. Until 1982 the DTEVT was responsible to the Ministry of Education and Culture. When the responsibility for education was divided in 1982 between the ministries of General Education and Higher Education, the DTEVT became part of the latter. Although a constituent part of the Higher Education Ministry, the DTEVT receives its budget direct from the Treasury. During the final year of the Third National Development Plan, 1979 - 1983, the Department was allocated 23 per cent of the Ministry of Higher Education's budget or 0.7 per cent of the country's capital budget respectively.⁹ In comparative terms, the DTEVT organisational structure (Figure 4.3) is, in general terms, similar to the previous Commission's structure, both being divided into administrative and professional units. However, the DTEVT's current structure recognises the need for closer professional administration of the various levels of education and training and by reducing the number of Deputy Directors from three to one has more clearly defined the hierarchy of command. The organisation of the previous Commission did not provide for a fully fledged inspection unit. The present DTEVT's organisational structure includes such a facility and acknowledges the close relationship between curriculum development and implementation by placing the inspectorate unit under the control of the Assistant Director for Curriculum and Evaluation.

Figure 4.3 Organisation of the Department of Technical Education and Vocational Training (1984)



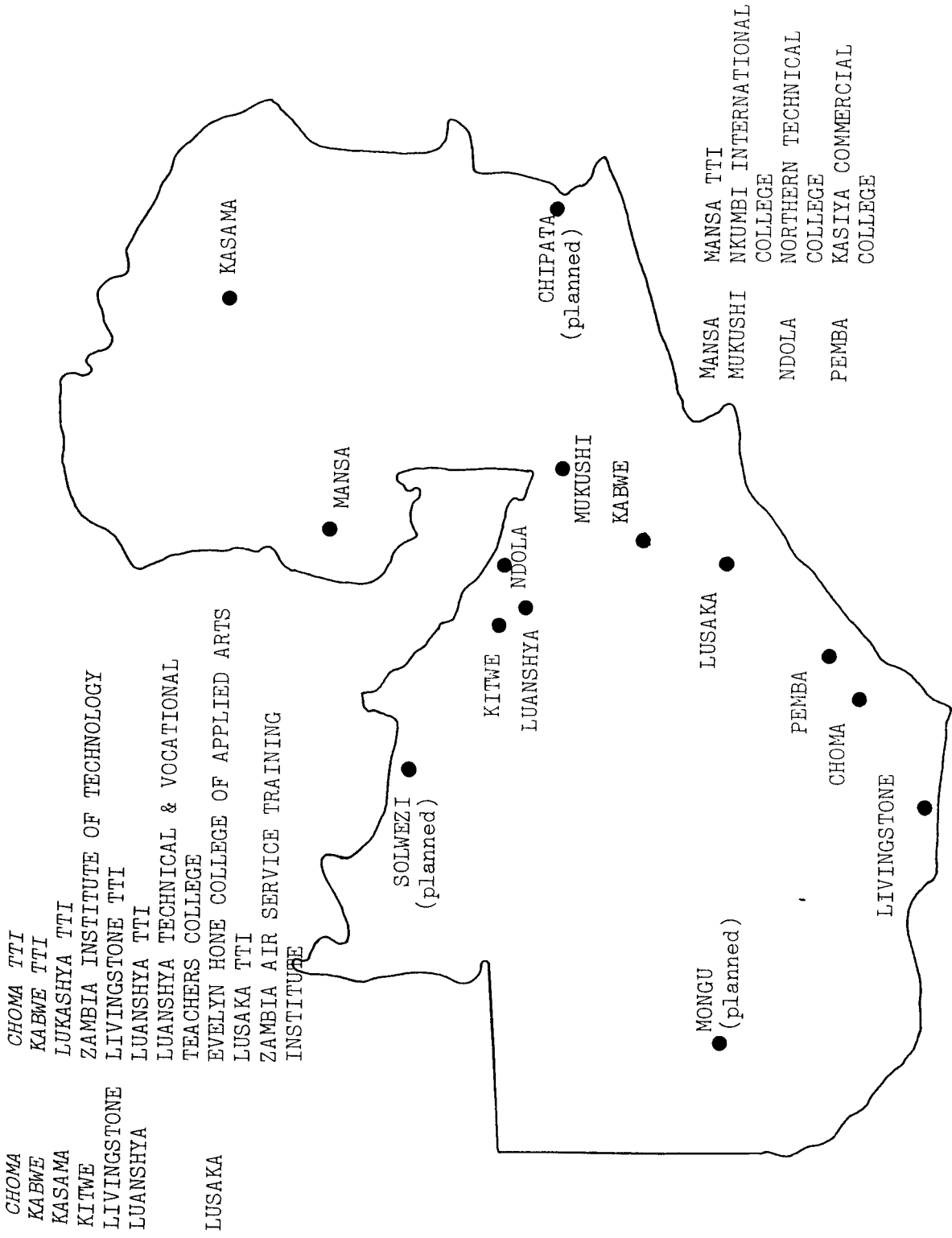
The Department of Technical Education and Vocational Training is presently responsible for the administration of two categories of institution: trades training institutes and higher institutions offering technician and technologist training. In addition to these there is the Technical Teacher Training College at Luanshya, the Kasiya Secretarial College at Pemba, and the Nkumbe International College near Mkushi.

The Nkumbe International College was established by the Refugee Commission of the United Nations. Its enrolment is made up of 40 per cent refugees (largely from Namibia, Angola, Mozambique and Zaire) and offers courses combining academic secondary education and technical and vocational training. The national distribution of the DTEVT's institutions is shown in Figure 4.4. With the exceptions of Kasama in the Northern Province and Mansa in neighbouring Luapula Province, all the operational institutes have been built in towns along the 'line of rail'.

4.4 Curriculum Development

Development of Zambia's present range of vocational and technical courses began in 1969 when, with Canadian Government technical assistance, a curriculum development unit was established. The unit is now headed by a Controller who reports directly to the Assistant Director, Curriculum and Evaluation. The present Curriculum Development Unit shares a modern education services building in central Lusaka with other units from both the Ministry of Higher Education and Ministry of General Education. Joint ministerial sharing of facilities offers the opportunity of achieving closer relationships between the two ministries.

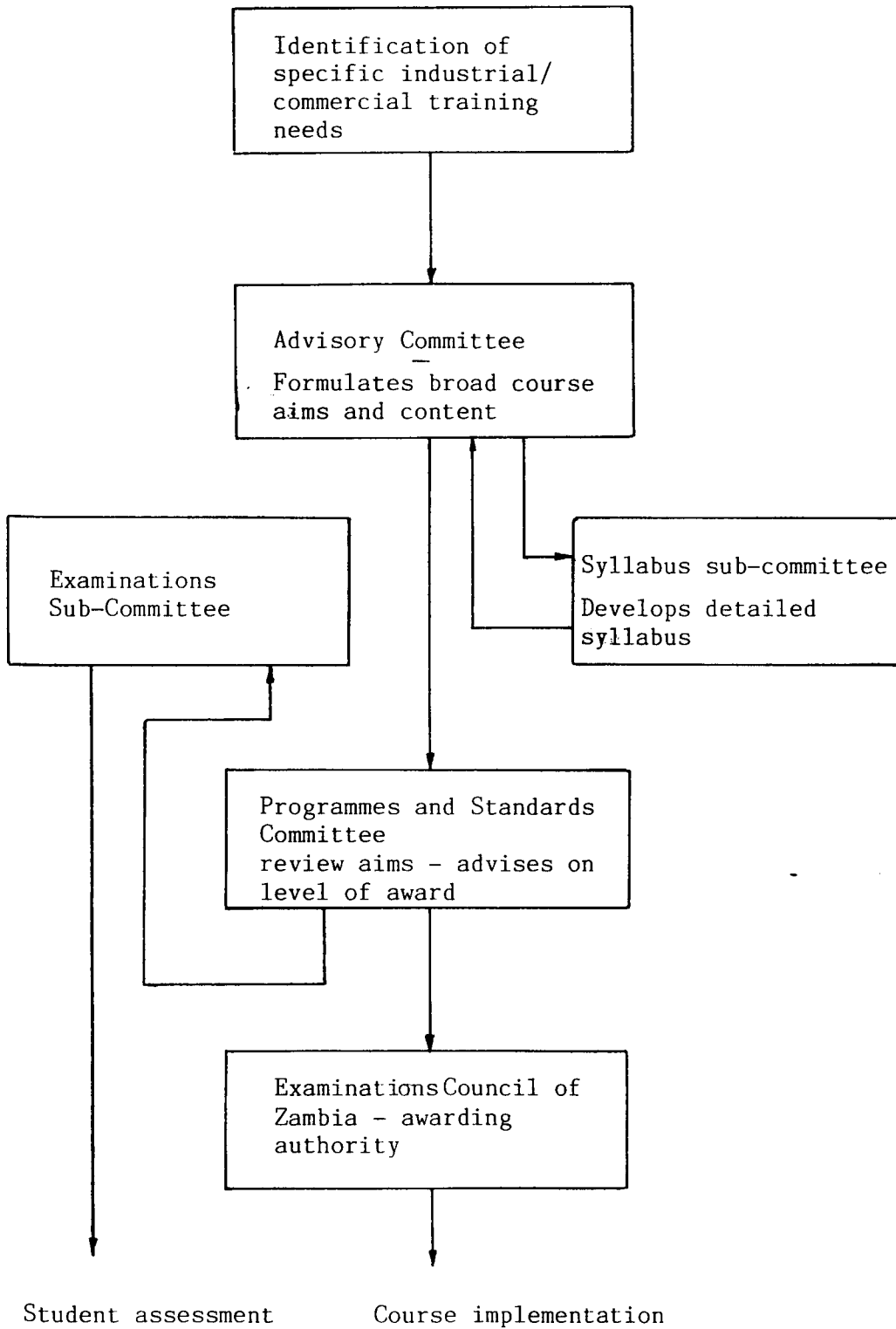
Figure 4.4 Distribution of Department of Technical Education and Vocational Training Institutions



Since its inception, the Curriculum Development Unit has been responsible for some eighty commercial and technical courses at the tertiary level. Assisting the Controller in the development process are five Senior Curriculum Development Specialists. Each of the specialists is responsible for the design and revision of a cluster of related courses. The design of new curriculum or the revision of existing courses is usually a direct response to training needs having been identified by advisory committees. Advisory committees have been established for each branch of commerce and industry (i.e. Hotel and Catering, Automotive Repair) and are responsible for keeping the DTEVT informed of particular commercial and industrial needs and alerting the Department to changes in technology.

Once a training need has been clearly identified, the advisory committee compiles a list of appropriate training aims and from these identifies subject and topic areas, essentially following the Canadian DACUM system of curriculum development. The next stage in the development process is the establishment of a syllabus sub-committee (Figure 4.5). The chairman of the sub-committee is one of the senior curriculum development specialists and members are recruited from both industry and technical institutions. Writing of the detailed syllabus normally takes place at the Curriculum Development Unit headquarters allowing designers the opportunity to use the facilities of the curriculum resource centre. On completion, the syllabus is presented to the advisory committee. In turn, the advisory committee forwards the completed curriculum to the programmes and standards committee who review the course aims against the national training policy and ensure that the level

Figure 4.5 Curriculum Development Process



of the award is appropriate to the curriculum content. During this period of development an examination sub-committee is set up to prepare the necessary assessment material for the launch of the course. The final stage of development prior to starting the course is obtaining approval from the Examinations Council of Zambia; the DTEVT issues credentials to the students who successfully complete their courses.

Since the early 1970's, the Curriculum Development Unit's approach to curriculum design has been based on the Canadian DACUM system (Developing A Curriculum). DACUM was initially established through the joint efforts of the Experimental Projects Branch, Canada Department of Manpower and Immigration and the General Learning Corporation. The approach relies on experts employed in a particular occupational field to determine a systematic content, the process usually begins with an examination of similar current vocational programmes and literature related to them. A unique aspect of the DACUM approach is the way in which curriculum content is displayed using a single sheet reducing the chance of treating one element of the programme in isolation (Appendix I). The single sheet profile provides a specification of the behaviours of skills associated with competence in a particular occupation and provides broad aims for the student. Once the DACUM profile has been developed it serves as the basis for developing instructional content and training materials. Surprisingly, the Curriculum Development Unit has not followed the contemporary trend in vocational curriculum and developed the broad aims incorporated in the DACUM charts into specific student learning outcomes but has preferred written specific training tasks in

the form of a list of topics to be covered by the technical lecturer. Commenting on the DACUM method, Finch and Crunkilton¹⁰ suggest that it is particularly useful for 'new start' activities where immediate action needs to be taken on curriculum development and where limited financial resources prevent a detailed job analysis. The two factors of 'speed of development' within a 'limited budget' were obviously attractive characteristics of the DACUM system and along with the presence of the Canadian Technical Assistance Team were probably the principal reasons for adopting this approach to curriculum development.

Having determined an approach to the design of curriculum, further development still remains an extremely complex and intricate process involving many decision situations. Decisions must be made about subject selection standards, assessment procedures, how eventually the material will be presented and how these micro decisions relate to the overall aims of the training programme.

A pointer to the macro aims of Zambia's new training initiative was given by President Kaunda in late 1969, when he wrote:

"We live in an age of technological achievement and if the Nation is to serve itself and to play an effective and productive role in the world community, it must itself be prepared to train its people, not only to use, but to maintain and create the technical apparatus which increasingly supports the modern community. If we allow ourselves to rely entirely upon foreign expertise, we run the risk of becoming slaves of technology rather than its master. It is imperative that Zambia now completes its total education programme and provides training in technical and occupational fields which will give the trainee those marketable skills demanded by industry."¹¹

It was this kind of thinking that characterised the early 1970's approach to curriculum content in Zambia, emphasis towards the

inculcation of technical knowledge and skills with virtually no mention of providing the student with a broad experiential base in preparation for employment. The need for supporting non-technical subjects to broaden the early courses, which in many cases were taken by students with only Form 3 education, began to be realized in 1975 when courses started to include non-technical support material. A typical technical course, Metal Fabrication, designed in the period 1975 - 1980, shows the following time allocations:¹²

Table 4.2 Metal Fabrication Course

Technical knowledge and Trade Skills	1,790 hours
Graphical Communication	400 hours
Mathematics	320 hours
Communication Skills	180 hours
Political Education	50 hours
	<hr/>
	2,740 hours
	<hr/>

Close examination of the Metal Fabrication course, and indeed other technical courses in Zambia, points to curriculum being designed exclusively for craftsmen and technicians who will be employed in the modern formal sector of industry.

There is little evidence that the curriculum designers have considered preparing trainees for self or cooperative employment which, given Zambia's serious unemployment situation, would seem a serious omission. A recent UNESCO publication on trends and issues in technical and vocational education highlights inappropriate curriculum:

"Programmes are often designed on far too theoretical a basis and in some cases deal with technologies which are not adapted to the social and economic needs and hence to the real employment situation prevailing in the country."¹³

On the point of adaption of technical and vocational education to the real needs of a country, the UNESCO study states:

"Technical and vocational education programmes do not provide graduates with the attitudes or motivation which would allow them to become self-employed if they so choose, and eventually to contribute to the further creation of jobs."¹⁴

Officials of the DTEVT are aware, especially at the craft level, that there is a need to move the curriculum emphasis away from exclusively meeting the needs of the trainee who enters government, parastatal and private companies to training courses which also cater for the self-employed. The importance of self and cooperative employment opportunities will be examined further in Chapter Six.

Since its formation in the early 1970's, the Curriculum Development Unit has been responsible for developing some eighty courses. Table 4.3 shows the various categories of courses which have been developed, with Table 4.4 showing recent student graduations by course categories.

The notion that females as well as males should participate in the whole range of vocational education is not borne out by the data in Table 4.4. Typical over-representation of females in secretarial and arts courses and under-representation in science, engineering and related fields have not been eliminated by the growth of vocational education, indeed, in the short term, sex differences in vocational programmes have been intensified.

**Table 4.3 Vocational and Technical Courses Developed by the CDU
1970 - 1983**

<u>Category of Course</u>	<u>No. of Courses Developed</u>
Applied Arts	9
Business Studies and Secretarial	8
Engineering) Craft	22
) Technicians	21
) Technologists	15
Paramedical	5
Teacher Training	6
Total	86

Adapted from: Annual Report 1983, DTEVT, Ministry of Higher Education

**Table 4.4 Full-Time Pre-employment Training Programmes:
Graduates By Programme and Sex, 1983**

<u>Programme</u>	<u>Graduates</u>		
	M	F	Total
Trades or Craft	591	23	614
Industrial Technician	181	-	181
Engineering Technologist	57	-	57
Science and Paramedical	48	19	67
Business Studies	80	17	97
Secretarial	-	360	360
Air Services	75	5	80
Applied Arts	31	40	71
Teacher Training	125	27	151
Academic (EFL)	28	-	28
Total	1,216	491	1,707

Adapted from: Annual Report 1983, DTEVT, Ministry of Higher Education

In this regard, Smock points out:

"educational systems remain one of the major perpetrators of the colonial legacy of devaluating women and depreciating their roles and status."¹⁵

A defensive posture of the current gender imbalance in Zambia's vocational courses might be that cultural tradition influences the nature of post-secondary studies and ultimately vocational specialization. However, there also exists a strong structural underpinning to this iniquitous state of affairs. The high cost of providing secondary schools with the resources to undertake science and technical courses tends to concentrate these resources in male schools. Therefore, it is hardly surprising that females with their limited preparation in science and technical subjects, are under-represented in these areas at the next level of education and subsequently in these areas of employment.

All colleges have attempted to extend facilities available to full-time students to part-time students. The pattern of attendance for part-time courses has mainly been through evening classes. Most of the courses which have been offered to part-time students have been in the business studies and academic areas. Part-time courses have proved to be popular and could, if permission was granted, be self-supporting in the context of recurrent costs, but as yet the Government has not agreed to this concept.

The dilemma faced by a Government keen to expand vocational training through part-time courses, especially engineering, is the extra financial burden this would induce on its already limited budget. Anxious and zealous to guard its notion of free

and equitable education it is reluctant to embark on offering courses which would be financially supported by fees from a small privileged sector of society. Therefore, due to a critical shortage of funds, colleges have been forced to suspend many of the part-time courses. Evelyn Hone College in Lusaka was offering fourteen part-time courses to 3,286 students in 1978; by 1983 part-time courses had been cut back to eight, with a corresponding part-time student enrolment of 1,561.¹⁶ One effect of the steady reduction of part-time opportunities at government colleges at a period of rising demand has been an upsurge in the enrolment at private colleges.

Though there exists in Zambia a national Curriculum Development Unit and specialist advisory committees to assist in the task of planning vocational education and training courses, financial limitations and administrative structures of Government often exercise greater influence on education and training concerns. Curriculum content and instruction methodology of most of the vocational and technical curriculum in Zambia was designed in the period 1970 - 1978. Needs of both industry and more basically the trainees have evolved considerably since the inception of the majority of courses. There is a need to continually evaluate the relevance of the curriculum. To do this in a systematic and logical way which consciously and effectively relates curriculum to the real needs of commerce and industry, realistic recurrent resources are required for both evaluation and any resulting curriculum changes. Apart from a degree of formative evaluation of curriculum content by the designers in the course of their work, the CDU has not been in a position to mount any large-scale summative evaluation exercise.

Revision which has taken place has largely been as a result of intuitive judgements by college lecturers. Nevertheless, the accomplishments of the CDU in producing such a wide range of courses is a testimony to sound initial planning, effective relationships with industry and a professional commitment by the curriculum development officers.

Clearly, these attempts to increase the scope and relevancy of vocational education in Zambia have a bearing on the employability of graduates of vocational and technical institutions. If curriculum intentions are to be met, information and documentation concerning curriculum content, methods and standards, need to be made available to prospective employers. However, the means to do this is another matter which will be discussed as part of the larger question of transition from education to employment in the following section.

4.5 Transition from Education to Employment

Alongside the significant increase in the availability of vocational and technical programmes during the early 1970's was a growing awareness of the requirement to make young people more conscious of the need to give deliberate thought to the problem of their occupational choice. Several innovative approaches have been employed by the Government of Zambia. An early, post-independent attempt to develop and furnish occupational information for use in guidance and educational programmes was the publication by the Directorate of Civil Service Training of a comprehensive career guide¹⁷ to Government employment in the

areas of: education, engineering, agriculture, sciences, medicine, commerce and industry.

A second development was the establishment by the Ministry of Labour and Social Services of an Occupational Assessment Service. This department has two main functions: firstly, to establish a data base of Form V school leavers wishing to enter the labour market and to match job seekers with requests from industry for first time appointments. Secondly, to provide and administer tests for assessing the suitability of people for employment, training and for promotion in public, private and parastatal organisations.¹⁹

Particular attention was given in the 1972 - 1976 National Development Plan to improving educational services: Library, Educational Broadcasting, Curriculum Development and Student Services,¹⁹ the latter incorporating three functions: testing, selection and the placement of students in industry.

By the mid 1970's, the Student Services Section of the Development and Planning Division (Figure 4.3) was operating with a Controller and several subordinate staff. According to the Department of Technical Education and Vocational Training's 1976 Annual Report:

"Despite shortages of publicity material and lack of transport, Placement Officers had found employment for 576 or approximately 99 per cent of its craft graduates from the Trades Training Institutes and those students following craft courses at the Northern Technical College,²⁰

Due to Zambia's further decline into economic recession, the previous buoyant industrial placement situation was not maintained and by 1983 the Director of Technical Education and Vocational Training reported that difficulties were being

experienced in placing craft graduates into industry.²¹ The decline in industrial placements for craft trainees both prevents them from obtaining their full craft certificate and removes a valuable avenue into full-time employment, as many trainees who, in the past, were taken on by companies for a one year period were kept on as company employees.

For those students following technologist or technician courses at the Zambia Institute of Technology or the Northern Technical College, industrial experience is gained midway through their course of study. Unlike at craft level, there is still an active demand for engineering technicians to fill new places and replace the large number of expatriates in industry. Therefore, many industrial organisations are keen to use the industrial placement as a method of identifying future potential technicians for their particular company.

Of the various factors contributing to improvement in the transition from school and college to employment perhaps none is more fundamental than information. Despite only receiving a limited amount of assistance from manpower surveys for use in predicting the needs for training in certain employment sectors, the Department of Technical Education and Vocational Training have continued to provide both students and employers with information on occupational matters. The major approach to providing data and information about job requirements, work place environments, wages, education and training required, has been through a wide range of occupational 'Fact Sheets' produced by the Educational Service Centre in Lusaka between 1980 and 1982 (Appendix II). If the 'Fact Sheets' are to continue to have positive implications for improving the education to

employment transition there will shortly be a requirement for their up-dating with information more relevant to the technological and economic changes facing students in the 1990's.

Vocational guidance in the Ministry of Education's secondary schools lies with nominated teachers who are responsible for monitoring academic progress and linking success with employment or further education opportunities. Teachers with responsibilities for vocational guidance in the secondary schools also attend seminars organised and run by the Student Services Unit of the Department of Technical Education and Vocational Training. These seminars are aimed at creating a general awareness of employment opportunities and also sensitising career guidance teachers to the need for students to know early in their secondary school course, career implications in the choice of subjects they make at Grade Ten.

Maintaining contemporary vocational and technical curriculum for Zambia's tertiary colleges has been achieved with the assistance of industrial and commercial advisory groups. These bodies, who work closely with the Curriculum Development Unit, have been a source of information on new developments resulting from new technology in the workplace. This practice makes vocational and technical education more relevant to employment which, in turn, promotes a smoother entry into work for the college graduate. However, it is evident that the current severe fiscal restraints on budgets for meetings, transport and publications are threatening the continued existence of those advisory groups.

In similar difficult circumstances is the operation of the Student Services Unit which, unless it is better financed, risks becoming a routine clerical unit, merely keeping student records and issuing references to potential employers.

4.6 Non-formal Education and Training

In common with the majority of post-colonial administrations in Africa, Zambia began to discover during the late 1960's that the rapid expansion of primary education was raising school costs at a rate which the national budget could not sustain. The immediate consequence was a growing number of primary school leavers who were eligible for entry into lower secondary education could not be accommodated. Many Grade 7 leavers found themselves unemployed due to a primary school curriculum which was not designed to equip young people for direct entry into employment but rather act as preparatory stage for further education. This all too common dilemma was aggravated by a stagnant economy unable to create more formal sector jobs and a pool of unemployed school leavers from Grades 10 and 12. In line with other third world countries, the Government of Zambia looked towards non-formal education as an alternative learning activity for young people unable to enter or continue their formal schooling.

Non-formal education has been defined by Coombs as:

"any organised, systematic, educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children."²²

The critical dimensions of unemployment in Africa have prompted governments, international agencies and individual researchers

to investigate the various possibilities of using non-formal educational strategies as a means of creating skills and employment opportunities. David Evans, in his work on the planning of non-formal education, notes that this type of education has evolved into four categories: industrial and vocational, agricultural and community development, programmes aimed at out-of-school rural youth and programmes for rural adults.²³ Simkins, in his work on non-formal education, refers to certain characteristics which the various categories of this type of education tend to share:²⁴

- | | | |
|-----------------|---|---|
| Purposes | - | Short Term and Specific
Non-Credential Based |
| Timing | - | Short Cycle
Recurrent
Part-Time |
| Content | - | Output-Centred and Individualised
Practical
Entry Requirements Determined by
Clientele |
| Delivery System | - | Environment-Based
Community-Related
Flexibly Structured
Learner Centred
Resource Saving |
| Control | - | Self-Governing
Democratic |

Zambia and its previous colonial administration have substantial experience of the various categories of non-formal education described and characterised by Evans and Simkins. Prominent amongst the early attempts to offer learning facilities to a wider public were the network of Jeanes schools (Chapter Three, Section 2) which flourished in East and Central Africa during the 1920's/30's. In the period when independent Zambia began searching for alternative methods of education for its increasing 'out-of-school' population, two African initiatives

'Village Polytechnics' and 'Building Brigades' started to receive considerable attention from writers, researchers and international development agencies.

The Village Polytechnic movement in Kenya was a response to a growing unemployment problem for primary school leavers. Established by local rural communities with the assistance of the National Christian Council of Kenya, the village based centres were low-cost attempts at training youths in skills required for maintenance and development of their rural communities.

The concept of using brigades as a pattern of non-formal education was given prominence in Nkrumah's Ghana of the late 1950's. Some fifteen years later and responding largely to pressure from young people seeking places in post-primary education, Van Rensburg, a South African exile, established the first of Botswana's Brigades at Swaneng Hill School, Serowe. Avoiding the traditional mode of many African secondary schools, the Swaneng Hill curriculum was directed primarily towards providing the practical skills required for life in the rural communities of Botswana along with supporting academic studies which focused on local economic, social and cultural issues. The ethos of the school and the need to provide income for recurrent education costs led to the creation of building brigades which undertook contracting work in their local community and also built a major part of Swaneng Hill School. With some measure of assistance from both internal and external funding the self-help concept has been extended to brigades for

mechanics, handicrafts, leather tanning, printing, agriculture and hotel keeping.²⁵

The outcome of non-formal initiatives in both Kenya and Botswana has been a low cost provision of post primary education and training opportunities which, in the case of the Village Polytechnics, Thompson estimates is around half the cost per pupil of non-residential secondary education.²⁶ However, David Court²⁷ in concluding a study of Kenyan Village Polytechnics, and Sheffield and Diejomaoh²⁸ in their case study of Brigades, note that these types of non-formal activities, whilst providing important long-term lessons for combating unemployment is, because of limited application, small enrolment, often isolated locations and a social preference for general academic education not the panacea to the whole problem of youth unemployment.

Kenya and Botswana are, of course, not alone in Africa in their concern for non-formal education. In Zambia an assortment of non-formal education, training and community development activities continue to respond to the various population groups' needs for further learning opportunities. By the end of the 1960's questions were being asked by economists, politicians and educationalists about the continued expansion of formal education where the costs of schooling were rising. Concern was also being expressed for the increasing number of children who did not complete the full cycle of education and whose primary education was largely irrelevant to obtaining full-time work.

In his evaluation of non-formal rural training schemes in Zambia, F.P. Dall²⁹ reviews the Government's responses to education outside the formal system. Dall notes that the

inclusion of rural community skills training first came to the public's attention as a component of the Government's Youth policy in 1972. A Youth Division in the Ministry of Education assumed responsibility for promoting grant aided training projects. An even greater prominence for the value of non-formal education and training was established in 1978 with the creation of the Ministry of Youth and Sports which assumed control for community based skill training projects. Further impetus was given to this sector of training in April 1979 when the President opened the Village Industry Service. Critics³⁰ of the Government youth policy during the 1970's often suggest that many training initiatives were poorly planned and resourced. Ostensibly designated to provide training for young people, many schemes did little more than repatriate youths to their home districts only to find no proper training infrastructure in place. Needless to say, this situation only encouraged people to drift back to the copperbelt area.

Zambia's efforts to develop non-formal education and training opportunities have not received the same international attention as those in Kenya and Botswana. Possibly this is due to a later start and a diffusion of effort between various types of projects. According to Dall,³¹ most of the rural schemes he visited in the Southern and Eastern Provinces during 1977/78 had neither training based on systematically identified local needs nor a properly planned training syllabus. Common to most schemes was a difficulty in recruiting locally trained staff and a high dependence on external expertise and help. Jones Akinpelu, writing on the comparative results of vocational training in the context of rural development in Africa, highlights that

successful schemes in Tanzania, Kenya and Botswana have incorporated:

"a generous local input and influence in programming. The localisation ensures situational relevance in terms of meeting self-identified needs."³²

Urban areas, on the other hand, with their large numbers of under-employed and unemployed youths, have developed a wide variety of non-formal training centres. At one extreme there are metalwork and carpentry workshops, often consisting of a basic shelter for the storage of materials with the training and production work taking place outside. Such centres offer on-the-job courses where the training is very practical and oriented towards producing finished marketable products such as building blocks, roofing sheets and charcoal fired ovens. The duration of schemes such as this depends largely on the speed with which the trainee masters the various skills, with most courses being completed inside an eighteen month period. Two features of this type of training, which is very similar to that described by King³³ in his Kenyan study, are that trainees do not require educational qualifications to enter and certification of completion is normally in the form of a testimonial.

A project which has given thought to ways of raising the living standards of urban communities is HUZA (Human Settlements of Zambia). In partnership with non-government aid agencies, including Oxfam, this organisation runs intensive short training courses covering carpentry/joinery, sheet metal work and tailoring/dressmaking. In addition, the group provides credit

facilities for those who have received training and are trying to set up small business enterprises.

At the other end of the spectrum, urban training centres offer vocational courses in carpentry, metalwork, automotive work, clerical and dressmaking. These centres, housed in permanent buildings, offer courses not far removed from those of the Government TTI's. Courses at these 'modern' centres usually attract candidates who have at least succeeded in the formal system up to and including Grade 7 but have failed to secure places in lower secondary schools, implying that non-formal training only becomes a viable option once the formal channels towards employment, where education and training are important, are blocked. Given the present economic position, the 'modern' non-government training centres, with their fixed entry qualifications, terminal certificates and escalating scale of fees, are becoming a second option only for the children of middle class parents with the 'artisan type workshops' serving the less schooled and poorer sections of the community.

Promotion of the Village Industry Service was conceived and set up to fulfil the demands of the Second and Third National Development Plans which had laid emphasis on a 'back to the land policy'. Supported by professionals, seconded from the Ministries of Youth and Sport, Agriculture and Water Development and from the Commission for Community Development, the scheme sought to promote and encourage small scale enterprises of individual and cooperative nature. Schemes are encouraged to be labour intensive, thus making a contribution towards alleviating rural under-employment and unemployment and stimulating village communities. To date, the structure of the service has

concentrated its attention and resources in three main sectors: food processing, wood and textile processing and metalwork and chemical processing.

In a study of non-formal education/training completed at the same time as Dall's, Wim Hoppers³⁴ confirms the wide variety of programmes serving different purposes during the late 1970's. Hoppers also identifies a major shift in the use of non-formal education, claiming that it is often a substitute for formal schooling that otherwise would not be available, such as in primary, lower secondary and vocational training. Significantly, it is the latter area of non-formal training which has lost many of its non-formal characteristics with many programmes taking on the role of surrogate to the Government programmes. Hoppers³⁵ identifies the basic cause for this formalization in the steady decline of pupils progressing between Grade 7 (primary) and Grade 8 (lower secondary), so that during the early 1980's only about 16 per cent of eligible pupils found a place in Government lower secondary schools. This decreasing opportunity for post primary education and the stagnation of employment opportunities in the modern sector has seriously reduced the value of primary school qualifications which, in turn, has increased the pressure for other means to achieve the certificates required for entry into technical and administrative positions.

In contrast to the stagnation in the growth of Government schools and training centres, the continuing pressure for post-primary learning is likely to increase the size and impact of the non-formal education and training sector. Hoppers³⁶ sees further expansion of this area of learning being closely linked

with non-government centres losing their autonomy to official control which, in turn, will reduce their ability to build upon innovative features and remain truly non-formal alternatives. Nevertheless, the situation described in this section suggests a susceptibility on the part of the formal Government system of vocational education to be the only provider of employment orientated education.

Within a wider perspective, post-independence public sector vocational education has seen the introduction of new specialist fields into the national curricula and attempts to secure their acceptance by employers. These have had varying degrees of success. A significant part of this growth has involved efforts to form closer relationships with particular fields of employment. This, as we shall see in Chapter Five, contrasts sharply with the situation in Zimbabwe. Representatives from industry in Zambia have usually been most willing to assist, but clearly the rigid structure of organisation and the depleted funds of the Department of Technical Education and Vocational Training have had a considerable effect on initial success of this participation.

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CHAPTER FIVE VOCATIONAL EDUCATION AND TRAINING IN ZIMBABWE

5.1 Colonial Divisions in Vocational and Technical Education

Organised vocational education and training in the territory south of the Zambezi has a recorded history going back almost 100 years. For most of this period the progress of this type of education has been developed along three distinct lines: missionary endeavour, Government schemes for Africans, and Government technical schools and colleges for Europeans.

Early missionary enterprise during the 1890's resulted in a number of mission settlements capable of training African teachers for work in smaller out-stations. The earliest of these settlements, St. Augustine's, Penhalonga, and St. Faith's, Rusape, were located in the eastern districts of the territory. Both establishments represented an attempt to train African personnel for a wide variety of educational work in Mashonaland. In addition to providing general and religious education, the early curriculum also included specialised instructions in agriculture and the building trades. These early vocational education ventures by the various missionary organisations continued to expand through the first quarter of the century, but as African employment expectations began to widen beyond that of a carpenter or bricklayer, the vocational centres tended to lose some of their earlier popularity. It is only from the mid-1950's onwards, when schools such as St. Peter's, Kubatana, Harare, St. Aidan's, Bulawayo, and the Honde Technical School, Manicaland, began to introduce modern trades such as vehicle repair and fitting and machine shop work that this type of education regained some of its earlier esteem. Most of the

missionary schools in present day Zimbabwe, including those which offer vocational courses, are registered and aided by the Government who provide teachers' salaries, per capita tuition and boarding grants.

Government involvement in secular vocational education for African students began during the period under the Chartered Company's rule and three years before the granting of responsible Government in 1923, when the Domboshawa school was opened. This relatively early state involvement in vocational education¹ was largely the result of the efforts and conviction of Mr. H.S. Keigwin, the Native Commissioner for Sinoia, that the development of indigenous industries could be turned to economic use.² The Domboshawa model of offering a curriculum of general education, skill training and an introduction to the fundamentals of agriculture have been used on several occasions by Government: Tjolotjo in Matabeleland (1922), Miezú, Que Que reserve (1959), and the Luveve Technical College, Bulawayo (1960). Following the declaration of UDI in 1965, and the presentation of the New Plan for African Education introduced in 1966, more vocational secondary and post-primary schools were proposed. These F2 and F1 categories of schools never attained the wide acceptance of popularity with Africans and during the transition to independence in the late 1970's these schools were converted to normal general education schools. However, the present Government of Zimbabwe, being concerned about the high rate of youth unemployment³ announced, during 1988, proposals for introducing vocational curricula into its secondary schools. This apparent oscillation between general education, vocational preparation and vocational education for

explicit purposes is acknowledged and taken up in the initial part of Chapter Seven.

Vocational classes for teenage children of European settlers are recorded as having started in the form of evening study in 1924 at Prince Edward School, Salisbury.⁴ However, this early venture initiated by a Mr. Gifford, a teacher at the day school, lasted only two or three terms due to the indifferent attitude of the students. Similar early attempts to start vocational evening classes took place in Que Que and Umtali. In 1920, with the assistance of the local gold mine, Globe and Phoenix, a Mr. C.H.L. Barker started evening classes at the Que Que Public School. The students, who were mostly employed in the mining industry, studied machine drawing construction, practical mathematics and geometry and applied mechanics. Despite both industrial and Government support in the form of capitalization grants, these early classes ceased in 1925 due to difficulties in finding suitable instructors. Responsive to a growing popularity for this type of education in England and the Union of South Africa, Mr. L.M. Foggin, Director of Education, made a further approach to establishing vocational classes by canvassing some fifty engineering and building companies in the Salisbury area as to their requirements for such courses. Formal evening classes in electro-technics, building construction and book-keeping opened at Prince Edward School in January 1930. Three years earlier, in January 1927, the territory's first full-time technical school for Europeans was established at Bulawayo when the Bulawayo Technical School was opened for both full-time and part-time vocational studies. This early attempt to establish formal technical education was:

"a blend of an English Junior Technical School and a Transvaal Trades School"⁵

which offered a two year full-time course in metal and wood skills to students who were at least 14 years of age and had passed Standard IV. The 1927 prospectus gives an indication to the nature of the training when it advised potential students that the curriculum had been designed to provide:

"a training designed to meet the needs of boys likely to enter industrial life as apprentices or otherwise."⁶

Part-time evening and Saturday morning classes were largely taken up by employees of the railway workshops in Bulawayo.

By 1930, the education authorities in Southern Rhodesia's other main urban centre, Salisbury, were showing renewed interest in establishing opportunities for technical and vocational studies. Using part of the premises of Prince Edward School, the Salisbury and District Technical and Commercial Evening Classes were formally opened in January 1930. Both the part-time nature of the studies and the use of temporary buildings were to be a continuing feature of technical and vocational classes in Salisbury until after 1950. Although day time classes conducted by full-time lecturers were initiated in 1947 for students from the Electricity Supply Commission, it was not until 1951 that the Salisbury Polytechnic⁷ introduced its first full-time course (commercial studies). During the two preceding decades and until the Apprenticeship Act of 1959, the 1934 Industrial Conciliation Act ensured the racial separation of vocational education.

Discussed earlier in Chapter Two (Section 5), this Act, and in particular paragraph nine, turned out to be one of the most

significant pieces of legislation limiting the involvement of Africans in skilled employment for some forty years. Although concerned with employment issues, this legislation should be seen as only part of a continuous racial confrontation centred upon the struggle for social and political dominance.

The 1959 Apprenticeship Act, which replaced the previous Industrial Conciliation Act governing the training and employment of apprentices, made it legally possible for non-Europeans to be indentured as apprentices (Table 5.1). However, it was left to the later Select Committee on Apprenticeship and Technical Education, 1964, to establish the requirement for off-the-job training as part of the apprenticeship training scheme. This requirement led to the expansion of technical facilities at both Bulawayo and Harare colleges to support apprenticeship training.

Table 5.1 Yearly Apprenticeship Intake 1961 - 1976

Year	No. of Apprentices	Difference Over Previous Year	No. of Africans Indentured	Percentage Of Africans To Total
1961	308	N/A	N/A	-
1962	436	+ 128	10	2.29
1963	371	- 65	9	2.43
1964	378	+ 7	8	2.12
1965	445	+ 67	7	1.57
1966	378	- 67	9	2.30
1967	396	+ 18	5	1.26
1968	498	+ 102	17	3.41
1969	531	+ 33	49	9.23
1970	600	+ 69	10	1.66
1971	751	+ 151	23	3.06
1972	807	+ 56	31	3.84
1973	798	- 9	46	5.76
1974	800	+ 82	104	11.36
1975	1211	+ 331	219	18.05
1976	1098	- 113	163	14.84

Source: Annual Reports and Information from the Apprenticeship Training and Skilled Manpower Development Authority.

Table 5.1 shows the effects of the 1959 Apprenticeship Act on the employment of African apprentices and the general expansion of this form of training during the UDI period. The latter was both a direct result of enlarging the import substitution manufacturing industry and the declining rate of skilled workers entering the country.

Traditionally, Rhodesian industry had always depended heavily on immigration from Europe and South Africa to supply its skilled manpower. The degree of this dependence was estimated by B.D. Mothobi in the late 1960's to be in the region of 80 per cent,⁸ whilst the Minister of Labour, Mr. R. Cronje, stated that the ratio in 1975 was 65 per cent from immigration and 35 per cent from the apprenticeship training scheme.⁹ Decline in White immigration and its effect on the supply of skilled manpower led, as was noted in Chapter Three, to the setting up of the Cameron Commission 1974 to investigate the future supply and training of skilled workers. Recommending a more dynamic and professional approach to manpower training, the Commission suggested that this could be better achieved outside the Ministry of Education. Four years later, the responsibility for sub-professional manpower training was reassigned to the Ministry of Manpower Planning and Development. During the post-independence period, responsibility for manpower training remained with the Manpower Ministry until 1984 when this Ministry was renamed the Ministry of Labour, Manpower Planning and Social Welfare. This Ministry, through the 1984 Manpower Planning and Development Act, became responsible for training in a wide range of public, parastatal, private companies and private institutions.

During 1988, and beyond the time limit of this study, the portfolio for manpower training was transferred, yet again, to the newly established Ministry of Higher Education. The question must be raised whether transferring responsibility for vocational education from the Ministry of Education in 1978 to the Ministry of Manpower Planning and Development significantly extended the 'British model' of vocational education through the first decade of Independence or whether the momentum in the system made this inevitable.

To answer this question, it is helpful to study the pattern adopted by the Ministry of Education in its post-independence provision of general education. For example, senior officials at the Ministry of Education were certainly more confident and independent in thought than their counterparts in Manpower, less dependent on western notions of education and generally more sympathetic towards introducing some degree of equity into the education system.

These observations can be illustrated by reference to a number of projects and courses launched in the 1980's by the Ministry of Education: -

The Belvedere Teacher Training College, specially built and resourced for the training of handicraft and science teachers with particular emphasis towards appropriate technology.

The National Curriculum and Examination Centre, Harare, accommodating specialists involved in localising foreign courses and examinations.

Zintec Teacher Training Colleges, referred to earlier in Chapter Three, Section 3.7.

In contrast to the developments outlined above, it is difficult to find similar initiatives of this scale emanating from the Ministry of Manpower Planning and Development and the Ministry of Labour, Manpower Planning and Social Welfare during the period 1978 to 1988. Also significant has been the more ready acceptance of foreign aid by these Ministries, whereas the Ministry of Education has been far more selective regarding the aid it has received. For example, the latter Ministry has steadfastly refused to accept aid from the World Bank, mainly due to the restrictive and conditional use of aid from this donor.

In the light of this, it seems reasonable to make the following cautionary observation - had the Ministry of Education continued to hold the portfolio for vocational education until the Independence period, it is more than likely that the colonial mould of this sector of education would have been broken. Undoubtedly, the largely restrictive entry pattern (employment position) for course admission at most colleges would, by now, have changed. More objective analysis would have been directed towards the value of establishing the two large colleges at Mutare and Masvingo vis-a-vis smaller and more diversified rural training centres. This issue is taken up again in Chapter Six, Section 6.3

5.2 Post-Independence Policies

At Independence in 1980, the skilled manpower base of the new nation was in some confusion. Attempts before Independence by several studies to predict the manpower resources and training requirements of Zimbabwe invariably included the prediction that

the event would lead to the large-scale emigration of White skilled workers. Assumptions about the indispensability of the White labour force and fears that a White exodus from Zimbabwe would result in a breakdown in the economy, proved to be exaggerated as the emigration of economically active persons was largely balanced by new immigrants, upgrading of 'semi-skilled workers' and apprentices on completion of their training period. Although Rhodesia had a formal vocational training system, mainly used by the White sector of the population, training for high level manpower posts remained related to Britain and South Africa. The National Manpower Study of 1981 estimated that at the time of Independence there were about 5,000 White Zimbabwean students at South African educational institutes.¹⁰ During the same period, the national survey estimated that between 6,000 - 8,000 African students were in institutions of higher education in various countries of the world.¹¹ In addition to these exiles, were the thousands of civilian and military personnel in the liberation movement.

The inheritance of a relatively healthy economy with development potential, coupled with a strong if somewhat traditional educational and training establishment, was a substantial asset to the new Government of Zimbabwe. However, as noted in the 1982 World Bank Education and Training Sector Study, the education and training system needed substantial adjustments to meet the new conditions resulting from independence.¹² Early post-independence initiatives towards restructuring vocational and technical training emerged at the Donors Conference held in Harare during March 1981. Amongst these were two proposals from

the ILO which projected the building of four Regional Skill Centres and six Rural Skill Centres which would have an annual output of 1,700 skilled workers.¹³ The ILO's rationale for locating vocational training centres in rural districts was closely related to developing the technical capacity of key 'growth points'¹⁴ which were being established by the Government in the communal areas (African settlements) of the country. Trainees leaving the projected course would, in addition to having learnt particular skills, also have entrepreneurial abilities in the various aspects of establishing and operating small-scale businesses and commercial enterprises. Although the World Bank report of 1982 did not include specific proposals for the training sector, it did make broad recommendations whereby the initial emphasis would be to clearly identify the training needs of the country. This would, in turn, be followed by close cooperation between the Government training institutions and the private sector to ensure that subsequent training plans were both functional and as economical as possible.¹⁵

Government response to external proposals for the future of vocational education and training were in specific terms the National Manpower Survey (1981), Manpower Planning and Development Act (1984), and certain parts of the Transitional National Development Plan 1982/83 - 1984/85. The National Manpower Study (1981) was undertaken to assist the Government of Zimbabwe in the planning, training and development of the country's manpower resources and had as its objectives: -

1. to assess the size and characteristics of the nation's professional, skilled and semi-skilled workforce,
2. to assess the potential of professional, skilled and semi-skilled Zimbabweans working or studying abroad, who could become available to work in Zimbabwe,

3. to assess existing shortages with regard to professional, skilled manpower.
4. to formulate short, medium and long-term policies for education and training to meet the nation's development requirements.¹⁶

The results of the study were published in 1983 and showed the formal sector of the Zimbabwean economy in 1981 to have had 313,395 posts within the professional, skilled and semi-skilled categories. Vacancies were computed at 15,004 or around 5 per cent of the available posts.¹⁷ However, in some sectors of employment, the number of persons undergoing training would, on completion, satisfy the immediate needs of the sector (Table 5.2). Whilst the study was particularly strong in identifying the racial inequalities of the employment market, it was somewhat vague in stating the number and time frame for future training of additional trainees, simply stating that there "was a general shortage in certain occupations"¹⁸ and that this be approached by vocational and technical training and the upgrading of semi-skilled personnel. This apparent lack of specificity was no doubt due in part to the uncertainty as to the extent of the future growth in the Zimbabwean economy.

Another important contemporary document which gives some insight into the emerging pattern of vocational and technical training in post-independent Zimbabwe is the Transitional National Development Plan (1982/3 - 1984/5). Although lacking in specific details, it does use some of the preliminary results of the National Manpower Survey in its descriptive projections for skilled manpower training. Anticipating an extremely high annual growth rate in most material producing sectors (manufacturing 11 per cent)¹⁹ the Plan asserts that to achieve

and sustain this massive expansion, and at the same time replace expatriate workers, it will be necessary to expand training opportunities for existing and new employees.

**Table 5.2 Formal Sector Employment Posts and Vacancies - 1981
(Professional, Skilled and Semi-Skilled)**

Employment Sector	Posts	Vacancies	Vacancies Difficult To Fill	Employees in Training
Agriculture, Hunting, Forestry and Fishing	57,660	1,659	1,180	822
Mining and Quarrying	24,821	754	377	1,432
Manufacturing	77,195	2,822	1,438	4,483
Electricity and Water	3,365	355	283	292
Construction	9,746	999	470	376
Wholesale and Retail Trade, Restaurants and Hotels	41,447	869	435	2,574
Transport, Storage and Communication	28,894	1,888	1,412	1,579
Finance, Insurance, Real Estate and Business Services	17,064	777	469	1,768
Community, Social and Personal Services	51,564	4,901	2,989	5,687

Source: Compiled from the National Manpower Survey - 1981, the number of people involved in education and training are not included in the above table.

The strategies to achieve more skilled manpower are wide-ranging if again somewhat devoid of planning detail: -

- i) upgrading and certification of workers (mostly black) whose skills have not been officially recognised,
- ii) restructuring and integration of the formal education system with the manpower development plan
- iii) bonding of apprentices, thus reducing the number immediately leaving the country on completion of training
- iv) doubling the enrolment of the two main technical colleges of Harare and Bulawayo and expanding the smaller colleges of Mutare, Kwe Kwe and Gweru
- v) opening of a technical teachers college to achieve self-sufficiency in technical instructors
- vi) establishing a National Vocational Training Development Centre (NVTDC) as a focal point for training activities
- vii) building four Regional Skill Centres and three hundred Rural Skill Centres
- viii) encourage ministries and parastatals to provide training programmes for the development of their staff
- ix) provide training for cooperation personnel,²⁰

The authors of the Transitional National Development Plan conceded and, to some extent, concurred with the previous World Bank survey that Government training should be supplemented with on-the-job training opportunities in the private sector. With regards to formal training programmes operated by the private sector, which had previously emphasised overseas curriculum and certification, these would in future be regulated by the Ministry of Manpower Planning and Development.

It is interesting to note that six of the points raised in the Transition Plan refer directly to increasing the consumption of vocational education/training. Three involve structural changes but significantly none relate directly to creating full employment or, in more realistic terms, minimising unemployment.

Completing and consolidating the various post-independence surveys and plans affecting the training of sub-professional skilled manpower was the 1984 Manpower Planning Development Act. This Act also established the legal basis for the Ministry of Labour, Manpower Planning and Social Welfare to set up and maintain manpower training schemes and institutions. In addition, the 1984 Act also provided for the setting up of a National Manpower Advisory Council, the Zimbabwe Manpower Development Fund, and new arrangements for apprenticeship training and skilled manpower certification. Whilst the Act confers upon the responsible Minister the authority to establish, equip and maintain Government vocational or technical institutions, it fails to clearly identify the direction that vocational and technical training should take; in particular whether it would continue to serve the needs of the apprenticeship system or explore new avenues of training. Though there is an absence in the Act of specific training strategies, section three (vocational and training) gives the responsible Minister a wide remit to establish alternative schemes for manpower training.²¹

The ultimate effectiveness of these policy goals on changing the direction of vocational education will, of course, greatly depend on these issues being clearly articulated and carefully translated into concrete policy decisions.

The period 1980 to 1984 was crucial in the future policy of vocational/technical education and training in Zimbabwe. The basic choice was whether to continue supporting the well-proven but limited apprenticeship training scheme combined with the traditional 'British' mode of a technical college or to look

toward new methods of training with priority given to the needs of the rural areas. Without a clear training development policy, lack of a data base for comprehensive training needs (especially in rural areas), and a cadre of conservative education policy makers, the system had drifted into perpetuating the pre-1980 model of technical colleges in Rhodesia.

Hanf describes this interest group as the 'independence generation' who believe that the education system that produced them cannot be all bad. The same writer suggests:

"This group is interested in maintaining those selection criteria on which they obtained their present positions, i.e. primarily achievement criteria, oriented to European educational standards. Their ideological justification is a pragmatism that is very much defined by the negative experiences made with adaptations that deviated from the western model."²²

Comparative indications from other countries also demonstrate how difficult it is to bring about curricula change until new educational theories have been slowly disseminated and accepted by the majority of teachers.

Dealing with the more general problems of innovation in education systems, with particular reference to those of Africa, A.R. Thompson reflects on the prevalence of unclear, confused and sometimes conflicting aims in education and suggests that:

"if an innovation is to be successful its objectives must be clear and where multiple objectives are aimed at, these must be in harmony with each other and there should be clear understanding of the relative priority of these objectives."²³

Predictions made in the early 1980's as to the growth of the Zimbabwean economy have proved to be widely incorrect, with the Gross Domestic Product (expressed in constant prices) rising by only 0.18 per cent in 1986 and for the period 1980 - 1986 the

per capita growth has been zero.²⁴ These disappointing figures are largely a result of a high annual birth growth rate (3.9 per cent), annual inflation at 14 per cent, drought condition in 1983 and 1984, and a depressed manufacturing sector of the economy.²⁵ The corollary of this downturn in the formal wage economy has been a drop in the number of apprenticeships and as a consequence a steadily increasing decline in the use of technical college facilities at Bulawayo and Harare (Tables 5.3 and 5.4).

Table 5.3 Comparative Student Enrolments 1981 - 1987

Third Term 1981		First Term 1987	
Technical Colleges	Number of Students	Number of Students	Technical Colleges
Bulawayo	1,988	1,714	Bulawayo
Harare	3,813	3,484	Harare
-		459	Gweru
-		343	Kushinga Phikelela
-		430	Kwe Kwe
-		132	Masvingo
-		701	Mutare
Total	5,801	7,263	Total

Source: Compiled from National Manpower Survey, 1981, and Ministry of Labour, Manpower Planning and Social Welfare Data, 1987

In the short-term and within the aspirations of the First Five Year National Development Plan (1986 - 1990),²⁶ the Government has the opportunity to update the 1981 National Manpower Survey, establishing comprehensive manpower data and financially

quantify policies and plans required to assess the precise education and training needs relating to both rural and urban situations. In the medium-term, decisions are required regarding the structural and curricular reform of tertiary education and training, and the long-term planning objectives and financing of this sector of education.

Table 5.4 Apprenticeship Intakes 1979 - 1986

Industry	1979	1980	1981	1982	1983	1984	1985	1986
Aircraft	135	119	115	79	25	84	109	40
Automotive	331	345	460	350	242	214	245	216
Building	106	154	157	158	121	88	85	73
Electrical	300	392	350	391	260	269	279	286
Hairdressing	55	59	58	29	8	47	64	17
Mechanical	582	641	797	478	511	472	582	456
Printing	105	106	107	64	64	64	32	41
Total	1,614	1,816	2,044	1,782	1,198	1,263	1,286	1,129

Source: 1979-1982 Apprenticeship, Training and Skilled Manpower Development Authority - Annual Reports

1983-1986 Industrial Training Department - Annual Reports

It would be premature to predict that vocational education in Zimbabwe has, since independence, been totally unresponsive to the needs and demands of the new order and in doing so lost the majority support of the population. Nevertheless, the most challenging issue has been to channel resources into schemes which would benefit the whole of Zimbabwe and not just replicate and expand the previous vocational system of education. Not

surprisingly, a challenge of this order tends to create resistance among bureaucrats, who tend to protect the status quo.

In all probability, a precondition for any substantial expansion beyond the large technical college model (suggested by ILO - 1981) would be the delegation of more responsibility and authority to regional and local communities. Critics of the decentralized model argue that it produces repetition, petty corruption and unequal standards. Still given the nature of the Zimbabwe's future growth, highly linked to agriculture and rural areas, surely channelling a proportion of the budget for vocational education through local authorities should have been considered.

Is it possible to blame one set of factors for this inertia: neo-colonial dependency, cultural and political constraints, or is the lack of new direction a mixture of several factors? What is surprising is that no-one in Government or indeed opposition has had the vision to ask, "Is this the only way?"

5.3 Structure of Vocational and Technical Education

On the basis of the provisions of the 1984 Manpower Planning and Development Act, the Ministry of Manpower Planning and Social Welfare, through its Division of Vocational and Technical Training, was responsible for providing and controlling the State's contribution to this sector of education until 1988.

Based in the capital, Harare, and operating from the newly built National Vocational Training and Development Centre, the Division of Vocational and Technical Training was divided into

two departments: the Department of Institutions and the Department of Industrial Training. The latter inherited mainly the duties and responsibilities of the previous Apprenticeship Training and Skilled Manpower Development Authority.

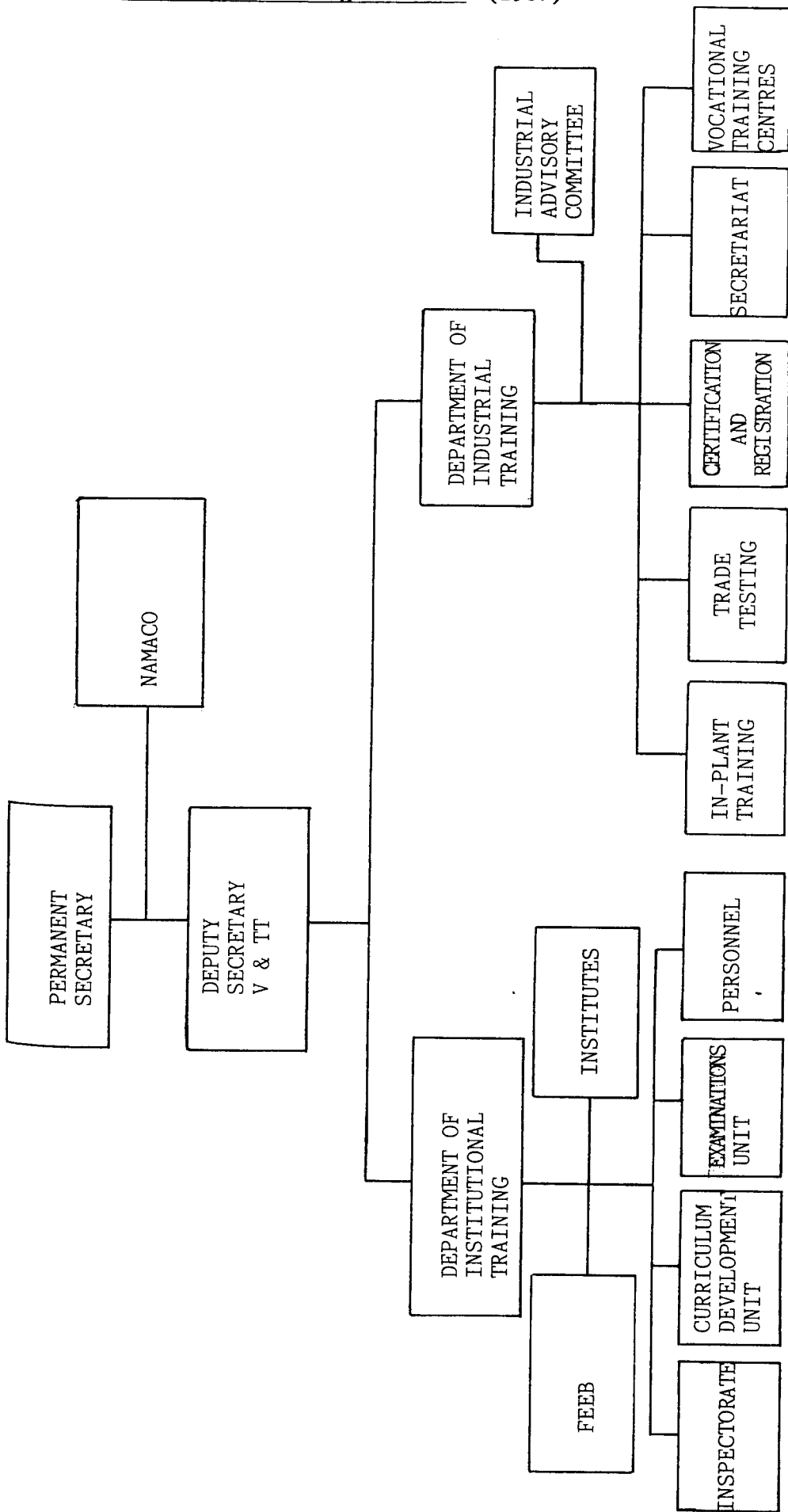
Although the 1984 Act clearly states that there should be one Director of Vocational and Technical Training, the system continued from 1984 to 1988 with two Directors,²⁷ one responsible for institutional training and the other for apprenticeship training (Figure 5.1). The ministerial link between the professionals and politicians was undertaken by a Deputy Secretary who, in turn, was responsible to the Ministry's Permanent Secretary.

The Department of Institutional Training administered seven tertiary technical and vocational colleges and one secondary trade school along with the responsibility for monitoring the standards of some eighty private colleges, most of whom offer commercial courses (Figure 5.2). The administrative structure expressed the policy of a centralised approach to tertiary technical training with the department being organised into four units responsible respectively for personnel, examinations, curriculum development and inspection.

Responsibility for finance and scholarships rested with other departments in the division whilst affairs dealing with staff development were largely conducted at college level.

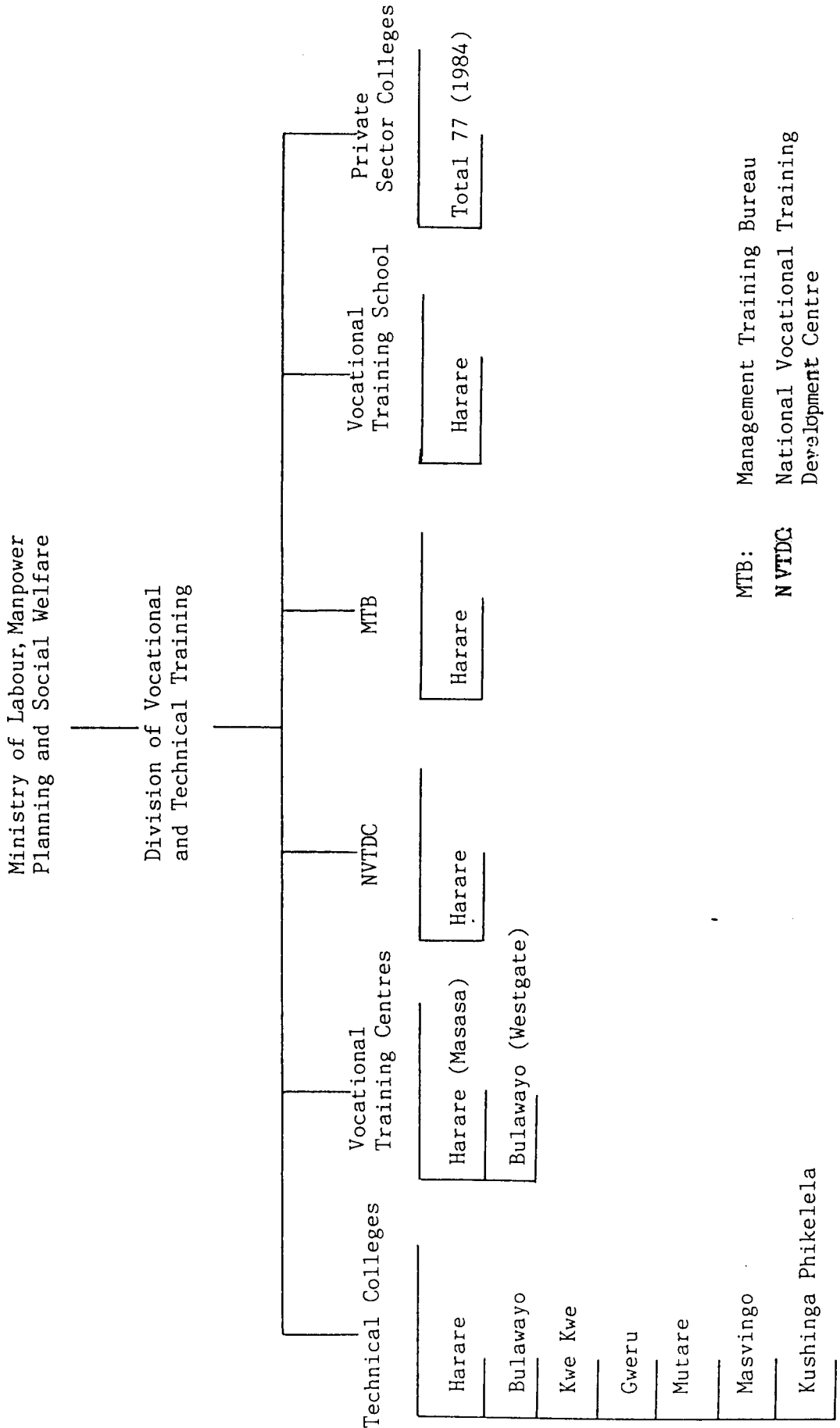
Assessing how this organisational structure responded to policy aims was often clouded both by the vagueness of the aims themselves and the sporadic introduction of unstated aims by various sub-units within the overall structure. These

Figure 5.1 Organisational Structure of the Vocational and Technical Training Division (1987)



FEED: FURTHER EDUCATION EXAMINATIONS BOARD
 NAMACO: NATIONAL ADVISORY MANPOWER COUNCIL

Figure 5.2 Vocational and Technical Institutes (1987)



unofficial notions often occurred because of the inadequacy of the official aims towards vocational education. The root of this problem lies, as detailed earlier in this section, in the failure of Government to clearly establish development guidelines and targets for vocational education. The lack of such elaborations was particularly evident in the 1984 Manpower Planning Development Act.

5.4 Planning, Coordination and Supervision

The tasks which were central to the development of the new structure of vocational education were multi-faceted, embracing a range of activities from the siting of new institutions to needs assessment and evaluation. Adopting a proactive posture in determining solutions to these issues required comprehensive planning capable of looking at the present and anticipating the future.

Educational planning can be approached from different viewpoints. It can be seen as a complex technical specialised process designed and managed only by trained specialists. On the other hand, planning can be viewed in general terms as one of several components of the administrative process - an executive skill and responsibility.

Historically in Zimbabwe and the former Rhodesia, the latter approach, that of viewing planning in general terms, has been the model adopted by educational practitioners and administrators.

Overall planning for vocational and technical education which establishes the criteria and broad lines of development now form

part of national development plans. Below this macro level there is a Division of Research and Planning within the responsible Ministry. However, due to the general nature of the data collected by this division, it is of only limited value to the development of vocational and technical training.

Unlike the Ministry of Education, which has a particularly strong planning section with which to refine national development plans, the former Division of Vocational and Technical Training did not have a unit dealing specifically with planning issues. Attention to planning the development and expansion of technical and vocational education was normally undertaken on an ad hoc basis by the various units within the Division: curriculum development, examinations, inspectorate. Due to this improvisation, planning exercises were often undertaken with questionable data provided by inadequate research facilities.

There can be no doubt that vocational education in Zimbabwe has grown to the point where it is no longer possible for top administrators to direct all facets of the organisation in achieving its aims without effective planning. Future decisions require analysis and information to consider all alternative routes. This will require a dedicated planning unit, adequately resourced and integrated in the operation of the ministry.

Prior to 1980, the coordination of in-school and out-of-school technical and vocational education with manpower requirements and employment was strong at both college and ministerial level. At Independence there was a large turnover of senior staff in

the Ministry, colleges and industry; personal contacts were inevitably severed and barriers of suspicion created.

To deal with this problem, the 1984 Manpower Planning and Development Act called for the establishment of a National Manpower Advisory Council.²³ The Council's members are appointed by the responsible Minister for their expertise and interest in national manpower development. Having created such a structure, it is now the intention of the Council to encourage the implementation of college-based advisory bodies which will strengthen the present tenuous links with industry.

Since the transfer of responsibility in 1978 for tertiary vocational and technical education and training from the Ministry of Education to the then Ministry of Manpower Planning and Development there has developed an unhealthy divide between the two phases of education. Reasons as to why these difficulties arose range from a common lack of understanding of both Ministry's specific policies to the respective background of senior ministerial staff. During the liberation struggle, the majority of senior Ministry of Education officials were based in neighbouring countries serving the educational needs of the 'liberation fighters', whilst the majority of the senior staff in the Ministry of Labour, Manpower Planning and Social Welfare were post-independence returnees from degree courses in Europe and the United States.

Although the two Ministries mainly responsible for education and training had not, in 1988, created any permanent structures for coordinating tertiary vocational and technical education with secondary education, there were emerging inter-ministerial

committees whose remit was to advise on the direction and extent of vocational subjects in secondary schools. However, contemporary education's poor record of coordination, especially with outside bodies, was reflected in the planning process for the introduction of vocational subjects into secondary schools with initial meetings being devoid of any industrial or commercial representatives. It was unfortunate, at this initial stage, that not more was known of industry's requirements before the number of places for various vocational subjects were allocated. Although secondary education has a wider remit than just fulfilling industrial specifications, students might equally be educated in a discipline more likely to lead to future employment.

In an attempt to impose some measure of control on the growth of private tertiary commercial training institutions in the immediate post-independence period, the Manpower Planning Development Act of 1984 made wide-ranging provision for the supervision of this type of institution.²⁹ Arousing a fair amount of controversy at the time, the private institutions became subject to the Minister's discretionary powers to register or deregister them, a sanction not too dissimilar to that imposed by the 1956 Education Act on private schools. By contrast to the rather vague inspection measures proposed by the Act for State institutions, the private institutions are expected to fulfil rigorous conditions of registration, staff appointments, academic records and be subject to control on the type of courses offered.

Ensuring that educational standards were maintained within both State and private institutions was the responsibility of the

Inspectorate Unit of the Department of Institutional Training. Unfortunately, this unit did not grow at the same pace as the number of institutions and, with its staff of two inspectors, was totally inadequate to both implement the supervisory requirements of the 1984 Act and offer modern comprehensive inspection services to the State institutions.

Coordinated research efforts in Zimbabwe leading to the development of vocational and technical education are, at the moment, virtually non-existent. For most part, research undertaken is in the general area of manpower planning, employment trends and economic development.

Lack of provision for pedagogical research into vocational and technical education, as well as design and production of teaching equipment and materials, is reflected generally in the traditional line which this sector of education has followed since independence.

Cognitive and practical priorities for improving the teaching and learning process should be centred around methods and materials which encourage self-confidence and skill competency, with special emphasis on individual laboratory and workshop exercises (particularly absent at the new colleges), interactive media systems and, where appropriate, more use of well-structured industrial visits and attachments.

Equally as important is how successful the system is in equipping students to face the world of work through inculcating the right attitudes, sharpening intellect and critical faculty to respond to a wide range of situations. Support for this affective domain of learning is most likely as a result of a

well-structured teacher recruitment policy supported by training and other facilities to enable them to function effectively in their posts.

5.5 Finance for Vocational and Technical Education

In Zimbabwe, State provided vocational and technical education is primarily financed from public funds. To varying degrees, this financial responsibility is shared by industry (training levy), private agencies (church organisations), individual college fees and aid received from external sources for capital investment through bilateral agreements or from international organisations.

Rationales for expenditure on vocational and technical education/training largely focus on the need for manpower development, including arguments concerned with the need for an educated labour force with the basic skills required by a developing country and specific arguments related to the development of particular skills and knowledge in science, technology, agriculture and for rural development activities. Although this constitutes the main focus of most of the expenditure since 1980, contemporary plans include other themes regarded as at least as important. Prominent among these are social equity and nation building considerations.

However, the relationship between plans and what has actually been implemented in vocational and technical education and training has been diminished by both lack of detailed planning and competition from other ministries for the allocation of financial resources.

Whilst there is continuing faith, backed up by steady annual increase of expenditure, in the ability of general education to promote further economic growth with equity, there appears to be some uncertainty about the benefits from increasing the recurrent expenditure on vocational and technical education. Vote appropriations to the Ministry of Education in 1984/85 were Z\$516,765,200, with the 1985/86 figure rising to Z\$562,224,000, an annual increase of 8.8 per cent. Estimates of expenditure for the year ending June 30th, 1987, show a sharp rise to Z\$704,510,000, an increase of 25.3 per cent.³⁰ During a similar period, 1985/86, the annual budget (non-salary) of the Ministry of Labour Manpower Planning and Social Welfare was almost cut by half (47.4 per cent) to Z\$40,813,000. Although there was a slight increase in the 1987 estimates to Z\$46,641,000 (Labour Z\$9,417,000, Social Welfare Z\$14,131,000, Vocational and Technical Education Z\$23,093,000)³¹ the resources available for vocational and technical education in real terms were virtually static because of steadily increasing inflation.³²

Although the Government does not reveal and explain to the public the reasons for these differential rates of investment, the most plausible explanation for this situation is that in the present tight fiscal situation tertiary vocational education is viewed as already serving the interests of a privileged class - those in employment. Therefore, it appears that at the moment the Government is prepared to push aside arguments in favour of manpower investment, preferring to support a policy directed towards mass consumption of education.

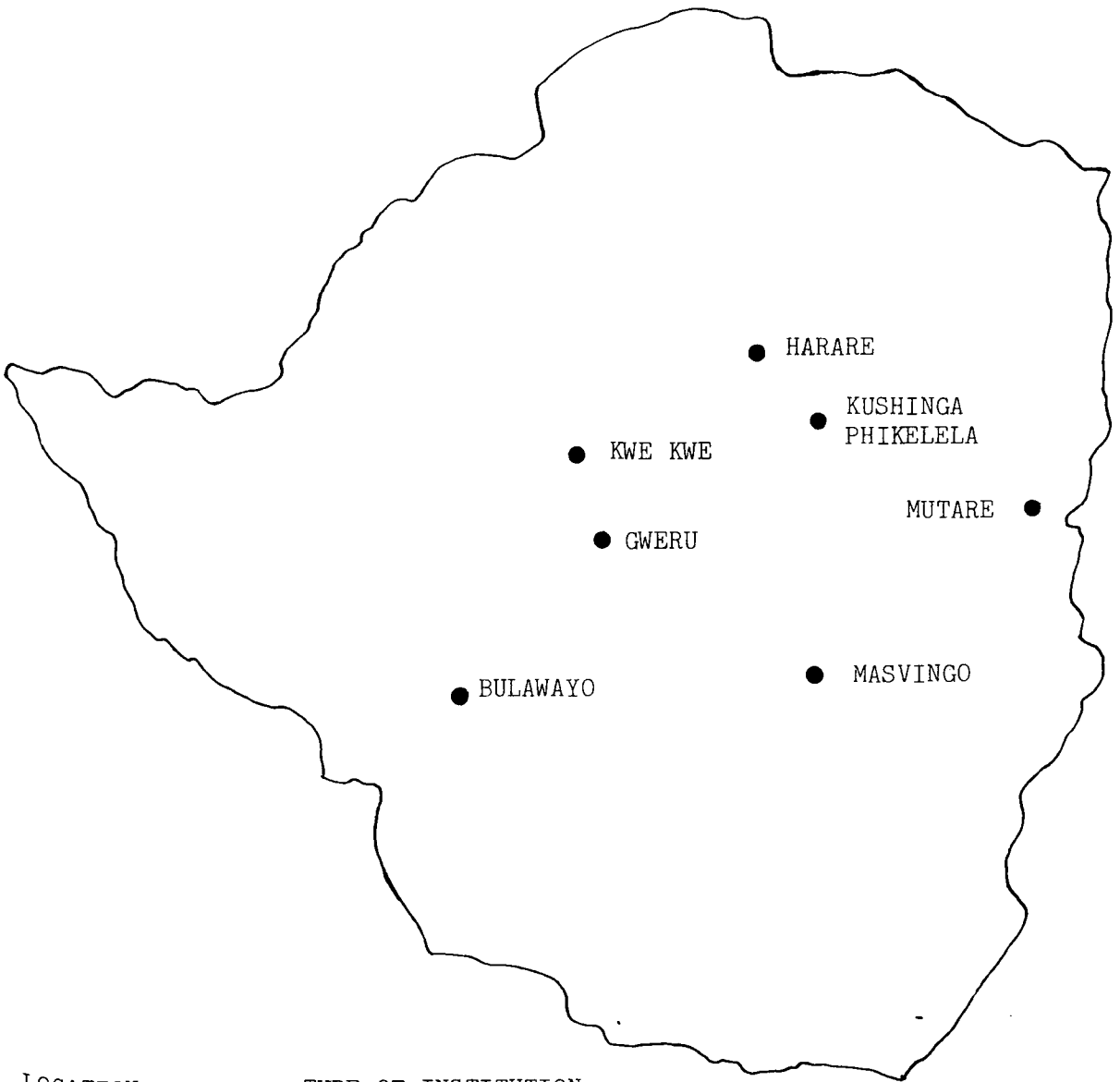
The majority of the physical expansion of vocational and technical education which has taken place since 1980 has been

funded through bi-lateral aid agreements with the United States and West German Governments who together have contributed, under grant terms, some US\$20 million. A large proportion of this external finance has been used to build new technical colleges at Gweru, Masvingo, Mutare and Harare (Figure 5.3). The four new colleges, plus the internally funded college at Marondera (Kushinga-Phikelela), are planned to be fully operational by the end of 1990. The limited operations of the new colleges during the 1986/7 period resulted in a reduction of the budgets at the more established colleges to allow some operational funding for the embryo colleges. Coombs and Hallak,³³ illustrate a similar model to the foregoing problem when suggesting that careful attention should be given to international capital grants and loans and the consequences of the capital grant or loan on future recurrent costs and the risk of penalising other educational activities. The authors go on to suggest that when considering such a loan or grant it should be viewed in its full context using the broad perspective of systems analysis rather than a cost analysis approach.

Whilst formal and, to a lesser degree, non-formal technical and vocational training in Zimbabwe is heavily State subsidised, fees and other costs are borne by both students and, in the case of sponsored students, by their employers. Although the Government is keen to promote its policy of education with production, the technical colleges are, as yet, only receiving a small amount of revenue from the sale of products and the undertaking of contracts.

Student tuition fees during the academic year 1987/88 ranged from Z\$140 per year for students on full-time craft courses, to Z\$3,000 for those students undertaking courses on the B.Tech

Figure 5.3 Location of Government Vocational and Technical Institutions



<u>LOCATION</u>	<u>TYPE OF INSTITUTION</u>
HARARE	POLYTECHNIC
	VOCATIONAL TRAINING CENTRE
	VOCATIONAL TRAINING SCHOOL
	MANAGEMENT TRAINING BUREAU
	NATIONAL VOCATIONAL TRAINING DEVELOPMENT CENTRE
BULAWAYO	TECHNICAL COLLEGE
	VOCATIONAL TRAINING CENTRE
KWE KWE	TECHNICAL COLLEGE
GWERU	TECHNICAL COLLEGE/TECHNICAL TEACHERS COLLEGE
MUTARE	TECHNICAL COLLEGE
MASVINGO	TECHNICAL COLLEGE
KUSHINGA PHIKELELA	TECHNICAL COLLEGE

programme. In the case of the latter, a combination of loan and grants was introduced to assist students. In addition to tuition fees, students residing in official hostels paid Z\$25 per week and an annual Z\$10 amenities fee.

To assist students on full-time courses, the Ministry of Labour Manpower Planning and Social Welfare, through its Scholarship Section, offered a limited number of scholarships each year. However, faced with an increasing amount of candidates for tertiary courses and, at the same time, striving to maintain an equitable admission policy, the Zimbabwean authorities may soon be faced with the dilemma of the need to increase student contributions to augment the State's declining financial involvement to recurrent costs.

The other non-state contribution to vocational and technical training is made by employers' levies paid to the Zimbabwe Manpower Development Fund (ZIMDEF). Introduced in 1982 and replacing the previous Manpower Development and Training Authority levies, the main purpose of the levy system is to encourage private sector employers to participate in the national training effort. The system requires employers to pay one per cent of their monthly payroll bill to the development fund. Funds collected through the scheme are used to:

- i) help to finance the apprenticeship training scheme
- ii) meet the administration costs of the fund
- iii) fund special manpower training and development projects
- iv) pay allowances to approved trainees
- v) pay grants and rebates to institutions and employers in respect of approved training.

In practice, however, the fund has come under criticism from both institutions and employers for its reluctance to respond to training innovations. Clearly, demands on the substantial capital assets accumulated by ZIMDEF will increase in order to support the expansion of vocational and technical training over the next few years.

5.6 Curriculum Development

Although limited financial resources have become a growing feature in vocational and technical training, the fiscal problems have had little effect on reducing the number of courses offered by the State system of tertiary education. During the 1987 academic year there were 105 national courses on offer at the various colleges.³⁴ Table 5.5 shows the broad classification of these courses and the student enrolment for 1986 and 1987.

Table 5.5: Number of FEEB Courses and Student Enrolment 1986 and 1987

Type of Course	Number of Courses	No. of Students		% of Total	
		1987	1986	1987	1986
Applied Arts	9	231	152	3.7	2.9
Commerce	31	3,800	3,635	60.0	68.5
Craft	29	1,376	917	21.7	17.1
Technicians	34	629	600	9.9	11.5
Staff Dev.	2	298	N/A	4.7	N/A
TOTAL	105	6,334	5,303	100.0	100.0

Source: Curriculum Development Unit Report 1987

N. B. The enrolment figures are those for the first term of 1986 and 1987.

Because of either lack of resources or insufficient student take-up, 34 per cent of the 1987 courses were not operational with almost 40 per cent of these non-operational courses being in the craft training category.³⁵

This is a striking illustration of the variance between vocational curriculum designed and physically resourced in the early 1970's and the reality of a current situation where the majority of school leavers exit from secondary education with no marketable skills.

In addition to the national courses there still remain nineteen courses, mainly engineering, which are certificated abroad. Although the obvious solution would be to reassess these foreign certificated courses, the present under-resourced Curriculum Development Unit and inertia of some college departments probably means that these courses will continue for some time to come.

The Further Education Examinations Board is responsible for course standards and certification. Restyled after Independence, the Board consists of fifteen members who are drawn from both the responsible Ministry and the colleges, including all seven college principals. At the end of 1987 there were no representatives from commerce and industry. National courses range in the non-technical stream from the National Foundation Course to the National Higher Diploma, whilst in the technical stream the base course is the National Craft Certificate and the final award is the National Diploma (Table 5.6). The recently introduced degree programme at Harare Polytechnic and The Technical College, Bulawayo, is authorised by the University of Zimbabwe.

Table 5.6 FEEB Courses: Hierarchy of Certification

Non-Technical Courses

Number of Subjects	Minimum Duration	Minimum Entry	Level of Study
4	1 year F. T. 2 years P. T.	ND	NHD
Varies Between Courses	1 year F. T. 2 years P. T.	NID	ND
Varies Between Courses	1 year F. T. 2 years P. T.	3 - 5 'O' Levels or NC	NID
Varies Between Courses	1 year F. T. 2 years P. T.	NFC or 3 'O' Levels	NC
6	1 year F. T. 2 years P. T.	Form II	NFC

Technical Courses

Number of Subjects	Minimum Duration	Minimum Entry	Level of Study
6	900 hrs	NID	ND
3	300 hrs	NC	HNC
6	900 hrs	4 'O' Levels	NID
3	300 hrs	4 'O' Levels	NC
5	1 year	NCC	NACC
5	1 year	Form II	NCC

Source: Curriculum Development Unit, 1986

Reasons for the profusion of vocational and technical courses in Zimbabwe are closely linked to the long established practice of overseas staff recruitment with its resultant importation of foreign perceptions about vocational courses and the absence, until 1985, of a national development unit for this type of education and training. Clearly, the latter point is not too dissimilar from the situation in British vocational education before the rationalisation of courses following the Hazelgrave Report in 1969.

Conscious of the spurious development background to many of its courses and with a view to reducing costs, the Division of Vocational and Technical Training in the mid-1980's began to rationalise both courses and level of awards. Until this time, an area of training which characterised this problem of overlapping courses and awards was the training programme for electrical technicians. Prior to 1987 there were five separate paths available for students wishing to become electrical technicians, three external CGLI courses and two national courses. Consequently, the courses were under-resourced, and with small numbers in each course they were certainly uneconomic to run. Rationalising this problem involved discussions with representatives from the electrical industry which resulted in the previous five separate streams being joined together to form a modular structure of training and offering students a clear and relevant path for electrical technician training.

The hub for the future development of vocational and technical courses in Zimbabwe will be the recently established Curriculum Development Unit. Nevertheless, until such time as the Unit reaches its full complement of professional staff, it will

continue to rely on the cooperation of college staff for much of its development activities. Endeavouring in future course developments to gain the increased support and confidence of commerce and industry, the Curriculum Development Unit will be pursuing a policy of closer cooperation with private, parastatal and other Government ministries during the various stages of course rationalisations or new developments. The unit hopes to achieve this objective through increased dialogue with the industry on its actual training requirements and by inviting more external specialists to participate in the work of course development syndicates.

Prior to the formation of the Curriculum Development Unit in 1985, courses authorised by the Further Education Board of Zimbabwe were generally presented in a style of curriculum characterised by statements of activities to be undertaken by teachers. This traditional method of presenting curriculum often resulted in misinterpretation and differing strengths of emphasis between colleges with all the related problems of student assessment.

Table 5.7 illustrates an example of how more objectivity and clarity of approach has been developed into a course revision of a Library and Information Assistant's Certificate Course.

Curriculum emphasising student activities with measurable performance rather than the duties of the teacher will be a principal feature of all future course revisions and new developments. These established competences will also provide a forum for teacher discussion and allow meaningful development to

take place in full awareness of student needs, teachers' expertise, resources, and so on.

Table 5.7 Comparative Curriculum Styles

Course: Library and Information Assistant's Certificate

Subject: Library and Information Services Management

Pre 1985 - Subject Outline

- a) Functions and management of library personnel
 - b) Types, forms and purposes of internal and external communication
 - c) General administration of the Library
 - d) Selection and withdrawal of materials
 - e) Acquisition processes
- etc.

Example of Post revision curriculum highlighting (c): General administration of the library.

NB. All the following objects relate to the end performance of the student.

- 1. General administration of the library
 - i) Understands and demonstrates the correct use of library forms for both internal and external communication
 - ii) Understands the purposes and maintains the use of acquisition files, including standing order files, publishers catalogues, and other bibliographic files
 - iii) Outlines the main factors determining the selection and withdrawal of library materials
 - iv) Identifies the various procedures for book circulation: - manual, mechanised and computerised
- etc.

Source: Further Education Examination Board, Course 152/86/BO, Library and Information Assistant's Certificate

Supportive towards the new style of curriculum and wishing to reduce the multitude of course formats, the Further Education Examinations Board has laid down a standard format for the future presentation of all revised and new courses (Appendix III).

Interest in curriculum development and in particular behavioural objectives has its strong merits, notably the ability to clearly map out exactly what is required to be learned by the student. Hopefully, this latest 'foreign import' will be seen as curriculum development which requires continual activity in which questions asked in one context lead to others and eventually to the starting points of the enquiry - the direction of vocational education in Zimbabwe.

Vocational and technical courses offered formerly at Rhodesian and latterly Zimbabwean tertiary institutions have been directed towards supporting the training requirements of those people already in full-time employment, particularly those in the apprenticeship system. Mainly as a result of political pressures, there has been a slight shift towards providing pre-employment courses for some of the growing number of secondary school graduates who have been unable to either find full-time employment or places at the University. These recent initiatives towards providing pre-employment opportunities for secondary school leavers include craft, technician, technical training and first degree courses.

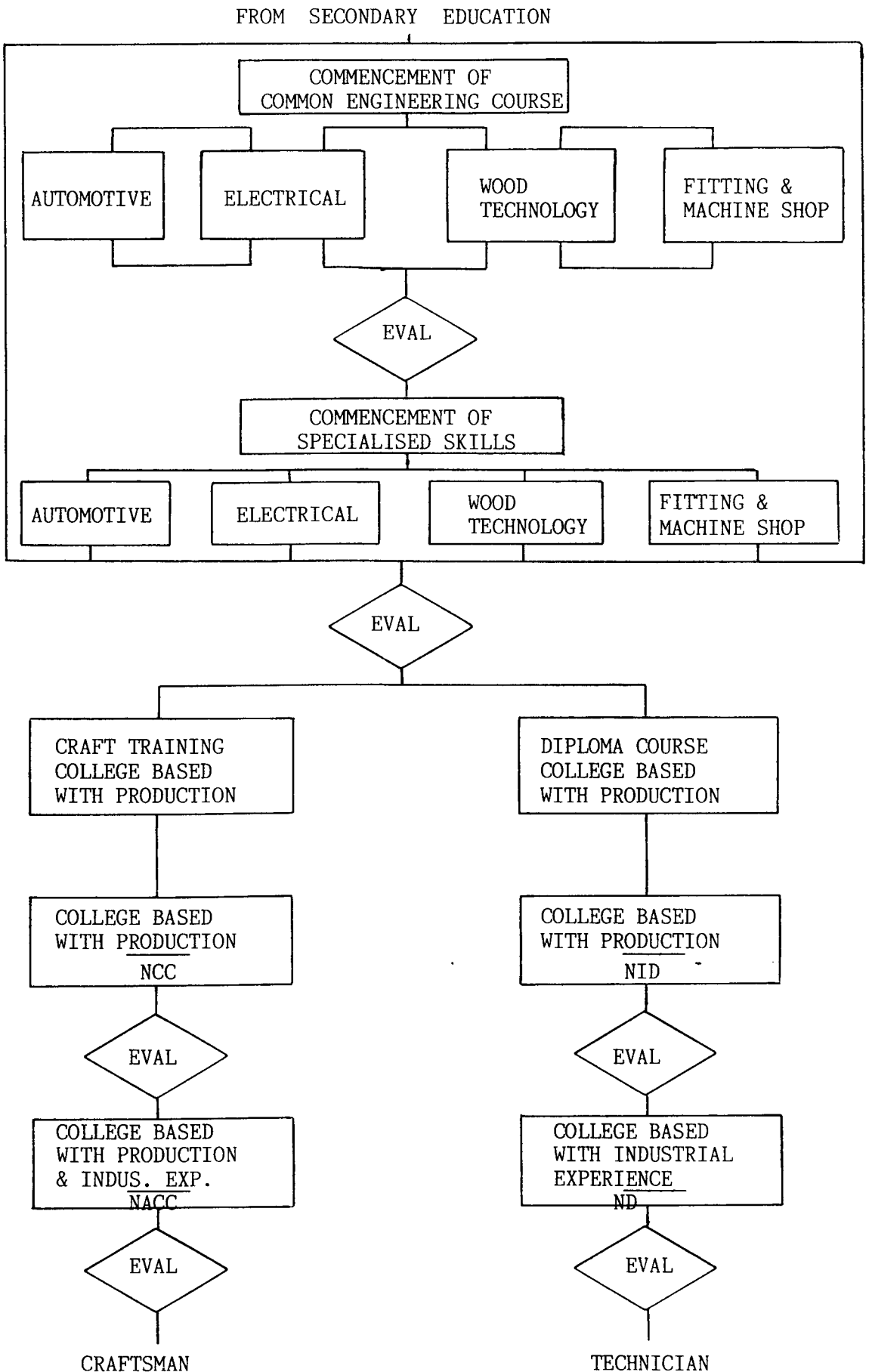
Concerned about the shortage of industrial opportunities for young people to undertake apprenticeships (Table 5.4), both at craft and technician levels, the Division of Vocational and

Technical Training, through its Curriculum Development Unit, designed four three-year engineering craft and two engineering technician courses. Designed specifically for the direct entry trainee and launched in 1986 at the new Mutare Technical College in the eastern part of Zimbabwe, the courses with their mix of traditional theory and practice are supplemented by external contract work and industrial placements. Figure 5.4 shows the training flow path for the pre-employment programme.

Unless there is a dramatic increase in the growth of the Zimbabwean economy, it will be unrealistic to expect all the trained personnel from the pre-employment courses to obtain employment in the formal sector. With this in mind, the course designers have included in the pattern of study, concepts and practice of business skills. It is hoped that an introduction to business skills will assist some of the trainees to establish modest self-employment or cooperative ventures.

During 1985, the Division of Vocational and Technical Training undertook a review of the existing arrangements in Zimbabwe for the pre-service training of technical lecturers to work in the technical colleges. These arrangements previously consisted of Cadet Training Programmes which were instituted in 1984 at the Technical College, Bulawayo, and Harare Polytechnic. The single cohort of students graduated in 1988. Following this initiative, the Division of Vocational and Technical Training established a more permanent base for technical teacher training at the Gweru Technical College. Admission to the course is post 'O' level study, with at least five 'O' level passes at Grade C. The programme has been designed to be under-taken full-time over a four year period and comprises of theoretical

Figure 5.4 Programme Structure: Craft and Technician Pre-employment Courses



and practical subjects, industrial attachments and teaching practice (Figure 5.5).

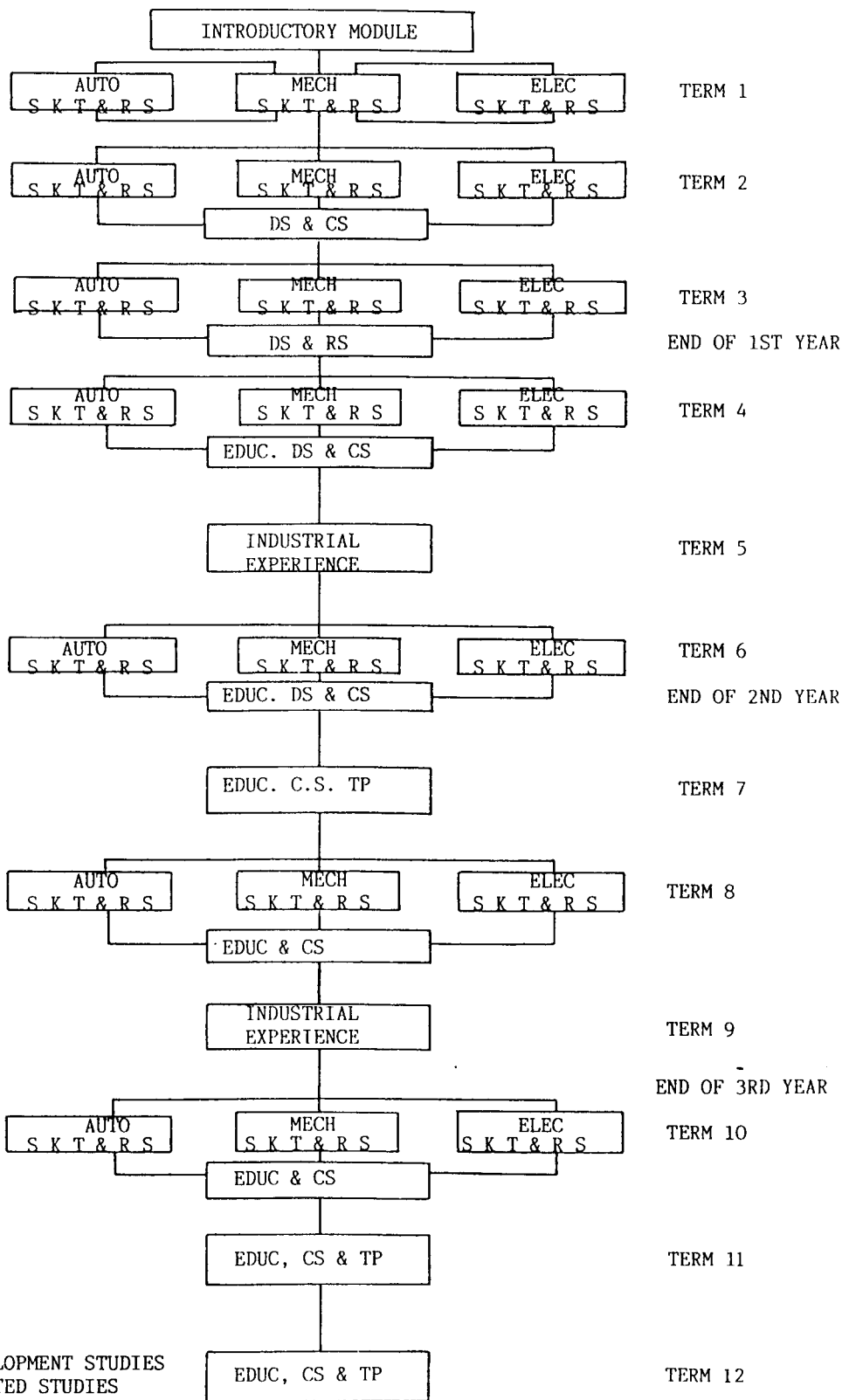
With its limited capacity and resources, the Gweru Technical College offers pre-service training courses for automotive, electrical and mechanical craft teachers.³⁶ During 1988 the college benefited from an EEC grant under LOME'III which provided for the expansion of workshop and classroom facilities. This expansion will eventually enable the college to expand both the range and level of its technical teacher courses.

The recent introduction of a Bachelor of Technology programme into the vocational and technical system of Zimbabwean tertiary education was a dichotomous approach in providing places for those eligible students who could not find vacancies at the University and providing commerce and industry with an additional source of graduates. With initial technical support from USAID the degree programme included six courses of study (Table 5.8) which have been designed to be closely integrated with commercial and industrial attachments. The structure of two B.Tech. courses, along with their linkage with existing diploma courses, is shown in Figure 5.6.

The courses, introduced at Harare Polytechnic in 1986, and The Technical College, Bulawayo, one year later, vary in length between four years for the applied science and business courses to five years for the three engineering courses.

Whilst the take-up of the course by those students who are eligible but have been unable to enrol at the University of Zimbabwe has been satisfactory, there still remains a considerable amount of work in exposing and promoting the

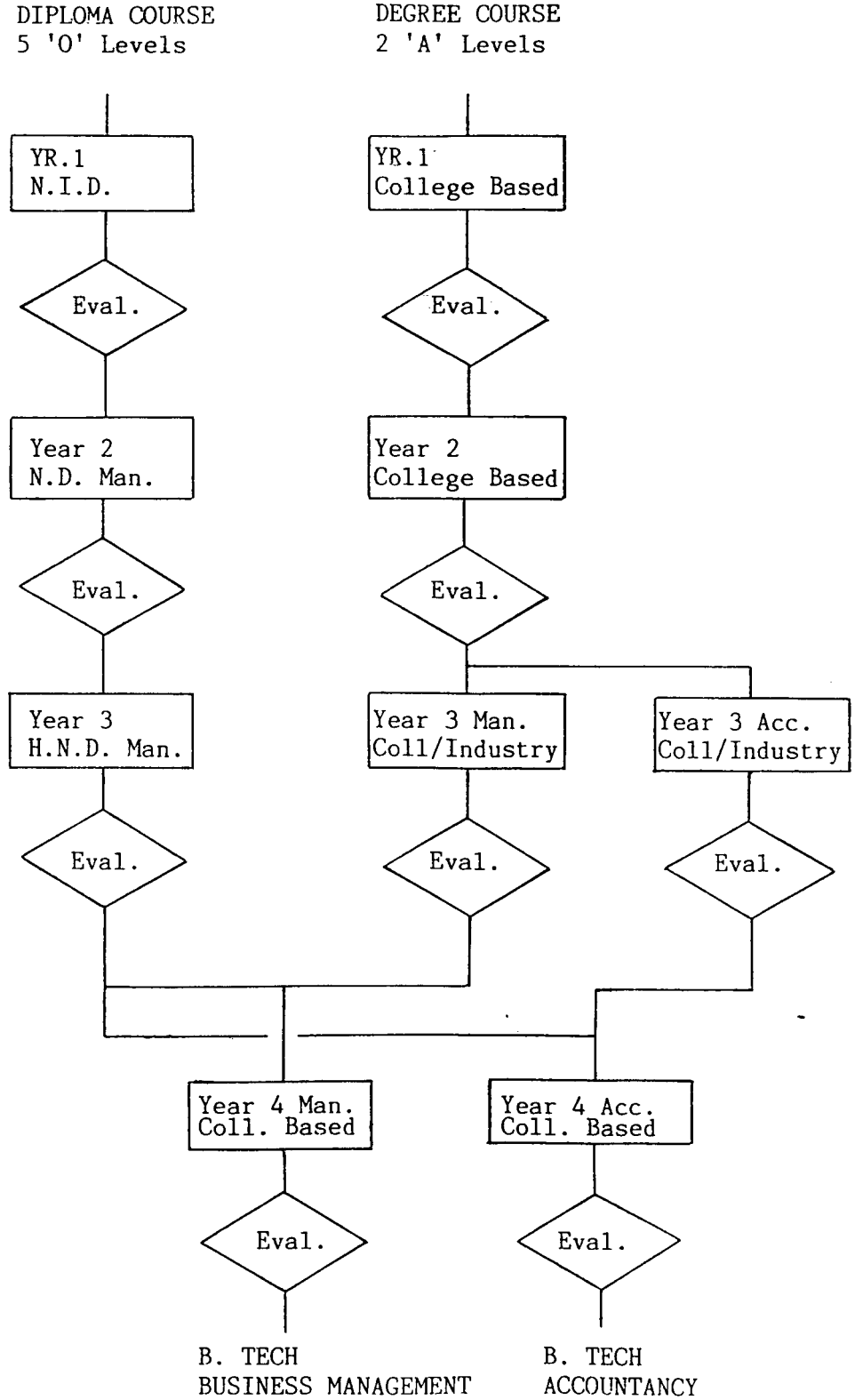
Figure 5.5 Four Year Integrated Technical Teacher Programme



KEY:-

- DS - DEVELOPMENT STUDIES
- RS - RELATED STUDIES
- SKT- SKILL TRAINING
- TP - TEACHING PRACTICE
- CS - COMMUNICATION SKILLS

Figure 5.6 Course Structure: B. Tech. Business Management and B. Tech. Accountancy



various courses to commerce and industry. Equally, the Bachelor of Technology programme would benefit from a closer working relationship with the University who now have some twenty years experience of running degree courses.

Table 5.8 Bachelor of Technology Courses

Course	Duration	Intake(1986)
Civil Engineering	5 years	25
Electrical Engineering	5 years	38
Mechanical Engineering	5 years	38
Applied Sciences	4 years	35
Accountancy	4 years	35
Business Management	4 years	41

NB: The intake figure is for Harare Polytechnic only

Source: Annual Report, Department of Vocational and Technical Training, 1986, p.9

The foregoing developments, pre-employment training, technical teacher training and degree courses serve as examples of recent curriculum change in Zimbabwe. Further change will focus upon completing the localization of foreign courses, revision of existing courses and designing wherever necessary new courses. Unlike the ad hoc developments of the UDI and immediate post independence periods where it was difficult to clearly identify one particular style of curriculum, future developments will lay more stress on modularization, objectivity and competency. Briefly stated, the main characteristics of a modular programme may be defined as

"units of learning which are highly self-contained so that they can be fully learned, and the learning validly assessed, without the simultaneous or prior learning by the student of other modules in the scheme."³⁷

Since modular style programmes of study may be open to students from other programmes, duplication is avoided and some rationalization of resources can take place. A modular structure which is student centred in the sense that the student can participate in the planning of his course of study also makes it easier to employ assessment which is appropriate to the present Zimbabwean stress on objectivity in course design. Whilst all education and training programmes employ some degree of competency assessment in their course design, future programmes will allow students more flexibility to proceed at their own pace of learning. The pace of learning will be reflected by the student's ability to accomplish marketable skills in contrast with the more traditional ability to demonstrate knowledge. Completion of the localisation of courses and other innovatory schemes, such as those described, will not be just dependent on training resources, including adjusting serving teachers' concepts of training, - but will involve a firm commitment and continued support from the responsible Ministry. This, in turn, will require the recruitment of more professional educationalists into the education system.

Concerned about the ability of the central administration to respond to innovations in vocational and technical training, the Director of Institutional Training highlighted the importance of having a full complement of professional staff in his 1985 annual report.³⁸ A codification of his concerns were: -

- i) there should be a relaxation by Government of the tight controls imposed on the staff establishments of key administration areas.
- ii) staffing position should be such that will allow effective control of developments along Government policy guidelines
- iii) there should be a relaxation of the existing tight procedures and often remote controls on the hiring of staff.

Concluding his 1985 report on a rather cautious note, the Director of Institutional Training noted that:

"If the conditions concerning senior staff continue to be ignored, public training institutions will fail to respond adequately to the training needs of this country and will continue to be relegated to the back seat in preference to the private institutions."³⁹

Within this milieu, structural tensions increased between the various compartments of Government. During the writer's period in Zimbabwe (1985 - 1987) constant debate in Government circles centred on whether forces within the Ministry of Labour, Manpower Planning and Social Welfare could emerge and prove sufficiently influential to maintain control of vocational education or whether the potentially more powerful figures in the Ministry of Education would counter these forces and gain control of vocational education. In the event, responsibility for vocational education was transferred to the newly formed Ministry of Higher Education in 1988.

Ironically, there was a similar power struggle over the control of vocational education in the latter part of the UDI period. On that occasion, described earlier in this Chapter, control of vocational education moved away from the Ministry of Education. Uncertainty as to where exactly vocational education belongs only serves to emphasise a point made on several previous

occasions in this work, namely, this sector of education has never been thoroughly thought through. As a consequence, its full potential and contribution to Zimbabwe's future is not being fully exploited.

Finally, all this concern over the last few years with the political responsibility for vocational education has had a marked effect on the operations of vocational institutions. Decisions concerning appointments, resources, assessment, etc. which, until a few years ago, would have been settled by a college principal now need to be referred to the responsible Ministry. This and other issues affecting the running of institutions will be introduced in the next section and explored further in Chapter Six.

5.7 Technical College Structure

The general approach of using technical colleges as the platform for vocational and technical training in Zimbabwe has resulted in colleges which are not specific either in range or level of courses offered. In the process of expanding the system of seven technical colleges there have, on several occasions, been political statements to indicate that future trends may favour colleges which specialize in certain areas of training.⁴⁰ However, no planning has taken place which might lead to this type of college in the near future.

The internal management structure of the technical colleges is of a departmental nature and characterised by a tendency towards central control. All institutions have hierarchies of command with a principal who is officially responsible for the efficient organisation, management and discipline of the institution.

Below the principal are other senior staff operating on the basis of a delegation of responsibility from the principal: departmental heads, lecturers in charge of a section. It is reasonable to assume that the major influences on the college organisational development was the British and South African school and college systems and indeed departmentalism is a dominant feature of industrial, commercial and public service organisation in Zimbabwe.

In the first term of 1987, there were 453 full-time lecturers employed in all seven Government colleges in Zimbabwe.⁴¹ The breakdown of lecturers in the different colleges is shown in Table 5.9.

Table 5.9 Employment of Technical College Lecturers

College	Staff Establishment	Staff At Post	Expatriate Staff
Bulawayo	207	116	25
Gweru	30	27	-
Harare	250	212	- 71
Kushinga Phikelela	43	42	7
Kwe Kwe	41	28	10
Masvingo	9	9	-
Mutare	29	19	5
TOTAL	609	453	118

Source: Summary of College Statistics - Division of Vocational and Technical Training, First Term 1987.

With the system of vocational and technical education being administered by a central ministry, the lecturers are employed

as "officers". A developmental task which was self-defined for the Division of Vocational and Technical Training by its own manpower situation was that of producing more Zimbabwean staff members. This endeavour had a quantitative dimension: reducing the overall dependence upon expatriates, and a qualitative dimension: providing a type of training suitable for future staff members.

Reducing the level of expatriates in the system, (26 per cent in 1987) began to take effect in 1989, when 94 cadet lecturers completed their courses at The Technical College, Bulawayo, and Harare Polytechnic. During 1990, the staffing position will be further strengthened with the graduation of the first cohort of technical teachers from the programme being run at Gweru. The level of staff localisation may appear potentially high, however, most of the recently employed expatriates have been recruited to teach the higher level technician and degree courses, whereas the teacher training programmes are only producing craft level teachers. Therefore, the full benefits of localisation programmes are unlikely to be realised until well into the 1990's. Commenting on the employment of expatriate teachers and their usually dominant role in an institution's formative years, J.S. McNown,⁴² suggests:

"that, because of the often shortage of suitable local counterparts and because the objectives of the expatriate are sometimes difficult to match with the long range goals of the institution, successful transition to local leadership can often take up to a decade."

During the period since Independence, there has been only limited debate about the type of training required by staff concerned with vocational and technical training. The Public Service Commission recommend that the relevant academic qualifications for a College Principal should be a first degree supported by a higher degree in the educational field. However, in the rush to localise senior positions and also to cope with the increase in number of posts of principal, none of the seven principals at post in 1987 had been appointed with academic qualifications which match the Public Service standard. With regard to the recruitment of teaching staff, the major problem is to attract both technically and pedagogically qualified people. The technically qualified are few in number and are much sought after by commerce and industry where salaries are such that the education system can rarely compete for the services of these people. Not only is there a problem of quantity but also one of quality. Teachers who are technically sound often have no pedagogical training. On the other hand, teachers recruited for science and commercial departments usually have a university education; they often have no real work experience and thus tend to emphasise theory to the detriment of practice.

A small, but significant bureaucratic issue in the recruitment of teaching staff is the often undue delay between the time of advertising a post and making the final appointment. Delays can be in the region of between six to nine months, during which time many of the better qualified candidates have found alternative work.

Despite the absence of an official policy and active support towards improving the qualifications of staff in the vocational and technical system, both individual and college initiatives have been made. Several principals, through their own efforts, have started or plan to begin educational courses at the University of Zimbabwe or foreign universities which should expose them to the mastery of principles and techniques of educational management leading, in turn, to the award of higher diplomas or degrees.

All colleges would like to encourage new teachers without previous teaching experience by giving them the opportunity to undertake formal pedagogical studies. Because of a lack of educational units in the college system, in-service courses are only available at three colleges: Bulawayo, Harare and Kwe Kwe. The one year part-time course available at the three colleges is a national certificate course in further education. The course, which is a mix of pedagogical theory, assignments and teaching practice, is open to teachers from both the Government and private sectors. The varied and flexible in-service teacher training programme offered by the the three colleges is one of the rare examples of close and active cooperation between individual Government colleges and private training institutions. The enrolment pattern for the in-service courses, whereby more than 60 per cent of the participants in 1987 were from outside the Government colleges, indicates the growing number of private institutions and industrial training units in Zimbabwe.

Whilst the in-service teacher training course is undoubtedly fulfilling a useful manpower development role for both public

and private sectors, there is growing concern amongst some senior government officers that the growth of student enrolments at private colleges is a potential threat to the State system of vocational training. To counter the apparent popularity of the private sector, the Director of Vocational and Technical Training, in his 1985 annual report,⁴³ urged the Government to provide more resources for the State sector to meet competition from private institutions. In particular, the Director highlighted the urgent need to adjust lecturers' conditions of service so that colleges could be utilized for 48 weeks of the year instead of 36 weeks. Coupled with this extra workload, the Director called for lecturers' salaries to be made more competitive with those paid to similar training personnel in the private sector.

5.8 Apprenticeship and Related Training Programmes

Until 1988, apprenticeship programmes were operated by the Industrial Training Department of the Division of Vocational and Technical Training (Figure 5.1). After Independence, this department became progressively more involved in the training of apprentices, culminating in 1986 when the Department assumed responsibility for the centralized recruitment of apprentices. Formal apprenticeships are available in seven designated industries: aircraft, building, electrical, hairdressing, mechanical, motor and printing. Prior to Independence, the normal apprenticeship period was five years. In an attempt to accelerate the output of skilled manpower, most of the apprenticeships have now been reduced to four years.

Concerned about the reluctance of some industrial establishments to redress the previous racial imbalance in their recruitment policies, the Industrial Training Department controls and administers the centralized recruitment of apprentices. Accepted applicants, who must be at least 16 years of age and, in most cases, have successfully completed GCE courses in English language, mathematics and science, are placed on the waiting lists according to their trade preferences and test results. Employers wishing to indenture new apprentices are obliged to select from those listed by the Department of Industrial Training. Generally, industry has not responded favourably to the Government's intervention in what industry views as its prerogative to choose its own employees.

In addition to the industry-related component of the apprentice's training, the programme also includes skill development and related theory instruction conducted at one of the technical colleges. Apprentices normally attend college full-time for a period of 20 to 36 weeks (depending on trade) during the first year of their apprenticeship. Most apprentices follow a National Craft Certificate course, although those with the appropriate entry qualification can enrol on a relevant technicians course.

When concerned about the large-scale emigration of skilled workers (mostly to South Africa) in the immediate post-independence period, the Government introduced an apprentice bonding scheme in 1982. To deter apprentices intent on using the limited training facilities in the country, only to leave on completion of their training, the bonding scheme requires employers to deduct 10 per cent of the minimum monthly wage

payable to the apprentice. The amounts deducted from each apprentice are held in trust, with accumulated interest, until the end of the bonding term which is equal to the length of training received and calculated from the completion of the apprenticeship. Initially, the loss of 10 per cent of their wages was not entirely welcomed by the apprentices, resulting in a significant number of apprentices leaving the country in the final year of training. Five years on from the introduction of the bonding scheme, the racial balance of apprenticeships had dramatically changed in favour of the Black community (Table 5.10). With the racial make-up of apprentices changing and the downturn in most of the economies of neighbouring countries there are not the same opportunities for newly qualified craftsmen to emigrate.

Concerned about the decline in the number of apprenticeship indentures, the Government has taken recent action to halt the fall in this type of skill training. Firstly, to encourage employers to indenture apprentices, the Government has introduced an incentive scheme whereby they reimburse the employer for the first year wage costs of the apprentice. Secondly, in an attempt to increase the number of apprenticeships, particularly in the building industry, the Department of Industrial Training has itself indentured apprentices.

Reporting on manpower requirements in the transitional period between Rhodesia and Zimbabwe, Colin Stoneman⁴⁴ highlights the growing industrial tendency towards job fragmentation. Generally resisted by White skilled workers, the slow process of change allowed some Black assistant workers, albeit after

Table 5.10 Apprentices According to Industry and Race
1981 - 1985

INDUSTRY	RACE, YEAR AND INDENTURED APPRENTICES														
	AFRICANS				EUROPEANS				ASIANS/COLOUREDS						
	1981	1982	1983	1984	1985	1981	1982	1983	1984	1985	1981	1982	1983	1984	1985
AIRCRAFT	30	59	18	43	109	85	20	7	7	6	-	-	-	-	-
BUILDING	117	125	102	107	83	18	18	14	12	6	22	15	5	2	2
ELECTRICAL	145	210	205	223	233	189	161	46	35	29	16	10	9	2	2
MECHANICAL	286	459	346	387	413	474	221	103	87	76	37	31	29	4	4
MOTOR	132	197	187	170	114	313	134	77	67	50	15	19	14	5	4
PRINTING	45	39	49	50	25	51	20	11	9	4	11	5	4	1	-
HAIRDRESSING	15	17	3	3	32	41	12	4	5	5	12	-	1	-	-
TOTAL	770	1106	910	983	1009	1171	586	262	222	176	103	80	62	14	12

SOURCE: Annual Report 1985 - Industrial Training Department

regrading, to become classed as skilled workers. This practice has become an increasingly common feature in the building industry. Stoneman⁴⁵ suggests that the widening of job opportunities was mainly due to: industry's slow acceptance of multi-racial employment policies, increasing proportion of skilled Whites on military service and the longer term prospects of cheaper skilled labour.

Soon after Independence, trade tests were introduced by the Government to reclassify and up-grade semi-skilled workers. The number of successful semi-skilled workers who have been trade tested by the Industrial Training Department is shown in Table 5.11.

Table 5.11 Successful Trade Tests, 1981 - 1985

Industry	Year and Successful Candidates				
	1981	1982	1983	1984	1985
Aircraft	-	67	60	8	4
Building	63	998	880	1,145	1,282
Electrical	29	209	215	150	172
Mechanical	98	818	876	641	555
Motor	-	398	499	750	443
Printing	-	158	109	2	-
Hairdressing	-	8	5	26	114
Total	190	2,656	2,644	2,722	2,570

Source: Annual Report 1985, Industrial Training Department

Workers who have been initially taken on as assistants and, in the course of time, assimilated the main skills of the craftsmen, generally have educational qualifications ranging from Grade IV to Form 2; as a consequence, their labour mobility is rather low. In a large number of companies, this category of skilled worker has replaced the skilled White craftsman and is seen as a viable alternative to the apprentice trained craftsman. Viewed in the wider context of manpower development, the number of indentured apprentices taken on each year by industry has little impact on the secondary school leaver.

Some ten years ago, Kenneth King,⁴⁶ in his commentary on technical training in Kenya, suggested that because of the apprenticeship system's small coverage of industry and its considerable administrative costs, it was in danger of becoming an elitist method of entry into industry. It could also be suggested that the present state of the Zimbabwean apprenticeship system, with its limited relevance to the majority of Zimbabwean workers but nevertheless receiving a high official profile, parallels the situation reported by King. This view is supported by the large amount of concern for the apprenticeship system in Zimbabwe's 1984 Manpower Planning and Development Act and the Act's sparse coverage of other methods of training.

Alongside the Government's attempts to continue the formal and traditional apprenticeship system are the training programmes provided at the Vocational Training Centres. The two VTCs at Westgate, Bulawayo and Masasa, Harare, began operational training in 1983 and were organised and run by the Department of

Industrial Training. A third VTC, the training wing of the National Vocational Training Development Centre at Belvedere, Harare, commenced VTC type training programmes in 1988. The Vocational Training Centres offer training to adults who have at least completed Grade IV education. At present, vocational courses cover the building, automotive and mechanical trades. Trainees who successfully complete the twelve or eighteen months courses are eligible to be registered as Class IV or III skilled workers; Class I being recognised as equivalent to a craftsman. Starting with a modest 48 trainees in 1983, the annual enrolment at the two VTCs had increased to 610 by 1986.⁴⁷

Technical schools, as alternative forms of primary and secondary education in both Rhodesia and Zimbabwe, have been considered on various occasions during the past eighty years. Under the auspices of the British South Africa Company, Keigwin and his colleagues established the Domboshawa and Tjolotzo schools. With the advent of 'Responsible Government' in 1923, the Phelps-Stokes Commission recommended that the work already begun by Keigwin should be supported by larger financial aid, the encouragement of Government and the cooperation of the missionaries. Although this recommendation was largely ignored by successive Governments in Rhodesia, it was a feature of many missionary school curricula. Growing awareness of the shortcomings of a purely academic secondary school curriculum was highlighted by the 1936 Fox Commission Report into European education along with the proposal to establish a tripartite secondary system: academic, technical and modern schools.⁴⁸

The tendency to create specialist schools for certain skill areas at the post-primary level is, according to A.R. Thompson,⁴⁹

a common feature in both anglophone and francophone countries of Africa. P.J. Foster's criticism of African post-primary technical schools, with their legacy of the Phelps-Stokes era and post-independence strategies towards manpower development, is a 'false start' towards developing a nation's skilled manpower. He argues that the basis for effective specialist training is a post-primary education with a bias towards general science and English or French.⁵⁰

In the transition from Rhodesia to Zimbabwe, very few of the technical schools run by church organisations have remained. This has been due to African pressure for academic education which has resulted in many of the previous technically biased schools reverting to normal secondary high schools. The two European secondary technical schools, Alan Wilson, Harare, and Gifford School, Bulawayo, have also been converted to secondary high schools.

Those secondary schools which have retained their technical status are now in a very small minority and are all church related. One of these, St. Peter's Kubatana in Highfield, Harare, became a Government-aided Vocational Training School in 1984. The curriculum which is a two year post Form II mix of academic and technical subjects was intended to be a pilot scheme for similar church schools who were seeking Government assistance.

Unfortunately, the original planning for the Vocational Schools did not involve industry, therefore relationship between the two year programmes in carpentry and joinery, bricklaying, automotive work and machine shop engineering, and a specific

slot in the employment market, is weak. As a consequence, industry does not readily accept the terminal skills of the students who, in turn, are having to compete for 'skilled' jobs against apprentice trained craftsmen and more mature upgraded trade assistants, and will shortly face further competition from the tertiary pre-employment training programmes.

Commenting on the apparent lack of success of many vocational schools, John Simmons, notes:

"there is a tendency for most systems of technical education to neglect the required mechanisms or incentives for employers to participate in educational policy decisions."⁵¹

Simmons goes on to suggest:

"that in all phases of the transition to a more effective technical education system would be to hold discussions among employers, craftsmen, students and teachers about the kind of workers that employers need. Almost no information flows systematically between these four groups, which are also not consulted by the educational planners about the kinds of abilities which jobs require and school might teach."⁵²

Given the recent expansion of opportunities for pre-employment training within the existing technical colleges and the imminent introduction of vocational options in Ministry of Education controlled Secondary Schools, it is unlikely that the concept of specialised secondary technical schools will be pursued by either of the concerned Government ministries.

5.9 Transition from Education to Employment

The problem of relating education to employment is common in all countries. Nevertheless, Colin Brock,⁵³ writing on this issue in the context of small Commonwealth countries, suggests that small developing countries, with their highly concentrated economies, face this problem most acutely. Brock strengthens his position by suggesting that:

"because formal education was bequeathed to most developing countries as one of the legacies of colonialism, it corresponds most readily to the modern sector of an economy, and already produces many more aspirants than the relatively small nature of that sector can accommodate."⁵⁴

With the advent of political independence and the subsequent conflicting pressures for 'relevant but formal education', Zimbabwean school leavers are experiencing great difficulties in the transition from education to employment.

Whilst significantly different and with their own unique problems, vocational colleges and secondary schools in Zimbabwe share common issues inhibiting the smooth transition of students from college and school to work. Predominant among these problems are: coordinating vocational and technical programmes under one overall policy; weakness of career information systems for students, teachers and counsellors; the need for provision of more comprehensive information on technical and vocational education; lack of effective job placement and follow-up services.

Underlying the decision to divide responsibility for tertiary and secondary education between the two ministries of Education and Manpower in 1978 was the need to focus more clearly on producing skilled manpower. Whilst the consequence of this change has benefited a small section of the post-secondary school population, in particular apprentices, it has certainly not enhanced student possibilities for passing from one level of education into another and from secondary education into employment.

In principle, the Ministry of Labour, Manpower Planning and Social Welfare had overall responsibility for manpower

development until 1988. However, the high level of diversity of both purpose and administrative approach between this Ministry and the Ministry of Education and indeed training provided by the private sector, fell far short of an integrated approach. Until there is a stronger linkage between schools, colleges and the business-industrial sector, the division of purpose and approach to manpower development is unlikely to be reduced.

In general, career guidance is still at an early stage of development in Zimbabwe's schools and colleges. Effective guidance and counselling in general education is a continuing problem in that schools do not have separate career guidance teachers and where they exist on an ad hoc basis there are no quantitative indicators of the work undertaken. Due to the previous pattern whereby colleges were used almost exclusively for supporting trainees already employed in industry, career guidance services have not developed into anything other than informal advice from individual college lecturers. With the introduction of pre-employment courses which require both work experience and eventual employment opportunities, industrial liaison officers will be required at all technical colleges.

It is difficult to identify any major innovative approaches by either the Ministry of Labour, Manpower Planning and Social Welfare or the Ministry of Education in specifically solving the transitional problems from school to work. However, responding to a common criticism from industry for more information about vocational and technical training opportunities, the Ministry of Labour, Manpower Planning and Social Welfare compiled and published in 1987 its first directory of information regarding national training programmes, facilities, training institutions

and training requirements. The Ministry of Education argues that expanding the academic curricula of the secondary schools to include vocational subjects will enhance the linkage between teachers, students and the employers of skilled manpower. Before these peripheral reforms take effect on smoothing the transitional period between education and work, further fundamental changes are needed. Principally these involve the recruitment and training of career guidance personnel who can facilitate complete and precise information on training and employment opportunities. Building on such a cadre of professionals is a requirement for follow-up studies of students with a view to verifying training effectiveness and actual student placement.

Whilst all the technical colleges and vocational training centres previously controlled by the Ministry of Labour, Manpower Planning and Social Welfare, are located in well-established industrialised centres, many of the secondary schools are in isolated rural areas far away from urban centres where most of the non-agricultural formal employment opportunities exist. This can pose a serious problem for the rural secondary school leaver in his/her transition from education to employment. Overcoming this problem is not just a question of improving the country's transport infrastructure but more fundamentally implies expanded and more adaptable curricula committed to the conveyance of rural values and the technological requirements of supporting the Government's push to establish rural growth points and their dependent settlements.

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CHAPTER SIX: RECENT DEVELOPMENTS IN VOCATIONAL EDUCATION AND TRAINING

6.1 Changing Perceptions Of Education

The major influence on Zambian and Zimbabwean education during their early pre-independence period was the various European Christian missions. Although the main purpose of starting mission work was evangelism, most missions aimed at producing skilled and educated Africans who would contribute to the success of village industries or could undertake work in the formal framework of the colonial administrations. What was absent in these endeavours at educating the indigenous African was any kind of education or training that threatened the hegemony of the European settler and his dominant position in both the civil service and commercial activities. Skilled workers in Southern Rhodesia were further sheltered from competition by the passing of the 1934 Industrial Conciliation Act which regulated conditions of service between European employers and their European workforce.

During the years that followed the establishment of the Sub-Department of Native Education (1924, N. Rhodesia) and the Department of African Education (1927, S. Rhodesia), both territories concentrated heavily on schemes for the extension of primary education as a means of raising the educational levels of their respective African populations. This emphasis was very much in line with the first report from the Phelps-Stokes Commission. However, the opening of the Munali secondary school near Lusaka in 1939 did offer and indeed provide the opportunity to build up a small group of Africans in Northern Rhodesia with familiarity with European culture. This was achieved through a

school curriculum heavily biased towards humanity studies. The distinctive Southern Rhodesian attitude to African education avoided this developmental strategy which Atkinson relates may have:

"created superficial intellectualism, which in turn might allow irresponsible leaders of opinion to gain undue influence over their own people."

Whether official Government policy in the south was more influenced by educational or by non-educational factors is by no means easy to decide. Nevertheless, the legacy of failing to create a common standard of education was that during the pre-independence period a large number of talented Africans were not provided with appropriate schooling opportunities and certainly not comparable with those available to their White contemporaries.

Early African response to education provided in both Northern and Southern Rhodesia followed a pattern not unfamiliar to other colonised areas of Africa. To begin with, there was an attitude of indifference towards formal education. This was understandable because education did not appear to offer advantages to those who enrolled at early missionary schools. As the territories developed and financial benefits arose for those who could speak and read the English language this indifference towards education began to fade. By 1945 a new socio-economic situation was emerging in both territories with increasing White settler immigration and a general expansion of commercial activities. This in turn triggered a demand for greater opportunities for African education. A demand which had, as far as the African was concerned, to be met by following

a curriculum equal and leading to the same examinations as that offered in European schools.

Bernard Chidzero, now a prominent cabinet minister in the Zimbabwean parliament, during the period of his country's independence struggle remarked that:

"Rhodesian society was underpinned and sustained by the education system."²

The dual nature and the function of the system were clearly intended to be complementary to and consistent with the aims of the larger society. This role has also been observed on an international level by Faure who observed education as being:

"a sub-system of society, necessarily reflecting the main features of that society."³

In the post war era, African perceptions of education and what they saw as its role in the new industrialised societies of Northern and Southern Rhodesia were directed towards seeking education that would be rewarded by the new occupational structure. As a result, African opinion moved away from education that was different from White settler education which Mazhero suggests resulted in a system of education that:

"gradually became a poor mimic of the English based white system".⁴

Nevertheless, during the past four or five decades, African parents and children have been brought to realise that success in adult life comes as a result of progressing further and further on the educational spiral. But in practice, Riddell considers that:

"the majority of Black children have failed to escape from poverty because the Black school system has provided a screening system which has only allowed a small minority to proceed from

the higher grades of primary school and beyond to the relatively few higher paid jobs in the economy."⁵

Few African nations on this 'educational spiral' have had the luxury of being able to pause and consider the most relevant education system for their particular country. This point, particularly the oscillation between stressing general education against vocational education, has been common to both Zambia and Zimbabwe. In many instances, public pressures, aspirations and often the survival of political groups results in just providing more schools to accommodate the perennial increase in school populations. Distinctions introduced in the rest of this Chapter refer to important aspects of vocational education and how each national system has responded in a difficult period of adjustment and development.

6.2 Post-Independence Approaches to Manpower Training

In previous chapters it was noted that Northern and Southern Rhodesia had strong and often very restrictive patterns of skilled employment. For example, the structure of the labour force in the manual trades was composed of three categories:

- i) Unskilled employment Covered general labouring tasks such as carrying, lifting, loading, cleaning, packing and handling. These mainly physical jobs requiring little or no schooling have a continuing history of being undertaken by the African worker.
- ii) Semi-skilled jobs The manufacturing and extractive industries such as machine minding, operating and trade assistants which require a certain amount of formal schooling and skill, became the preserve of the African

worker during the 1950's because of the shortage of white labour.

iii) Skilled jobs As a result of traditional working practices imported from Europe, strong White dominated trade unions and, in the case of Southern Rhodesia, the Industrial Conciliation Act, these were closely linked with the apprenticeship system. Prior to Independence, Northern Rhodesia had twenty-nine listed trades for which apprenticeship training was a pre-requisite for employment. In Southern Rhodesia the structure was somewhat more rigorous with seven industrial groups which, in turn, were divided into eighty-one trade areas for which a recognised apprenticeship was required. By the early 1960's, most of these jobs, which by tradition and restrictive practices had been the preserve of white workers, were becoming more available to Africans because of a shortage of White apprentices, especially in the building industry.

A strong divergence of approach within the two national systems to the development of skilled manpower took place after gaining their respective independent status. Zambia's post-independence period coincided with a phase in international trends whereby institutional training was seen as a panacea for third world manpower problems.

This method, with its inherent opportunity for involving far more young people than the traditional apprenticeship system of training, also aligned closely with the President's approach which he described as 'African humanism', implying in this

context that human interests should not be suppressed by dogmatic adherence to traditional and mostly foreign methods of education and training. In the preface to the policy document on manpower training, President Kaunda writes:

"This new training programme intends to clear away the old sludge and provide a clear way towards technological advancement and initiative - not merely to train Zambians to be members of other people's conceptions."⁶

Later in the text, the authors of the document reinforce the belief in education and training being a means towards man's own realisation:

"...that the potentiality of man's development is infinite and, therefore, the social and class barriers obtaining in the traditional practices of apprenticeship training are unacceptable."⁷

The fundamental changes brought into play in 1969 must also be set against several decades of resentment by Africans against the apprenticeship system. Set against this desire for change were industrial organisations which clearly favoured the continuation of training systems which they themselves controlled. This status quo remained virtually intact in the 1964 - 1969 period, with little evidence of companies willing to accept trainees from the trade schools and the Northern Technical College at Ndola on an equal basis with their own apprentices. The final end of the apprenticeship system was inevitable following the publication of Saunders Report in 1968 and the subsequent Canadian offer to support the development of pre-employment training.

Possibly if Zimbabwe had gained control over its own affairs at a similar time to its northern neighbour, it too may have followed other developing countries and elected to abolish

apprenticeship training in favour of government controlled pre-employment schemes. However, by the early 1980's, doubts were clearly being cast on the wisdom of Governments, mainly because of financial implications, taking total control of skilled manpower training. Further evidence for the many protagonists, both Black and White, of maintaining Zimbabwe's strong heritage of apprenticeship training came as a result of Zambia's failure to adequately maintain its pre-employment institutions after the departure of the Canadian development team. One rather subjective opposition to pre-employment training came from those who had worked with institutionally trained Zambians in that country or with Zambians who had been expatriate workers in Rhodesia. Although the apprenticeship training scheme had been a cornerstone of earlier racial discrimination, the UDI period had created shortages of skilled labour in certain areas which, in turn, had allowed an increase in the recruitment of Black apprentices. (See Chapter Five, Table 5.10)

By the end of UDI, Black Zimbabweans, some returning from abroad, were taking over control of the previous Apprenticeship Authority. Therefore, given the numerous pressing internal and external problems facing the incoming Black Government and without opposition from its own civil service or trade unions, there was no immediate call for the review of skilled training practices. The researchers and authors of the National Manpower Survey (1981),⁶ whilst criticising the past inequalities of the apprenticeship training scheme, confirmed its continuing role as the main platform for training skilled manpower. Perhaps, unknowingly at the time, by recommending both a centralised recruitment and bonding scheme for apprentices, the National

Manpower Survey report subsequently strengthened the institutional aspect of the apprenticeship scheme. Some nine years on, the apprenticeship controlling authority has grown to a point where its size and influence make it difficult to introduce fundamental changes to this level of manpower training.

6.3 Expansion of Vocational and Technical Institutions

Paradoxically, Zimbabwe and its former regime, whilst clearly supporting on-the-job training, have developed several important tertiary institutions over the past fifty years, including Bulawayo Technical College and Harare Polytechnic. By contrast, similar institutions in Zambia, Zambia Institute of Technology and the Northern Technical College (in its expanded form), have only been established in the period since independence. Expansion of the Bulawayo and Harare institutions has always been closely linked to Government support for the apprenticeship training scheme. An early indication of this support, along with the future direction of the institutes, is given in an inspection report carried out at Salisbury Polytechnic in 1942:

"In general, the institute aims at providing technical education for the various trade apprentices who attend under the terms of The Industrial Conciliation Act of 1934; commercial education for the office workers in Government and other employment and if there is a demand, cultural education for these two categories and for other students who wish to pursue special interests."⁹

The reluctance to develop tertiary technical institutes in the northern territory in the post 1945 period must be viewed in the previous racial context of apprenticeships and the smaller demand for skilled industrial workers.

Expansion during the 1970's of tertiary vocational and technical institutes in Zambia was a direct consequence of the Saunders Report (see Chapter Four) and the Government's response in establishing a three-tiered institutional training structure. Set against what in Zambia was a comparatively clear series of events leading to an expanded system of colleges, the development of this type of education in Zimbabwe was as a consequence of a more involved set of circumstances.

At independence, Zimbabwe had essentially two vocational and technical colleges at Bulawayo and Harare. In addition, there were small training units at Gweru, Kwe Kwe, Masvingo and Mutare; these four centres were running commercial courses for office workers. Seven years on and without any distinct policy for this type of education, the Ministry of Labour, Manpower Planning and Social Welfare was responsible for seven substantial technical colleges. This remarkable expansion of facilities must also be viewed against a background of continuing support for on-the-job training. Probably the most crucial factor in the expansion programme lay outside Zimbabwe altogether. This was the availability of external donors and their perceptions of the emerging nation's educational requirements. Such external forces, ostensibly aiming towards worthy social and economic outcomes, have often failed to take into account the educational and management considerations that are an integral part of a viable education system. Offers of external assistance were made during a period when the responsible Ministry was in its early years of existence and with very few professional staff and empirical data with which to counter external notions. Negotiations with both western and

eastern bloc countries tended to be undertaken by politicians who saw the inflow of large capital projects as a necessary feature of regional development programmes. Little thought appears to have been given to the actual use of four large technical colleges in what are essentially small towns and there has been even less concern about the recurrent costs of extra institutions.

In a situation like the one just described, decisions made about aid programmes eventually influence the learning process. Typical of the immediate post-independence inflow of technical aid to vocational education in Zimbabwe was an agreed package between the Government of Yugoslavia and the Ministry of Labour, Manpower Planning, whereby the former would equip the new technical college at Mutare. Unfortunately, both the scale and type of equipment eventually received under this agreement has proved inappropriate for technical training purposes. In the event, the gap between the expectations of recipient and donor on the definition of fully equipped workshops is considerable. For example, equipment received for the machine workshop only included one each of the following: lathe, shaper, radial arm drilling machine and milling machine. All machines were large industrial applications, unsuitable and obviously an insufficient number with which to train classes of up to twenty students. While the Ministry which signed the aid agreement was too embarrassed to complain to the Yugoslavian authorities, Mutare Technical College has been put in a position where it cannot effectively complete its training courses. Ironically, the donor nation has received a considerable amount of favourable publicity for this ostensibly generous donation.

6.4 Management Structures

Chapters Four and Five provided a description of the respective Government structures responsible for vocational and technical education/training in Zambia and Zimbabwe. Relative positions adopted by both countries in managing this type of education is one of using Government Ministries as the responsible agent. In addition, Zambia used for a short period the Commission for Technical Education and Vocational Training. However, seemingly uncertain of where responsibility for this third level of education should rest both countries had, by the close of this study (1987), transferred responsibility for vocational and technical education/training from the Ministry of Education to, in the case of Zambia, the Ministry of Higher Education and in Zimbabwe, the Ministry of Labour, Manpower Planning and Social Welfare. In both instances, the transfer of responsibility was undertaken against a background of endeavouring to change the ethos of tertiary institutions by creating closer links with industry and commerce.

Equally as important, from an operating point of view, are the management structures within the colleges. Developments prior to and since independence of the managerial arrangements for vocational and technical education/training in Zambia and Zimbabwe have centred around departmentalism. This approach applies both within the respective ministries and their subordinate institutions. Commenting on the tendency of newly independent countries to maintain their previous colonial type school administrations, Philip Coombs notes that:

'The main features of many management structures were cast during an era when education and the world outside were moving slowly by today's pace, and when the size and diversity of education's tasks much smaller. They were not designed for planning in

today's sense of the term, or for implementing such planning, or for critical evaluation of the educational system's performance, or for rigorous promotion of innovation."¹⁰

Examples of the degree of commitment to orthodoxy in management structures and practices are especially apparent at Zambia Institute of Technology and Harare Polytechnic. At the latter there are now ten distinct departments with fixed boundaries often conflicting with other departments which subsequently limits the optimum use of college resources through non-sharing policies. This has the effect of encouraging departments to see each other as in competition, and to defend their territory with tenacity.

Finally, of course, colleges operating under the real prospect of further changes in ministerial control are reluctant to initiate policy issues. They tend to concentrate on what they do reasonably well - operational duties - which are less complicated with possible controversy.

6.5 Curriculum Changes

The decade 1964 - 1974 was a period of criticism, reform and innovation in vocational and technical education in Zambia. It began with questions being raised about the purpose of the country's depleted trade schools and apprenticeship system of training skilled manpower. The criticism led to a new expanded role for trade schools in preparing young people for skilled employment. Political will and commitment stimulated Government and overseas agencies to invest in projects which changed the traditional curriculum of vocational and technical education.

During a similar developmental period in Zimbabwe, decisions about the future role of vocational and technical education were less decisive. The expanded college system, largely a result of foreign aid, was not conceived with a view to changing the previous role of vocational and technical education but rather of accommodating more students in the system. Indeed, the largesse of foreign donors has created something of a dilemma for vocational and technical education in Zimbabwe. Both support and teaching resources are now tenuously extended to fully utilize the new facilities at Gweru, Masvingo and Mutare. Coombs and Hallak remind us that this particular problem has been around since the 1950's when major external assistance programmes to African countries began. The co-authors describe a problem which is all too familiar. They point out that external aid, made with the best intentions but with too little insight:

'ends up costing the recipient nation more than if it had never received the gift. This happens when the gift entails transplanting an ill-fitting educational model which does not match the recipient nation's needs or, at any rate, does not fit its pocketbook, and yet thereafter imposes a continuing heavy burden of operating costs on the local educational budget.'

One important feature that emerged from decisions made during Zambia's early reappraisal of its vocational and technical system was the establishment of institutes which offer only one level of training. This feature contrasts with colleges in Zimbabwe which continue to run various levels of courses within a particular college. Zimbabwe's approach to using colleges for multi-faceted levels of training, was recently illustrated with the introduction of both vocational foundation (craft) and degree courses at Harare Polytechnic. A similar initiative in Zambia would result in the foundation course being taught at one

of the TTI's and the degree course at the Zambia Institute of Technology.

A second feature that was brought under examination was the arena in which curriculum development in Zambia should be undertaken. Before independence, most vocational and technical curricula were of foreign origin. Consequently, any curriculum activity was predominantly a response to the need to develop courses related to syllabuses and guidelines produced by these overseas authorities. Encouraged by Government and assisted by a Canadian technical aid programme, Zambia embarked on solving some of its curriculum dilemmas through the establishment of a national curriculum development unit. Although lacking in initial commitment and direction and suffering from a strong preference by teaching staff for maintaining existing curricula, Zimbabwe had, by 1985, established its own curriculum development unit.

The overriding question of all curriculum endeavour is what should be taught in the various programmes. All other questions, or problem areas related to curriculum, are subordinate to this main issue and generally are a means of seeking answers that contribute to decision-making about what should be taught in a system of education. Whilst in this context the Government of Zambia had been provided with a number of recommendations by the Saunders Report, it was left to advisory committees to describe what was required by various levels of skilled manpower.

As described later in this Chapter, initial attempts in Zimbabwe to both revise old and develop new programmes for vocational and

technical education did not take place within a strong employment setting. Content decisions tended to be based on introspection by persons from within Government service. Consequently, industry is sometimes reluctant to accept new courses as being relevant in meeting their particular manpower training requirements.

In countries like Zambia and Zimbabwe, where authority and responsibility for all aspects of education rest in central Government, official curriculum development is inescapably from top to bottom. A similar pattern of functional responsibility for curriculum activities has now been established with both countries having centralised curriculum development units.

Beauchamp reminds us that:

"Operational techniques for curriculum planning are complicated, or simplified, by at least three factors. One is the expertness of the planners with respect to both the subject matter and decision-making procedures. Another is the number of persons involved in the planning activity. And a third is the intimacy between the lives of the planners and curriculum decisions to be made."¹²

With the exception of industry participation, the framework of curriculum planning for vocational and technical education has a great deal of similarity in both countries. Both use groups of technical experts in their field of specialisation to plan and design curriculum. These experts are assisted by curriculum development specialists who guide and monitor style and content. Working groups in both systems of education tend to be small, usually about six members, who know their field well and can agree within a reasonable time-frame on content decisions.

The arrangement whereby the majority of curriculum writers in Zambia and Zimbabwe are drawn from technical colleges relates

closely with Beuchamp's third point concerning curriculum decisions and implementation. The extent and nature of this involvement can have the effect of overcoming barriers to implementation in colleges but in the interests of keeping abreast of modern technology this needs to be tempered with some degree of industrial representation.

Determining curriculum content for vocational and technical education involves a variety of factors affecting which subjects should be taught. A critical factor for both countries in their curriculum development endeavours has been the time available to determine curriculum content. In the case of Zambia, new courses had to be developed across a wide spectrum of vocational and technical education in the period 1970 - 1975. Zimbabwe is currently experiencing a similar period of concentrated development. A common response to pressures of fixed times has been curriculum development teams adopting content determination strategies (introspection) which can be executed in a relatively short period of time. Whilst there is a higher degree of specificity and preciseness towards student learning outcomes in Zimbabwe's latest curricula endeavours, design strategies in both countries are useful where time for development is limited. Likewise, content determination strategies have also been strongly influenced by the small-scale budgets which both curriculum development units have had at their disposal.

Vocational and technical courses as planned in the national curriculum development units of Zambia and Zimbabwe use separate subjects as their fundamental units. Subjects are specified for each course and within each subject are units and topics which

set out the curriculum in some detail. Those courses in Zimbabwe, introduced before 1985, leave much of the detail to be worked out at the point of implementation. Courses introduced later share with those in Zambia a more elaborate and detailed type of course documentation, containing general aims, detailed units and topics for each subject. Topics, especially those in later Zimbabwean courses, stress student outcomes and lead to measurable statements of behaviour by the student under specified conditions.

Although the move towards the development of competency-based vocational education has found significant support from educationalists in Zimbabwe, arguments against this style of curriculum are no less frequently brought forward. Many teachers feel uneasy because, since they are not familiar with learning based and evaluated on competency benchmarks, they suspect that it is somehow wrong.

The reluctance to use learning techniques which can be accurately measured, often by others, coupled with complex curriculum and evaluation documents, makes it important to provide more in-service training. In this way, teaching staff can be stimulated to look critically at their own work and also respond more positively to innovative strategies. This point has been taken very much on board by the designers of the newly introduced pre-service training course with curriculum issues featuring in three of the four years of study.

Until recently, when new courses introduced in Zimbabwe started to include recommended textbooks, little consideration appears to have been given in either system of vocational and technical

education towards specifying resource material.

Finch and Crunkilton point out that:

"meaningful information from curriculum developers about curriculum materials to those responsible for course implementation can make teaching more effective for a teacher and more efficient for the student." ¹³

This aspect of curriculum activities has been left very much to the initiative of individual colleges which, in the absence of locally published vocational and technical textbooks, tend to recommend British or sometimes American material. Design and production of other visual teaching materials such as charts and technical illustrations, is the responsibility of individual college departments. Some colleges, notably at Ndola and Bulawayo, have had considerable assistance with their teaching material requirements from local mining companies, whilst Harare Polytechnic and the Zambia Institute of Technology have received similar help from manufacturing and service industries. However, those colleges located away from the Copperbelt in Zambia and the Zimbabwean cities of Bulawayo and Harare are less likely to have their meagre recurrent budgets supplemented by industry.

Consequently, curriculum designers in the future may have to plan and modify content so that it can be taught effectively with the resources which emerging colleges in both countries have at their disposal.

Most curriculum designers would agree that it is necessary to establish strong and efficient links between the process of curriculum development and its eventual use in the world of work. However, development of vocational and technical courses

in both Zambia and Zimbabwe have, for the most part, taken place without any formal provision for their summative evaluation. Curriculum designers have tended to accept informal feedback mostly from college staff as an adequate indication of a course's success. Also, without the benefit of pilot courses, the extent of formative evaluation is limited to the breadth of experience which the development group possesses. We are often reminded by writers on curriculum matters that programme evaluation, particularly of those programmes involving vocational or technical elements, are:

"often dreaded and avoided".¹⁴

The same authors go on to suggest that the reason for this tardiness is:

"educators often feel they have neither the time, the expertise, nor the inclination to carry out the type of comprehensive evaluation actually needed."¹⁵

Also, in the context of Zambia and Zimbabwe, the strong competing demands for funds further restrict the opportunities for rigorous and systematic evaluations.

Whilst there has been a steady worldwide trend in the 1970's and 1980's towards the inclusion of vocational subjects into secondary curriculum, secondary schools in Zambia and Zimbabwe during the same period concentrated on academic subjects.¹⁶ This bias towards academic curriculum has not always been the case. During the last hundred years both systems of education have undergone considerable policy changes reflecting the strengths and weaknesses of vocational education as a worthwhile aspect of general education. From information provided in Chapter Two and Three, dedicated vocational church and State

schools, north and south of the Zambezi, were a significant feature until the late 1960's and early 1970's respectively. Vocational education, although not popular with the majority of white parents in Southern Rhodesia, was provided both in separate vocational schools and as part of general secondary education.

Increasing concern about the growing number of secondary school graduates who are unable to find employment is forcing both Governments to reappraise their previous policy of an almost exclusive academic secondary education. Future innovations towards vocationalising the general secondary curriculum will no doubt be strongly influenced by the high cost of this type of education. Once the financial implications for buildings, equipment and providing the necessary qualified staff are realised, the eventual vocational provision in both countries will most likely be limited to secondary curriculum which offer general preparation for employment rather than emphasising particular marketable skills. If this does occur, it will be similar to the situation noted and criticised by Bray during the Federal period of Government (Chapter Three), whereby students, it was suggested, were only marginally exposed to studies which equip them for craft vocations.

Given a combined rural population of some twelve million people in Zambia and Zimbabwe¹⁷, with a heavier than average concentration of poor people, the unsettling social and economic pressures in rural areas do not appear to be currently met by the curricula of the two countries' formal vocational and technical systems. Courses are essentially designed for students who will eventually progress to employment in the

formal sector of industry. Indeed, there is little evidence that the newer TTI's in Zambia and colleges in Zimbabwe, which have been located in towns and are centres for rural areas, are offering anything other than what is being run at the large centres of Bulawayo, Harare, Lusaka and Ndola. This reflects not the lower demand in the rural economy for courses which support rural activities but curricula and services which are not flexible enough to meet the rural students' needs. This issue is inexorably bound up in the lack of political decentralisation in Zambia and Zimbabwe since their respective points of independence. It follows logically from this feature that shortage of input at the local level, as well as creating an unbalanced curriculum, can also contribute to a general decline in interest as to what and how curriculum material is taught.

Growing directly out of a need for more secondary school places in Zambia are a wide range of private schools offering vocational tuition of a specialized nature. Resources to fund the cost of equipment and materials are recouped from student fees. Consequently, those vocations which require a large investment in capital equipment and recurrent costs are less frequently found, certainly in rural areas. Adaption of Zimbabwe's established private tertiary vocational schools to cater for growing secondary enrolment has not seriously been considered by Government. If technical studies are to become a positive option for more students in their secondary phase of education, the Government may have to look towards the Zambian model of private sector participation in providing vocational secondary education.

As yet, little emphasis has been placed in both countries on a closer partnership of secondary schools and tertiary institutes, but in the face of continuing economic constraints in Zambia and Zimbabwe, it may be only a matter of time before both Governments start to enquire of the responsible ministries whether they are making full use of the resources at their disposal. At present, both national systems of vocational and technical education have student attendance patterns which ensure that expensive technical facilities are under-utilized. In the case of Zimbabwe, this may be due to the apprenticeship intake in a particular craft being low or, in the case of Zambia, because there is a shortage of recurrent funding for a particular course. Approaches to partnership between schools and colleges would ensure that more secondary school students are exposed to the practical aspects of their technical studies. However, setting up the machinery for this integration is likely to remain dependent on future steps to unify both phases of education under the responsibility of one Ministry.

6.6 Cooperation with Industry

In previous chapters it was possible to identify a number of events in both Zambia and Zimbabwe which have significantly shaped the present pattern of vocational and technical education. Publication and enactment of the Saunders Report (1967) by the Government of Zambia was an early post-independent initiative to reform the process of skilled manpower training. In this new climate of development, fresh policies for expansion, curriculum development and cooperation with industry were much easier to initiate. Whatever the economic difficulties which Zambia has had to face since then - and at

present they are very serious - the system of vocational and technical education envisaged by the 1967 report continues to provide the main official means for this type of education.

Perhaps surprisingly, after more than eighty years of European settlement in Southern Rhodesia and the consequential development of two distinct systems of education, Zimbabwe has been less decisive in introducing changes to its vocational and technical education system. Zimbabwe's major post-independence legislation concerning manpower development, the Manpower Planning and Development Act (1984), strengthened the position of the traditionally trained apprentice vis-a-vis other methods of training. However, the 1984 Act had a more fundamental effect in bringing about a change in the racial balance of indentured apprentices in favour of the country's African majority.

Recognising the important role of vocational and technical education to provide a labour force that is capable of meeting the needs of the economy, both countries have used industrial advisory committees in varying degrees as links between training needs and vocational and technical curriculum.

Advisory committees in Zambia, drawn from both institutions and industry, and with their own agenda of concerns, have been active since the early 1970's. Initially involved in formulating aims and general course direction, their influence has now spread to most aspects of curriculum development. Compared with this detailed involvement, industrial advisory committees in Rhodesia and latterly Zimbabwe have tended to delegate specific curriculum content decisions to lecturers at

Bulawayo and Harare colleges. As a consequence, much of the pre-1980 curriculum development was based on British or South African courses.

Despite severe financial restrictions, advisory committees in Zambia continue to be active and provide some support for vocational and technical programmes. In contrast, the influence of industrial advisory committees in Zimbabwe had, by the mid-1980's, fallen to a point where no apparent dialogue was taking place. Contributing to this situation was the large turnover of professional staff from positions in both Government service and industry. The non-functional status of these committees is expected to be addressed by the recently formed National Manpower Advisory Council which has a designated role to effect the cooperation of industry and education.

The effectiveness of advisory committees, both in Zambia and Zimbabwe, will be ultimately determined not by the number formed but by their ability to participate during the time that vocational and technical programmes are being developed. In the medium and long-term, it is unlikely that industry will be strongly committed to a programme if their involvement has not been encouraged during the various stages of development.

6.7 Transitional Problems

A 1983 UNESCO report cites the lack of sufficient guidance and counselling services for students in vocational and technical education as an inherent weakness of most education systems.¹⁰ In contrast to this apparent worldwide problem, the early presence (1970 - 1975) of sufficient funds, effective administration and consultative machinery undoubtedly helped

vocational and technical education in Zambia to establish a positive link with industry. Underpinning the counselling service offered by the Student Services Division of the Department of Technical Education and Vocational Training was the publication of a wide range of literature dealing with information on employment and career opportunities. Despite this impressive start to student counselling and guidance, budget constraints have now reduced the service to a routine clerical unit which has not the resources to publish and disseminate information concerning training programmes and employment opportunities. At no point either prior to or following Independence has there been any similar mechanism in Zimbabwe to ensure the smooth transition from vocational studies to the world of work. This, as one might expect, is a result of a system which, until recently, has been catering for students who have, in the main, been sponsored by industry. However, with the recent introduction of pre-employment courses there is a growing demand for guidance and counselling services which can closely relate students to industry and potential employers. Significantly, nowhere in either national systems of vocational and technical education are there mechanisms for looking after the transition problems for special groups such as economically deprived, refugees, women and those with physical handicaps.

6.8 Examinations

Ronald Dore contends that centralised examination systems play a key role in the development of most educational systems.¹⁹ Against a long historical background of externally shaped examinations all students attending Government institutions in Zambia and following vocational or technical courses are

assessed by national examinations. Diplomas, advanced certificates and certificates are issued by the Department of Technical Education and Vocational Training under the signature of the Chairman of the Examinations Council of the Republic of Zambia. A similar situation exists in Zimbabwe except that the authority for diplomas and certificates is the Further Education Examinations Board (FEEB) and acts at the same level as the 'Department' in Zambia. At the moment, there is no Zimbabwean equivalent of the Zambian Examinations Council for vocational and technical studies.

Examinations in Zambia are devised and marked by examination syndicates. Syndicate members are selected and appointed from amongst college teaching staff. Moderation is usually undertaken by senior teachers. The Zambian approach to compiling examinations is mirrored in Zimbabwe except that more use is made of part-time staff in setting and marking examination papers. Using external staff for assessment purposes often leads to delays in issuing examination results but it does provide a useful link with industry. Also in the Zimbabwean system, with its wide variety of courses, the assigned teacher has sometimes to take responsibility for instruction, devising and marking of examination papers.

Another point of considerable importance is that both countries' 'examinations' in the technical field are, for the most part, of the essay type with practical skills being assessed from course work performance. Questions to which essay-type answers are expected tend to emphasize principles rather than practical applications. Only incidentally are they able to assess a student's ability to cope with higher learning levels such as

analysis and synthesis. In addition, supporting subjects such as mathematics, seem to be based on the same view, namely, that principles rather than applied techniques should be learned.

In the midst of a period of curriculum reform, both countries still have provision for technical students to enter for foreign examinations. Zambian students attending engineering courses at the Northern Technical College, Ndola, are encouraged to enter as private candidates for City and Guilds of London Institute examinations. Within the Zimbabwean system there were, in 1987, still some nineteen courses which emphasised British norms of achievement and examined by external assessment.

Two factors support the continuing use of external examinations: firstly, some employers in the formal sector of industry and commerce maintain that national qualifications do not involve the student in the same rigorous study as foreign equivalents; secondly, the continued presence of expatriate teaching staff or sometimes nationals who have studied abroad, seek to maintain the use of foreign examinations. This lack of confidence by emerging nations to define local needs was highlighted by Julius Nyerere in 1975 when he wrote:

"We have been too timid - too unliberated - to effect the required radical transformation of the system we inherited. We have made important changes, especially in the curriculum and syllabuses. But we are still mentally committed to 'international standards' in education. We still apparently believe that a Tanzanian is not educated unless his education takes the form that is recognisable by, and acceptable to, other countries - and in particular the English speaking countries. It is from others that we seek our certificates or respectability."²⁰

Certainly, neither of the two countries at the centre of this study has attempted the wholesale structural reforms seen in all sectors of education following Independence in Tanzania. R. Dore suggests that this is mainly because:

'other countries have not had presidents with the conscience and quality of mind of Nyerere, nor, perhaps, had an elite so small that one man of high prestige could dominate it and successfully require it to sacrifice at least some of its material interest and established conceptions.'²¹

This view is also shared by Eisemon²² who suggests in his study of autonomy and authority in universities, that conservatism, especially that created by a colonial legacy, is only broken by the occasional emergence of a dynamic leader.

6.9 Patterns of Teacher Education

As emphasized in earlier chapters, both countries have taken policy measures to try and ensure that the expansion and improvement of vocational and technical education is not hindered by problems concerned with recruitment and training of teachers. From the outset of the expansion of vocational and technical programmes in 1970, Zambia has been faced with a shortage of teachers with specialised skills. Similarly, in Zimbabwe, the difficulty of recruiting and retraining specialised vocational teachers has been a recurrent problem for the various authorities responsible for this type of education. Probably the single most important response in Zambia to the shortage of vocational teachers was the building of the Luanshya Technical and Vocational Teachers' College. Zimbabwe's investment in vocational teacher training has been through a pattern of formal training combined with practical on-the-job experience. But, unlike in Zambia, where formal training courses have been focused on Luanshya, Zimbabwe's initiatives have been spread over four colleges: Harare, Bulawayo, Kwe Kwe and Gweru. Probably the main fundamental difference between initial teacher training courses in Zambia and Zimbabwe is that

those students who enrol at Luanshya have some previous practical experience of their future teaching specialization. Students enrolled on pre-service teacher training courses in Zimbabwe are generally secondary school graduates who have no industrial experience. As a consequence, courses contain a large element of technology and practical work which in turn accounts for their four year duration compared to the Zambian equivalent course which runs for ten months.

Against these positive responses towards improving the supply and quality of staff, declining real wages in both countries have encouraged many teachers, especially those with specific vocational skills, to seek supplementary sources of income on top of their state salaries. Many of these 'secondary' jobs are located within the growing private school sector. The negative implications for the state schools and colleges are that with conflicting interests teachers are unable to carry out their official jobs as well as they might.

In-service staff development programmes with a view to replacing expatriate staff and improving the performance of teachers are provided by both education authorities. Perhaps the most notable difference of approach to this type of training is that Zambian courses cover both pedagogical and technical requirements whilst those in Zimbabwe are exclusively devoted to improving serving teachers' pedagogical skills.

There can be little doubt that external aid, despite various shortcomings, was an important feature in the multiplication and diversification of vocational and technical activities in Zambia during the early 1970's. An indicator of the dependency on

foreign staff is given in the 1976 Annual Report from the Department of Technical Education and Vocational Training which states that during 1975, 60 per cent of the total teaching staff was expatriate.²³ Midway through the next decade the proportion of expatriate teachers had been reduced to approximately 30 per cent.²⁴ At the same time as expatriates were being recruited for the expanded teaching service, strategic senior administrative gaps in colleges and Ministry were also being filled by foreigners. During the initial expansion period, overseas volunteer organisations provided technical volunteer teachers, most of whom were attached to the Trades Training Institutes.

Because of the political situation in Zimbabwe prior to 1980, technical assistance programmes did not get under way until the early 1980's. Numerically speaking, considerably less external assistance in the form of teaching personnel has been received by Zimbabwe from bi-lateral and multi-lateral sources than that provided to Zambia. A significant proportion of the 118 (26 per cent) expatriate technical and vocational teachers at post in 1985 were directly recruited by the Zimbabwe Government.²⁵ Unlike Zambia, where expatriates continue to be employed in senior college posts at both the Northern Technical College and the Zambian Institute of Technology, expatriates in Zimbabwe are almost exclusively employed to fill specific teaching posts. Also, little use has been made of foreign volunteers in technical colleges. Concern for improving inspection services has not induced the Zimbabwean authorities to follow the Zambian strategy of employing larger number of expatriates in the Ministry. Overseas training for teachers and Ministry officials

has played a small but significant part in the efforts of both Zambia and Zimbabwe towards self-sufficiency, with both countries having benefitted from CIDA scholarships in Canada.

6.10 Resource Costs and Allocation

In Zimbabwe there are no specific education taxes nor are particular sources of Government revenue directed towards educational needs, with the exception of the industrial training levy. Zambia introduced in the 1970's both industrial training and education levies on medium to large-scale employers, but revenue from these taxes is absorbed into the general funds of the Ministry of Finance. Consolidated Government revenues are proportionally allocated to the responsible Ministries in the form of annual vote appropriations for capital and recurrent needs. The former category includes finance for building new colleges or enlargement of existing buildings, workshops and classroom equipment and teaching aids. Recurrent expenditure covers teachers' emoluments, building and equipment maintenance, hostel budgets and utility charges.

Both Governments obtain their funds from a wide range of sources, most significantly taxes on personal income, company profits, customs duties, sales taxes and loans raised on both national and international financial markets. The latter source, along with international development assistance grants, are mainly used for capital work.

Decisions about the size of educational budgets for vocational and technical education in Zambia and Zimbabwe and the uses to which they are put, are largely determined by the respective ruling political parties and government ministries. Since

central governments are responsible for systems of college management, there are very few opportunities for political decentralisation at the lower levels which in turn restricts the scope and direction of current expenditure. Proposals for new policies from teacher organisations, local communities and other non-political groups have little effect on shaping this type of education. Reliance by colleges on centrally raised and allocated funds results in financial budgets which are greatly influenced by the general buoyancy of the respective country's economy.

There is considerable contrast between industrialised countries in Europe and North America - which have access to a wide range of data for analysing the cost implications of educational programmes - and developing countries such as Zambia and Zimbabwe, which often have to proceed with projects not fully knowing cost implications.

The Commission for Technical Education and Vocational Training did not have sufficient information to determine the prospective cost when putting together Zambia's new plan for vocational and technical training in 1968. Only after some years of operation were the cost implications of the plan made apparent. By 1976, the Ministry of Education was able to report that the annual cost per enrolled student at a technical institute was approximately K.1,380.00.²⁶ This costing exercise would have been more useful if it had been available eight years earlier when it could have been used to reveal more clearly the available options for the new start in vocational and technical education. Moreover, early data showing clearly segregated capital and recurrent commitments may have influenced the scope

and depth of Government involvement in skilled manpower development. In this connection, at the end of the Third National Development Plan (1979 - 1983), student enrolment in Zambia had fallen by approximately 9 per cent.²⁷ This was as a result of persistently declining budgets and increasing unit costs.

Zimbabwe's straightforward enlargement of its existing vocational and technical education system was also undertaken without fully knowing future recurrent costs and how much unused capacity there was in existing buildings. The data difficulties in Zimbabwe are illustrated by the fact that vote appropriations to the responsible ministry do not differentiate between recurrent and capital expenditure. Despite this difficulty, a World Bank survey into education and training estimated that unit costs for vocational and technical education in Zimbabwe (1982) were US\$3,500.,²⁸ This figure was higher than for similar students in OECD countries and was approximately twice the Zambian unit cost for 1982.²⁹

Scarcity of basic data on educational enrolments and targets is a further barrier to determining prospective costs of vocational and technical programmes. Official statistics in Zimbabwe continue to show enrolment and target figures which are inconsistent between development plans and actual enrolments at technical colleges. For example, the First Five Year National Development Plan planned for a total student enrolment at Government institutes in 1985 of 13,776, increasing to 20,000 by the year 1990.³⁰ A closer analysis of the actual 1985 enrolment figure reveals that this is a combination of Government and private institutions. The actual enrolment figure for

Government colleges during the first year of the development plan was 5,306.³¹ Disparities of this magnitude are unlikely to provide the means for the efficient deployment of scarce resources, especially under rapidly changing conditions.

Despite its serious economic difficulties since the inception of the Government led vocational training schemes, Zambia has constantly produced annual data which accurately reflect student numbers at its various institutions. Moreover, annual reports clearly detail when planned enrolments do not occur and more importantly the reasons for not achieving target figures.

Coombs and Hallak warn against:

"Simplistic assumptions that costs will remain constant or that revenues will grow at a steady pace."³²

In inflation-prone economies like Zambia and Zimbabwe, these problems are often exacerbated by inflation of prices and wages. Quite often annual increases in educational expenditure only reflect and cover the amount of inflation which has taken place during the previous year. This point is vividly illustrated in a recent annual report by the Director of Technical and Vocational Education in Zambia, when he says:

"despite the increase of twenty-one per cent in the recurrent budget over the 1982 level, student enrolment dropped by approximately 300 students or five per cent during the year. This is attributed to rising prices in training materials, equipment, services and food materials. The situation was also aggravated by the Government decision to decontrol prices."³³

Similar statements of concern about inadequate recurrent budgets can also be found in Zimbabwean documents. Therefore, cost escalation in vocational and technical education is unlike that in primary and secondary education where it is mainly a consequence of increasing demand. Rising expenditure in

vocational and technical colleges in Zambia and Zimbabwe tends to be more closely linked to ever increasing material costs and unit costs which are also increasing as the student teacher ratios decrease.

There now appears to be a growing acceptance in both countries that vocational education, at least that part provided by government, is becoming out of phase with individual needs, changing labour market requirements and general economic development. It is fairly evident from the issues raised in this chapter that unless there is congruence between the supply and consumption of vocational education the success of the system is endangered. Thus, in the interests of vocational education in Zambia and Zimbabwe, a closer working relationship between the two groups would seem highly desirable.

The history of vocational education in Zambia and Zimbabwe, particularly during the past two decades, holds warnings for the policy makers of today. It clearly reflects the danger of adopting a polarised stance on the funding and provision of this type of education without due regard to central government long-term financial support capability.

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CHAPTER SEVEN: A COMPARATIVE OVERVIEW: EXPANSION, CHANGES AND PROBLEMS

7.1 Introduction

This study has explored the development of vocational education in both Zambia and Zimbabwe. The extent to which the supply and quality of trained manpower from the two educational systems has influenced and played a role in carrying out basic technological functions has also been examined. The study was extended to include the scope and nature of past and present day vocational curriculum and the policies and institutional framework necessary for implementing vocational programmes.

A major theme of the study has been that the education and employment issues of Zambia and Zimbabwe will not be solved by simply expanding the inherited systems of vocational education.

The final chapter summarizes comparative issues from the study and discusses the implications of promoting a new approach to vocational education, one which is specifically concerned with providing education and training for employment.

7.2 Colonial Legacy of Vocational Education

Vocational education and training in Zambia and Zimbabwe have, since gaining Independence, been under a constant state of experimentation. Yet this thesis argues that changes have been closely influenced and structured to support assumptions on manpower training inherited from previous colonial administrations. Dependency is more apparent and acute in Zimbabwe where recent experience of European control has left a strong legacy of training norms and institutions. This

experience is also reinforced by political and professional attitudes of those involved in determining the direction of vocational training. Although less apparent to the casual observer, manpower development dependency in Zambia is still present, particularly in the nature and scope of national vocational curriculum. This is due, in part, to the maintenance of external links (foreign teachers and examinations) which make it very difficult for reformers to break with entrenched views about vocational education.

Lillis and Hogan¹ investigating some of the problems of vocational education in developing countries, suggest that attempts to vocationalise education are usually associated with the following goals:

1. halt urban migration
2. reorientate student attitudes towards rural society
3. alleviate unemployment
4. transmit skills and attitudes useful in employment

Earlier chapters have recognised these points as having influenced policy decisions towards formal vocational education since its introduction to British controlled Central Africa in the late 19th century. For example, socializing aspects of secular and non-secular sponsored vocational education featured prominently in early European administrations in the Rhodesias.

More specifically, Gunnar Myrdal identifies an early relationship between colonial interventions in education and manpower development.

¹To a varying degree, all colonial powers had made some significant contributions to education in their dependencies, but their main interest, with the exception of the Americans in

the Philippines, had not been to educate the people and prepare them for development. Their objective was to train clerks, minor officials of all sorts and, particularly in British colonies, higher administrative functionaries and to some extent professionals."²

The pattern of attempts to vocationalize education was through a system dominated by strong racial overtones. African vocational education was through a primary school curriculum which contained strong pre-employment components. Opening of Domboshawa and Tjoltjo schools (southern territory) in the early 1920's are examples of schools directed towards producing skilled rural artisans.

However, the limited vocational curriculum of these schools (building skills, weaving and agriculture) restricted school leavers to employment in rural areas. This was not due to a deficient curriculum, it was a planned outcome. Many Africans felt that attempts to link vocational education to rural development (also recommended by the Phelps-Stokes Reports) was a means of perpetuating the inferior status of their race.

Early formal vocational education for Europeans in the British Central African Territories began at Bulawayo Technical School in 1927. The curriculum was geared towards the theory and practice of mechanics and electricity and was clearly intended as preparation for students who would embark on an apprenticeship in the emerging modern industries of the 1930's.

Apart from official legislation on employment (Industrial Conciliation Act 1934 - Southern Rhodesia), the opening of tertiary technical evening institutes in the 1930's, with their racially controlled entry, further distanced the African from

vocational employment in the expanding railway and mining industries.

With employment legislation and separate and distinct systems of education it is not surprising that Africans continued to view attempts to vocationalise primary and lower secondary education with a high degree of suspicion. This suspicion was heightened when in the 1950's the northern administration tried to introduce trade schools for primary school leavers (Mwekera, Luanshya, Mufulira and Kitwe). Courses at these trade schools were heavily orientated towards the building industry with engineering trades being restricted due mainly by the cost of capital equipment and shortage of instructors. The impact of these schools in terms of both resources committed to their development and actual manpower outputs, appears to have been minimal.

Dorsey reminds us of a similar vocationalisation attempt by the Smith regime in 1966 when educational authorities tried to introduce three hundred two-year junior vocational secondary schools.

"The curriculum emphasized the acquisition of pre-vocational skills with 45 per cent of the time to be spent on practical subjects."³

The African analysis of equating vocational education with low status rural employment was not a view shared by the White populations of Northern and Southern Rhodesia. The period 1945 - 1960 saw a change of direction and expansion of vocational education for the European population. Developments in this sector of education closely paralleled expansion of tertiary technical training in Britain and South Africa.

The three main vocational centres for Europeans in the two territories Ndola, Salisbury and Bulawayo, expanded their facilities to serve a period of increased foreign investment and a new generation of European settlement. Whilst many employers relied on new immigrants for the expanding economy, the shortage of skilled craftsmen, mainly in the engineering trades, increased the demand for formal training programmes.

Concern about the standard and number of apprentices being trained prompted the authorities in Southern Rhodesia to adopt a more interventionist training strategy. The 1964 Select Committee Report on Apprenticeships and Technical Education required apprentices to attend formal 'off-the-job' training as part of their four or five year training period. Training was modelled on British training schemes of that period with apprentices attending part-time day or block release schemes at Salisbury Polytechnic or Bulawayo Technical College. Courses for apprentice craftsmen and technicians usually led to examinations of the City and Guilds of London Institute. External examinations were seen as giving a stamp of respectability to the apprenticeship. Despite efforts to localise vocational training, external examination certificates retain their privileged position, especially with potential employers.

High expectations placed on this form of State intervention to provide more skilled workers appear to be dubious, particularly when industry is effectively controlling the entry into the training schemes. Equally, it is questionable whether technical institutions modelled on British counterparts, using British curriculum, could deliver the relevant support skills for

industry. Bennell questions this relationship between State technical institutions in Africa and industry.

"from inception, each of the industrial and educational systems has its own view on manpower requirements. Industry has little influence on the education of the manpower it needs, remaining outside of the education system and a passive consumer of its products,"⁴

This belief is perhaps justified when the curriculum of the mainstream technical institutions are inextricably connected with qualifications and occupational skills of a distant nation.

7.3 Independence: Reforms of Vocational Education

During the post-colonial period in Zambia and Zimbabwe, with assistance from donor countries, the respective Governments expanded their primary and secondary system of education. It is important to recognise in the case of Zimbabwe that, after a long civil war, Zimbabwean nationalist leaders came out of prison or exile in an exuberant mood and determined to improve the lot of the masses. Nevertheless, this approach towards national development had few internal critics. In line with numerous other newly Independent states, Zambia and Zimbabwe saw a fixed relationship between education, qualifications, entry and success in the world of work; an assumption no doubt encouraged by the previous colonial administration where professional success was a visible consequence of modern education and training.

The two Governments viewed the widening access to education as a means of creating conditions which would eventually lead to nationals taking over skilled posts held by expatriates; a belief encouraged by the high state of development in

industrialised countries, where there is a strong correlation between education standards and economic development.

This view was further supported by human capital and modernisation theories which were popular with members of bilateral and multi-lateral agencies, particularly at the time of Zambia's Independence. Yet, as Theodor Hanf comments,

"If substantial investments in education are not accompanied by complementary capital investments, education will not yield any profit and these investments will be withheld from alternative more profitable investment possibilities."⁵

With similar social political and economic ideologies, strategies for achieving mass education in Zambia and Zimbabwe have shared a common approach: State schools emphasising primary and lower secondary education. Dynamic expansion of these sectors of education in the post-independence era has also brought similar problems - teacher shortages, financing and some fall off in the quality.

Debate over the priority of investment in education vis-a-vis economic support for agriculture and industrial development became somewhat complicated in both countries shortly after independence. In the case of Zambia, declining international copper prices in the mid-1970's (Burdette, Chapter Two), removed much of the financial support from educational reforms. Successive droughts in Zimbabwe (1983 - 1984), combining with a major world economic recession, strained the Government's determination towards universal education. Both Governments have indicated that future educational growth will have to be largely financed by local communities. This must lead to a situation likely to promote the growth of private schools or marginal establishments whereby parent teacher associations

establish management committees and charge fees to run and expand school buildings. Ironically, in middle class urban areas, the situation may once again promote the growth of elitist and fee paying schools.

With continuing optimistic assumptions about the role of formal education in economic development, more secondary school graduates, in both countries, have become available for entry into skilled employment. Historically, entry into many skilled occupations has been controlled by apprenticeship training schemes. This system of training, established by the previous colonial industrial system on the model of British tradition, required a four to five year period of training before recognition was granted as a skilled worker.

Despite this restrictive situation, there was no immediate post-independence change in either country to the form and scope of Government intervention towards the training of skilled workers. Prompted, however, in the late 1960's by an economy showing signs of stagnation and a rapidly increasing urban population, employment started to become a major concern for the Government of Zambia. This led to questions about the validity of apprenticeships with a growing realisation that training schemes with entry solely controlled by industry was firstly, not going to absorb the growing number of secondary school graduates and secondly, unlikely to provide skill training for employment in rural areas.

In short, prospects for young persons with normally acceptable entry qualifications for an apprenticeship were bleak. Decisions were needed with a view to satisfying the aspirations of the new

wave of graduates from Zambia's expanded school system and preparing sufficient qualified persons for economic development.

Zambia's situation, where the output of students from its post-independence education system far exceeded the jobs available in the modern sector of industry, is a resultant feature shared by numerous other nations in Africa including Zimbabwe. Hanf and his co-writers suggest that from this over-supply situation develops a sequence of events:

'the socio-economic system demands that the political system creates more jobs. This demand is accompanied by threats from the unemployed to diminish their support for the political system. The political system registers the demand and the threat.'⁶

Therefore, with popular demand for education remaining a constant political factor, the Zambian Government, doggedly committed to industrial development, looked towards modifying post-school opportunities as a means of transforming growing youth unemployment and one of its foremost corollaries, under-employment, or as defined by UNESCO:

'the acceptance of jobs and salaries below one's level of training and skill simply to survive.'⁷

Some of the main characteristics experienced by Zambia and described by Hanf, are now becoming more evident in Zimbabwe. The Government response to growing unemployment offers an interesting contrast to the policy adopted by Zambia. More inclined towards a mixed agricultural/industrial economy, Zimbabwe is actively encouraging rural people to remain 'on the land'. Although no changes have yet been made to widen entry opportunities into skilled jobs, basic vocational skills are to be reintroduced into the general secondary curriculum.

In these circumstances, Riddell suggests:

"the education system (defined broadly to include technical training) may be failing to provide any education at all to some people, it may be failing to provide the type of education necessary for the whole working population to be effectively and productively employed - or it might be failing to achieve both of these goals simultaneously."

However, this thesis favours the wider views that given the growing enormity of the unemployment issue, it is unlikely that any single policy option will solve the problem. Moreover, it would be irresponsible for either Government to ignore Hanf's caveat that educational development is wasted without corresponding policies which lead to a climate of investment in both agriculture and industry.

Clearly, future investment must include some degree of diversification away from trade based largely on primary products which, as discussed in Chapter Two, has locked Zambia into exporting goods which are subject to a high degree of price instability in international markets. The opening recently in Zimbabwe of the first gold refining plant in Africa, outside South Africa, is an example of investment and technology directed towards increasing the value of a primary product. Moreover, both countries have a clear comparative advantage in the processing of many primary products (including agricultural) which are at present exported largely in their raw state. Apart from the obvious distance and disadvantage of weak transport links to the major markets in N. America, Europe, Asia and neighbouring African countries, there would appear to be some possibilities for spreading production processes whereby the two developing countries import components of high level technology and specialise in the labour-intensive stage of the

productive process, such as in assembly and re-export of the product. Zimbabwe, to a certain extent, has begun this form of development with its three modest vehicle assembly plants. However, finished products are, at the moment, only marketed within Zimbabwe. There are numerous examples, especially in Asia (Malaysia, Indonesia, Thailand), of raising export earnings by adopting the measures previously described, but an important requirement for these patterns of development spreading to the countries of central southern Africa are political stability, improved road and rail links with the major ports of the region and a relaxation of trade barriers by the developed countries.

Bennell, in his theoretical overview of skill formation in developing countries, points to the lack of substantiated empirical data in this process, which he argues encourages simplistic manpower planning models. The same author identifies the most popular of these planning models and inherited by both Zambia and Zimbabwe:

"The Manpower Requirements Approach postulates the existence of a fixed relationship between the formal acquisition of educational and vocational qualifications and occupational skill requirements. The recommendation that skilled manpower should be produced in fixed ratios, e.g. one professional engineer to five technicians to twenty artisans (tradesmen) with primary reliance being placed on skilled acquisition at formal training institutions, is probably the most well known."⁹

It is hard to say how far these assumptions can be tied back into the previous colonial industrial structure. Nevertheless, specific conceptions of training associated with artisan, technician and engineer occupations, have proved difficult to dislodge.

King,¹⁰ in the context of Africa, identifies the narrowness of this manpower development approach suggesting that countries

using this strategy are training manpower almost exclusively for the apex of industrial activity and neglecting the needs of petty entrepreneurs and rural development.

Following on from Independence, official scope for drastically remodelling manpower training was limited in both countries by convention, prejudice or vested interests and external perceptions on manpower training.

Lillis clearly identifies the educational pressures and emerging outcomes at the period of Zambian independence:

"The period leading up to Independence saw a swing towards academic curricula although the rhetoric of vocational education was also present. However, within a few years, a primary school crisis appeared with many leavers having widely unrealistic expectations and no marketable skills in a phase of massive change and Africanisation and uncharacteristically fiercer competition for entry to the low positions. Technical schools emerged amongst primary leavers who quickly reappraised the job prospects of the products of academic curricula."

By the early 1980's, all sectors of education in Zimbabwe were more inclusive than its Zambian counterpart at a similar period of Independence. Yet, there is no doubt that the fashionable opinion of the period, 1964 - 1970, whereby education had a specific responsibility for training skilled manpower, was still in evidence.

Paradoxically, but perhaps predictably, when Zambia was seeking to change its formal training system to accommodate more young people, it chose to rely heavily for advice from a country outside the African continent. Growing links with Canadian aid organisations led to the Saunders Report on manpower training. This report, detailed in Chapter Four, recommended that the apprenticeship system be abolished in favour of training centred on Government pre-employment training institutes. By and large,

these institutes would be segregated along lines dictated by the level of skill required for a particular job: a training model which, it could be argued, erects barriers between intellectual and manual work and is unlikely to impose a high use factor on particular institutes.

It is not easy, as King points out, to generalise skill levels in Africa where there is a danger in:

'talking about Africa's needs for 'basic skill' or high level skilled manpower as if these were self-evident categories.'¹²

With King's caveat in mind, the Saunders Report was promising for its explicit and purposive intentions but it was equally disappointing in its identifications and quantification of skills required for urban and rural development in Zambia. A comment by Tavernier indicates the importance normally attached to the basics of manpower planning:

'In order to be able to establish training objectives it is necessary to determine the training required to provide the skills, knowledge and attitudes for objectives. There are many uncertainties in carrying out this kind of forecasting which make it all the more important that any identification of future training needs to be systematic and comprehensive.'¹³

In addition to the belief that there was in Zambia a demand for broad-based craftsmen rather than specialists trained in a limited field, the Saunders Report is interesting in the importance it gave to establishing two classes of higher skilled manpower: the technician and technologist. The distinction between the two manpower levels is very fine. The emergence of the technologist grade in Zambia was probably due to the growing use of the term in North America, where the job is viewed as:

'one concerned with the achievement of practical results based upon plans or designs developed by the engineer.'¹⁴

A corresponding definition for the technician reveals the large amount of common responsibility:

"the technician performs technical duties of an established or novel character either independently or under the general direction of a Chartered Engineer or Scientist."¹⁵

Faced with recommendations for change (Saunders Report), the Zambian Authorities appear to have reacted in part by introducing the technologist grade of training but at the same time maintained its formalized links with the City and Guilds of London Institute technicians courses.

By 1980, as we know, vocational education in Zimbabwe had been opened up to all races and was in the public sector almost twice the size (in student terms) as its Zambian counterpart. Colleges in Zimbabwe also offered a far wider range of courses, a direct consequence of uncontrolled development during the UDI period. A more fundamental point to be made about the two systems, however, is that in 1980 the Zambian colleges were primarily concerned with programmes for full-time students, whereas opportunities at vocational colleges in Zimbabwe were almost exclusively for part-time study by students already in full-time employment.

A basic assertion of the 1970 Zambian Training plan was to spread more evenly the advantages of vocational education among all areas of the country. In effect, this required a large redistribution of resources to the rural areas. In the event it has been the rural TTI's at Mongu, Chipata, Solwezi (construction not yet begun), Choma, Pemba, Kasama and Mansa which have received the least resources with which to achieve

curriculum goals and henceforth contribute to the slowdown of rural migration.

Quite apart from a paucity of equipment and essential consumable items, the network of rural Trades Training Institutes, seen as a panacea for the development of skills required by local industries, have operated under a national curriculum which did not always recognise the special needs of the rural areas. Industry, in most of Zambia's rural districts, tends not to be manufacturing but agricultural related process industries. Trades Training Institute graduates, seeking employment in these industries, are presumably expected to adapt their skills to the specialised skills required for agricultural equipment and process industries.

Apart from students attending Kushinga Phikelela College (East Mashonaland) students from rural areas in Zimbabwe wishing to enrol on formal and nationally recognised vocational courses must move to the main urban centres of Harare, Bulawayo, Gweru, Kwe Kwe, Masvingo and Mutare. The special prestigious positions of Harare Polytechnic and Bulawayo Technical College appears to have sheltered both institutes from radical administrative or curriculum reforms. Although, as mentioned earlier, there has been a large turnover of staff, including several changes of Principal, these two institutes continue to operate more or less as they did before 1980.

Political rhetoric of the 1975 - 1985 period, presented employment orientated education as a form of investment which would create situations where those who had received it would be able to maintain themselves through self-employment.

Unfortunately, this expectation was not translated into curriculum content, which as already noted, concentrates on outcomes more aligned with modern industrial situations.

Leaving aside curriculum issues, a major barrier to the start-up of self-employment is the extent of advice and economic support following graduation. King identifies the divergence between policy and reality when he writes:

"The emerging institutes of technology affirm the importance of technical self-employment in their objectives, but however rigorous the standard of their instruction, their graduates will find it difficult without some associated credit programme effectively to embrace levels of technology that are much above those required in the small building contractor."¹⁶

With the exception of some assistance towards self-help building programmes in Zambia, which in some cases have been adapted to serve as small workshops, there is no general provision in Zambia or Zimbabwe for assisting recent graduates of vocational institutes to establish their own businesses.

Formal vocational education in Zimbabwe and its colonial predecessor has, since the early 1950's, been located in the tertiary sector. In Zambia by contrast, this sector of education was, until changes following the Saunders Report, more associated with secondary education.

The difference might seem to be one of mere labelling, but in reality location within the 'higher' sector has a real effect on curriculum. By contrast with the previous trade schools, there is a substantial trend towards a greater emphasis on theoretical subjects. Dore¹⁷ interprets changes of this nature as a straight forward process of escalation often resulting in graduates being less attractive to potential employees. In

addition, the content of practical training has been seriously reduced because of ageing equipment and machinery. The result is a reduction in the number of skilled and qualified craftsmen and technicians from the TTI's and higher institutes. Moreover, Mudenda and Bardouille¹⁸ report that the quality of many graduates, particularly in the engineering area, is not as acceptable to the mining industry as was the initial output in the mid 1970's. A point not missed by proponents of apprenticeship training in both Zambia and Zimbabwe.

In practice, completion of pre-employment craft courses in Zambia does not represent a qualification in skill terms, which automatically leads to employment; certainly not in the graduate's area of specialisation. A wastage which Silver and Brennan view as:

"weakening of the course-employment relationship"¹⁹

There is also growing evidence in Zimbabwe's more established vocational colleges of material shortages and obsolescent equipment, particularly in electrical and electronic engineering departments. However, the material/equipment gap is more evident in the newer group of colleges - Gweru, Masvingo and Mutare - where, as highlighted in Chapter Five, capital and recurrent budgets are insufficient to launch and run these large colleges. This, like the situation in Zambia, results in graduation skills falling short of curriculum expectations. In turn, a situation develops whereby students are dissatisfied with their learning opportunities and employers gradually lose confidence in the ability of institutes to adequately support manpower development.

It would seem that approaches to vocational training, especially engineering craft training, in Zambia and Zimbabwe demonstrate that structural reforms alone (abolition of apprenticeship, establishing new colleges) are by themselves not enough to provide the working population with skills and productive capacities necessary for useful employment. They must be accompanied by curriculum changes in the widest sense of the phrase, which closely track the requirements of formal employment, self-employment and employment on a regional basis.

7.4 The Need to Revise Policies

In this final section, a number of proposals for achieving relevant vocational education for employment in Zambia and Zimbabwe are outlined. To achieve this overview it will be necessary first to comment briefly on substantive issues from previous chapters.

An inventory and analysis of current vocational education programmes in Zambia and Zimbabwe reveals four major problem areas.

- i) The first and probably most illusory is change. This is frequently linked closely with negative views as to the value of vocational education. What was true about the reluctance to change during the first decade of Zambia's Independence is also true of Zimbabwe today.
- ii) The second problem is made up of severe financial restraints to support the current systems of vocational education.
- iii) Thirdly, there is insufficient coordination between vocational education and the world of work, especially in

matters dealing with curriculum development, planning and location of training institutes. Both countries have, in the past, had periods of close cooperation with industry but for various reasons brought out in Chapter Six, are now in positions of some isolation.

- iv) The final area of concern includes issues directed towards implementation and involves: lack of research into vocational education matters, ineffectual forward planning, insufficient attention to programme evaluation including student tracer studies and bureaucratic hinderances to staff recruitment and development.

All attempts to formulate decisions for vocational education obviously require serious study and debate, which must include both the philosophy and the structure of this sector. But, as has been stressed earlier, the vocational education system cannot be divorced from the wider society in Zambia and Zimbabwe and their respective patterns of national development. Only by linking national development goals of the countries concerned with their vocational education systems can the skills necessary for full and productive employment be achieved.

Any effective programme of vocational education must be underpinned and reinforced by sound policies. There is ample documentary evidence that Zambia, on launching its new vocational initiative in 1969, had clear and decisive policy guidelines. Moreover, written policies were drawn up to enhance the effectiveness of curriculum development, implementation and evaluation of the programmes. However, twenty years on, there is an urgent need to reappraise the policy of vocational

education in view of the vastly different economic and social position of the nation in the late 1980's.

Though Zimbabwe was quicker than Zambia in responding at the time of Independence to demands for mass education, the former has never produced policy documents reflecting the purpose and direction of vocational education. To deal with this situation, Zimbabwe needs to examine its national development plans and assess how vocational education can assist in their implementation.

Equally obvious is the need for basic policy decisions for vocational education to be made by a wide cross-section of interested parties: members of the legislature, educationalists, trade union representatives, industrialists, representatives from agriculture and regional nominees. The basic policies for vocational education will have their inception in the basic forces that shape the respective societies and not, as in the past, a watered down version of British, North American and South African systems.

More specific policies for vocational education in Zambia and Zimbabwe will emerge from problems and issues which have developed since Independence, some of which are identified at the beginning of this section. Many of these concerns will have their origins at the local level. Given the present disparities which exist between opportunities for vocational education in urban and rural areas future policies should seriously consider the merits of some measure of decentralisation. Parameters for some divestment of national control could extend from curriculum

emphasis, hire of local staff and more fiscal control over establishing and disbursement of educational budgets. This change will enable regions to respond positively to local social, economic and educational requirements. The role of the central ministry or department should be to ensure a coordinated programme and maintain equal standards between the regions and adequately safeguard the rights of ethnic or religious minorities who may wish to attend a particular institute. It should also be the responsibility of the central authority to ensure that vocational educators, groups representing vocational education, and all users of the system are properly informed about the basic principles, aims and objectives of vocational education. Of course, the basic principles of vocational education should be kept under review and strengthened to meet any change in society.

With increasing competition for limited available resources to meet the increasing populations in both countries, vocational education should enlist the coordination and cooperation of State education, private institutes, job training agencies and church groups. From an ideological point of view, this may be difficult for both Governments to accept. However, as explained in earlier Chapters, there is already a de facto provision of private vocational education in operation. An expanded involvement of the 'private sector' should be in a position to use spare workshop and classroom facilities at the established State run vocational colleges. This would make these large institutes economically more viable whilst offering an extended service to the community.

By any international measure the Governments of Zambia and Zimbabwe have inherited and built in urban areas a substantial network of vocational colleges. Therefore, unless there is a proven need for further State run vocational institutes in these areas, all future State participation in expanding the number of training institutes should be directed to areas of well researched need in rural areas. A moratorium on further Government vocational institutes in urban areas would both divert funds to regional development and allow those colleges in urban areas to receive more realistic recurrent budgets.

While part-time attendance has been an organisational feature at vocational institutes in Zambia this form of attendance is not encouraged due to the present logistical difficulties (Chapter Four). Obviously, this results in under-utilization of training facilities and deprives potential students of learning activities. Organisational patterns of attendance should be available which allow different groups of the population to take advantage of the vocational institutes through full-time, part-time, block release and sandwich programmes.

In this section of the final chapter, attention and discussion has centred around several issues relating to policy formation for vocational education. From the results of the study it appears that in the past rather too much emphasis has been given in both Zambia and Zimbabwe to establishing vocational institutes at the expense of a thorough consideration of the issues raised in the foregoing discussion. An outstanding example of this is the purpose of the new colleges at Masvingo

and Mutare. In attempting to bring about relevant policy documents, attention should be at least focussed on:

- i) the needs to be met or existing deficiencies to be overcome by the vocational education system
- ii) the organisation style of the vocational education system
- iii) the legislative and financial framework to be adopted
- iv) the qualitative and quantitative parameters expected from the vocational education system.

To move the foregoing concerns beyond the policy stage inevitably depends upon producing detailed short and long range plans. The growth and diversity of vocational education programmes in Zambia and Zimbabwe during the past twenty years has led to a general lack of coordination and formation of separate departments that has tended to make comprehensive planning difficult. In addition, the almost total lack of research and dissemination of data has caused further difficulties for the small groups of often ad hoc planners. There are no structures in place, for example, which collate and pass on information concerning qualitative and quantitative needs of individuals and industry.

A way of visualizing the nature and scope of planning and how it would assist vocational education in Zambia and Zimbabwe is to review past events in these two countries, noting the indicators of changes to come which were in evidence five to ten years ago. For example, the large expensively equipped Printing Department at Harare Polytechnic conceived and built during the late 1970's when there was already evidence of a

radical change from the processes centred around hot metal type setting. The department now finds itself left with obsolete equipment and insufficient funds to replace it with computerised type setting equipment. Also in Zambia, if detailed recurrent financial implications of pre-employment training had been made available to the Government before it elected to be the sole provider of craft and technician training in 1969, it is doubtful whether this approach would have been adopted in its entirety. Similar indicators are in evidence today - decline of heavy metal fabrication plants, less dependence on extractive industry as a major source of employment, more food processing plants, more females wanting to join the formal labour market, growth in small scale agriculture, increases in tourism. Emphasis and providing for effective planning would recognise the needs of new programmes and eliminate obsolete ones.

In the light of this discussion, planning is essentially the process of making decisions about future actions in order to achieve policy goals. Exposing students to both concepts and processes implicit in planning decisions requires the careful development of vocational learning programmes. Concern has been expressed throughout this study about vocational curriculum development in Zambia and Zimbabwe which has often been the product of a mere acceptance of prevailing views and fashion without adequate analysis of occupational requirements.

It is now clear from the under-utilized facilities at Harare Polytechnic, Bulawayo Technical College, Northern Technical College - Ndola, Zambia Institute of Technology - Kitwe, as well as from the ever-growing number of unskilled unemployed

that the present vocational education, has failed to produce the skills required for the 1990's and beyond. The content of future instructional programmes should be continuously monitored and updated to match the pace of social and employment demands. Changes will continue to occur in the world of work, including the use of new materials and equipment. Through a dynamic curriculum such changes should be made in the vocational education setting.

In this final chapter, the strengths and weaknesses of vocational education in Zambia and Zimbabwe have been brought together for comparative study. Four common strands emerge from contemporary vocational education in the two nations: a continuing dependence on values and structures applied by previous administrations; bureaucratic inertia which prevents responses to changing societal and industrial requirements; the intent to demonstrate that the state sector is fully capable of fulfilling the majority of vocational needs; a deepening economic crisis, especially in Zambia, which is bound to reflect on the future provision of education and training.

Vocational education in both countries has assumed very large tasks with ever decreasing resources. Many vocational programmes have been introduced in both national systems during the past twenty years to ostensibly reduce economic and employment inequalities, but the scale of these two goals has exceeded the resource and boundaries of vocational education in Zambia and Zimbabwe.

Vocational education in its widest sense should continue to be held accountable for programme development, implementation and

evaluation. However, the principal aim of producing skills for employment goes beyond the boundaries of vocational education. Thus, resurgent systems of vocational education can only succeed in assisting to provide skills necessary for full productive employment if the national goals of the two countries are taken seriously in any future curriculum reforms.

National goals of Zambia and Zimbabwe will inevitably differ and certainly be incompatible with those of highly industrialized countries. Therefore, it must be borne in mind that both vocational systems cannot be a copy of Western European or North American models. National conditions should bear considerably upon the programmes of vocational education. Population changes, respective roles of industry and agriculture, trading patterns and cultural background are important factors that must be given due consideration in any new system of vocational education.

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CURRICULUM DEVELOPMENT UNIT

DEPARTMENT OF TECHNICAL EDUCATION AND VOCATIONAL TRAINING

PRIVATE BAG RW 16, LUSAKA

SECOND EDITION APPROVED
1980

APPRECIATE
BODY
PROTECTION
AND HOUSE
KEEPING
11-01-A1

Use of protective
clothing
Dermatitis
House-keeping
Knowledge of
workshop safety

TEMPLATE
MAKING
11-01-A4

Uses of templates
Materials used
Production of
templates

CALCULA
BENDING
ALLOWAN
11-01-A7

PATTERNS FOR
PLATEWORK
11-01-A

USE OF LAYING-
OUT TOOLS
11-01-A2

Laying-out tools
Simple laying-out

UNDERSTAND AND
USE BASIC
PRINCIPLES OF
DEVELOPMENT
RADIAL LINE
11-01-A5

Comparison with
parallel line
development
Applications

USE OF
TEMPL
OR LO
11-01-A

UNDERSTAND
AND USE BASIC
PRINCIPLES OF
PARALLEL LINE
DEVELOPMENT
11-01-A3

Develop patterns
for right cylindrical
pipes

UNDERSTAND
AND USE BASIC
PRINCIPLES OF
TRIANGULATION
11-01-A6

Comparison with
parallel and radial
line development
Applications

C
F
E
I

SET OUT
11-02-A1

Introduction to
template or setting
out floor
Terminology used
Set out straight
lines and right angles

Construct and set out
angles by measurement
and geometric means
Set out a simple truss
Set out a welded
portal frame

MAKE
TEMPLATES
11-02-A3

Symbols and
information
Mark out gusset piece
templates for roof tru
Mark out batten
templates for rafter,
main tie, and bracing
angles

TEMPLATES FOR
STRUCTURAL
SECTIONS
11-02-A

USE OF STANDARD
ALLOWANCES
11-02-A2

Use of standard
backmarks for holes
on angle
Use of back marks
for holes on channel
section flanges
Use of standard back
marks and cross-centres
for holes on beams,
columns, joists, channels
and tees

Standard dimensions
between hole centres
and sheared, flame cut,
rolled, sawn or planed
edges
Hole sizes various
types of bolts and
rivets
Allowances for welded
construction

Use of standard
dimensions to determine
template shape
Standard dimensions
for pitching holes
Allowances for notch
on column to column
connection
Use camber diagrams

IDENTIFY
VARIOUS HAND
TOOLS
11-03-A1

For: measuring,
marking, filing,
cutting, drilling,
forging and fastening

BECOME
FAMILIAR WITH
DIFFERENT TYPES
OF MATERIAL
IDENTIFICATION
11-03-A3

Types of Iron and
steel
Types of non-ferrous
metals and alloys
Types of ferrous
alloys
Structural steel
sections in common
use

Flat strip and
in common use
ferrous and
non-ferrous
Properties of
used for strl
sections, flat
and sheet
Number ar
coding sys

CUTTING,
FORMING,
JOINTING,
FASTENING AND
STEEL
OPERATIONS
11-03-A

RECOGNISE
DEFECTIVE
TOOLS, GUARDS
AND ISOLATING
PROCEDURES
11-03-A2

Isolation
Electrical equipment
Condition of tools
Guards

IDENTIFICATION
OF JOINTING
MATERIALS
11-03-A4

Determine the
need for the use of
jointing material
Ensuring the correct
alignment of joints
Methods of tightening
joints



HOURS ALLOCATION THE GRADUATE CAN:

Connecting into below angular branch cylindrical pipe	PRODUCE PATTERNS FOR A SPIRAL CHUTE 11-01-A18	Flat bottomed spiral chute around a central column	110	UNDERSTAND HOW TO WORK OUT, DEVELOP AND MAKE PATTERNS FOR PLATE WORK
Ventilator base (Use conic frustum + conic frustum + calculation)	APPRECIATE THE NEED FOR AND USES OF ASSEMBLY JIGS AND FIXTURES 11-01-A19	The need for positioning locating or guiding aid Use of a jig to tack weld assemblies Functions of jigs and fixtures		
Two pipes into a conic frustum	MAKE PATTERNS FOR, AND MARK-OUT ON HOLLOW SECTION MATERIALS. 11-01-A20	Mark out a cut-and-shut bend Applications Types of hollow sections in common use Mark out hollow section material to convey liquids and gases Mark out circular hollow sections (tube) Mark out square and rectangular hollow sections		
Set drawing off web plate Use a part template Marking off holes on web plate	Make templates and mark off: end plates, stiffeners, bearing pads, erection cleats and packings	Set out inner and outer stringer flat strips	80	UNDERSTAND HOW TO MARK OFF AND MAKE TEMPLATES FOR STRUCTURAL SECTIONS
Mark off and make templates for welded X column Marking off plated beam	SET OUT A SPIRAL STAIRCASE 11-02-A9	Draw out positions for hand rail standards, tread and stringer flats Set out staircase The need for a positioning, location or guiding aid		
Produce components using simple fabricated press tools Introduction to plate folding machines and brake press	GRINDING 11-03-A12	Introduction to grinding machines		
Fold plate using a brake press Batch folding techniques	APPRECIATE THE NEED FOR TRIAL ERECTION 11-03-A13	Identify the need for trial erection Types of trial erection	1,040	PERFORM THE FOLLOWING: CUTTING, FORMING, JOINTING, FASTENING AND TESTING
Introduction to drills, tapping and punching machines	Drill holes using radial arm drilling machine Batch hole production by stack drilling	POST WORKING TREATMENT 11-03-A14		
Drill holes using a hand drill Drill holes using a portable drilling machine	Batch drilling using simple jigs and fixtures Punch holes using a cropper shear	Description of process Method of operation Painting		



DEPARTMENT OF TECHNICAL EDUCATION
AND VOCATIONAL TRAINING

MINISTRY OF EDUCATION AND CULTURE

FACT SHEETS

BUSINESS STUDIES

COMMERCIAL

Programmes: Diploma and
 Certificate levels

 Duration
 Credential
 Location
 Entry Requirements
 Programme Content
 Employment Opportunities

As at July, 1980

Contents	PAGE
Accountancy	1
Marketing	2
Business Administration	3
Personnel Management	4
Accounts and Business Studies	5
Accounting	6
Stores Supervision	7
Typewriting	8
Shorthand-Typewriting	9
Personal Secretary	10

Accountancy

Programme: ACCOUNTANCY.

Duration: 3 years.

Credential: Diploma.

Location: Evelyn Hone College, Lusaka; Zambia Institute of Technology, Kitwe; Northern Technical College, Ndola; N.I.P.A., Lusaka; Local Government Training Centre, Chalimbana.

Entry Requirements: Form V, with 'O' levels in English, Mathematics and two other relevant subjects.

Programme Content:

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PHASE ONE serves as a Common-intake year, during which students are prepared for the various Business Studies Diploma programmes to follow during Phases II and III.

Any student who proves incapable of continuing in the Diploma stream during Phase II will be diverted to the Certificate programme in Accounting or Stores Supervision. Such student will graduate at the end of Phase II if he is successful.

(b) Diploma in Accountancy (Years 2 and 3): Accountancy 2 and 3, Business Mathematics, Mercantile Law with an Introduction to Company Law, Costing, Economics 2, Data Processing, Auditing, Taxation, Management Accounting (Options: Local Government Accounts and Local Government Finance).

Employment Opportunities: This is an area in which there are literally thousands of opportunities for jobs in industry, commerce, parastatals and government.

Marketing

Programme: MARKETING.

Duration: 3 years.

Credential: Diploma.

Location: Evelyn Hone College, Lusaka; Zambia Institute of Technology, Kitwe; Northern Technical College, Ndola; N.I.P.A., Lusaka; Local Government Training Centre, Chalimbana.

Entry Requirements: Form V with 'O' levels in English, Mathematics and two other relevant subjects.

Programme Content: (a) Common-intake year for new Business Studies Programmes: Elementary Accounting, Business Mathematics and Statistics, General Principles of Law, Introduction to Business, Business Communication, Economics I, Political Education.

PHASE ONE serves as a common-intake year, during which the students are prepared for the various Business Studies Diploma programmes to follow during Phases II and III.

Any student who proves incapable of continuing in the Diploma stream during Phase II will be diverted to the Certificate programme in Accounting or Stores Supervision. Such student will graduate at the end of Phase II if he is successful.

(b) Diploma in Marketing (Year 2): Principles of Marketing, Marketing Planning and Forecasting, Distribution, Economics 2, Mercantile Law. Year 3 being developed.

Employment Opportunities: This is an area in which there are literally thousands of opportunities for jobs in industry, commerce, parastatals, government and even self-employment as a business.

Business Administration

- Programme:** BUSINESS ADMINISTRATION.
- Duration:** 3 years.
- Credential:** Diploma.
- Location:** Evelyn Hone College, Lusaka; Zambia Institute of Technology, Kitwe; Northern Technical College, Ndola; N.I.P.A., Lusaka; Local Government Training Centre, Chalimbana.
- Entry Requirements:** Form V with 'O' levels in English, Mathematics and two other relevant subjects.
- Programme Content:**
- (a) Common-intake year for new Business Studies Programmes: Elementary Accounting, Business Mathematics and Statistics, General Principles of Law, Introduction to Business, Business Communication, Economics I, Political Education.

PHASE ONE serves as a common-intake year during which the students are prepared for the various Business Studies Diploma programmes to follow during Phases II and III.

Any student who proves incapable of continuing in the Diploma stream during Phase II will be diverted to the Certificate programme in Accounting or Stores Supervision. Such student will graduate at the end of Phase II if he is successful.
 - (b) Diploma in Business Administration (Years 2 and 3):
Accountancy 2, Mercantile Law with an Introduction to Company Law, Business Administration 1 and 2, Economics 2, Management Accounting, Data Processing, Management Organisation and Development, Marketing and Production with Financial Management, Management Science.
- Employment Opportunities:** This is an area in which there are literally thousands of opportunities for jobs in industry, commerce, parastatals and government.

Personnel Management

Programme: PERSONNEL MANAGEMENT.

Duration: 3 years.

Credential: Diploma.

Location: Evelyn Hone College, Lusaka; Zambia Institute of Technology, Kitwe; Northern Technical College, Ndola; N.I.P.A., Lusaka; Local Government Training Centre, Chalimbana.

Entry Requirements: Form V with 'O' levels in English, Mathematics and two other relevant subjects.

Programme Content: (a) Common-intake year for new Business Studies Programmes: Elementary Accounting, Business Mathematics and Statistics, General Principles of Law, Introduction to Business, Business Communication, Economics 1, and Political Education.

PHASE ONE serves as a common-intake year, during which the students are prepared for the various Business Studies Diploma programmes to follow during Phases II and III.

Any student who proves incapable of continuing in the Diploma stream during Phase II will be diverted to the Certificate programme in Accounting or Stores Supervision. Such student will graduate at the end of Phase II if he is successful.

(b) Diploma in Personnel Management (Years 2 and 3): Elements of Personnel Management, Elements of Sociology and Psychology, Management Organisation and Development, Labour Law, Economics 2, Personnel Skills, Personnel Management, Industrial Psychology, Manpower Development Education and Training, Introduction to Costing, Industrial Relations.

Employment Opportunities: This is an area in which there are literally thousands of opportunities for jobs in industry, commerce, parastatals and government.

Accounts and Business Studies

Programme:	ACCOUNTS AND BUSINESS STUDIES.
Duration:	2 years.
Credential:	Certificate.
Location:	Evelyn Hone College, Lusaka; Zambia Institute of Technology, Kitwe; Northern Technical College, Ndola; N.I.P.A., Lusaka; Local Government Training Centre, Chalimbana.
Entry Requirements:	Form III to Form V.
Programme Content:	Certificate in Accounts and Business Studies (old syllabus): Communication in Business, Book-keeping and Accounts 1 and 2, General Principles of Law, Office Organisation, Elementary Economics, Public Finance, Commerce, Political Education.
Employment Opportunities:	This is an area in which there are literally thousands of opportunities for jobs in industry, commerce, parastatals and government.

Accounting

Programme: ACCOUNTING.

Duration: 2 years.

Credential: Certificate.

Location: Evelyn Hone College, Lusaka; Zambia Institute of Technology, Kitwe; Northern Technical College, Ndola; N.I.P.A., Lusaka; Local Government Training Centre, Chalimbana.

Entry Requirements: Form V with 'O' levels in English, Mathematics and two other relevant subjects.

Programme Content: (a) Common-intake year for new Business Studies Programmes: Elementary Accounting, Business Mathematics and Statistics, General Principles of Law, Introduction to Business, Business Communication, Economics 1, Political Education.

PHASE ONE serves as a common-intake year, during which the students are prepared for the various Business Studies Diploma programmes to follow during Phases II and III.

Any student who proves incapable of continuing in the Diploma stream during Phase II will be diverted to the Certificate programme in Accounting or Stores Supervision. Such student will graduate at the end of Phase II if he is successful.

(b) Certificate in Accounting: Accounting, Elementary Costing, Computer Appreciation, Office Administration, Elements of Supervision.

Employment Opportunities: This is an area in which there are literally thousands of opportunities for jobs in industry, commerce, parastatals and government. The graduates have the opportunity, too, of continuing their training from the Certificate through to the Diploma level.

Stores Supervision

Programme: STORES SUPERVISION.

Duration: 2 years.

Credential: Certificate.

Location: Evelyn Hone College, Lusaka; Zambia Institute of Technology, Kitwe; Northern Technical College, Ndola; N.I.P.A., Lusaka; Local Government Training Centre, Chalimbana.

Entry Requirements: Form V, with 'O' levels in English, Mathematics and two other relevant subjects.

Programme Content: (a) Common-intake year for new Business Studies Programmes: Elementary Accounting, Business Mathematics and Statistics, General Principles of Law, Introduction to Business, Business Communication, Economics 1, Political Education.

PHASE ONE serves as a common-intake year, during which the students are prepared for the various Business Studies Diploma programmes to follow during Phases II and III.

Any student who proves incapable of continuing in the Diploma stream during Phase II will be diverted to the Certificate programme in Accounting or Stores Supervision. Such student will graduate at the end of Phase II if he is successful.

(b) Certificate in Stores Supervision: Stores Design and Materials Handling, Stores Administration and Control of Stock, Elements of Supervision, Introduction to Costing, Office Administration.

Employment Opportunities: This is an area in which there are literally thousands of opportunities for jobs in industry, commerce, parastatals and government.

Typewriting

- Programme:** TYPEWRITING.
- Duration:** 15 months.
- Credential:** Certificate.
- Location:** Zambia Institute of Technology, Kitwe; Trades Training Institute, Kabwe; Lukashya Trades Training Institute, Kasama; Trades Training Institute, Livingstone; Nkumbi International College, Kabwe; Trades Training Institute, Luanshya.
- Entry Requirements:** Form III with Pass in English Language.
- Programme Content:** *Typewriting.*
Keyboard mastery in touch typing, letters, memoranda, proof reading, carbon copying, tabulations, forms, manuscripts, commercial, technical and accounting documents, programmes, itineraries, company reports, stencils, composing on typewriter, literary work, agenda and minutes of meetings, specifications, legal documents.
- Office Practice.*
Filing methods, organisation of work, handling office mail, Post Office services, banking, commercial documents, business and personal attributes, personal relations, telephone usage, reception duties, office machines.
- Communication Skills and Political Education* are also taught throughout the course.
- On successfully completing the course, students will be able to type at a minimum speed of 45 words per minute.
- Employment Opportunities:** For a proficient typist there is a variety of posts to choose from according to personal interest, and this can provide an interesting career, which can be resumed by married women even after a break of some years. Salaries are good in comparison with other skills, particularly in areas requiring a high standard of efficiency, such as a law firm.

Shorthand-Typewriting

Programme:	SHORTHAND-TYPEWRITING.
Duration:	15 months.
Credential:	Certificate.
Location:	Evelyn Hone College of Applied Arts and Commerce, Lusaka; Kasiya Secretarial College, Pemba; Zambia Institute of Technology, Kitwe; Trades Training Institute, Kabwe; Lukashya Trades Training Institute, Kasama; Trades Training Institute, Luanshya; Trades Training Institute, Livingstone; Nkumbi International College, Kabwe.
Entry Requirements:	Form V with 'O' level in English (grades 1 to 6).
Programme Content:	<p><i>Pitman Shorthand.</i> Theory and speed covering a wide range of materials, with typewritten transcription as early as possible.</p> <p><i>Typewriting.</i> Keyboard mastery in touch typing, letters, memoranda, proof reading, carbon copying, tabulation, forms, manuscripts, commercial, technical and accounting documents, programmes, itineraries, company reports, stenils, composing on typewriter, literary work, agenda and minutes of meetings, specifications, legal documents.</p> <p><i>Office Practice.</i> Filing methods, organisation of work, handling office mail, Post Office services, banking, commercial documents, business and personal attributes, personal relations, telephone usage, reception duties, office machines.</p> <p><i>Communication Skills and Political Education</i> are also taught throughout the course.</p> <p>On successfully completing the course, students will be able to write shorthand at not less than 80 words per minute and will be able to type at a minimum speed of 45 words per minute.</p>
Employment Opportunities:	The services of a competent shorthand-typist are needed in offices throughout the country. If she can demonstrate her efficiency, reliability and discretion, then she is launching herself on a worthwhile career which can lead to the responsible position of Personal Secretary. Promotion can be rapid for the girl who is ambitious and keen and she will have security, conditions of services, and a salary which will compare favourably with those of any other skilled post in Zambia.

Personal Secretary

- Programme:** PERSONAL SECRETARY.
- Duration:** 6 months.
- Credential:** Certificate.
- Location:** Evelyn Hone College of Applied Arts and Commerce, Lusaka;
Kasiya Secretarial College, Pemba.
- Entry Requirements:** The Department's Shorthand-Typewriting Certificate or other recognised Certificates for Shorthand and Typewriting speeds of 80/40 words per minute, employer's recommendation, a minimum of one year's office experience and an aptitude test.
- Programme Content:** *Shorthand-typewriting.*
Developing accuracy and speed in transcription, taking shorthand notes and composing replies, direct dictation on to typewriter, drafting memoranda, letters, notices and advertisements, and replying to invitations, specialised typewriting.
- Secretarial Duties.*
Personal and professional qualities, organisation of work, filing, including classified material, simple book-keeping, insurance, travel arrangements, protocol, telephone usage, reception duties, meetings and committee procedure, Personal Secretary projects.
- Communication Skills are also taught throughout the course.
- Employment Opportunities:** On successfully completing the course, students will be able to write shorthand at 100 words per minute, and type at a minimum speed of 50 words per minute. Personal Secretaries learn mainly from experience on-the-job and continue to learn, but it is essential that they should start with a basic knowledge of the work involved. Ministers, Permanent Secretaries, General Managers and other high-ranking officials greatly depend on their Personal Secretaries to relieve them of many of their routine duties. Personal Secretaries who possess the business and personal attributes required to run an office smoothly and efficiently on their own initiative are rare – they are, therefore, much in demand and can earn a high salary.

FURTHER EDUCATION EXAMINATION BOARD: GUIDELINES FOR THE SUBMISSION OF PROGRAMMES AND COURSES. APRIL 1986**INTRODUCTION**

Being conscious of the rapid rate of advance in engineering, science and commercial practices, the Board does not wish to be too prescriptive in specifying detailed course content. However, it is the policy of the Board to standardize course formats. To assist committees in devising their courses, a recommended set of guidelines describing essential components of a submission document are listed in the following text.

Note:

Committees are requested to set out the preface to the curriculum content in the following order:

1 Title and Level of Award

The title and level of the award document need to be clearly specified. Subjects to be included on the final document should also be shown.

2 External Consultation

When designing new courses, committees should consult closely with industry or commerce and adopt course material which contributes to the particular knowledge and skills required. Details of these consultations should be included in the submission document.

3 Aims and Objectives

The general aims of the programme or course should be clearly stated; general and specific objectives should be an integral part of syllabus detail. Aims are considered to be more appropriate for describing the outcomes of Programmes, Courses and Subjects. The term Objectives should be used to describe the learning outcome of the more detailed Units and Topics.

4 Programme Structure

When a programme or course involves more than one year of study a 'flow chart' should be constructed and enclosed with the submission document. This will assist FEEB and those colleges implementing the programme to appreciate more clearly the planned sequence of events. If the course being submitted has links with other courses, these relationships should be clearly shown on the flow chart.

5. Admission Requirements

The minimum entry qualification should be included in the submission documents. The main criteria for setting the level of entry should be the potential success of the student, taking into account the curriculum content.

6 Mode of Study

The pattern of college attendance should be stated: full-time, part-time, block release. The amount of time required to complete the course should be included along with the proportion of time allocated to practical work, lectures, projects, industrial attachment, etc.

7 Assessment

Whilst flexibility will be given to committees to devise assessment methods appropriate to a programme or course, it is important that there should be a broadly comparable approach to assessment. This will ensure that consistency of standards is maintained throughout FEEB courses.

Committees should clearly state their proposed assessment arrangements:

- i) arrangements for the awarding of Pass, Credit and Distinction grades
- ii) the overall assessment scheme should reflect the objectives of the curriculum content and the main emphasis of the course
- iii) each subject to be assessed should be allocated a distinct title reflecting subject content
- iv) method of assessment should be clearly shown:
 - a) written examination
 - b) practical examination
 - c) in-course assessment
 - d) project work

If a combination of the above methods of assessment are to be used to determine the student's achievement, the respective weightings should be clearly shown.

8 Re-testing

A clear statement needs to be given on the policy colleges should adopt if students' marks are below the agreed 'Pass' criterion.

9 Coding

Once a course has been accepted by FEEB it will be allocated an appropriate code number. This number will clearly indicate which FEEB Coordinating Committee has responsibility for the course. However, for the purpose of uniformity in both course documents and examination papers, further syllabus coding is required.

10 Resources

Committees submitting new or modified courses for approval should provide information about:

- i) staff required to teach the proposed course, numbers, qualifications and experience
- ii) institutions at which the proposed programme or course will be offered
- iii) additional buildings and major pieces of equipment
- iv) indication of recurrent requirements.

11 Recognition of Award

Information should be given as to which professional institution, society, industrial committee or statutory body will accept the proposed award as meeting their particular academic requirements.

12 Text Books

When a programme or course requires students to use certain text books, a list of recommended books should be included in the curriculum document.

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