

**THE ROLE OF TECHNICAL EDUCATION IN COMMUNITY UPLIFTMENT IN
ZIMBABWE: A HISTORICAL PERSPECTIVE AND EVALUATION**

by

ARMITAGE BEVELEY MAKOTOSE

**submitted in fulfilment of the requirements for
the degree of**

MASTER OF EDUCATION

in the subject

HISTORY OF EDUCATION

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: DR S. SCHOEMAN

JUNE 2001

DECLARATION

I declare that **THE ROLE OF TECHNICAL EDUCATION IN COMMUNITY UPLIFTMENT IN ZIMBABWE : A HISTORICAL PERSPECTIVE AND EVALUATION** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

SIGNATURE

DATE

ARMITAGE BEVELEY MAKOTOSE*

*The candidate submits this dissertation posthumously.

ACKNOWLEDGEMENTS

The author is greatly indebted to a number of people and special gratitude is extended to the following:

Dr S. Schoeman, my supervisor, without whose constructive guidance, support and patience this dissertation would not have been completed.

Mr J. Chitauro, the then Permanent Secretary for Higher Education and Technology, for granting me permission to visit and carry out research in technical institutions in Zimbabwe.

Rev M. Beukes for translating vital information from Afrikaans to English for me.

Mr T.C. Gwarinda for being a constant source of inspiration in our long, arduous and yet sweet journey in academia together.

Mr J.C. Bwerazuva for fruitful dialogues and correspondence we had on technical education in Zimbabwe and Germany.

Mrs A. Gomo and Mr C. Mbiriyamveka for patiently typing the manuscript over and above their own workloads.

Members of my family for supporting and spurring me on through their obvious interest in my progress during periods of joy and frustration.

Finally, God the creator of all phenomena which exist in time and space, and the provider of strength.

SUMMARY

In this dissertation, research was undertaken to trace the development of technical education in Zimbabwe and evaluate its role in community upliftment.

The colonial era (1890-1979) and the post-colonial era (1980-2000) were examined in this connection. This involved, *inter alia*, analysing findings and recommendations of commissions of inquiry, and provisions of national development plans. Empirical analysis of the status and role of technical education in community upliftment was also undertaken.

Finally, on the basis of the historical data, findings and conclusions regarding the history of technical education, as well as its role in community upliftment in Zimbabwe were made. As a way forward, some recommendations were made which would, if implemented, enhance the role of technical education in the individual's attainment of meaningful adulthood and improvement of society's quality of life.

KEY TERMS:

technical education; community upliftment; technical institutions; Zimbabwe; colonial manpower training policy; post-colonial technical education policy; commissions of inquiry; apprenticeship training system; empirical analysis; status of technical education.

LIST OF TABLES

		Page
I	Apprenticeships registered each year (1961-1976)	34
II	Salisbury Polytechnic: Student Enrolment (1962-1977)	76
III	Bulawayo Technical College: Student Enrolment (1962-1977)	81
IV	Subjects and allocation of 40 minute periods	85
V	Student Enrolment at institutes for further education (1964-1976)	89
VI	Enrolment of students at technical institutions (1981-1994)	137
VII	Gender participation in engineering and science areas in technical institutions (1990-1993)	138
VIII	Gender participation in business and secretarial studies in technical institutions (1990-1993)	139
IX	College (technical institution) enrolment of apprentices (1990-1993)	140
X	Principals' views on the status accorded to technical colleges and polytechnics vis-a-vis other institutions of higher learning by members of the public	158
XI	Principals' views on whether or not their equipment matches equipment in industry	159
XII	Heads of Department's views on the status of technical colleges and polytechnics vis-a-vis other institutions of higher learning	160
XIII	Heads of Departments' responses on local and expatriate lecturers in selected technical college and polytechnic departments for 1995	161
XIV	Heads of Departments' responses on teaching qualifications of lecturing staff in selected departments at technical colleges and polytechnics for 1995	161

XV	National Diploma students' responses on whether or not coming to the technical college or polytechnic was their first choice	162
XVI	National Diploma students' responses on the status of technical colleges and polytechnics <i>vis-a-vis</i> other institutions of higher learning	163
XVII	Responses of members of the public on whether or not they have sound knowledge of what goes on at technical colleges and polytechnics	164
XVIII	Responses of members of the public on the status of technical colleges and polytechnics <i>vis-a-vis</i> other institutions of higher learning	165
XIX	Responses by industrialists or employers indicating whether or not they have ever employed institutional graduates from technical colleges or polytechnics	166
XX	Responses by industrialists or employers indicating who they would prefer to the other between an apprenticeship trained and institutional trained graduate	167
XXI	Views of industrialists or employers on whether City and Guilds of London Institute qualifications are stronger than local Zimbabwean qualifications	168
XXII	Responses by principals on the nature of comments from commerce and industry on the quality of graduates from technical institutions	170
XXIII	Responses by principals on the approximate percentage of applicants who were able to enrol at technical institutions for 1995	171

XXIV	Responses by principals indicating whether or not they agree with the claim that graduates from technical colleges and polytechnics have difficulties in securing employment	172
XXV	Responses by principals on the approximate percentage of graduates from technical institutions who secure employment in the chosen field within one year of graduation	173
XXVI	Principals' views on the nature of current training offered at technical institutions	174
XXVII	Principals' responses on whether or not future training at technical institutions should be geared at making graduates more of job creators than job seekers	174
XXVIII	Principals' views on whether or not the course Principles of Business Management should be incorporated in all programmes offered at technical institutions	175
XXIX	Principals' responses on whether the course Principles of Business Management should be examinable or non-examinable	176
XXX	Principals' responses on whether or not they hold open days for members of the public to familiarise themselves with what goes on at technical colleges and polytechnics	177
XXXI	Responses by heads of department indicating whether or not they agree with the claim that graduates from technical colleges and polytechnics have difficulties in securing employment	180
XXXII	Heads of departments' views on current training offered at technical institutions	181

XXXIII	Views of heads of departments on the effect training has had in development selected qualities in graduates from their department	182
XXXIV	Responses given by heads of departments on the nature of comments from commerce and industry on the quality of their graduates	183
XXXV	Responses given by heads of departments on whether or not the course Principles of Business Management should be incorporated in all programmes offered at technical institutions	185
XXXVI	Responses of heads of departments on whether or not Principles of Business Management should be examinable	186
XXXVII	Responses given by National Diploma students indicating whether or not graduates from technical colleges and polytechnics have difficulties in securing employment	189
XXXVIII	Views of National Diploma students on whether current training at technical institutions makes graduates job seekers not job creators	190
XXXIX	National Diploma students' rating of the effect which training has had in developing selected qualities in them	191
XL	Views of National Diploma students on whether or not the course Principles of Business Management should be incorporated in all programmes offered at technical institutions	192
XLI	National Diploma students on whether Principles of Business Management should be examinable or non-examinable	193

XLII	Responses by members of the public on whether or not technical institutions were contributing to the quality of life of the people	196
XLIII	Views of industrialists or employers on the extent to which graduates from technical institutions demonstrate selected competencies	200

TABLE OF CONTENTS

	Page
TITLE PAGE	i
DECLARATION	ii
ACKNOWLEDGEMENTS	iii
SUMMARY	iv
LIST OF TABLES	v

CHAPTER 1

INTRODUCTION

1.	Introduction	1
2.	Formulation of the problem, motivation for and purpose of research	3
	2.1 Formulation of the problem	3
	2.2 Motivation for the research	4
	2.3 Purpose of the research	7
3.	Methodological account	8
	3.1 Approaches	8
	3.2 Method of research	9
4.	Demarcation of the field of research	14
5.	Clarification of relevant concepts	14
	5.1 Higher Education	14
	5.2 Technical Colleges and Polytechnics	15
	5.3 Education and training	16
	5.4 Technical-vocational education	17
	5.5 Andragogic accompaniment	18

5.6	Modes of life	19
5.7	Aim of education	19
5.8	Community upliftment	20
6.	Further course of study	21

CHAPTER 2

AN OUTLINE OF THE DEVELOPMENT OF TECHNICAL EDUCATION IN ZIMBABWE (formerly Rhodesia) DURING THE COLONIAL ERA (1890-1979)

1.	Introduction	23
2.	Development of technical education during the colonial era (1890-1979)	30
2.1	An overview of apprenticeship training	30
2.1.1	Views and attitudes	30
2.1.2	Apprenticeship enrolments	33
2.1.3	Organisation of training	35
2.2	Colonial manpower training policy	37
2.3	Commissions of inquiry: towards a "viable" educational dispensation	39
2.3.1	The Phelps-Stokes Commission, 1924	39
2.3.1.1	Findings	39
2.3.1.2	Recommendations	41
2.3.2	The Kerr Commission, 1951	42
2.3.2.1	Findings	44
2.3.2.2	Recommendations	49
2.3.3	The Judges Commission, 1962	52
2.3.3.1	Findings	52

2.3.3.2	Recommendations	56
2.3.4	The Cameroon Commission, 1974	58
2.3.4.1	Findings	59
2.3.4.2	Recommendations	61
2.4	Missionary efforts in the provision of technical-vocational education	62
2.4.1	Ministerial Directives on the provision of technical-vocational education by mission schools	62
2.4.2	Some mission centres involved in technical-vocational education programmes	63
2.5	Establishment of early institutions for industrial and agricultural education	64
2.6	Establishment of the Luveve Technical Teacher Training College	70
2.7	Founding of the Salisbury Polytechnic, 1919	73
2.7.1	Factors leading to its establishment	74
2.7.2	Entry qualifications and courses offered	75
2.7.3	Enrolment	76
2.7.4	Staffing	77
2.7.5	Examinations and Certification	77
2.7.6	Problems	78
2.8	Establishment of the Bulawayo Technical College, 1923	79
2.8.1	Factors leading to its establishment	79
2.8.2	Entry qualifications and courses offered	80
2.8.3	Enrolment	81
2.8.4	Staffing	82
2.8.5	Examinations and certification	82

2.8.6	Bulawayo Technical College and its satellites	82
2.8.7	Problems	83
2.9	1966 New Education Plan	83
2.9.1	Nature of the F2 System	84
2.9.2	Curriculum	84
2.9.3	Attitudes	86
2.10	Small centres for further education	88
3.	Résumé and conclusion	90

CHAPTER 3

A SURVEY OF THE DEVELOPMENT OF TECHNICAL EDUCATION IN ZIMBABWE DURING THE POST-COLONIAL ERA (1980-2000)

1.	Introduction	92
2.	Development of technical education during the post-colonial era (1980-2000)	98
2.1	Policy on technical education	98
2.1.1	National Manpower Survey, 1981	99
2.1.1.1.	Findings	99
2.1.1.2	Some policy positions	101
2.1.2	Transitional National Development Plan, 1982/1983-1984/1985	104
2.1.3	Manpower Planning and Development Act 36 of 1984 and its provisions	106
2.1.4	First Five-Year Development Plan on Technical Education, 1986-1990	109

2.1.5	Second Five-Year Development Plan on Technical Education, 1991-1995	112
2.1.6	Rationalisation of courses and qualifications	116
2.1.7	Implications of the policy documents	120
2.2	Post-independence development of technical-vocational education	120
2.2.1	Establishment and development of technical colleges and polytechnics	120
2.2.1.1.	Establishment and mandates of individual colleges	121
2.2.1.2	Rationale behind the establishment of technical colleges and polytechnics	126
2.2.1.3	External aid	127
2.2.1.4	Administration and control of technical colleges and polytechnics	128
2.2.2	Provision of human and non-human resources	132
2.2.3	Programmes and courses	133
2.2.4	Enrolment	136
2.2.5	Staffing	141
2.2.5.1	Lecturer-training programmes	141
2.2.6	Supporting services	145
2.2.6.1	Curriculum service	145
2.2.6.2	Examination service	147
2.2.7	Problems experienced by technical institutions	147
3.	Résumé and conclusion	150

CHAPTER 4

AN EVALUATION OF THE STATUS OF TECHNICAL EDUCATION AND ITS ROLE IN
COMMUNITY UPLIFTMENT IN ZIMBABWE

1.	Introduction	152
2.	Technical education and community upliftment	153
3.	Empirical analysis of the status of technical education and its role in community upliftment	155
3.1	Empirical analysis of the status of technical colleges and polytechnics	157
3.1.1	Responses by principals	157
3.1.2	Responses by heads of departments	159
3.1.3	Responses by National Diploma students	162
3.1.4	Responses by members of the public	164
3.1.5	Responses by industrialists or employers	166
3.2	Empirical analysis of the role of technical education in community upliftment	169
3.2.1	Responses by principals	169
3.2.2	Responses by heads of departments	178
3.2.3	Responses by National Diploma students	188
3.2.4	Responses by members of the public	195
3.2.5	Responses by industrialists or employers	199
4.	Résumé and conclusion	205

CHAPTER 5

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

1.	Introduction	206
2.	Findings	207
2.1	A critical summary of the selected periods	207
2.1.1	Colonial era (1890-1979)	207
2.1.2	Post-colonial era (1980-2000)	208
2.2	Commissions of inquiry on technical education	209
2.3	Policy on technical education	213
2.3.1	Policy on technical education in the colonial era (1890-1979)	213
2.3.2	Policy on technical education in the post-colonial era (1980-2000)	215
2.4	Establishment and development of technical institutions in the colonial era (1890-1979)	217
2.4.1	Missionary efforts in the provision of technical-vocational education	217
2.4.2	Early institutions for industrial and agricultural education	218
2.4.3	Luveve Technical Teacher Training College, 1960	218
2.4.4	Salisbury Polytechnical College, 1919	219
2.4.5	Bulawayo Technical College, 1923	220
2.4.6	Small centres for further education	221
2.5	Establishment and development of technical institutions in the post-colonial era (1980-2000)	221
2.6	Status of technical education	224
2.7	Problems faced in the provision of technical education	225
2.8	Role of technical education in community upliftment	227
3.	Conclusions	229

4.	Recommendations	231
4.1	Importance of attitudinal change	232
4.2	Role of principals as change agents	233
4.3	Importance of curriculum review	233
4.4	Centrality of practical exposure	235
4.5	Importance of entrepreneurship education	235
4.6	Importance of efficient financial management	236
4.7	Importance of linkages between technical institutions and the community	237
4.8	Importance of graduate support programmes	238
4.9	Importance of institution-based research	238
4.10	Importance of regular manpower surveys	238
5.	Final remarks	240
	REFERENCES	242
	APPENDICES	253

CHAPTER 1

INTRODUCTION

1. Introduction

Man is a social being who educates, is educated and is dependent on education (*animal educandum*; Venter & Van Heerden 1989:88). In ancient times such purposive accompaniment of the not-yet-adult members of the society by adults was largely the responsibility of parents in the home. With increased complexity of society, schools came into being to impart specialised knowledge and other competencies *in loco parentis*. For incorporation and participation of adults-in-the-making in the social life with all its facets Verster, Van Heerden & Van Zyl (1982:24) point out that the school remains one of society's most important instruments for moulding and educating the child in terms of the demands of a specific cultural community.

Throughout the ages various types of schools were established for different purposes, and eventually also had to be altered to suit changing demands. For example, *inter alia*, in the past the following types of schools existed: the Ancient Israelitic *Beth ha-Sepher* (house of the Book or primary school) and *Beth ha-Midrash* (house of the Oral Law), the Spartan barrack schools for boys, the 'Platonic Academy' (in the Later Athenian period), and catechetical schools (in the Early Christian period; Verster et al 1982:4-10). In Medieval times, the guild school, for example, was established in response to the rise and prosperity of cities, and the desire by employers and employees to protect and promote common interests of their trades (Verster et al 1982:19). As a result, young apprentices were required to undergo training in a guild school, and thus lay foundations for career training.

Similarly, technical institutions have been established to satisfy the manpower requirements of modern society. The parent has become more bewildered by the demands of the highly specialised technocratic era, and educational institutions such as technical colleges, therefore, have an obligation to serve the community and make existence meaningful.

As social institutions, technical institutions have their own internal environment as teaching institutions, but this must not create the impression that they operate in isolation. They are influenced by the socio-economic and political forces operating in the society which they serve. These are part of the external environment of the technical institutions which they must respond to. In this regard, Van Schalkwyk (1988:250) maintains that "... labour expectations of industry and the trade sector of society must not be ignored in education". However, technical institutions should not become a 'slave' of commerce and industry.

As educational institutions, technical institutions should also aim at educating human beings to adulthood which entails, among other things, becoming a worthwhile human being and being prepared for life (Van Schalkwyk 1988:112). The activities at technical institutions ought to be pedagogically accountable, and should centre on the individual's eventual attainment of proper, responsible adulthood for the service of his/her community.

In the face of changing demands and circumstances, technical institutions cannot afford to remain unaltered, otherwise they may render themselves irrelevant. Their internal environment should go through renewal to cope with an ever-changing and sometimes 'hostile' external environment, such renewal could be in curricula, mandates, mode of training and increased accessibility. Against the above backdrop the formulation of the problem, motivation for and purpose of research consequently can be discussed.

2. Formulation of the problem, motivation for and purpose of research

2.1 Formulation of the problem

The problem to be investigated in this study is that of institutions of technical education threatened by redundancy in the face of a rather hostile external environment. The number of semi-utilised and unemployed technical institution graduates is escalating. Attendance at technical colleges and polytechnics now appears as if it was society's ploy to reduce potential job-seekers for the period that they are studying. This seems to negate the purpose for which these technical institutions were established.

Industrialists also assume negative attitudes towards technical college and polytechnics graduates. They do not see value in institutional technical training the same way they viewed apprenticeship training (*Chronicle (The)* 26 September 1994:1).

Focus is on both the internal and external environments of technical institutions. This study intends to search for answers in a scientifically accountable manner to the following three questions:

- What trends are noticeable in the establishment and development of technical colleges and polytechnics in Zimbabwe?
- What can be done to enhance the viability and role of technical education in community upliftment in Zimbabwe?

- What can be done so that technical education can still play a significant role in community upliftment in Zimbabwe?

2.2 Motivation for the research

A few problems and points of interest have been noted in situations where education with a technical-vocational bias is provided.

It has been observed that pupils and teachers at F2 secondary schools¹ and those at bi-lateral secondary schools² whose curriculum had a vocational bias were made to feel inferior to those pursuing purely academic courses. Turning to technical colleges, there seems to be general public ignorance about what exactly happens in the institutions, and most employers, as revealed earlier, seem to have negative attitudes towards the products of technical institutions.

Apart from the foregoing, the continuing global debate on the limitations, relevance, desirability and promise of technical-vocational education has been found intriguing. A few arguments in this debate will now be highlighted.

Okwuanaso (1984:16) asserts that no nation has been developed by an army of clerks and administrators but by an army of skilled technicians, engineers and scientists. These are products of technical-vocational education and as one African educator puts it: "... emphasis on technical education can assure African reconstruction, rebirth, development..." (Okwuanaso

¹F2 secondary schools were elementary vocational schools for Africans during the period, 1967-1982, and were abolished soon after independence. They were not favourably accepted by the people since they had limited academic orientation.

²Bi-lateral secondary schools were schools where F1 (academic secondary schools) and F2 (elementary vocational secondary schools) were housed together and were mainly found in urban areas. They were intended to improve the image of the so-called F2 secondary schools.

1984:16). Expressing a similar view, Claassen (1992:110) states that technical-vocational training does advance the economic development of a country.

In this connection, the World Bank (1989:81) observes that higher education in Africa is confronted by overproduction of poor-quality graduates, high costs, growing unemployment of graduates, apparent excess of graduates in some disciplines and too few in others. Thus, it recommends the production, at an affordable and sustainable cost, of well-trained people in academic and professional disciplines applicable to diverse African work environments (World Bank 1989:81).

For Okwuanaso (1984:16) the success or failure of technical-vocational education depends on the level of affluence of the country wishing to provide this type of education to its people. He claims that capital-rich nations seem to obtain good returns from their investments in vocational-oriented education unlike the capital-poor nations who do not (Okwuanaso 1984:16). Despite this failure, technical-vocational education continues to be a popular antidote for educational planners and politicians to reduce unemployment, increase productivity, and improve the quality of life of the people.

In support of technical-vocational education, Neuman & Zideman (as quoted in Claassen 1992:110) note the positive results enjoyed in England, Wales and Israel where technical-vocational training has been properly administered. Germany is another example of a country which continues to enjoy the fruits of technical-vocational education. About the importance

attached to this type of education by the German educationists, Bwerazuva³ while in Germany had the following to say in correspondence to the researcher:

... they try to make everybody feel that technical-vocational education is the kernel of human existence and human progress. They relate their story and show how far they were trailing behind Britain, France, the U.S.A and Spain after the Second World War. They have managed, not only to close the gap between them and these other developed countries, but proudly surpassed them all except the U.S.A which is now at par with them. They attribute all this progress to their unwavering commitment and investing in technical-vocational education (Bwerazuva 1995: Correspondence).

Against this background, Zimbabwe's policy on technical-vocational education will be indicated. The Zimbabwe government has demonstrated its commitment to the provision of technical-vocational education through its massive expansionist programme of technical institutions. The *ZANU PF Election Manifesto* (1995:11-12) reports as follows:

To the two technical colleges in existence at independence, ten more were added over the past 15 years, thus increasing enrolment from 3 663 in 1979 to 23 044 in 1994.

In addition, graduate output from technical colleges has more than doubled since 1989 from a mere 2 257 to 7 178 graduates in 1993 (*Herald (The)* 23 September 1994:8).

It is also noted that at least 50 pilot schools offering technical-vocational subjects have been set up (*Daily Gazette (The)* 28 October 1994:4). Government still encourages individuals and organisations to assist in establishing more vocational and technical institutions to produce the requisite number of qualified personnel, and also to reduce unemployment (*ZANU PF Election Manifesto* 1995:11-12; *Herald, (The)* 2 June 1995:1).

³James Chizhande Bwerazuva is an eminent educationist who served as a former Principal of Mkoba Teachers' College (January 1985 - November 1988) and Gweru Technical College (December 1988 - December 1995). He then took office as the first Honourable Executive Mayor of the City of Gweru (22 December 1995 -).

The objectives are plausible, but what seems to be true is that the number of underemployed and unemployed graduates is rising, and thus they live in squalor. Economic emancipation and meaningful existence are unattainable for these graduates. The sentiments of one destitute technical college graduate bear testimony to this state of affairs:

I hold a National Advanced Craft Certificate and a Diploma in Technical and Vocational Education. I graduated in 1993 and the only form of employment I have known has been of temporary teaching for one term. I am aged 27 and am getting old ... what I need now is anything even *sweeping* to keep my sanity... patience does have a limit (*Personal interview* 6 April 1995).

Thus, the apparent contradictions inherent in Zimbabwe's provision of technical-vocational education have provided the impetus for undertaking this study. The continuing debate at various fora on the limitations and promise of technical-vocational education has also been a strong source of motivation for the research.

2.3 Purpose of the research

The purpose of this study is to establish origins and analyse trends in the establishment and development of technical colleges and polytechnics in Zimbabwe. Attention is paid to both the internal and external environments of these institutions. In the process, interconnections of economic, social, and political factors with the educational event will be established from a historical perspective.

It is also intended to evaluate the role of technical education in community upliftment in Zimbabwe. In this analysis, both strengths and shortcomings will receive fair attention.

Information gained from such a study should enable classroom practitioners, principals and other stakeholders to reflect on their practice and adopt corrective measures. This would ensure renewal in the technical institutions for instance through a dispensation of relevant technical-vocational education.

3. Methodological account

3.1 Approaches

The comprehensive nature of a study of past education requires the adoption of an appropriate approach or attitude to one's study before selecting a suitable method of research. In this study, the situation has been made more complex by the fact that the researcher is serving as a lecturer at a technical college and, while this may bring him closer to his object of study, prejudices and biases may arise.

It has thus been seen fitting to adopt multiple approaches, and the following basic approaches have been proposed for this study: phenomenological, problem-historical, thematic and metabletic. The phenomenological approach entails provisional setting aside of one's views and prejudices to allow the phenomenon under study to address the researcher freely and reveal its true essence (Venter & Van Heerden 1989:142). The problem-historical approach requires the researcher to enter into critical association with the problem being researched (Venter & Verster 1986:37). Thus, one can only uncover and gain insight into the historical education reality by asking problem-oriented questions arising from current difficulties in education (Venter & Van Heerden 1989:85). Closely related to, but not synonymous with the problem-historical approach is the thematic approach which has also been adopted for this

study. It involves focusing on a specific theme, critical examination of the past for facts related to the theme and the reproduction of these.

The metabletic approach is appropriate for its emphasis on change. It requires the researcher to show how educational theory and practice have changed in time and space (Venter & Van Heerden 1989:157-159).

It is thus necessary and appropriate to adopt multiple approaches to this study, as it affords the researcher opportunities for the following: critical association with the problem, objective uncovering and description of the essences of the phenomenon being studied, study of changes, trend analysis and basis for future prognosis.

3.2 Method of research

A research method can be described as the road by which the pedagogician carries out his scientific research and eventually discovers the truth which he uses to establish his science. The historical-educational research method (also known as the basic-scientific research method) has been found appropriate for the study. The researcher adhered to the seven basic steps of this method:

- Choice of a suitable topic

The topic, *The role of technical education in community upliftment in Zimbabwe: a historical perspective and evaluation* was chosen after careful consideration of the educational value of researching such a topic. The researcher, further, also took into

account the availability of relevant primary as well as secondary sources in pursuing such a topic.

- Preliminary study

In order to determine exactly what the topic entails; and to be in a position to interpret and evaluate the data from the educational past, the researcher set about mastering the existing knowledge pertaining to the problem.

- Hypotheses

In order to guide the research process the researcher formulated the following hypotheses (see pp.3-4):

- There are significant interconnections between the establishment and development of technical colleges and polytechnics and the social, economic and political circumstances of the colonial and post-colonial Zimbabwe.
- There has been a significant shift from an elitist to a popular dispensation in the provision of technical-vocational education at tertiary level in Zimbabwe since independence.
- The imparting of entrepreneurial skills, broadening of mandates and curricula, increased accessibility, initiation of outreach programmes, change in attitude of industrialists towards technical institutional graduates and clear formulation

of government policy on the future of these graduates, can enhance the viability and role of technical education in community upliftment.

- The proper synchronisation of training and graduate output with job market requirements can enhance the role of technical education in community upliftment.
 - The enskilled graduates can transfer learning to society for their own benefit and service to the community.
 - Technical colleges and polytechnics are not being utilised adequately to contribute significantly towards community upliftment.
- Investigation of the problem in the educational past

In order to test the validity of the hypotheses, (see pp. 10-11) the researcher engaged in the examination and study of the educational past from the point of view of the stated problem (see p.3-4). Both, primary and secondary sources, which had a direct or indirect bearing on the stated problem were consulted. But in gathering the data, the researcher has had to focus mainly on primary sources which are accounts based on eyewitnesses. Secondary sources have also been used to enrich the discussion. In this study the following primary sources, *inter alia*, were used: laws, manifestos, reports of officials, commission reports, and newspaper reports.

In addition, visits to technical colleges and polytechnics had to be made to obtain a fuller picture of the subject under study. In this regard, Good (1963:195) maintains that:

... vitality of history [of education] is enhanced not only through reading the original sources but also through visitations of place of origin of events.

To gather relevant additional information, systematic observation of the education phenomenon has been made, questionnaires have been used, and interviews conducted (see Appendices). To ensure validity and reliability of the questionnaires, they were submitted to the supervisor for assessment before they were administered. Pretesting was also done on small samples at Gweru Technical College, as well as in the Gweru vicinity. The questionnaires were then distributed to principals of colleges, students, heads of departments, employers, and members of the general public. This generated numerical facts relevant for analysis and final conclusions.

Secondary sources used, include journals, dissertations and textbooks.

- Critical evaluation of data

Data gathered ought to be subjected to critical evaluation, i.e. to two critical processes, namely:

- Elimination. The only material which has been retained is that which is educationally relevant for the problem and which can be of real educational value for the present.

- External and internal criticism. External criticism has been employed to determine the authenticity or genuineness of documents consulted in this study (Good 1963:201). Internal criticism has been used to determine the accuracy, trustworthiness or credibility of the statements within the documents (Good 1963:211; Venter & Van Heerden 1989:115).
- Interpretation of data

In interpreting the data the researcher took into account the background of time, the surroundings and the circumstances during which the events occurred. The data was also subjected to a stringent test in order to establish the validity and acceptability of the hypotheses. Only then was it possible to interpret the data so as to determine its contribution to the educational present and guidelines for the educational future.

- Writing of the research report

In the light of the historical educational data collected, the researcher in writing the report traced the development of the problem through time. The facts are ordered chronological-thematically in the subsequent chapters.

Further, the data was critically evaluated in order to gain insight into an understanding of the development of technical education in Zimbabwe and its role in community upliftment.

4. Demarcation of the field of research

In delimiting the field of research, two separate but interdependent periods have been identified, namely: the colonial era (1890-1979) and the post-colonial era (1980-2000). It is during these two periods that the researcher examines the history of state-owned technical colleges and polytechnics in Zimbabwe. Missionary efforts in the provision of technical-vocational education also receive consideration. In the process, trends in the history of technical institutions may be established. The study, however, does not focus on teachers' colleges, vocational training centres and private colleges which may be engaged in technical-vocational education.

The study also focuses on an evaluation of the role of technical education in community upliftment. Members of staff, and National Diploma (ND) students, their prospective employers and the general public, are involved in this analysis.

5. Clarification of concepts

For the sake of clarity the following concepts will be explained: higher education, technical colleges and polytechnics, education and training, technical-vocational education, andragogic accompaniment, modes of life, aim of education and community upliftment.

5.1 Higher education

The *Manpower Monitor* (1994a:5) defines *higher education* as post-secondary education. Thus, it is tertiary education. In Zimbabwe it is provided in and through such institutions as

vocational training centres, conventional teachers' colleges, agricultural colleges, technical teachers' colleges, universities, technical colleges and polytechnics. Aims of higher education are numerous but on the basis of the Robbins Report in Britain (1961), the following fundamental aims can be distinguished, and should be envisaged:

... provision of instruction in skills associated with one or other profession; the moulding of cultivated, refined people, the advancement of knowledge and scholarship and the spiritual enrichment of the community (Venter & Verster 1986:51-52).

In addition, the Robbins Report (1961) noted that any graduate would expect compensation for his or her expertise (Venter & Verster 1986:51). It can be deduced that higher education provided at the various institutions identified above, should ideally benefit both the individual and the community.

5.2 Technical Colleges and Polytechnics

According to *Webster's Third New International Dictionary* (1961:2348), the word *technical* is of Greek origin and it stems from the word *technikos* which is made up of *techné* (which means art, craft or practical skill) and *-ikos* (-ical). The word is also closely related to the Greek words *tekton* (carpenter, builder) or *taksan* (carpenter). If taken further, *taksati* means a carpenter forms or constructs. Thus, technical means having special, usually practical knowledge especially of a mechanical or scientific nature.

On the other hand, the word *college* is derived from the Latin word *collegium* which means colleague. A college is thus a society of scholars or friends of learning, incorporated for study or instruction especially in the higher branches of knowledge (*Webster's New Twentieth*

Century Dictionary of the English Language 1975:278).

In this study, technical college shall be taken to mean institutions of higher learning which focus not only on engineering disciplines but also commercial courses as specified by the Ministry of Higher Education. It shall not apply to agricultural colleges, vocational training centres and technical teachers' colleges.

The word *polytechnic*, is also of Greek origin and it stems from the word *polytechnikos* which is made up of *poly* and *techné* (many + an art; *Webster's Third New International Dictionary* 1961:1761). Thus, a polytechnic is an institution of higher learning where instruction is devoted to many technical arts or applied sciences. In Zimbabwe there are two such institutions, namely: the Harare and Bulawayo Polytechnics. They do not award degrees, but certificates and diplomas just as in the case of technical colleges which offer a narrower range of courses than the polytechnics.

In this study, the term *technical institutions* shall be used interchangeably with either technical colleges or polytechnics.

5.3 Education and training

It is not feasible to study the history of technical institutions without clarifying the concepts *education* and *training* before hand. Van Rensburg & Landman (1988:330) trace the word *education* to its Latin origins in the words *educere* and *educare* which mean lead out and nourish respectively. Training means forming or leading in a certain direction (Van Rensburg & Landman 1988:503). In this regard, Beach (1980:358) points out that training is

vocationally-oriented and usually has a more immediate utilitarian purpose. The *Manpower Monitor* (1994a:5) indicates that training has to do with:

programmes designed to prepare individuals for the world of work by providing them with knowledge, skills and attitudes pertinent to specific occupations.

For Williams (1988:81), education must relate to the individual's goal of self-actualisation, offer a diversified curriculum and abolish the antithesis between mental and physical labour. Thus, education is thought of as being broader in scope than training which lies within education (Beach 1980:358; Schofield 1972:42). It is clear that education and training are not mutually exclusive but are different in that the former involves an understanding of fundamental principles of what is under study.

5.4 Technical-vocational education

As indicated earlier on, the word *technical* means art or practical skill. The word *vocational* stems from the Latin word *vocare* which means:

... to call or a summons from God to an individual or group to undertake the obligations and perform the duties of a particular task or function in life: a divine call to a place of service to others ... (*Webster's Third New International Dictionary* 1961:2561).

Technical-vocational education encompasses diverse programmes which are designed to prepare and fit an individual for employment as skilled, responsible adults. In this study, it is taken further to mean accompaniment to facilitate self-actualisation and mandate fulfilment in the service of the community by an individual as an occupational being. According to the *Manpower Planning and Development Act, 36 of 1984 (Zimbabwe 1984:289)*, this should not

include instruction by the University of Zimbabwe.

5.5. Andragogic accompaniment

The word *andragogy* stems from the Greek words *aner* (man, adult) and *agogos* (leader or attendant) which together mean adult accompaniment (Van Rensburg & Landman 1988:286-287). In technical institutions, lecturers and trainers are examples of adults, who purposefully teach and guide students, apprentices and other adult persons by means of specialised learning content to enable the latter to become more mature, intellectually independent and socially more responsible (Fraser, Loubser & Van Rooy 1990:8-11).

This accompaniment is done with the view to enable the adult learners to join the community as vocationally competent adults, especially considering that their obligations are more inclined towards the society in general (Fraser et al 1990:16).

Smit (1989:65) insists that the sympathetic lecturer must make an effort to understand the adult learner as a total person who, among other things, is a personal, physical, cultural, intellectual and occupational being whose goals and aspirations must be translated into educationally meaningful experiences.

Thus, contrary to the view that adult students are self-directed, they need andragogically accountable accompaniment which seeks to marry theory and practice (praxis) and facilitate job proficiency and attainment of proper, responsible adulthood. This may not be negated when technical institutions succumb to pressure brought to bear by the external environment.

5.6 Modes of life

To render this study more meaningful, two fundamental modes of human life shall be highlighted. These are the working and creative modes of life. De Jager, Reeler, Oberholzer & Landman (1985:6) maintain that labour is central to and crucial for man's continued existence. From a Judeo-Christian perspective, man was banished to perpetual labour: "...cursed is the soil on your account; by toil you shall eat from it all your life" (Genesis 3 vs 17).

To transcend mere existence, man's labour must be meaningful, and should enable him to elevate his standard of life and the quality of his life (De Jager et al 1985:6).

Closely related to the working mode of life is the creative mode of life. Through purposeful and constructive creativity man is able to live off his environment and in this regard he attempts to make his life more pleasant (De Jager et al 1985:6). As a social being, man derives pleasure from using and enjoying, together with his fellowman, his creations and the effects of creating (De Jager et al 1985:7). Technical institutions should thus seek to educate and train members of society for job proficiency, appreciation of the significance of labour and creativity for community upliftment.

5.7 Aim of education

Van Rensburg & Landman (1988:330) regard adulthood as the goal of education. It is related to raising, improving, ennobling and guiding towards what ought to be (Van Rensburg & Landman 1988:330). Taken further, it entails, *inter alia*, self-knowledge and meaningful

existence. For Jordaan (1988:76), proper being-an-adult is synonymous with proper humanness. The education-aim-essence structure comprises, *inter alia*, the following interwoven essences which must all receive attention in education: religiousness; ethical (norm-image); bodiliness; affectiveness; rationality; freedom and authority; language; economical; nationality; individuality; and sociality (Jordaan 1988:76). It is further argued that man is adult only when his/her existence provides a meaningful reply to the questions set by life (Jordaan 1988:83). Therefore, technical institutions have an obligation to society to educate and enable its members to face the challenges of the technological concerns of contemporary society. This will lead to community upliftment and meaningful existence.

5.8 Community upliftment

The word *community* is derived from the Latin word *communitas* which could be taken to mean "... a social body; body of people living in the same locality ... or the public ..." (Sykes 1976:204). For Kuper & Kuper (1985:136) a community is a microcosm of society or a social system with basic functions to be met. It is implied that if these basic functions are performed the society could experience well-being.

Upliftment implies elevation or being brought to a higher *niveau* or level. Thus, community upliftment implies, *inter alia*, improved socio-economic life of the people.

As *community upliftment* is an omnibus concept which encompasses anything that has to do with standard of living, it is thus difficult to measure it with scientific precision. The problem is further complicated by the fact that there are different indices of community upliftment. Furthermore, what may constitute community upliftment for one may be retrogression for

another. Gilmurray, Riddell & Sanders (1979:14-15) provide the following social indicators of standard of living: standard of housing, income levels, health, telephone service and mode of transport. These are applicable to the Zimbabwean situation to a considerable extent.

In an attempt to determine the role of technical education in community upliftment in Zimbabwe, this study seeks to establish the extent to which technical institutions fulfil the following: accessibility to applicants; impact of education and training, both quantitatively and qualitatively; setting up of projects and programmes for upliftment of community life; production and provision of goods and services to the community by enskilled graduates; and the improvement of the quality of life of the graduates and their families.

6. Further course of study

The rest of the study will deal with the theme as follows:

- Chapter 2 will examine the development of technical education in Zimbabwe (formerly Rhodesia) during the colonial era (1890-1979). In this connection, among other things, findings and recommendations of selected commissions of inquiry, missionary efforts and the founding of the Salisbury Polytechnic and the Bulawayo Technical College will be highlighted.
- Chapter 3 will focus on the development of technical education in Zimbabwe during the post-colonial era (1980-1999). Among other issues, the Manpower Survey of 1981, the policy on technical education as well as the post-independence development of technical institutions will be discussed.

- Chapter 4 evaluates the role of technical education in community upliftment in Zimbabwe.
- In the final chapter findings, conclusions and recommendations are made.

CHAPTER 2

**AN OUTLINE OF THE DEVELOPMENT OF TECHNICAL EDUCATION IN ZIMBABWE
(formerly Rhodesia)⁴ DURING THE COLONIAL ERA (1890-1979)****1. Introduction**

An education system is inexorably bound to its milieu and, similarly, technical institutions which are part of the system do not develop *in vacuo*, but are in a mutually dialogical relationship with factors and forces which shape them. Thus, when regarding the theme of this Chapter, it is necessary to briefly reflect and focus on some factors and aspects which have influenced the colonial education system in Zimbabwe, namely, colonisation, ideological elements, demographic position, political situation and socio-economic conditions.

• Colonisation

While missionary activities preceded formal colonisation of Zimbabwe, the incorporation of the British South Africa Company (BSAC) under Royal Charter, and its subsequent occupation of this country has greater relevance to the establishment of Zimbabwe's education system. Most sources note the unusual nature of Zimbabwe's colonisation. The occupation of Zimbabwe was organised by Cecil John Rhodes, a businessman, who persuaded the British

⁴This landlocked country measuring approximately 390 759 sq km has been known by the following names: Zambezi (1886), Charterland (for a short period); Southern Rhodesia (1890 to 1965, and legally until 1980), Rhodesia (used by the regime during the Unilateral Declaration of Independence (UDI) period 1965 to 1979); Zimbabwe Rhodesia (used after the Internal Settlement in 1979) and Zimbabwe (the latter is the name of the independent state following the March 1980 elections (*Official Year Book of the Colony of Southern Rhodesia No. 2* 1930:1; Stoneman 1981:viii; *Statistical Yearbook of Zimbabwe* 1987:11)). These names are used interchangeably in this study as circumstances dictate.

government to grant a Royal Charter to his BSAC entitling it to govern and administer the territory (International Defence and Aid Fund for Southern Africa 1977:5). Logically, Rhodes was desirous of maintaining links with his home country, Britain (*Official Year Book of the Colony of Southern Rhodesia No.2* 1930:3).

As Challiss (1980:vi) puts it:

... the ... system of schools in the territory generally reflected the notions of British Empire loyalty and adherence to British educational traditions.

- **Ideological elements**

Of importance, too, was the way immigrants conceived of themselves and the ideological stance which they took. Most authors observe that they portrayed themselves as superior in every respect and were thus fulfilling a divinely-inspired mission as purveyors of civilisation (Frantz *in* Farquhar 1960:53; Chung & Ngara 1985:45). This notion of racial supremacy is expressed by Cecil John Rhodes as follows:

I contend that we are the finest race in the world, and that the more of the world we inhabit the better it is for the human race. Just fancy those parts that are at present inhabited by the most despicable specimens of human beings. What alteration there would be in them if they were brought under Anglo-Saxon rule (Atkinson 1972:5).

This self-conception by the colonialists would have serious implications for life in its entirety in the colony. For example, indigenous people were regarded as an inferior race, while white races were to maintain their distance ahead of the rest, and would require better preparation for the burdens and responsibilities of life (Challiss 1980:27, 47; Frantz *in* Farquhar 1960:54; Jackson 1986:8).

On the other hand, self-depreciation becomes notable in the colonised. As Freire (1972:38) puts it:

So often do they hear that they are good for nothing, know nothing and are incapable of learning anything - that they are sick, lazy, and unproductive - that in the end they become convinced of their own unfitness

- **Demographic position**

As a result, partly of colonisation of and immigration into Zimbabwe, the population gradually became multi-racial as shown by the presence of European, African, Coloured and Asian people.⁵ From the time of colonisation of Zimbabwe, Europeans have been outnumbered by Africans. According to Stoneman (1978:5), the peak of European population in Zimbabwe of 5,7 percent was reached in 1960. This dropped to 3,98 percent in 1977 and 0,80 percent of the total population in 1992 (Stoneman 1978:5; *Zimbabwe* 1992b:19). Sources reveal that the African population in this country has largely constituted 95 percent of the total population since 1969, with 98,77 percent being recorded in the 1992 National Census (Parker *in*: Rose 1970:235; Murphree et al 1975:25; *Zimbabwe National Report: Census* 1992:19). During the same period, Asians constituted 0,2 percent in 1969 and 0,13 in 1992, and Coloureds have remained around 0,30 percent of the total population of this country.

It may be argued that these numerical disparities certainly influenced policy formulation and provision of education in Southern Rhodesia (now Zimbabwe). For example, Challiss

⁵The term *European* is used to describe persons of white or caucasian descent regardless of their continent of origin; African is used to describe the black negroid people whether indigenous or migrant; Coloured designates a person of mixed racial origin (Afro-European or Afro-Asian); and Asian in used to describe people of Indian or South-East Asian origin (Murphree, Dorsey, Cheater & Mathobi: 1975:10).

(1980:vi) points out that European settlers in Southern Rhodesia were influenced by fears of African competition and these prompted them to set great store by the provision of adequate education for their children.

- **Political Situation**

According to Frantz (*in* Farquhar 1960:53), to establish political ascendancy, European settlers ignored the indigenous inhabitants as much as possible. This was in keeping with the ideology of white supremacy alluded to earlier on (see p. 24). From the beginning of European rule in 1890 the African was prevented from participating in the political process (Murphree et al 1975:34).

The British South Africa Company (BSAC) continued to administer the colony until 1923, when the British government granted the settlers what was described as responsible self-government (Parker *in* Rose 1970:236; International Defence & Aid Fund for Southern Africa 1977:6). Although Britain retained veto power over legislation affecting Africans, she never used that power and the white settler government was left very much to its own devices (Parker *in* Rose 1970:236). As the settlers were left to function with little external restraint, consequently African rights and interests became largely unprotected (Zvobgo 1994:9).

The white settler governments systematically discriminated against and excluded the African people from the political process, though a measure of 'tokenism'⁶ would be noted in later

⁶Tokenism involves placing a few token men and women in policy making bodies and implementing agencies to 'please' the disadvantaged and the international community. Their impact would, in most cases, be insignificant.

years (*Rhodesia* 1970b. :1533). Separate agencies were created to handle all aspects of life of each race. In this regard, unequal treatment of races was noted, for example, in 1925 the Native Affairs Department Annual Report made the government's philosophy quite explicit:

The objects of our native policy (are to ensure) the development of the native in such a way that they will come as little as possible into conflict or competition with the white man socially, economically or politically (Riddell 1980:9).

Guided by the same ideology, one legislator aptly summarised the stance of the Southern Rhodesian legislative assembly in 1927:

We do not intend to hand over this country to the native population or to admit them to the same society or political position as we occupy ourselves... . We should make no pretence of educating them in exactly the same way as we do the European (Loney 1976:67).

This unequal treatment of races would be pursued and consolidated by subsequent white settler governments. The spotlight tends to fall on Ian Douglas Smith whose Rhodesia Front government ushered in a new era through its Unilateral Declaration of Independence (UDI) from Britain on 11 November 1965. Relations between Africans and Europeans did not improve even though the Declaration of Rights in Constitution No. 54 stated that every person in Rhodesia should enjoy fundamental rights and freedoms of the individual (*Rhodesia* 1970c:450). Contrary to this provision, it could be argued that racial discrimination was subtly legitimised by paragraph 10(2) of the same document which states, in part:

... a law shall not be construed to discriminate unjustly to the extent that it permits different treatment of persons or communities if such treatment is fair ... by making due allowance for economic, social or cultural differences between them (*Rhodesia* 1970c:460).

- **Socio-economic situation**

The discussion thus far has revealed the inseparability of the political situation from the socio-economic situation of the colonial state. As Tandon (1984:2-3) puts it:

The colonial laws, the colonial ideology, the colonial education system, ... the colonial system for the provision of social services, ... were all ... a mutually self-reinforcing system.

The consequences of this system were noticeable in the differential levels of affluence and poverty between the Europeans and Africans at independence. In this regard, Gilmurray, Riddell & Sanders (1979:14-15) point out that at independence the European population enjoyed a standard of living similar to that of the higher social classes of the industrialised world. In contrast with the affluence of the European population, Gilmurray et al (1975:15) note that during the same period the majority of the African population lived in severe poverty.

Although during and after the Second World War (1939-1945) Southern Rhodesia experienced an economic boom which brought an increased demand for Africans in formal employment, their incomes per capita could not match those in the European sector (Murphree et al 1975:38; Riddell 1980:10; Gwarinda 1985:101). The reason was simply that the vast majority of African workers performed unskilled or semi-skilled manual jobs at very low rates of pay (International Defence & Aid Fund for Southern Africa 1977:12).

Of significance to this study, is the fact that education was seriously implicated in these disparities. As Chidzero (as quoted Riddell 1980:5) stresses: "... inequality is the very

foundation of the Rhodesian society, underpinned and sustained by the education system". A racially segregated education system evolved from the inception of colonial rule and was consolidated by subsequent settler governments. For example, in 1970 the then Minister of Education stated:

So our first priority in our education policy is to provide a system of education for Europeans, Asians and Coloureds which is as good as, or better than, can be obtained elsewhere (Riddell 1980:8-9).

On the other hand, for the majority of African children, the education system acted as a screening mechanism geared at producing a very small number of well-qualified people to work mostly in clerical-type jobs (Kadhani & Riddell *in* Stoneman 1981:59,70). Thus, while Europeans enjoyed monopoly of skills, technical training, expertise and undisputed economic dominance, most Africans failed to escape poverty and remained in their disadvantaged position (International Defence & Aid Fund for Southern Africa 1977:12,22; Brand *in* Stoneman 1981:50).

Against the above introductory remarks, the development of technical education during the colonial era (1890-1979) will be discussed.

2. Development of technical education during the colonial era (1890-1979)

2.1 An overview of apprenticeship training⁷

As the focus in this section is on apprenticeship training, the influence of the guiding ideology, political and socio-economic situation of the colonial era must be borne in mind.

2.1.1 Views and attitudes

According to Challiss (1980:48), in 1928 one legislator pointed out that the survival of European youth would largely depend on the educational advantages and training afforded to them. There is evidence that this stance was maintained in subsequent years. For example, after apprenticeship training had been introduced in 1934, one legislator advised: "Educate the natives by all means, ... but don't teach them trades. What position would our sons have to face at this rate?" (Moyana 1988:37).

It is also interesting to note that the apprenticeship training system was very much concerned with, "... enabling the not-so-intelligent white youth to survive in Rhodesian society" (Mothobi 1978:60). In this regard, a senior labour official is said to have admitted that any white, of whatever calibre, could get an apprenticeship (Mothobi 1978:60). Under this system of 'selection', even the intelligent native was disadvantaged. This position was clearly stated in 1951 by the Chairman of a Parliamentary Select Committee to the House:

⁷Apprenticeship training is a system of training or way of developing skilled crafts persons or artisans, mainly on the job. It is a descendant of the medieval craft guild system. With the old system, an apprentice was likely to be denied vital knowledge, pick up one's master's mistakes, outdated methods and ideas. For this reason, this practice has been ridiculed by the description : 'sitting next to Nellie' (Mothobi 1978:47; Beach 1980:375; Van Dyk, nel & Loedolff 1992:432).

... by technical education we must ensure that even the very lowest strata of European labour shall not be passed by the intelligent native up the industrial ladder while the European labourer is coming down (Mothobi 1978:60).

Views and attitudes pertaining to apprenticeship training can be fully understood through a close examination of the ideas of the Adviser on Technical Education to the Federal and Southern Rhodesia governments, Mr F. Bray. In his opinion, the promulgation of the new *Southern Rhodesian Apprenticeship Act of 1959* which came into force on 1 January 1960 was a plausible idea (Bray 1960:8). While this piece of industrial legislation was non-racial in scope, Bray is quick to point out: "It is one task, ... to pass an Act of Parliament; it is quite another to implement it"(Bray 1960:8). In his analysis, Bray identifies possible hurdles in training Africans. One such hurdle being the general assumption that, "... the African cannot be expected to acquire European standards"(Bray 1960:8).

Bray (1960:8) proceeds to define European standards as follows:

By European standards, we mean not only technical efficiency and adaptability at acquiring new techniques as they appear but, above all, qualities of character, such as integrity and a high sense of responsibility.

He, however, acknowledges the fact that if the African were provided with training, using his tradition for certain hand crafts as a foundation, he could become as technically efficient as the European. To become adaptable, he would need to acquire, "... knowledge of the scientific processes underlying his craft" (Bray 1960:8). Bray (1960:8) concludes that the African "... needs technical education ... (which:ABM) is impossible ... to pursue ... without a sound foundation of secondary education".

Since, in Bray's view, integrity and a sense of responsibility are qualities which spring largely from environment, it would be proper to improve the impoverished home background of the African by educating "... African women to the fullest extent possible" (Bray 1960:8). While urging the authorities to accelerate the educational advancement of the African and improve the quality of his education, Bray (1960:8) warns:

This calls for considerable investment - more than we can afford unless we mortgage the future and borrow for our manpower as we must borrow for industrial development.

In view of these ideas, Bray (1960:8) concludes that the number of Africans suitable for apprenticeship is likely to be small and "... it is also unlikely that there will be an immediate demand for African apprentices by European industry ... and the African has (to be:ABM) full trained elsewhere"(Bray 1960:8).

Fifteen years later, (1975) Murphree and his associates carried out a study which revealed the unwillingness of European employers and European workers to train Africans because they found them unsuitable. Among other attitudes, interviewees revealed the following:

... because of his background the white boy is accustomed to using tools, assisting his father, ... whereas the African has been limited to spanning oxen or making *jukskeis*;

Africans ... do repetitive work very well because they are used to routine. The difficulty arises when you change the routine because they cannot adapt; and routine jobs for Africans are fine, they are quite happy with them; they switch off mentally but carry on physically whereas Europeans get quite bored (Murphree et al 1975:270-271).

This has led some authors to point out that despite the overwhelming support for and interest in technical training among African workers, white employers and white workers together

have formed a powerful stumbling block to African advancement (Gasson 1963:29, International Defence & Aid Fund for Southern Africa 1977:15; Mothobi 1978:16,22).

2.1.2 Apprenticeship enrolments

According to the International Defence & Aid Fund for Southern Africa (1977:15), the *Southern Rhodesian Apprenticeship Act of 1959* allowed African apprenticeship for the first time, but the numbers involved were very small. In 1969, the then Minister of Labour and Social Welfare presented information on numbers and trades of Africans apprenticed by the government departments concerned, in terms of existing legislation, as follows:

1960	2 carpenters and 1 bricklayer
1961	1 plumber
1962	1 motor mechanic
1967	1 electrician (<i>Rhodesia</i> 1969a:1382).

Although numbers of African apprentices whose contracts of apprenticeship registered in terms of existing legislation were small, minor breakthroughs were made in the building industry where worker unions had been unable to resist job fragmentation (Stoneman 1978:14). Stoneman (1978:13-14) points out that:

... figures published up to 1969 show the numbers of blacks registered to be derisory, probably because of the unwillingness of existing skilled workers (almost exclusively white) to allow blacks to be apprenticed, and the refusal of employers to risk antagonising their skilled workers by insisting.

Table I (See p. 34) shows apprenticeships registered each year between 1961 and 1976.

TABLE I

Apprenticeships registered each year (1961-1976)

Year	No. of apprentices	No. of blacks	Percentage of blacks
1961	308	n/a	-
1962	436	10	2.3
1963	371	9	2.4
1964	378	8	2.1
1965	445	7	1.6
1966	378	9	2.3
1967	396	5	1.3
1968	498	17	3.4
1969	531	49	9.2
1970	600	n/a	-
1971	751	n/a	-
1972	807	n/a	-
1973	798	n/a	-
1974	800	100	11.4
1975	1 211	219	18.1
1976	964	143	14.8

Source: Stoneman, C. 1978. *Skilled Labour and future needs*
Gwelo : Mambo Press.

Note : n/a = not available.

From Table I it is evident that an average of 154 blacks gained apprenticeships each year from 1974 to 1976 as compared to almost 865 for the other groups (mainly whites) during the same period. A marked increase in the number of black apprentices is seen compared to the earlier period (1961 to 1969).

2.1.3 Organisation of training

Apprenticeship training was organised and provided in terms of the *Industrial Conciliation Act of 1934*, the *Southern Rhodesian Apprenticeship Act of 1959* and the *Apprenticeship Training and Skilled Manpower Development Act of 1968*. The *Southern Rhodesian Apprenticeship Act of 1959* was designed "to regularise the training and employment of apprentices and minors in certain trades and provide for matters incidental thereto" (Mothobi 1978:19). Whereas, among other things, the *Apprenticeship Training and Skilled Manpower Development Act of 1968* established a Training Fund and the Apprenticeship Training and Skilled Manpower Development Authority (*Rhodesia* 1968b:5, 15). Functions of the latter, among others, were to evaluate the impact of technological and other changes on the use of skilled manpower and establish techniques and methods to meet such impact and changes; assess the future skilled manpower needs of industry in the light of economic and technological developments; prescribe practical and theoretical subjects for apprentice testing; and make recommendations to the Minister in regard to the levy to be imposed on employers, and courses and standards of apprenticeship training (*Rhodesia* 1968b:5, 14).

According to Gasson (1963:28), apprenticeship committees also made vital contributions towards the organisation of apprenticeship training. The above consisted of representatives of employers and employees, together with experts in education and apprenticeship matters. Some committees attempted to be non-racial but with little success.

Insight into the organisation of apprenticeship training in Rhodesia can also be gained through reflection on the observations and recommendations made in a report on the facilities for

technical education in the Federation of Rhodesia and Nyasaland. The Report of Survey of Facilities for Technical Education in the Federation (Federation of Rhodesia and Nyasaland 1957-1959:5) reveals that apprenticeship of the European in the Federation followed to a large extent the pattern of the United Kingdom in that the employer was responsible for training the young learner while the government (except in a few cases) was responsible for his or her technical education. The Report recognises the desirability of an integrated approach to training in which there is the right combination of practical training and technical education. This would produce an efficient skilled worker able to adjust to the introduction of new ideas, new techniques, new tools, new materials (and even new machines: ABM) (Federation of Rhodesia and Nyasaland 1957-1959:1).

However, the Report (Federation of Rhodesia and Nyasaland 1957-1959:5) states that "... it is questionable if existing methods generally can produce the adaptable skilled worker needed for the future". For example, the Report refers to the time wastage in the first two years in an apprentice's life while he or she will be trying to acclimatise to working life in the work place. To solve this problem, some large firms provided vital instruction at works schools, such as the mining school at Eiffel Flats (Federation of Rhodesia and Nyasaland 1957-1959:5).

In addition, the Report (Federation of Rhodesia and Nyasaland 1957-1959:1) reveals the need for needs analysis in providing facilities for technical education and training to cover all known industrial and commercial needs and provide educational ladder for young workers who seek to train themselves for higher posts. Furthermore, the Report (Federation of Rhodesia and Nyasaland 1957-1959:1) advises: "Ability, not colour ... must in the long run

determine the status of the worker in industry".

2.2 Colonial manpower training policy

While the colonial manpower training policy has been partly revealed in the foregoing discussion, the *Industrial Conciliation Act of 1934* deserves special mention in this regard. Prior to 1934 there was no organised apprentice training system in this country. Control was administered in terms of the *Master and Servants Act of 1898* which provided for the contract of apprenticeship to be registered before a magistrate (Mothobi 1978:18). One obvious weakness of this system was that the employer provided training as he chose and the apprentice received training as the chance offered.

According to Moyana (1988:38), in 1933 white workers forced the government to pass the *Industrial Conciliation Act* which gave white artisans power to determine who would be accepted for artisan training. A closer look at the *Industrial Conciliation Act of 1934* reveals that its promulgation led to the repeal of the *Industrial Disputes Ordinance of 1920*, but it would not affect the application of the *Masters and Servants Ordinance No. 5 of 1901*, as amended to apprenticeship (Southern Rhodesia 1935:42,68).

The *Industrial Conciliation Act of 1934* was passed so as:

... to make provision for the prevention and settlement of disputes between employers and employees by conciliation, for the registration and regulation of trade unions and employers' organisations, and for other incidental purposes (Southern Rhodesia 1935:42).

Furthermore, the Act's application is clearly stipulated as: "... to every undertaking, industry,

trade and occupation, and to every employer and employee engaged in or at any such undertaking ..." (Southern Rhodesia 1935:42-43). An important condition, too, was representation on an industrial council. In fact, under the *Industrial Conciliation Act of 1934* conditions were laid down for the resolving of industrial disputes through a system of industrial councils and industrial boards (International Defence & Aid fund for Southern Africa 1977:19).

Also essential to this discussion is the interpretation of certain terms as they apply to the *Industrial Conciliation Act of 1934*. For example, the term "employee" means "any person engaged by an employer to perform, for hire or reward, work in any undertaking, industry, trade or occupation to which this Act applies, but shall not include a native". The term "native" refers to "any member of the aboriginal tribes or races of Africa or any person having the blood of such tribes or races and living among them and after the manner thereof (Southern Rhodesia 1935:43-44). As the Act indicates that "trade unions" would be organised to, *inter alia*, protect and further the interests of employees, natives were certainly excluded as revealed in the definition of an employee above.

Furthermore, the *Industrial Conciliation Act of 1934* had notable implications for manpower training. For example, it made the first attempt to regularise the training of apprentices under the control of industrial councils for each industry. Unfortunately, since each industrial council set its own training standards, different forms of training were provided for the same trade (Mothobi 1978:18). In addition to this, the terms of the Act restricted Africans from qualifying for apprenticeships or being qualified as skilled workers (Murphree et al 1975:35). This was done to ensure job reservation for Europeans in a broad spectrum of jobs which

unfortunately created an artificial scarcity of skilled workers (Gwarinda 1985:100; Raftopoulos *in* Mandaza 1986:276; Murphree et al 1975:35). The apprenticeship training system introduced in 1934 also placed emphasis on immigration for the provision of formally skilled personnel.

2.3 Commissions of inquiry: towards a "viable" educational dispensation

2.3.1 The Phelps-Stokes Commission, 1924

The Commission was appointed by the Legislative Assembly in August 1924 and its terms of reference were defined by the Governor. Its task was to inquire into native education in all its bearings in the Colony of Southern Rhodesia (Jones 1925:254; Lloyd *in* Farquhar 1960:8). The educational aspects to be investigated, included hygiene and medical treatment, agriculture and stock raising, industrial skill, general economic and moral development, and the uplift of native women with special attention to mothercraft (Jones 1925:254).

Some of the findings and recommendations made by the Commission were as follows:

2.3.1.1 Findings

Jones (Chairman of the Commission;1925:44) reveals that a few native pupils requiring special training for technical, agriculture or teaching service, as well as those who desired to enter the professions, went to Europe or America to continue their education. The plight of natives was worsened by what Jones (1925:90) has termed apparent "... inconsistency of Europeans ... in their advocacy of racial segregation and at the same time their denial of

facilities for the training of native leaders". Furthermore, the Commission received evidence which led it to conclude that an overwhelmingly larger proportion spent on European youth points to the danger of neglecting natives and favouring Europeans (Jones 1925:253). A consequence of this policy was the importation of skilled labour into Africa which, in the opinion of the Commission, was not justifiable as a permanent policy (Jones 1925:42).

The Commission noted how even the casual observer could be impressed by the handicraft of many tribes. With training, the quality of such handicraft could be enhanced. It was, therefore, "... colonial gossip that education spoils the blacks", and the Commission further concluded that the educational needs of the natives were not fundamentally different from those of Europeans and Americans (Jones 1925:91).

The Commission also noted that the Department of Native Affairs was fully conscious of the importance of teaching the natives to cultivate their land more intensively, and that many missions were providing some instruction in agricultural and industrial skill (Jones 1925:231). Two undenominational schools, Domboshawa and Tjolutjo, were found surprisingly successful but progress was threatened by conflict between mission and government schools. Although there were indications of progress in agriculture and industrial activities, the Commission maintained: "There is a most pressing need for agricultural instruction ... to encourage the natives to work" (Jones 1925:231).

2.3.1.2 Recommendations

Among other things, the Commission made the following recommendations: Those responsible for educational policies in Africa should realise that the millions of native people must have native leaders (Jones 1925:44). Furthermore, education should be adapted to the daily activities of the masses, to the large commercial and industrial operations of the 20th century and to the requirements of the notable developments of science (Jones 1925:40). Thus, education should provide training for all the activities essential to human welfare. As recommended by the Commission:

Higher education is essential to provide knowledge ... necessary to explore and exploit the great resources of Africa ... and ... thus the native Africans will not only be freed from the fears of superstitions, but will also be given a command of their environment that will be of value to themselves and to the colony (Jones 1925:45).

In addition, Jones (1925:250) recommends the elimination of preventable diseases in the native population as this was a basic essential of sound economics. According to Jones (1925:251), "... sound policy is to discover the means and the methods ... needed for the improvement of the native masses in health, agricultural and industrial skill, the decencies of home, healthful recreation and sound character". By recreation, the Commission meant activities, such as singing, dancing and participation in vigorous sporting activities (Challiss 1983:113).

The importance which the Commission attached to what it regarded as the essentials of education led it to recommend that grants-in-aid to missions should be strictly conditional on the quality and quantity of work done. Economy and efficiency require that government shall encourage only those schools, whether governmental or mission, that contribute directly to the improvement of the native people in health, agriculture, industry, home life and character

development (Jones 1925:253).

According to Jones (1925:254), there was need for a government extension plan to ensure maintenance and supervision of native workers trained in hygiene and sanitation, agricultural and industrial activities and in teaching related to the life of natives in the Reserves. Those natives that would have profited by instruction and training received in mission and government schools would return to their people rather than seek employment among Europeans.

Recommending vocational education on the Hampton and Tuskegee¹⁰ model, Jones (Carnoy 1974:301) maintains that it could control unrest in the colonies better than academic schooling. According to him, the unrest of India was owing to the fact that there were "too many who were prepared to write and talk" and too few who were prepared to till the soil and engage in the great and numerous mechanical operations (Carnoy 1974:301). Southern Rhodesia had a "lesson" to learn from this example.

2.3.2 The Kerr Commission, 1951

It is necessary to provide information on some circumstances which led to the setting up of the Kerr Commission in 1951. Arrighi (as quoted in Moyana 1988:36) points out that new socio-economic needs emerged during and after World War II (1939-1945). Some authors view the wartime period as a time which experienced an unprecedented economic boom

¹⁰The Hampton and Tuskegee model involved provision of functional education to develop head, hand and heart for self-reliance and enable its recipients to earn recognition in society. Such education was intended for service and upliftment of the masses (Siyakwazi 1991: 184, 186; Siyakwazi 1993:102, 106,109).

(Moyana 1988:36; Gwarinda 1985:101). According to Moyana (1988:36), the boom resulted in the emergence of a large class of white bourgeois and manufacturing capitalists. Consequently, need arose to create a class of skilled and semi-skilled Africans who would supply the requisite person power for the expanding economy. In addition, Gwarinda (1985:101) regards the general workers' strike of 1948 in Southern Rhodesia as having provided impetus for change. This seems evident in the observation made by Godfrey Huggins, the then Prime Minister of Southern Rhodesia:

We are witnessing the emergence of the proletariat and in this country it happens to be black We shall never do much with these people until we have established a native middle class (Moyana 1988:36-37).

Under these circumstances, a Commission was appointed under the Chairmanship of Alexander Kerr to undertake an inquiry into Native Education. Some of its terms of reference were:

To enquire into and report upon the system of education for Africans in the colony in relation to:

- a. the present and probable future needs of the African.
- b. the social and economic development of the colony, including the following matters:
 - i) the efficiency and suitability of the education provided in primary, community, teacher training, post-primary and secondary schools;
 - ii) education of physical deviates;
 - iii) vocational and technical training, and
 - iv) education of women and girls (*Southern Rhodesia* 1952:1-2).

2.3.2.1 Findings

Attention is mainly focused on matters that appear to have a bearing on this study.

The Commission learnt of an education experience in homecraft training which was begun in 1942 at Hasfa School by Miss Tully and Miss Langham. No academic qualifications were required and the training provided in practical domestic subjects (for example, sewing, hygiene and simple cooking) was intended to help African women in the running of their own homes. The Commission further learnt how, on the example of the Hasfa School, the Beit Trustees offered valuable financial assistance for the establishment and maintenance of similar schools under missions, such as Morgenster, Empanjeni, Masase and Wanezi. The outcome was the provision of classroom blocks, domestic science blocks, industrial workshops, halls and water supplies at many other centres by the Beit Trustees (*Southern Rhodesia 1952:6*).

Of importance, too, are the various views on the aims or purpose of education which were brought to the attention of the Commission. For example, the Joint Conference Standing Committee (one of the witnesses) informed the Commission that while missions exhibited the ultimate motive and government the secular organisation, the African as the subject concerned, had a good life as his or her object. According to the Kerr Commission's Report one mission body advised: "the African must be educated for himself, and not merely as an appendage to the economic and industrial set-up". Paragraph 42 of the Report of the Kerr Commission (*Southern Rhodesia 1952:7*) reveals that education creates ideas and awakens desires which, if ill-directed or unsatisfied, are calculated to cause frustration, discontent and even hatred towards those who have been the source of the education.

Some witnesses went further to prescribe education that would best suit the African in his or her present condition. For example, one representative body of industrialists advised:

If education is to lead the Bantu from the despotism of the all powerful chief into what is considered a better state, it is most prudent that the change be gradual, practical and based on Christian principles. An ignorant people whose whole background was one of subjugation, with no opportunity to discharge civic responsibility, should not be thrown into the turmoil of academic western education, but rather led slowly into the sphere where their natural abilities can be assisted by elementary education, and thereby find a place for themselves within a democratic social structure (*Southern Rhodesia* 1952:9).

Another industrial body emphasised the need for those providing Native Education to continually stress the prime importance and dignity of manual labour. In its view, keenness of natives had to be built up in this respect.

The Commission received abundant evidence which led it to conclude that training for occupations and subsequent employment occurred on racial lines. In its Report, the Commission refers to this feature as occupational colour bar. According to paragraph 49 of the Report of the Kerr Commission (*Southern Rhodesia* 1952:9), it is unreasonable to exclude the African from skilled trades or any other forms of lucrative employment as this would not make him a good citizen but a sour and embittered person. Further criticism of the occupational colour bar is evident in paragraph 71 of the Report of the Kerr Commission which states: "If the opportunities of this small group (i.e. educated Africans) who qualify to follow the skilled occupations, are persistently obstructed, the group will acquire a deep sense of frustration and grievance...". (*Southern Rhodesia* 1952:12)

Further discrimination against Africans requiring training was revealed to the Commission by most witnesses. For example, despite the provisions and implications of Section 60 of the *Industrial Conciliation Act of 1934*, paragraph 55 of the Report of the Kerr Commission indicates that employers would not apprentice Africans in any trade because if they were to do so the European journeymen and apprentices would stop work. Paragraph 55 of the Kerr Commission's *Report (Southern Rhodesia 1952:9)* further states that the same witnesses felt Africans were accustomed to and satisfied with a standard of living lower than that of Europeans. Consequently, their admission to the skilled trades would cause a general reduction of wages, other conditions of service and a lowering of the European standard of living. In addition, paragraph 168 of the Kerr Commission's Report (*Southern Rhodesia 1952:26*) states explicitly that there was no opportunity whatsoever for the African to be trained as a craftsman in any of the skilled trades through the time. The Commission thus concluded:

... the European legislates to compel his trade opponent to compete with him on level terms, while, at the same, preventing him, by other means, from competing at all (*Southern Rhodesia 1952:9*).

Furthermore, the Commission, noted that Africans appeared to have unrestricted entry to all unskilled occupations in the colony, and most industrial undertakings lacked either the time, patience or the ability to train their employees (*Southern Rhodesia 1952:11*). In paragraph 362 of the Report (*Southern Rhodesia 1952:57*) the Commission warns that the unwillingness of some employers to educate their "illiterate employees" could constitute a danger if prolonged indefinitely. In the opinion of the Commission Africans required education to enable them to enjoy happy home life and prosperity. Witnesses repeatedly indicated that Africans were lazy, indifferent, and educating an African turned him against manual labour and made him seek

only the "collar and tie" job (*Southern Rhodesia* 1952:10, 26). Therefore, the African required character training and an understanding of the concept "dignity of labour". In the opinion of the Commission, the African also required assurance that his/her labour would bring its due reward, and that if he or she had the intelligence, character, and ambition, the colour of his or her skin would be no barrier to his or her progress (*Southern Rhodesia* 1952:26).

According to paragraph 69 of the Report of Kerr Commission (*Southern Rhodesia* 1952:11), rapid industrial expansion in the colony had led to an increase in semi-skilled manipulative, mechanical, and machine-minding operations. Evidence further indicated that a regular supply of reliable operators could lead to an improvement of conditions of service.

The Kerr Commission Report (*Southern Rhodesia* 1952:27) reveals in paragraph 172 that several witnesses put in a plea for the provision of more facilities for "technical education" for Africans and this would include a technical college. In the opinion of the Commission, for most witnesses technical education and trade training meant one and the same thing and, therefore what they were requesting were schools of the Domboshawa type to offer training in trades other than those already provided (*Southern Rhodesia* 1952:27). The Kerr Commission's Report (*Southern Rhodesia* 1952:27) further stresses in paragraph 174 that the average African's pressing need was a fundamental education which was essential as a preliminary to any technical education which he or she might ultimately require.

Concerning the provision of commercial education, the Kerr Commission's Report (*Southern Rhodesia* 1952:27) reveals in paragraph 176 that no action had been taken on the recommendation made in 1944 by the Native Production and Trades Commission that courses

in certain commercial subjects be made available for Africans. The Commission thus established that at that time there was no provision of classes for Africans to obtain instruction in commercial subjects and this disadvantaged potential clerical staff in commerce and industry, native administration and school offices (*Southern Rhodesia* 1952:27).

According to paragraph 363 of the Report of the Kerr Commission (*Southern Rhodesia* 1952:58), many witnesses were in favour of short courses for cook-boys, waiters, gardeners; and classes would be supported as soon as the African appreciated the fact that training increased his or her wage-earning capacity. Paragraph 365 of the Kerr Commission's Report (*Southern Rhodesia* 1952:58) states possible courses, namely: practical gardening, plain cooking, home laundry, cleaning and pressing suits and dresses, waiter, nursemaid, cleaning of dwelling houses, offices and furniture, tractor drivers, delivery and order men, store assistants and petrol pump attendants. Fees were to be kept low and European employers were to assist with the selection of likely employees and payment for courses (*Southern Rhodesia* 1952:58).

Paragraphs 240 and 242 of the Kerr Commission's Report (*Southern Rhodesia* 1952:39) identify shortage of handicraft teachers as a major difficulty in promulgating an educational system with a heavy handicraft or industrial bias. This was so since they required specialist training.

2.3.2.2 Recommendations

Paragraph 56 of the Report of the Kerr Commission (*Southern Rhodesia* 1952:9) recommends

that emphasis on industrial training be increased to close the uneconomic skills gap between natives and Europeans. To ensure imparting of basic skills, paragraph 156 of the Report (*Southern Rhodesia* 1952:24) recommends the adoption of continuous three year handwork courses throughout Standards 4, 5, and 6. Paragraph 156 of the Report (*Southern Rhodesia* 1952:25) further recommends that a two-stream policy for boys and girls be instituted above Standard 3, namely, a general-education stream and a vocational-bias stream. Those in general education would devote not more than one third of available school time on practical skills and agriculture. On the other hand, those in vocational stream would devote approximately two-thirds of their time training in a particular craft. Paragraph 156 of the Report (*Southern Rhodesia* 1952:25) further states that the importance of handwork in the school curriculum ought to be stressed for the teacher training purposes.

It is recommended in paragraph 168 of the Report (*Southern Rhodesia* 1952:26) that since barriers to the African's development existed, it was the task of the government to surmount or by-pass them, even though the capital outlay might appear considerable. Paragraph 168 of the Report (*Southern Rhodesia* 1952:26) further recommends upgrading of the content and extent of training provided at the two government and six mission institutions to meet the demands of the time. For example, all post-standard 6 industrial courses were to run for a duration of 3 years.

The Report (*Southern Rhodesia* 1952:26) further advises in paragraph 168 that the Native Engineering Department and municipalities having departments concerned with construction work in African townships, cooperate in the training of Africans in their workshops and on

outside work. In addition, a trade test be set at the end of such a course leading to the award of a National Certificate of Competence to successful candidates.

In paragraph 171 of the Report of the Kerr Commission (*Southern Rhodesia* 1952:26) the following recommendations concerning diversification of training and provision of training facilities are made:

- Courses should be instituted for the training of plumbers and garage hands at Domboshawa and Mzingwane.
- Day trades schools should be established in the locations at Bulawayo and Salisbury which would train, in the first instance, fitters and turners, electricians and sheet-metal workers. Such schools would provide the recruits necessary for the proper development of the native townships and areas.

The Commission thus saw the possible contribution of trained natives to community upliftment.

The Commission viewed the provision of commercial courses as another area deserving immediate attention. As stated in paragraph 177 of the Report (*Southern Rhodesia* 1952:27), commercial courses should be made available in government secondary schools for Africans. Furthermore, evening or part-time classes in commercial subjects should be made available at government schools in the larger African townships and syllabuses to be used should be those prescribed for the National Examinations in Commerce of the Union Department of Education (*Southern Rhodesia* 1952:27).

The Report (*Southern Rhodesia* 1952:174) further advises in paragraph 174 that provision of technical education, as it entails the teaching of principles and application of art and science applicable to industry, be deferred until the technically trained African can find a place in the Colony's economic structure. Instead, as revealed in paragraph 242 of the Report (*Southern Rhodesia* 1952:39), handicraft instruction course, not necessarily for examination, should be compulsory in all secondary school courses. Similarly, paragraph 188 of the Report (*Southern Rhodesia* 1952:30) states that there should be at least one handicraft village school in the district of each Provincial Native Commissioner. All this points to the Commission's desire for the provision of elementary industrial education to the natives. To achieve success in this area, paragraph 244 of the Report (*Southern Rhodesia* 1952:39) recommends that intensive courses of instruction in teaching methods, open to both present and prospective industrial teachers, be organised and carried out at government expense, at one or both of the government trades schools during vacation periods. The justification being that a teacher must learn the professional as well as the technical side of his or her work if he or she is to be a successful teacher of industrial subjects.

Finally, paragraph 347 of the Report (*Southern Rhodesia* 1952:58) recommends the introduction of a polytechnic system at either Salisbury or Bulawayo to facilitate intensive teaching of semi-skilled occupations.

2.3.3 The Judges Commission, 1962

Government appointed the Southern Rhodesia Education Commission in 1962 under the chairmanship of Prof A.V. Judges. Some of the terms of reference of the Commission were:

- a. to consider the present position of education and its future development in Southern Rhodesia, "having regard to the cultural, social and economic needs of the country and its individual citizens";
- b. to examine and reassess:
 - i) the relationship between state and aided schools;
 - ii) the allocation of resources to the several varieties of primary and post-primary education and
 - iii) the distribution of responsibilities and the work of governing and advisory bodies (*Southern Rhodesia* 1963a:1).

The Commission's findings and recommendations highlighted in this study are contained in the chairman's press statement of 17 September 1963 and the Commission's Report of 1963.

2.3.3.1 Findings

Paragraph 40 of the Report of the Judges Commission (*Southern Rhodesia* 1963a:12) reveals how witnesses impressed the Commission by their assurance that education was a function of economic and social processes. Unfortunately, the Judges Commission's Report (1963:13) reveals the unpopularity of rural pursuits and village life with the educated or even the partly educated which, in the opinion of the Commission, retards development. Expressing a similar view, the Report (*Southern Rhodesia* 1963a:94) indicates in paragraph 477 that there is apparent sluggishness of agricultural processes in the reserves as able-bodied labour seeks to render services to the European in urban areas. As a result according to paragraph 412 of the Report (*Southern Rhodesia* 1963a:82), witnesses advocated the inclusion of vocational training

in carpentry, agriculture or building in early years of secondary school to imbue the school boy with the desire to return to the land.

Paragraph 417 of the Judges Commission's Report (*Southern Rhodesia* 1963a:83) indicates industry's preference for Cambridge School Certificate holders for apprenticeship even though the established entry qualification for apprenticeship was a pass in English, arithmetic or mathematics and one other subject at Junior Certificate (J.C.) level. Paragraph 521 of the Report (*Southern Rhodesia* 1963a:103) reveals the unequal entry requirements for the main racial groups as follows: the European can enter industry for training with the equivalent of a J.C., whilst the African is expected by employers to wait until he or she has successfully negotiated the work of the fourth form. The Report (*Southern Rhodesia* 1963a:93) further reveals that while European monopoly of the provision of skilled manpower was slowly breaking-down, employment statistics showed that the industrial boom of the fifties provided relatively little fresh employment for Africans except in quite unskilled capacities. In addition, witnesses of all kinds revealed the absence of real incentives to Africans to enter courses of training.

Furthermore, more subtle barriers to the training of Africans include the curriculum which provided for instruction in simple carpentry, sewing and gardening at Standard 6 level, which was inadequate preparation for more formal training (*Southern Rhodesia* 1963a:95).

According to paragraph 505 of the Judges Commission's Report (*Southern Rhodesia* 1963a:100), while the law under the *Apprenticeship Act of 1959* made no racial distinctions and made it possible for Africans to become journeyman tradesmen by way of industrial craft

training, it was no secret that trade practices and workshop custom still imposed hindrances upon non-Europeans. The Commission noted certain rigidities as non-African skilled labour barred African out of training. Paragraph 505 of the Report (*Southern Rhodesia* 1963a:100) further reveals that the two main technical colleges in Bulawayo and Salisbury could have higher enrolment figures if they did not function in virtual isolation. They had little connection with or control over courses in the schools, certainly the schools of the Africans. In addition paragraph 505 of the Report (*Southern Rhodesia* 1963a:100) indicates that witnesses were unable to fully explain why African enrolments at the two technical colleges were still almost negligible in number. The Commission received evidence which led it to conclude that residential zoning laws had conspired with other social impediments to make attendance and the securing of meals none too easy (*Southern Rhodesia* 1963a:100).

In respect of technical education, paragraph 506 of the Judges Commission's Report (*Southern Rhodesia* 1963a:101) reveals Southern Rhodesia's overdependence on expatriate experience, education and skill. In partial agreement with the Fletcher Committee on Adult Education in 1959, the Report (*Southern Rhodesia* 1963a:101) reveals the serious need for improved training conditions and supervision of African trainees on the shop-floor and constructional sites by European supervisors. In terms of the nature of training, paragraph 512 of the Report (*Southern Rhodesia* 1963a:102) states that the system in Southern Rhodesia bore too many signs of the British tradition of the past which decreed that the best industrial training is within industry itself; where juniors are placed under the eye of a competent artisan. Unfortunately, the domestic output of apprentices seemed surprisingly small.

Elsewhere, as revealed in paragraph 511 of the Report (*Southern Rhodesia* 1963a:101-102),

workshop experience was now being amplified by high level institutional learning, a situation quite difficult to find in Southern Rhodesia then. However, paragraph 514 of the Report (*Southern Rhodesia* 1963a:102) observes the division of responsibility between school and industrial shop at the Luveve Technical Teacher Training College (see pp. 70-79). While it may have appeared an uneconomic unit, results showed the potential for technical achievement among Africans (*Southern Rhodesia* 1963a:102). The Report (*Southern Rhodesia* 1963a:102) further states that with systematic training, they could provide a supply of technicians and craftsmen. In paragraph 515 the Report (*Southern Rhodesia* 1963a:102) states that 20 of the 26 students entered for the first examinations for the Intermediate or Craft Level Certificate of the City and Guilds of London Institute obtained first classes.

Paragraph 517 of the Judges Commission's Report (*Southern Rhodesia* 1963a:103) acknowledges the relevance of the training provided at the Luveve Technical Teacher Training College and questions the future of apprenticeship. According to paragraph 518 of the Report (*Southern Rhodesia* 1963a:103), apprenticeship was criticised for being too exclusive and having arbitrary and out of date divisions of trade skills. Furthermore, it protected interests of employers and those of trade unions. However, almost questioning the feasibility of the arrangement, paragraph 518 of the Report (*Southern Rhodesia* 1963a:103) states that "Luveve and Bulawayo Technical College exist within a few miles of one another ...".

2.3.3.2 Recommendations

The *Southern Rhodesia Education Commission. Ministry of African Education* (1963:1-2) makes the following recommendations concerning the provision of African Education in a

press statement on 17 September 1963:

- a larger proportion of the national income must be directed towards the education of African children;
- education must be viewed as an instrument of social development;
- there must be increased state participation in the training of skilled manpower; and
- there must be much closer cooperation by industry and commerce in the development of vocational education.

The Press Statement (*Southern Rhodesia Education Commission. Ministry of African Education* 1963:1) distinguishes children on the basis of ability and prescribes different treatment for each group. The Chairman of the Commission, Prof A.V. Judges, recommends:

There must be opportunities for quick and smooth ascent to the educational summit for the most able, eager and ambitious children. For this group of aspirants the very best educational resources available must be carefully deployed (*The Southern Rhodesia Education Commission. Ministry of African Education* 1963:1).

On the other hand, for children of ordinary ability, the Press Statement (*Southern Rhodesia Education Commission. Ministry of African Education* 1963:1) recommends that a shorter period of education of real post-primary quality be made progressively available. For this group of children, the Press Statement (*Southern Rhodesia Education Commission Ministry of African Education* 1963:85) recommends the provision of studies in such subjects as mechanical drawing, handicraft, domestic science, hygiene, or a variation of these of a kind appropriate to the neighbourhood and the occupations which it offers.

In paragraph 430, the Judges' Report (*Southern Rhodesia* 1963a:85) reveals the need for close association between secondary schools and the employment and training facilities in the neighbourhood. According to the Judges' Report (*Southern Rhodesia* 1963a:92) education of a secondary modern type should be progressively provided for children of ordinary ability. It is also important to note that the Commission felt that industrial education could be provided by way of two-year courses to meet the need for intermediate ranges of skills and opportunities for upgrading and further technical education for those selected by reason of their intellectual and practical competence (*Southern Rhodesia* 1963a:106).

Considering the success of training in teaching institutions as seen in the French system and a lot of other European countries, the Judges' Report (*Southern Rhodesia* 1963a:102) by implication, recommends the combination of theory and practice for the training of fairly highly skilled artisans. According to the Report (*Southern Rhodesia* 1963a:102), this system permits industry to deal with more trainees in the workshop, and more formal instruction of the classroom and laboratory can be planned to a broad and in some respects liberal syllabus.

Paragraph 516 of the Report (*Southern Rhodesia* 1963a:103) reveals the need for government to vest in some authority, such as the Apprenticeship Board, the power to set in motion the acceptance of trainees and to give them final recognition as qualified craftsmen or journeymen. Similarly, paragraph 518 of the Report (*Southern Rhodesia* 1963a:103) recommends that the work of the three senior technical colleges be organised within a concerted national scheme. In addition, recommendation number 40 of the Judges Commission's Report (*Southern Rhodesia* 1963a:105) further advises that the scope of the three technical colleges should be widened on an inter-racial basis, and facilities should be

made available for Africans to study, eat and find recreation at or in the immediate vicinity of each. Furthermore, recommendation number 43 of the Report (*Southern Rhodesia* 1963a:106) expresses the need to broaden opportunity for entry into office employment and commercial careers.

Recommendation number 33 of the Report (*Southern Rhodesia* 1963a:105) indicates the need to bring teachers and students into immediate touch with the market for labour and the conditions of entry by means of a careers and employment bulletin.

2.3.4 The Cameroon Commission, 1974

On 30 January 1974 the government of Rhodesia appointed a Commission under the chairmanship of J. Cameroon, with the following terms of reference:

- a) to inquire into and report on further education in the technical and commercial fields;
and
- b) to recommend such changes therein, whether legislative, administrative or financial, as may be considered to be necessary or desirable in the national interest (*Rhodesia* 1974:1).

The Commission received both written and oral evidence on which its findings and recommendations are based.

2.3.4.1 Findings

Paragraph 1.10 of the so-called Cameroon Commission of 1974 (*Rhodesia 1974:3*) indicates that Rhodesia was "... largely dependent upon the European for her labour force". The Cameroon Commission Report (*Rhodesia 1974:7*) further reveals that although immigration had been a major source of labour force in the past, it could not be relied upon in the future. According to paragraph 3.8 of the Report (*Rhodesia 1974:7*), too little use was made of African labour potential despite statistical evidence which indicated that the educational attainments of African aspirants were generally significantly higher than the prescribed minimum entry level for apprenticeship training.

Paragraph 7.5 of the Report (*Rhodesia 1974:17*) states that many reasons were advanced for the reluctance of some employers and some skilled employees to train apprentices across the colour. While paragraph 7.4 of the Report (*Rhodesia 1974:17*) acknowledges the fact that Rhodesia had a surfeit of unskilled African labour suitable for training, it however, justifies the non-tapping of this supply as due to the state's limited financial resources and low economic growth. The Commission, however, noted that no reservations were expressed about the trainability and quality of African apprentices by those that had trained apprentices of all races. Furthermore, according to paragraph 7.10 of the Report (*Rhodesia 1974:17*), some European witnesses appeared to stress the need for African apprentices to receive training in the same manner and alongside their European counterparts. Evidence revealed that as the number of skilled African journeymen increased in a particular trade, fewer Europeans were attracted to that trade for training, and journeymen tended to move to other fields of employment or leave the country, thus creating a temporary hiatus in the supply of adequate numbers of artisans to that industry (*Rhodesia 1974:17*). According to the Report (*Rhodesia 1974:6*), some witnesses thought there was inadequate career guidance in schools.

Concerning training, some witnesses, representatives of the workers in particular, expressed very strong views against modular training as they claimed it was tantamount to job fragmentation, and specialists in a narrow field would experience difficulties in securing alternative employment (*Rhodesia* 1974:10).

In addition, the Cameroon Commission learnt from some witnesses about the need to improve delivery of instruction in technical colleges. For example, paragraph 4.23 of the Report (*Rhodesia* 1974:10) indicates the immense benefit which could be drawn from the use of modern aids to instruction, such as video tapes. The Commission further learnt that technical colleges relied on instructors on loan from the private sector or engaged on an hourly basis (*Rhodesia* 1974:11). Paragraph 4.24 of the Report (*Rhodesia* 1974:11) further states that many of these instructors were very highly skilled in themselves but in some cases, were unable to impart knowledge, due to a lack of teacher training.

On adequacy and utilisation of facilities, the Commission's attention was drawn to the congestion at existing technical colleges in respect of certain types of training, more particularly commercial training (*Rhodesia* 1974:11). However, paragraph 4.22 of the Report (1974:10) indicates that insufficient use was made of facilities at colleges during evening and holiday periods. According to the Report (*Rhodesia* 1974:11), of concern to parents and employers was the unavailability of training in the Midlands where school-leavers were moving to other centres.

The Commission also learnt that the Advisory Councils of both the Bulawayo Technical college and the Salisbury Polytechnic in some measure, felt frustrated by the fact that they

had no real powers (*Rhodesia* 1974:10).

2.3.4.2 Recommendations

Among other things, the Commission made the following important recommendations:

- that a technical college to serve the needs of the Midlands area be established in the City of Gwelo at the earliest possible opportunity;
- an examination into the availability of teachers and instructors and, *inter alia*, into pay and conditions of service of the teaching profession, be instituted at an early stage;
- short teacher training courses be introduced for those instructors at technical colleges who lack basic teacher training qualifications;
- the desirability of making provisions, away from the main colleges, for specific courses under the control of the colleges and utilising college staff, to cater for heavy demands, be examined;
- every effort be made to ensure the greatest possible use of technical college facilities during evenings and, if possible, holiday periods;
- the Divisions of African and European Education be invited to re-examine the question of career guidance in high schools, and

- the structure of the advisory councils of technical colleges be reviewed, to ensure the widest possible representation and to arm such councils with greater powers so that they can assist in the operation of the colleges (*Rhodesia* 1974:22-23).

2.4 Missionary efforts in the provision of technical-vocational education

2.4.1 Ministerial directives on the provision of technical-vocational education by mission schools

The role of Christian missions in providing formal education has always been subordinate to the overall plans and philosophy of government. According to May (as quoted in Riddell 1980:9), "the segregated system in Rhodesia reflected the white insistence on racial segregation and the necessity of perpetuating white privilege ...". Thus the system provided for non-whites limited means of social mobility. For example, only a limited number was able to obtain full secondary education and thus the means to higher education.

Under Order "B" of the *Education Ordinance of 1899* (Southern Rhodesia 1901:100) a native mission school would be granted aid from public funds if it operated for not less than four hours daily, of which, not less than two hours were to be devoted to industrial training. In this regard, Parker (in Rose 1970:252) points out that missions provided religious instruction, simple manual instruction in building and trades, and some reading and writing in the vernacular and English.

2.4.2 Some mission centres involved in technical-vocational education programmes

After Domboshawa (1920) and Tjolutjo (Tsholotsho;1921 see pp. 66-69), mission stations, such as Mt Selinda, Tegwani, Waddilove, Morgenster and Gokomere followed suit in the provision of basic technical-vocational education to Africans. According to Moyana (1988:37), they trained Africans in rudimentary skills in agriculture, hygiene, bricklaying and smiting to be used in their own village, or to "... fetch and carry for the European worker" in industry.

Although some mission stations developed on the example of the Hasfa School (see p. 44), they still placed emphasis on the provision of basic technical-vocational education. The main beneficiaries were converts. After Standard 6 or Grade 7 and sometimes the Rhodesia Junior Certificate (R.J.C.), a considerable number of people who were unable to proceed to the next grade, received basic but vital skills in welding, plumbing, carpentry, crocheting, cookery, sewing and others. Some recipients of this training have been able to upgrade their skills and continue to enjoy upward social mobility.

Silveira House is another important example of missionary efforts in providing basic technical-vocational education to the poor regardless of creed. It was established in 1964 after Father John Dove (SJ) joined a group in Highfield in 1962 to discuss the plight of the poor under the existing conditions of segregation in what was then Rhodesia (*Silveira House s.a.:2*). Expansion was achieved through financial and moral support obtained from MISEREOR¹³ (Germany) in 1968 and CEBEMO¹⁴ (Netherlands) in 1975. Persuaded by trade unions, youth groups, communal farmers and other needy groups, Silveira House places

¹³*Misereor* is a Latin word for pity or mercy (Woodhouse 1965:106). MISEREOR was founded in January 1958 by German Bishops as an aid organisation (*das Hilfswerk MISEREOR*). It seeks to conscientise people on problems of the disadvantaged people and the need to share. Money is raised through *Lenten sacrifice*. It receives about 5 000 appeals for help every year and helps in 60% of the cases (Scheu 1997 Personal interview).

¹⁴CEBEMO is an aid organisation in the Netherlands similar to MISEREOR and is led by Bishops as well (Scheu 1997 Personal interview).

emphasis on training and education and production. It is thus committed to sustainable development and self-reliance (*Silveira House s.a.:2*). It is also committed to the improvement of the quality of life of the poor and hopes to liberate them from poverty, hunger, ignorance and oppression (*Silveira House s.a.:1*).

By adopting a holistic approach to training, Silveira House seeks to develop the person as a totality by running diverse departments, such as civics education, industrial relations and practical skills. The practical skills department offers courses in crafts production and marketing, blacksmithing, dressmaking, commercials, building, carpentry and appropriate technology (*Silveira House s.a.:2*).

While this discussion on missionary efforts in providing technical-vocational education is significant to this study, it cannot claim to be exhaustive.

2.5 Establishment of early institutions for industrial and agricultural education

From the beginning, the settler government desired to provide industrial and agricultural education to Africans. This intention was spelt out in education ordinances passed between 1899 and 1910. The 1899 Ordinance directed that industrial training be offered (for example, plain needlework and domestic economy as far as may be practicable), the 1903 Ordinance required that it be systematically taught and the 1907 Ordinance prescribed industrial training to include farming, brickmaking, road making, building, carpentry, and ironwork for boys, and domestic work for girls (Parker *in* Rose 1970:253; *Southern Rhodesia* 1901:99). In addition, the 1910 Ordinance made specific grants to European teachers who taught industrial and

agricultural work (Parker *in* Rose 1970:253).

Against this background, H.S. Keigwin's role in establishing early industrial and agricultural institutions can be discussed. Parker (*in* Rose 1970:254) states that in 1918 H.S. Keigwin, the then Native Commissioner for Sinoia (now Chinhoyi), interested government in developing village industries, such as basket-making, chair-making, pottery, tile-work, and other crafts which would not compete with European trades and products. According to Lloyd (*in* Farquhar 1960:4), H.S. Keigwin regarded the development and turning of indigenous industries to economic use as Southern Rhodesia's possible contribution to the First World War (1914-1918). Initially his idea did not receive support.

However, his plan was later accepted and in 1920 he became the first appointee as Director of Native Development, a sub-department of the Department of Native Affairs (Jones 1925:239; Parker *in* Rose 1970:254). Keigwin's scheme was based on his belief in raising the masses ever so little, rather than advance a few people, and in his view, it was necessary to demonstrate new methods, for example, of ploughing, to natives in their reserves (Lloyd *in* Farquhar 1960:8). As stated simply and directly in his memorandum of 1920, H.S. Keigwin was fully cognisant of the fact that development would be painfully slow and often disheartening but progress would eventually come with added prosperity for all (Lloyd *in* Farquhar 1960:8). According to Parker (*in* Rose 1970:254), the belief was that Africans would develop better work habits and their earning power would increase.

Following the recommendations made by Major V.C. Nesbit, the Native Commissioner of Goromonzi, the Department of Native Affairs granted permission to Keigwin and his men to

establish Domboshawa an undenominational industrial and agricultural school for the people of Mashonaland (Lloyd *in* Farquhar 1960:4; Jones 1925:239). Ground work commenced in April 1920. He opened a similar school at Tjolutjo (known as Tjolutjo school and currently as Tsholotsho) in 1921 for the people of Matebeleland (Jones 1925:239; Lloyd *in* Farquhar 1960:8).

• **Domboshawa industrial and agricultural school**

In its first year Domboshawa opened its doors to 55 pupils from 18 to 20 years of age with two European instructors - one for woodwork and building, the other for agriculture, the latter being the most important part of the activities (Jones 1925:239). According to Lloyd (*in* Farquhar 1960:5), the posts of woodwork and building and agricultural instructors were filled by Mr Lovemore and Mr Arden respectively. While some pupils left due to inability to pay fees, enrolment figures rose to 140 pupils by the end of 1924 and farm work was much developed (Jones 1925:239). The intention was to establish a centre where natives could settle and form a productive industrial native community (Jones 1925:240).

Lloyd (*in* Farquhar 1960:10) states that in the beginning the pupils required practical and plain direction in farming methods as practised by farmers without institutional training in farming. Contrary to this position, pupils expressed their dissatisfaction to the Commission of 1924 at their slow rate of progress in institutional work and the lines on which it was given (Lloyd *in* Farquhar 1960:9). Although the replacement of Mr Lovemore by Mr Wright, a holder of a diploma in Agriculture, was hoped to give agricultural instruction a scientific and technical character in 1923, it seems it did little to meet the pupils' requirements.

From the beginning, students' dissatisfaction with the curriculum was a major source of conflict at Domboshawa. According to Lloyd (*in* Farquhar 1960:6), the first school 'strike' occurred at Domboshawa towards the end of 1921 when 29 boys of the junior forms decided they were being kept back in their English by being refused a Reader. Another strike occurred in 1922 when 49 boys out of 79 expressed their desire for longer hours in academic classes or book study (Lloyd *in* Farquhar 1960:8). These events led Lloyd (*in* Farquhar 1960:8) to conclude that, although the doctrine of work might have had its advantages, the African scholar inevitably had a hankering after the sedentary book-centred form of education by which he or she knows the European transmitted his or her centuries of culture. It is further noted that English and book study were regarded as the "open sesame" to the wonders and better economic conditions of civilised peoples.

Despite this apparent dissatisfaction of the pupils, in his first annual report, Keigwin reports of natives wanting to be taught things which would help them to earn better wages and in this case, the useful trades of building and carpentry (Lloyd *in* Farquhar 1960:9). Reflecting on work he did 25 years before, Keigwin compiled and sent notes to Lloyd in May 1946. Keigwin highlights the willingness of old Domboshawa boys to work and work well and their honesty and respectful behaviour which he attributes to the fine influence of a good principal, and a sane curriculum (Lloyd *in* Farquhar 1960:13). Titus J. Hlazo, a member of staff at Domboshawa (1922-1942), argues that the type of education Keigwin had introduced meant native development and this received support from native commissioners who advised chiefs and elders to attend shows arranged by the school (Lloyd *in* Farquhar 1960:11). Expressing a similar view, a visitor to the school, C.W. de Kiewet, wrote in a letter to the principal in April 1924:

... Keigwin's theory and practice are on the right lines, ... we require natives who will be simple colonists in their reserves. As soon as the native colonist is self-sufficient and productive, a great advance will have been made ... (Lloyd *in* Farquhar 1960:11).

Although training offered at Domboshawa was intended to increase the wage-earning capacity of its recipients, this was difficult to achieve since graduate unemployment was a serious problem. The trained African could not find employment among his or her own people. To alleviate the situation, the Commission of 1924 recommended that Domboshawa's mission statement be expanded to include the training of agricultural and industrial teachers and demonstrators, and ultimately to meet the demand for higher education (Lloyd *in* Farquhar 1960:9). The trained native's plight was worsened by the fact that employment could not be obtained on the European labour market.

It must, however, be noted that entry into institutions of training was restricted and vacancies were very limited, and yet the number of qualifying applicants was high. For example, Domboshawa received 828 applicants for only 110 vacancies in 1956 and 762 applications for 110 vacancies in 1957 (*Southern Rhodesia* 1956:5; *Southern Rhodesia*. 1957:7). Increase in fees could not serve as a deterrent to qualifying aspirants.

- **Tjolutjo (currently Tsholotsho) industrial and agricultural school**

As revealed earlier on, the school at Tjolutjo was also established by Keigwin and a lot of similarity between it and Domboshawa was evident. However, it had its own uniqueness. In 1922 the number of pupils at Tjolutjo industrial and agricultural school had risen to 99 (Jones

1925:239). An interesting aspect is that the school was partly built by the pupils themselves. For example, a competition among pupils was arranged in building new dormitories and marks would be allotted for speed, good workmanship and finish (Jones 1925:240).

A visitor to the school was impressed by the diversity of the activities which were part of the curriculum. Most striking was the combination of theory and practice. It was noted that practical work on the farms and in the workshops was combined with class work (Jones 1925:239). In addition, besides the ordinary farm work pupils were also exposed to special branches in dairy work. These included milking, separating cream, making butter and cheese. The diversified curriculum also incorporated forestry, hay making, ensilage, pig-keeping, construction and upkeep of windmills, carpentry and building (Jones 1925:239).

Notable in the training offered at Tjolotjo was its practical value in terms of production and potential for skill utilisation for community upliftment during and after completion of training.

2.6 Establishment of the Luveve Technical Teacher Training College

In accordance with the terms of the Federation of Rhodesia and Nyasaland, Luveve Technical Teacher Training College (as it was officially known) was established by the Southern Rhodesia government⁹ since the responsibility for technical training of Africans was territorial (*Southern Rhodesia* 1963b:7). It was hoped that graduates from this college would be the

⁹The Southern Rhodesia government was one of the three territorial governments responsible for all African affairs and all matters of constitutional change in the territorial sphere (Tindall 1968:295; Zvobgo 1994:43).

future teachers in trade and technical schools where apprentices would receive special training (*Southern Rhodesia* 1960:8).

It opened doors to the first 45 students in January 1960 with a staff complement of 8 teachers.

The students were enrolled as follows:

Electrical Installation	9
Machine Shop Engineering	7
Motor Mechanics	8
Plumbers	5
Carpentry and Joinery	4
Plasterers	2
Painting and Decorating	6
Brickwork	4

(*Southern Rhodesia* 1960:8). Enrolment dropped significantly when 13 students left during the year for reasons ranging from failure to obtain a Cambridge School Certificate to a variety of domestic reasons (*Southern Rhodesia* 1960:8). However, enrolment rose by 59 students in 1961 when Luveve Technical Teacher Training College took over the Commercial Course which had been previously at Fletcher High School (*Southern Rhodesia* 1961:8). Students were entered for examinations of the City and Guilds of London Institute and performance was generally pleasing, a point which was also noted by the Judges Commission (1962). In addition, in trying to be responsive to societal needs, in 1963 Luveve Technical Teacher Training College undertook a short course of preliminary training for future employees of Central African Petroleum Refineries at Umtali (now Mutare). Fifty students were given this

course and 47 were accepted for employment (*Southern Rhodesia* 1963b:7).

According to paragraph 515 of the Report of the so-called Judges Commission, 1963 (*Southern Rhodesia* 1963a:102), African students for whom the college had been established were to hold a school certificate (Form 4) with credits in English and mathematics or science, a rare achievement then. Paragraph 515 further states that Luveve Technical Teacher Training College was nominally a technical teacher training college since interest and drive seemed to be behind the four-year practical and technical course leading to the final examinations of the City and Guilds of London Institute. In addition, the college seemed to have greater interest in the full-time apprenticeship course.

Concerning progress at and achievements of Luveve Technical Teacher Training College, paragraph 517 of the Report of the Judges Commission (*Southern Rhodesia* 1963a:103) firmly acknowledges that it brought apprenticeship within the field of publicly administered education and seemed to be offering the African more favourable training conditions than those enjoyed by the European apprentice under block-release arrangements. Furthermore, the college enjoyed sound public relations as shown by the many visitors it received, such as local industrialists, unionists, the Central African Film Unit, members of the Monckton Commission and of the British House of Lords, and bursaries and scholarships awarded to its deserving students (*Southern Rhodesia* 1961:8-9).

In this connection, Dr Luther Foster of the Tuskegee Institution Alabama, wrote the following to the principal after his visit to Luveve Technical Teacher Training College:

Of all my experiences in Southern Rhodesia, I believe the one which impressed me most was the splendid work at Luveve. In

a country which so greatly needs additional educational resources, and particularly in the technical field, it was a real delight to learn that such a high quality of service is being provided at Luveve. Your programme meets a most important need, ... (*Southern Rhodesia* 1962:8).

The college was not without its problems. For example, in the initial stages, progress was impeded by lack of basic and essential tools required for daily use (*Southern Rhodesia* 1960:8). Other problems related to lack of opportunity for trainees for trade practice required by the City and Guilds of London Institute (*Southern Rhodesia* 1962:8). Gasson (1963:29) points out that this problem arose because student apprentices at Luveve Technical Teacher Training College were excluded from the *Industrial Conciliation Act of 1934*, the *Apprenticeship Act of 1959*, and the *Workmen's Compensation Act 52 of 1959*. As a result unions could object to them and claim that they preferred indentured apprentices. In some cases, students misunderstood the purpose of trade practice, and allowed considerations of financial returns and material rewards to have priority over the acceptance of the opportunity to learn (*Southern Rhodesia* 1962:8).

The Annual Report of the Secretary for African Education, 1963 (*Southern Rhodesia* 1963b:7) states that the functions of Luveve Technical Teacher Training College were to demonstrate the capacity of Africans for training in modern technical occupations, provide staff for the trade schools and train apprentices. The above Annual Report (*Southern Rhodesia* 1963b:7) further indicates that the set objectives had been achieved, "polytechnics" could cope with the training needed and apprenticeship training had become non-racial. Against this background, the Secretary for African Education warned:

There is a danger that Luveve may become redundant and, in any case, being for Africans only is out of tune with the present

approach to training (*Southern Rhodesia* 1963b:7)

Following recommendations of the Parliamentary Select Committee on Technical Training, Luveve Technical Teacher Training College was closed and some courses were transferred to Salisbury (now Harare) and Bulawayo 'polytechnics' (*Rhodesia* 1964a:6). Students did well in their City and Guilds of London Institute finals, and 14 were offered a further two years of training and experience in Britain under the Commonwealth Assistance Scheme (*Southern Rhodesia* 1964a:7). The great bulk of the machinery previously at Luveve Technical Teacher Training College was transferred to Bulawayo Polytechnic College and the remainder to Salisbury (*Rhodesia* 1964a:7). According to the Annual Report of the Secretary of African Education 1964 (*Rhodesia* 1964a:7), Luveve Technical Teacher Training College would re-open in 1965 as a technical high school with boarding facilities for boys and girls.

2.7 Founding of the Salisbury Polytechnic, 1919

2.7.1 Factors leading to its establishment

What stands today as Harare Polytechnic has its humble origin in 1919 when the late George Chaloner started mechanical engineering classes for a few young men working in his firm, *Hubert Davis and Company* (*Zimbabwe. Ministry of Higher Education* 1994:3; *Manpower Monitor* 1994b:12). As more young men applied to join his classes he appealed to government for assistance. In 1925 the government agreed to start regular classes at Prince Edward School and the first Advisory Council was appointed (*Zimbabwe. Ministry of Higher Education* 1994:3). According to the *Department of Education. Inspectorate* (1939:1), increase in student

enrolment and the corresponding inadequacy of space led to the occupation of Goldfields Buildings and Commerce Buildings in 1935. Both buildings were rented from private owners.

In 1936 Chaloner asked Sir Ernest Guest to appeal to government for a permanent site to establish a college (*Manpower Monitor* 1994b:12). According to the *Zimbabwe. Ministry of Higher Education* (1994:3), the "old" Polytechnic was completed just before the Second World War (1939-1945) and with the post-war boom, the building became inadequate, necessitating the movement of some departments to old Selbourne School. The "new" Polytechnic was completed in January 1964 with assistance from the Federal government⁸ (Gasson 1963:26). The Polytechnic was officially opened by Sir Humphrey Gibbs, the Governor, in October 1965 (*Zimbabwe. Ministry of Higher Education*. 1994:3).

2.7.2 Entry qualifications and courses offered

According to the *Department of Education. Inspectorate* (1939:5), possession of a Standard 6 certificate seemed to be the entry requirement for most courses. The above document further states that apprentice electricians were, however, expected to have reached Standard 7. During this period instruction was provided in commercial subjects, languages, technical subjects, science, mathematics and art (*Department of Education. Inspectorate* 1939:1). As time progressed, new entry requirements were stipulated and courses became more diversified. Concerning entry to courses, Gasson (1963:26) reveals that, in general members of all races had to be in relevant employment. However, non-Europeans were further expected to satisfy

⁸A federal government was drawn from Northern Rhodesia (now Zambia), Southern Rhodesia (now Zimbabwe) and Nyasaland (now Malawi) to run affairs of the Federation of these three territories (1953-1963). It had responsibility over economic, technical and financial matters, in particular those relating to the welfare and development of Europeans in the Federation (Tindall 1968:293, 295; Zvobgo 1994:43).

individual course entry requirements and possess a minimum of a Form 11 Certificate or Rhodesia Certificate of Education (RCE; Gasson 1963:26).

Regarding the diversity of courses, the Office of the Prime Minister (1973:81) reveals that the Polytechnic offered both vocational and non-vocational courses, "... varying in standard from the development of craft skills to professional levels". The Office of the Prime Minister (1973:81) further acknowledges the existence of departments such as: mechanical engineering, electrical engineering, civil engineering and building, mathematics and science, printing, commerce (including management), hairdressing and adult education (including a General Certificate of Education Courses).

It is also important to highlight developments which resulted from the implementation of the *Apprenticeship Training and Skilled Manpower Development Act of 1968*. For example, the year 1969 saw the advent of full-time training of apprentices in the building, electrical, motor and printing industries at the Salisbury Polytechnic and this was consolidated in the following year (*Rhodesia* 1969b:20; *Rhodesia* 1970b:17). Consequently, exacting demands were made on full time lecturing staff and heavy utilisation of classroom and practical facilities for vocational training purposes was experienced (*Rhodesia* 1969b:20-21). Courses had to be redesigned. The apprentice tutorial schemes largely ceased to operate after May 1969. Interestingly, public interest in leisure-time courses was maintained, but expansion had to be curtailed since classrooms had become inadequate.

2.7.3 Enrolment

The demand for training at the Salisbury Polytechnic can be observed in the student enrolment figures over time. This includes both part-time and full-time students. Student enrolment was as low as seen in 1928, rising to approximately 3 000 students in 1969 (*Department of Education. Inspectorate 1939:7 Rhodesia 1969b:20*).

TABLE II

Salisbury Polytechnic: Student Enrolment (1962 - 1977)

1962	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
1578	1214	2676	2482	2614	2848	3241	3126	1987	2499	2215

- Sources* : Gasson, J. 1963. *Further Education in Southern Rhodesia with special reference to Bulawayo and Matebeleland*. Bulawayo: Bulawayo Council for Further Education. p. 27.
- Rhodesia. 1964b. Report on Education for the year ended 31st December, 1964*. Salisbury: Government Printer.
- Stoneman, C. 1978. *Skilled Labour and Future needs*. Gwelo: Mambo Press, p. 52 for period 1972-1977.

Notes: Information not shown in Table II above was not available in the sources which were consulted. Enrolments were very largely of Europeans. For the year 1977, at most about a third of the 3 852 students at both Bulawayo Technical College and Salisbury Polytechnic were African (Stoneman 1978:52). The first African students had been enrolled in September 1965 (*Zimbabwe. Ministry of Higher Education 1994:3*).

2.7.4 Staffing

According to the *Department of Education. Inspectorate* (1939:1), when fully staffed, the Polytechnic required 33 lecturers then. With increase in the number of courses and student enrolments, staffing requirements have also continued to rise. For example, the full-time lecturing staff complement was 49 in 1968 and 72 in 1969, while it stood at 119 full-time lecturers and 175 part-time lecturers in 1973 (*Rhodesia* 1969a:20; Office of the Prime Minister 1973:81). It must be noted that shortage of suitably qualified full-time lecturers necessitated the employment of part-time lecturers (*Rhodesia* 1964b:17).

2.7.5 Examinations and Certification

Sources reveal that qualifications in the technical fields, in particular, were awarded by the City and Guilds of London Institute (*Department of Education. Inspectorate* 1939:4; Riddell 1980:28). According to the Rhodesia. Report on Education for the year ended 31st December 1966 (1966b:17), the Republic of South Africa also awarded technical qualifications to Rhodesians. It is, important to note that the City and Guilds of London Institute examination results revealed that block release¹² was a good mode in Rhodesia (*Rhodesia* 1964b:17).

Localisation of examinations was also gradually effected. The Rhodesia. Report on Education for the year ended 31st December 1967 (1967:17) indicates the intention to award the Rhodesia National Technician's Diploma to successful students in Civil Engineering. Three

¹²Block release involves the release of industrial trainees from work for study at a college for uninterrupted periods of several weeks. An alternative arrangement is day release where classes are on single specific days, for example, Monday, Wednesday and Friday per week.

years later considerable progress was reported in the establishment of examinations for Rhodesian National Diplomas and Certificates. This was in accordance with policy of instituting Rhodesian examinations where examinations set by outside authorities were no longer available or suitable (*Rhodesia* 1970b:17). Local examinations were provided in plumbing and mechanical, electrical and motor engineering (*Rhodesia* 1970b:18). Examinations which were set, were based on international standards and were a logical sequel to the already successful Rhodesian National Civil Engineering Diplomas and Certificates for Technicians (*Rhodesia* 1970b:19).

2.7.6 Problems

The Department of Education. Inspectorate Report on the Polytechnic, Salisbury (1939:6) cites the uneven educational background of the students and the presence of students of non-academic type, at the time of inspection, as problems requiring attention. In the opinion of the inspectors, greater success would be achieved through the use of appropriate methods already used successfully in high school classes.

Other problems included shortage of classrooms, low completion rate by students, irregularity and unpunctuality to classes (*Department of Education. Inspectorate* 1939:3). In addition, the Polytechnic experienced shortage of suitably qualified full-time lecturing staff (*Rhodesia* 1964b:17).

Problems of a serious nature also emanated from the 'external' demands, stipulations and requirements. For example, since 1969 the Polytechnic had very serious problems in coping

with the demand of an increasing intake of apprentices (Mothobi 1978:40). Employers also pointed out that training given at the Polytechnic and at the other technical colleges was too broad, theoretical and not enough practical training was given. Thus the college atmosphere was completely divorced from that which prevailed in industry (Mothobi 1978:41-43). These problems were further aggravated by inadequate funding. In 1976, for example, only \$3 476 000 was voted for technical education, while \$31 199 000 was voted for European education (Mothobi 1978:41).

2.8 Establishment of the Bulawayo Technical College, 1923

2.8.1 Factors leading to its establishment

On the basis of the questionnaire completed by principals of colleges (see Appendix A), Bulawayo Technical College was established in 1923. However, the Office of the Prime Minister (1973:79) states that the college started around 1927, initially as an evening institute, being a department of the Technical High School, Bulawayo. In 1953 it became a separate institution, and in 1961 became a regional college, with technical centres at Wankie, Gwelo and Que Que (Office of the Prime Minister 1973:79). It is important to note that the Federal Government made significant contributions towards the college's establishment (Gasson 1963:26).

The college was established to meet the requirements of industry and commerce through the provision of full-time and part-time commercial and technical education to persons over compulsory school age (Gasson 1963:81). Leisure-time occupations were also to be taken into

consideration.

2.8.2 Entry qualifications and courses offered

Sources consulted reveal that the college offered further education in technical, commercial and management subjects on an adult education basis (Gasson 1963:82; Office of the Prime Minister 1973:79). As new demands arose, new courses were mounted. For example, in 1964 courses in coach-building, refrigeration mechanics and industrial statistics were provided (*Rhodesia* 1964b:19).

Departments at the college, included mechanical, electrical, and civil engineering, mining and building, mathematics and science, commerce, catering, art and adult studies (Office of the Prime Minister 1973:80). According to Gasson (1963:81-82), while Form 11 was the minimum entry requirement for most courses there were other specific requirements. Applicants for craft courses were to hold Standard 7 in arithmetic or mathematics and English; the Cambridge School Certificate with a pass in English; mathematics or a science subject was required for entry into technical and technological courses. The college, however, insisted upon higher entry qualifications for technological courses.

2.8.3 Enrolment

While sources at the researcher's disposal show different enrolment figures, the demand for training is evident in the table below.

TABLE III

Bulawayo Technical College: Student Enrolment (1962-1977)

1962	1964	1965	1966	1967	1968	1969	1970	1972	1976	1977
1814	1795	2682	3587	2820	2231	2263	2482	1474	1973	1637

- Sources* : *Gasson, J. 1963. Further Education in Souther Rhodesia with special reference to Bulawayo and Matebeleland. Bulawayo: Bulawayo Council for Further Education, p. 27.*
- Rhodesia. 1970b. Report on Education for the year ended 31st December 1970* Salisbury: Government Printer.
- Stoneman, C. 1978. Skilled Labour and Future needs. Gwelo: Mambo Press, p. 52.*

Notes : For the year 1977, at most about a third of the 3 852 students at both Bulawayo Technical College and Salisbury Polytechnic were African (Stoneman 1978:52).

2.8.4 Staffing

As in the case of Salisbury Polytechnic, Bulawayo Technical College experienced a shortage of suitably qualified full-time lecturing staff. Sources at the writer's disposal lacked statistical evidence to illustrate this point.

2.8.5. Examinations and certification

Students received City and Guilds of London Institute Certificates at Bulawayo Technical College (Riddell 1980:28). In addition, the policy of instituting Rhodesian examinations discussed in respect of Salisbury Polytechnic also applied to the Bulawayo Technical college (see p. 75).

2.8.6 Bulawayo Technical College and its satellites

As revealed earlier on in this study (see p. 80), Bulawayo Technical College became a regional college in 1961, with technical centres at Wankie, Gwelo, and Que Que (Office of the Prime Minister 1973:79). Periodisation cannot be done here with complete certainty since in the case of the centre at Gwelo the date for its establishment at Chaplin High School is stated as 1975 (*Gweru Technical College: Annual Report 1984:2*). What is significant in this study, is that like the other two centres, it was a department or annex of Bulawayo Technical College. Operations of the small centres were to a large extent influenced by the mother college. For example, in keeping with traditions of its mother college at Bulawayo, Gwelo Technical Centre introduced adult education in car maintenance, cake icing and hair dressing in 1979 (*Gweru Technical College: Annual Report 1984:3*).

2.8.7 Problems

Bulawayo Technical College experienced shortage of suitably qualified full-time staff, necessitating the use of part-time lecturers (*Rhodesia 1964b:17*). Furthermore, as in the case of Salisbury Polytechnic, Bulawayo Technical College had very serious problems in coping with the demand of an increasing intake of apprentices since 1969 (Mothobi 1978:40).

Inadequate funding also affected Bulawayo Technical College. Equipmentation and provision of other facilities were thus affected negatively. This was further complicated by the employers' dissatisfaction with the college environment for training which they felt was completely divorced from that which prevailed in industry (Mothobi 1978:41).

2.9 1966 New Education Plan

An important feature in the provision of education in Rhodesia is the 1966 New Education Plan which owes much to previous thinking based upon the Judges Report of 1963, the Advisory Board Sub-committee (s.a.) and the Planning Mission of 1964 (*Rhodesia* 1966a:3). Some of the elements of the Plan with necessary policy measures were: firstly, with due regard for financial considerations, formal academic type of schooling (F1 system) was to be limited to 12.5% of school-leavers from Standard 6 (later Grade 7) who were supposed to be correct grammar school material. These were to be identified through educational measurement. Secondly, the Plan also provided for junior secondary schooling (F2 system) for 37,5% of the primary school-leavers. These would receive training at Grades 8 and 9 in courses with a secondary modern flavour, more correctly designated "vocational preparation" studies (*Rhodesia* 1966a:3; *Riddell* 1980:10-11). It is this latter type which is significant to this dissertation. Of importance, too, is the 50% of primary school output excluded from the normal school system. One outlet for this group would be homecraft schools (*Rhodesia* 1964a:4).

2.9.1 Nature of the F2 System

The F2 system was a form of junior schooling intended for African primary school leavers deemed unsuitable for the superior F1 secondary school system by the selection system. The system had a vocational bias and subjects done were to bear some relationship to the environment of the school (*Rhodesia* 1968a:6; *Rhodesia* 1972:2). This system was intended to fit its recipients for earning a living (Parker *in* Rose 1970:245). To ensure the success of junior secondary schools, their capital costs were to be carried by missions and voluntary agencies (Riddell 1980:11). On the other hand, M.G. Mills, the then Secretary for African Education, pointed out that professional men and women, technologists and the high-level manpower of Rhodesia would emerge from the 12.5% pursuing academic secondary schooling (F1 System; Parker *in* Rose 1970:245).

2.9.2 Curriculum

The practical and vocational aspects of the curriculum were kept to the fore as revealed in the suggested subjects and allocation of 40-minute periods per week (see Table IV below).

TABLE IV

Subjects and allocation of 40-minute periods

SUBJECT	Present Allocation (3 Streams)	Proposed Allocation (2 Streams)		
		Grades 8 & 9	Grade 10	Grade 11

English	8	7	7	7
Mathematics	5	4	4	3
Science	5	4	4	3
Environmental Studies				
African Language	5	4	3	4
Religious Instruction	-	4	3	4
Boys' Practical A				
Boys' Practical B	1	1	1	1
Girls' Practical A	6	8	9	9
Girls' Practical B	6	8	9	9
	12	8	9	9
		8	9	9
TOTALS				
	36	40	40	40

Source: Rhodesia. 1972. Annual Report of the Secretary for African Education for the year ended 31st December 1972. Salisbury: Government Printer, p. 2.

The above Report of 1972 (*Rhodesia 1972:2*) specifies further that practical subjects were to be chosen from woodwork, metalwork, building, mechanics and agriculture for boys. Agriculture was emphasised in rural junior secondary schools. Domestic science, housecraft or needlework were the practical subjects intended for the girls. It was also felt that vocational training in tailoring, baking, leatherwork, upholstery, typing and electrics could be provided at junior secondary schools (*Rhodesia 1972:2*). The Report (*Rhodesia 1972:2*) further points out that vocational training centres were to be established if financial resources became available.

2.9.3. Attitudes

According to the Annual Report of the Secretary for African Education for the year ended

31st December, 1968 (*Rhodesia* 1968a:6), there was an incomplete understanding among the community of the function of this type of school. The Secretary for African Education further admitted that there was apathy, if not opposition, felt towards these schools (*Rhodesia* 1972:4). It was further noted, that the word "junior" in the title of these schools carried "unfortunate connotations" and was, therefore, to be omitted (*Rhodesia* 1972:4). It was thus felt that a four-year course could prove much more acceptable to the African parents as this could make the products more employable and minimise their sense of failure. In this regard, the Secretary stressed the importance of the F2 graduates' impact on their community and contribution to economic development of the tribal trust lands (*Rhodesia* 1972:4). He was, however, quick to point out that education could not shelter them from the facts of life, nor could it guarantee employment if the economic conditions of the country were adverse (*Rhodesia* 1972:4).

The truth of the matter, as observed by May (as quoted in Riddell 1980:11), was that most parents preferred academic-biased education. Vocational-biased education was, on the other hand, heavily criticised by the general public who viewed it as a second-rate type of education (Riddell 1980:12). By implication, academic education was regarded superior to vocational education. Lester K. Weiner, a critic who taught in Rhodesia, likened this situation to the Republic of South Africa's apartheid policy with its inherent differential opportunities (Parker *in* Rose 1970:251).

Furthermore, many scholars at the University College of Rhodesia (now University of Zimbabwe) wrote, "education in Rhodesia has always had political overtones", and the introduction of the F2 system was one of the strategies designed to prevent Africans from

attaining franchise qualifications and from competing directly with European youths for jobs (Parker *in* Rose 1970:251). On the contrary, in defence of the provision of the New Education Plan (1966) the Secretary for African Education contended:

There is no racialism or colour in this, just plain economics and the age-old relationship of capital and labour (Parker *in* Rose 1970:245).

Concerning the new dispensation, in 1970 the Hon. C. Chipunza, a member of the legislature and leader of the opposition, charged, "... if those changes were good they would also be implemented in their own schools" (*Herald (The)* 31 January 1984:5). He thus doubted the ability of the F2 system to prepare the child to take his or her place in society. Graduates of the F2 system were usually left out from higher level training. For example, Grade 11 students with four years of secondary school training in two skills areas were only admitted to the secondary sector of teacher education at Gwelo Teachers' College in 1978 (*Rhodesia* 1978:7). It was, however, believed that no training in technical-vocational subjects would be ever wasted. For example, domestic science would make African girls better mothers and housewives (*Southern Rhodesia Department of Labour* 1962:1).

The consequence of the bitter objection of the F2 system by the African community, was that between 1966 and 1971, out of the projected 300 F2 schools, 21 were operative and only 3807 students had enrolled (Mandaza 1986:330). At independence in 1980, the resentment of the F2 system was manifested in the decision by some students to sit for both Cambridge and Grade 11 examinations. Michael Mawaraidzo Kututwa, a former headmaster of an urban F2 secondary school, noted pleasing performance in both examinations by his Grade 11 class in 1982 (Kututwa 1996: Personal interview). Thereafter, the F2 system was phased out.

Reminiscing on the relevance of the F2 system to life, (Kututwa 1996: Personal interview) contends that it was "... a very good system and it should be re-introduced if we should have good education back in Zimbabwe". In his opinion, students acquired technical-vocational skills which they could use to earn a living.

2.10 Small Centres for further education

While technical-vocational education was being provided at Salisbury Polytechnic and Bulawayo Technical College, small centres for further education were set up to meet local needs in Umtali, Gwelo, Que Que and Wankie (Rhodesia 1965:18). It must, however, be noted that these were not technical colleges but small centres providing commercial and adult education classes according to local demand. Courses provided, usually on a single subject basis, included shorthand, typing, and bookkeeping. Entry requirement was the Rhodesia Certificate of Education (RCE) or less. Shona was also taught at Umtali and Que Que. In addition, Umtali offered classes in Portuguese and English for foreign students, and dressmaking (*Rhodesia* 1964:19). Classes of between 5 and 10 students were provided in Afrikaans, Floral Art, Art and Counted Threadwork (*Rhodesia* 1968c:17). Furthermore, under the centralization policy, small centres continued to provide continuity courses for apprentices between block release periods (*Rhodesia*, 1965:18).

Student enrolment tended to fluctuate with changing demand and circumstances. According to Riddell (1980:28), no Africans were enrolled at these centres. Enrolment by centre is shown in the table below.

TABLE V

Student enrolment at institutes for further education (1964-1976)

Institute	1964	1965	1966	1967	1968	1970	1976
Umtali	161	92	97	204	178	78	22
Gwelo	30	48	112	120	91	28	6
Que Que	28	124	158	84	101	28	66
Wankie	63	63	63	75	41	32	*

Sources : *Rhodesia. 1970b. Report on Education for the year ended 31st December 1970 (1964-1970). Salisbury: Government Printer.*

Riddell, R. 1980. Education for employment. Gwelo : Mambo Press, pp. 28-29.

Notes : *Information not available.
No enrolment figures were available for the years omitted in the selected period. Third term enrolments were used for 1970. Enrolment for Wankie in 1970 comprised apprentices only.

Concerning examinations and certification, Riddell (1980:28) points out that students at the centres sat for Rhodesian examinations as opposed to the City and Guilds of London Institute examinations at Salisbury Polytechnic and Bulawayo Technical College. Finally, it could be argued that although the institutes met some local educational and training needs, their impact on the community was considerably small owing to low enrolments.

3. **Résumé and conclusion**

The development of technical colleges and polytechnics in Zimbabwe (formerly Rhodesia) during the colonial period has been presented in this chapter. To place the discussion into its appropriate context, the ideological, demographic, political and socio-economic position and conditions of the time have been presented and analysed. Against this background, an overview of apprenticeship training and the colonial manpower training policy has been discussed.

Four Commissions of Inquiry, the Phelps-Stokes, Kerr, Judges and Cameroon, have been selected for study to provide insight into the educational dispensation of the colonial era and possible future developments. Their terms of reference, findings and recommendations have been highlighted. What appears to be a recurrent finding by the Commissions are the inequalities in the provision of technical-vocational education and training on racial lines.

Establishment of the early institutions for industrial and agricultural education has been highlighted, with main focus on Domboshawa and Tjolotjo (currently Tsholotsho). An interesting observation is that these institutions were intended for Africans only and skills imparted were to fit the graduates for their roles in their place, both geographical and social. Closely related to these institutions were F2 schools (established by the New Education Plan of 1966) which were intended for African children who were deemed unsuitable for academic work. This seemed to be in keeping with the general conception of the native by the colonial masters as being incapable of high level operations.

In addition, the opening and subsequent closure of Luvuvu Technical Teacher Training College for Africans has been discussed in considerable detail. Missionary efforts in

providing technical-vocational education have been considered. In accordance with ministerial directives, mission schools provided elementary technical-vocational skills.

The establishment of Salisbury Polytechnic, Bulawayo Technical College and small centres for further education has been discussed. Among other things, courses offered, problems faced and contributions to the community made by these institutions have been considered.

Developments, issues and events presented in this chapter reveal that race seems to be seriously implicated in the provision of and access to education and training, and subsequent occupational attainment in the colonial era. Consequently, apparent disparities among the races in the acquisition of vital technical-vocational skills are characteristic of the period of colonial rule. This is perhaps an entopic situation requiring transformation into a future ectopic (rectified) situation.

**A SURVEY OF THE DEVELOPMENT OF TECHNICAL EDUCATION IN ZIMBABWE
DURING THE POST-COLONIAL ERA (1980-2000)**

1. Introduction

The development of technical education in Zimbabwe during the post-colonial era can only be fully understood in time perspective. For example, the developments which took place in the socio-economic and political spheres during the colonial era are vital historical antecedents which may not be ignored when discussing developments in the education system in post-independent Zimbabwe (see pp. 23-29).

It is, however, also important to note that to comprehend the nature, breadth and magnitude of the development of technical education in Zimbabwe, one should gain insight into the people's attainment of political independence, the people and government's perceptual framework and their ideological elements, as well as the post-independence educational dispensation.

- **Attainment of political independence**

After a protracted armed struggle, elections were conducted in February 1980 and Independence Day was set at 18 April 1980. The Zimbabwe African National Union-Patriotic Front (ZANU PF or simply ZANU) emerged victorious and this ushered in new governance. What has seemed to be evident since then has been the government's apparent lack of

economic independence. However, on the basis of political independence the desire for self-determination continues to manifest itself in the people and government of Zimbabwe, especially with regard to technical-vocational education.

- **Perceptual framework**

It is also important to consider the people and government's perception of their past, present and desired future. The ZANU PF government has always regarded the colonial system elitist, discriminatory and segregatory. This created inequalities and Africans were the underdogs (*Herald (The)* 30 December 1995:1). According to the *Zimbabwe: The Facts. No. 9 Education* (1992:1), the colonial regime had in place a series of policies and structures which denied the Africans any meaningful role in the country's political, economic, social and cultural life. The rigid selection and screening mechanism, characterised by numerous bottlenecks and impediments, made educational attainment beyond the levels of basic and rudimentary acquisition of knowledge difficult for the majority of African children (*Zimbabwe: The Facts. No.9 Education* 1992:4). Such perceptions have provided the basis for post-colonial state policy on educational provision. In this regard, Robert G. Mugabe, President of Zimbabwe, has enunciated his government's policy as correcting imbalances of the past and creating a united nation, with all people on an equal basis and having equal opportunities (*Herald (The)* 30 December 1995:1).

- **Ideological elements**

The ZANU PF government made it clear from the beginning that socialism would be its guiding philosophy. Socialism is a mode of production which is characterised by the social

ownership of the means of production and classes undergo a process of dissolution (Gwarinda 1985:125). In addition, man is believed to be capable of creating and changing his or her social environment through praxis; marrying theory with practice, mental and manual work (Gwarinda 1985:92; Gillespie & Collins 1986:66). Thus, all people would be able to do productive work, plan and control production (Gillespie & Collins 1986:66). According to Chung & Ngara (1985:3), goals of socialism include equitable distribution of wealth, upholding of the principles of independence, social justice and democracy, promotion of prosperity and progress for all by removing the social roots of poverty, ignorance and backwardness. This promotes self-reliance.

In keeping with socialist orientation, the *ZANU PF Election Manifesto* (1980:3) reveals the party's intention to construct Zimbabwe's economy and evolve a socialist pattern in which the country's resources are fully tapped for the common benefit of all Zimbabweans. To achieve this, education was provided on the basis of the theoretical underpinnings of Marxism-Leninism (Gillespie & Collins 1986:66).

As a crucial factor in social Zimbabwe transformation, education was declared a basic human right and racial education had to be abolished (*ZANU PF Election Manifesto* 1980:12). In the new Zimbabwe, education would also be used to develop the inherent talents of the people and engender a common national identity in them and enable them to live a fuller life (*ZANU PF Election Manifesto* 1980:12).

Guided by this ideological stance, the *ZANU PF Election Manifesto* (1980:12-13) firmly states:

The economy of Zimbabwe requires a formidable force of skilled artisans and technicians A ZANU government will thus launch a vast network of technical and vocational schools throughout the country. ZANU will launch the Zimbabwe Institute of Technology which will offer courses at university level.

- **Post-independence educational dispensation**

The ZANU PF government headed by Robert G. Mugabe has shown its commitment to socialist policies in education soon after they came to power (Atkinson *in* Postlethwaite 1988:743). Thus, collectivist attitudes of socialism have been emphasised. For this reason, education legislation is explicit:

... every child shall have the right to school education and ... no child in Zimbabwe shall be refused admission to any school on the grounds of race, tribe, colour, religion, creed, place of origin, political opinion or the social status of his parents (*Zimbabwe 1987:207-208*).

Bold steps were made to desegregate schools and ensure that both private and government schools follow the same prescribed curricula and syllabuses (Farman 1991a:4,6). In keeping with socialist thinking, school programmes were designed to promote national unity, establish a non racial egalitarian society, and produce a productive and thinking citizenry (Gatawa *in* Postlethwaite 1988:6815).

Furthermore, as noted by Gillespie & Collins (1986:63), education in Zimbabwe must be viewed in the context of social and economic reconstruction. In this regard, the Zimbabwe Conference on Reconstruction and Development (ZIMCORD) noted a critical shortage of skills needed for development and it highlighted the following priority areas:

- reform and expansion of the formal education system,
- expansion of technical and vocational training institutions and the creation of additional facilities,
- review of the apprenticeship system in order to make it more relevant and effective,
- identification, upgrading and effective employment of existing skills, and
- utilisation of expatriate expertise where appropriate, and providing study opportunities abroad as stop-gaps (Gillespie & Collins 1986:63).

Influenced by views of this nature, the whole country, rural areas in particular, witnessed phenomenal expansion in educational provision between 1980 and 1990 as a result of a combination of government and community efforts (Chikombah *in* Wickremasinghe 1988:893; Gatawa *in* Postlethwaite 1994:6814). The expansion of educational infrastructure was achieved through reopening of schools closed down during the war period, expanding existing facilities and constructing new schools. Enrolment soared as education became more democratised and accessible.

Between 1980 and 1991 primary school education was free. In 1992 tuition fees were re-introduced at primary school level as a cost-recovery measure but with different rates for different socio-economic groups (Farman 1991b:10; Chikombah *in* Wickremasinghe 1992:892; Gatawa *in* Postlethwaite 1994:6815). In addition, government set up the Social Development Fund to cushion effects of poverty (*Zimbabwe: The Facts. No. 9 Education* 1992:3). The increase in children requiring places in the school system led to double seasoning¹⁵ or hot-seating¹⁶. Upper Tops¹⁷ were also established to cope with the massive numbers of graduates from the primary school system.

The overall demand for educational opportunities necessitated a significant expansion in teacher training facilities. For this reason, the Zimbabwe Integrated Teacher Education Course (ZINTEC)¹⁸ was established in 1980 with its main objective of enabling serving untrained teachers to achieve certificated status (Atkinson *in* Postlethwaite 1988: 745). The Zimbabwe-Cuba Teacher education programme was also mounted to meet the need for mathematics and science teachers in the country.

It is important to highlight the centrality accorded to production, science and technical subjects by government. The President's Policy Statement No.15 (*Zimbabwe* 1985a:5) clearly stipulates that expansion and consolidation of the country's vocational and technical infrastructure would be intensified during the first session of the Second Parliament of

¹⁵Double-seasoning is where a school runs two sessions, one in the morning and the other in the afternoon, but both doing the same syllabuses. This is often caused by a high demand for education where there is limited classroom space.

¹⁶Double-seasoning is also referred to as hot-seating to imply the unfavourable conditions of the afternoon session.

¹⁷Upper tops are secondary school classes housed at a primary school as a temporary measure to provide them with classroom space.

¹⁸ZINTEC refers to the Zimbabwe Integrated Teacher Education Course. Under this system, teacher trainees alternate between short teacher training courses at a ZINTEC College and practical teaching in primary schools. It is believed to be a cost-effective system of teacher training.

Zimbabwe. Farman (1991b:10) notes the introduction or consolidation of skills-training subjects such as woodwork, metal work, bricklaying, computer studies and accountancy in schools where equipment and trained staff were provided. Some of these schools were organised under the Zimbabwe Foundation of Education with Production (ZIMFEP). In addition, Zimbabwe Science kits (ZIMSCI) were developed in order to make science accessible to pupils who had no modern laboratories at their secondary schools.

Of importance, too, is the observation that most mission stations have continued to provide skills training in post-independent Zimbabwe. In some cases students are being trained and prepared for national examinations. "Innovation now" characterises training at some mission centres. For example, Driefontein (near Masvingo) has ventured into the manufacture of windmills, among other things. However, for the most part changes in the education system have been largely quantitative than qualitative.

Against this background, surveys and plans to establish skill levels and to redress areas of need will be discussed. Development of technical institutions and provision of technical education will also receive due consideration.

2. Development of technical education during the post-colonial era (1980-2000)

2.1 Policy on technical education

2.1.1 National Manpower Survey, 1981

The National Manpower Survey of 1981 (NMS) was undertaken as an integral part of the Ministry of Manpower Planning and Development's operations. Ibbo Mandaza was appointed director of the Manpower Survey. The main objective of the National Manpower Survey (1981) was to take stock of the manpower situation in Zimbabwe at the time of the attainment of national independence. It was hoped that the exercise would assist the new government in the planning, training and development of the nation's manpower resources which are critical for the implementation of its programme for national rehabilitation, reconstruction and development (*Zimbabwe* 1981:35, 43).

The immediate task of the National Manpower Survey (1981) was to assess the following with regard to the nation's professional, skilled and semi-skilled workforce: its size and characteristics, and the existing shortages. On the basis of this assessment, short, medium and long-term policies for education and training to meet the nation's development requirements would be formulated (*Zimbabwe* 1981:43).

2.1.1.1 Findings

The NMS involved 862 014 persons of whom 8% were professional, 12% skilled, 20% semi-skilled and 60% unskilled and on the basis of this sample, the following findings, among others, were made:

- Africans fared very poorly in the professional and skilled categories when compared to Europeans. Generally, the important policy and decision-making jobs in the

economy were in the hands of European workers, while Africans dominated the semi-skilled and unskilled employment categories.

- Females, despite being more numerous in the population than males, were fewer in number than males in the professional, skilled and semi-skilled categories. However, among female employees, Europeans enjoyed an absolute dominance over all other race groups. On the whole, data reflected male domination of Zimbabwean society.
- 38% of the professional, skilled and semi-skilled workforce had educational qualifications of Standard 6 (i.e. eight years of primary education) and below, 28% between Forms 1 and 6 (i.e. one to six years of secondary education), 13% had vocational certificates and a mere 4% had diplomas and degrees. The remaining 17% did not have their educational qualifications reported.
- Most employers did not seem to appreciate and accept training as part of the worker's long term development so as to adapt more effectively to changing social, scientific and technological conditions.
- Misallocation of skills, arising from the flight of workers with technical and scientific skills from their areas of specialisation into administrative jobs as a result of income expectations and the attached public visibility, was observed.
- Between 1974 and 1980, on average Europeans had great dominance of apprenticeship in the technically critical trades: aircraft (95%), electrical engineering (80%), mechanical engineering (69%) and motor trades (71%). They also dominated in

hairdressing (81%). During the same period, in building Europeans accounted for 34%, while Africans were on average 49%.

- Skills wastage through persistent emigration was noted. The main beneficiary was the South African labour market. In December 1976, the total number of journeyman in the country was 13 663. By December 1978 and 1980, it stood at 11 955 and 9 024 respectively. The situation had been worsened by resignation of some European apprentices following the announcement of bonding which obligated graduate apprentices to serve the country for a period equivalent to that of their training in Zimbabwe.
- A number of different training programmes and institutions sprung up around the country, and consequently a multiplicity of certificates of questionable standards were being issued by different institutions and organisations (*Zimbabwe* 1981:48-62).

2.1.1.2 Some policy positions

On the basis of the findings of the National Manpower Survey (1981), the Ministry of Manpower Planning and Development articulated important policy positions. For example, that:

- recruitment of apprentices in the country be centralised to enhance attainment of a stable pool of technical cadres.

- a new four class grading system of skills (i.e. classes four to one) be followed to ensure standardisation and objectivity in skills classification.
- a single national advisory body to be called the National Manpower Council (NAMACO) incorporate the three existing advisory bodies, namely, Manpower Development and Training Authority (MANDATA), the Apprenticeship Authority and the National Manpower Survey Advisory Committee.
- application and supervision of bonding, trainee recruitment and certification regulation be further tightened to ensure that more Africans are enrolled in priority areas, those that have benefitted from training make a meaningful contribution to national development efforts and government protects students from expensive, exploitative and irrelevant training.
- both employers and employees continue to be educated to accept the necessity for continuous worker development through training.
- there be greater awareness and appreciation within government of the need for a comprehensive national training infrastructure.
- government ensures that most training requirements, especially at the artisan, technician and first degree levels, are met within Zimbabwe.
- a centralised national budget for external training be established.

- there be vocational training centres to provide in-service training and trade-testing facilities for the semi-skilled workers who have potential to perform at the skilled level.
- radical re-orientation in career choices be brought about among African pupils in general and females in particular through broadcasts, pamphlets and visits to schools.
- there be a salary revision for technical staff in the public sector, especially for instructors at technical colleges to enhance national training efforts which are hampered by critical shortage of technical instructors.
- there be in-built incentives in both schools and colleges to encourage young people to prepare for occupations in the science and technical fields.
- government takes bold interventionist and affirmative actions in the labour market, such as designating certain areas as priority areas for female workers and accelerating the advancement of females to policy-making positions.
- government identifies occupations for which, after a given time period, non-Zimbabweans and dual citizenship holders will be phased out (*Zimbabwe* 1981:62-70).

2.1.2 Transitional National Development Plan, 1982/83 - 1984/85

The three-year Transitional National Development Plan was the Mugabe government's first endeavour at socialist transformation with the view to correcting the inherent social and economic imbalances (*Zimbabwe* 1982:1). The Plan observes the existence of gross disparities at various levels in the dual education system inherited from the colonial era and it highlights the overcrowded, poor physical facilities, less qualified teachers and few schools available for Africans (*Zimbabwe* 1982:15, 89).

It is also important to note that the Plan accords a central position to people in Zimbabwe as the most valuable resource since they are the sources of ideas, policies, decisions, production and innovations which are essential for sustained development (*Zimbabwe* 1982:57). The Plan was thus designed to serve as a vehicle for mobilising the country's human and material resources to rid the country of the vestiges of exploitation, unemployment, poverty, disease, ignorance and social insecurity (*Zimbabwe* 1982:1). In practical terms, this would ensure the achievement of a democratic and egalitarian socialist society, and revitalisation of those aspects which suffered dislocation or neglect because of the war and the sanctions (*Zimbabwe* 1982:2, 23).

Consequently, the Plan's objectives are people-oriented and aimed at the attainment of full employment and full development of Zimbabwe's human resources. The Plan highlights the need to ensure effective utilisation of existing human resources by eliminating distortions and rigidities in the labour market, such as racial, sexual or other forms of unjustified discrimination or preferences, including regionalism and tribalism (*Zimbabwe* 1982:58). For this reason, even the skills and attitudes of the ordinary workers would be regarded important

but would require improvement.

To achieve its objectives, the Plan attaches importance to education, culture and training. These are regarded as a basic need and a fundamental right, a requisite of equitable growth and development, and a force to liberate the full human potential both individually and collectively (*Zimbabwe* 1982:27, 89). Education is expected to impart new values, attitudes and motivations associated with the new society. It is further expected to meet the demand for creative and productive skills in the economy. In this regard, the Plan recognises the importance of technical, scientific, and professional skills, as well as entrepreneurial and administrative abilities (*Zimbabwe* 1982:57). The Plan clearly states that technical and vocational training would be carried out in vocational schools, technical colleges and on-the-job. Government would also encourage and promote the establishment of training facilities in work places (*Zimbabwe* 1982:27).

Furthermore, in order to meet the demand for skilled personnel, the Plan reveals the need to make judicious use of expatriate workers to train Zimbabweans during terms of their contracts. It was hoped that this would fill the short-term manpower gap (*Zimbabwe* 1982:27, 58). The Plan also provides for skills upgrading for semi-skilled workers through trade-testing. Training needs of semi-skilled workers would be met at the National Vocational Training and Development Centre due to be established. Significant expansion of technical institutions was envisaged during the Plan period. Enrolment was expected to double. In addition, recruitment and allocation of apprentices to sectors would be centralised and brain-drain would be curtailed through a system of bonding for all apprentices (*Zimbabwe* 1982:59).

The envisaged expansion of training facilities implied a corresponding increase in the number of suitably qualified trainers. While expatriate instructors on short-term contracts would be employed, Zimbabweans would need to undergo training. Consequently, a technical teachers college was to be opened early during the Plan period (*Zimbabwe* 1982:59).

Realising the demand for training in the country, the Plan clearly stipulates that the financing of tertiary education and training would be borne jointly by government, private sector, and individual beneficiaries of such education and training (*Zimbabwe* 1982:91). This would make education and training more accessible to the people of Zimbabwe.

2.1.3 Manpower Planning and Development Act 36 of 1984 and its provisions

To provide a legal framework and ensure effective implementation of its manpower planning and development, government passed the *Manpower Planning and Development Act 36 of 1984*. More specifically, the Act was put in place to, among other things, provide for the establishment and maintenance of manpower training schemes and institutions, establishment of the National Manpower Advisory Council and imposition of a 1% levy (see pp. 102,108); *Zimbabwe* 1984:285).

The Act empowers the Minister to establish, equip and maintain vocational or technical training institutions as he may deem necessary or desirable for the instruction of persons in vocational or technical skills. It further provides for the establishment, equipmentation and maintenance of institutions for research in advanced technology (*Zimbabwe* 1984:289).

Private vocational or technical training institutions are to be registered in terms of this Act. It clearly stipulates that the premises of such institutions are to be suitable and adequate for the provision of efficient and suitable instruction. In addition, all members of staff are to hold appropriate qualifications. In terms of the Act, the Director of Vocational and Technical Training shall ensure that the set provisions and standards are complied with (*Zimbabwe* 1984:290).

Concerning the establishment of the National Manpower Advisory Council (NAMACO; see pp. 102, 106), the Act empowers the Minister to appoint its members on the basis of their expertise and interest in national manpower development (*Zimbabwe* 1984:292). The advisory function of the Council may, among other things, relate to:

- establishment and maintenance by the Minister of schemes for manpower development to ensure an adequate supply of trained manpower for industry and all other occupations in Zimbabwe.
- measures to improve national manpower development programmes.
- techniques for detecting in advance the possible impact on any trade or occupation of technological developments.
- standards for the certification of skilled worker qualifications.
- standardisation of training programmes and examinations for any trade or industry.

- promoting and mobilising support for the manpower development programmes (*Zimbabwe* 1984:295-296).

The Act further provides for the establishment of the Zimbabwe Manpower Development Fund (ZIMDEF). The Fund is sustained by industrialists who pay a 1% levy in support of technical training and human resource development in general. In terms of the Act, sources of the moneys for the fund shall include money appropriated by Parliament and a levy paid by employers in the specified manner and time. The fund is vested in the Minister who is empowered to direct its administration and disbursement (*Zimbabwe* 1984:296-298). The Act states that the Minister may authorise payments from the fund for the following purposes:

- bursaries, loans or advances to apprentices and other approved trainees (i.e. persons undergoing vocational or technical training as may be prescribed) for training purposes.
- costs and out-of-pocket expenses incurred by apprentices and other approved trainees.
- prizes for success by trainees.
- cost of conducting examinations as may be specified by the Minister.
- hire of trainers and instructors in connection with manpower development schemes.
- payment of grants and rebates to registered employers in respect of approved training, subject to approval by the Minister.

- payment of grants to registered private vocational or technical training institutions.
- meeting the administration costs of NAMACO members.
- meeting the expenses of promoting and mobilising support for manpower development programmes.
- meeting any other costs involved, including the acquisition of land, equipment and other assets, and the construction of buildings (*Zimbabwe* 1984:299; *Manpower Monitor* 1996:7).

With the powers of the Minister clearly defined and sources of money identified, government could proceed to develop its human resources for the benefit of the nation.

2.1.4 First Five-Year Development Plan on Technical Education, 1986-1990

Consequent to socio-economic developments at independence and during the period of transition, the First Five-Year National Development Plan (1986-1990) was developed. This sub-section focuses on the development objectives of the Plan and the proposed action with regard to technical-vocational education.

Broadly, the Plan was intended to lead to the achievement of national revolution, economic liberation and socialist transformation (*Zimbabwe* 1986:i). Zimbabwe would be transformed into a democratic, egalitarian and socialist society. Among other things, the development objectives of the Plan are clearly articulated as follows:

- raising the standard of living of the entire population, in particular, the peasant population, by raising labour productivity.
- enlargement of employment opportunities and manpower development.
- developing and strengthening an endogenous scientific and technological capability, in terms of human resources, institutions, information collection and dissemination (*Zimbabwe* 1986:10, 22).

To achieve these objectives, a central position was accorded to science and technology, and education in general. Government would have to spend public funds on education since it is a human right, a process of socialisation, a critical factor in nation building and it develops the requisite manpower for the development of science and technology, overall industrialisation, management and administration (*Zimbabwe* 1986:39).

The Plan proposes possible courses of action to be taken during the Plan period. For example, the Scientific Council of Zimbabwe would engage in the popularisation of science and technology. Curricula would be developed to make them more responsive to the country's intellectual, political, economic, manpower and cultural needs. This would call for the localisation of the examination and standardisation of the curriculum at all levels of the school system (*Zimbabwe* 1986:38).

According to the *Plan Zimbabwe* (1986:39), government would continue to intensify its efforts in manpower development in order to redress the imbalances of the past and ensure that development of manpower resources was in line with socialist society. To achieve this goal,

government would expand the existing institutional training infrastructure and create new institutions necessary for a well coordinated national training programme (*Zimbabwe* 1986:1, 38). Expansion would include strengthening of the seven technical colleges to enable them to provide more facilities for vocational education. Enrolment at the colleges would be increased from 13 776 in 1985 to 20 000 by 1990 and this would reduce the agony often faced by secondary school graduates in search for gainful employment. Manpower training programmes would be extended to cover areas outside urban areas where most of the informal economic activities are undertaken (*Zimbabwe* 1986:39).

In addition, government would:

- promote, develop and co-ordinate management training in order to harmonise and rationalise all training in the country and make the private sector more sensitive to the nation's socialist goals.
- increase its control and supervision of private commercial colleges in order to achieve standardisation and make them more relevant to the new social order.
- ensure greater co-ordination of technical education at secondary and tertiary levels.
- maximise the use of resources and avoid duplication in public sector training through greater co-ordination (*Zimbabwe* 1986:38-39).

It was hoped that the country's growing needs would be catered for and self-reliance would be achieved.

2.1.5 Second Five-Year Development Plan on Technical Education, 1991-1995

In keeping with the provisions of the First Five-Year Development Plan (1986-1990), the Second Five-Year Development Plan (1991-1995) highlights the importance of science and technology in national development. The Plan observes serious deficiencies in skilled manpower in key areas of science and technology such as engineers, technicians and doctors (*Zimbabwe* 1991b:84). These shortages are attributed to problems of qualified teaching staff and lack of adequate financial resources to develop the infrastructure for science and technology. In addition, the Plan sadly acknowledges that the economy has not expanded sufficiently and rising unemployment has become a disturbing feature since 1981. Consequently, human resource development and community upliftment are accorded a central position in the Plan. In this regard, the Plan's development objectives and proposed action pertaining to technical-vocational education, receive attention in this sub-section.

The Plan's main objectives include:

- eradication of poverty.
- employment creation.
- productive investment.
- improving the quality of life of the people (*Zimbabwe* 1991b:i, ii).

For this reason, emphasis would be placed on provision of relevant, quality education and training to disadvantaged groups and thus meet the skilled personnel requirements of all sectors of the economy (*Zimbabwe* 1991b:76). In particular, technical and entrepreneurial skills for enterprise development would be highly promoted (*Zimbabwe* 1991b:ii).

The Plan proposes possible strategies and course of action to be adopted to ensure the realisation of its objectives. It is important, however, to reiterate that technological know-how is central to the plan. According to the *Zimbabwe Second Five-Year Development Plan* (1991b:84):

Technological know-how is the most decisive factor in development because it enables one to convert natural resources into goods or to manipulate ... resources so as to produce the desired environment.

For this reason, the Plan clearly states that government would:

- rationalise and consolidate its efforts to institute new content and structure of the education system with particular emphasis on the expansion of science and technical subjects.
- facilitate the training of more teachers in technical fields and provide additional requisite equipment to allow for the introduction or promotion of technical subjects at secondary schools throughout the country.
- continue to use external scholarship facilities offered by other countries for the training of high level personnel in critical and shortage areas such as surveyors and medical

doctors.

- review the conditions of service for professional and technical personnel working in public institutions to reverse the brain drain which was adversely affecting teaching and training programmes at technical colleges and at university level.
- continue to use expatriate staff until Zimbabwe had enough qualified personnel to man its institutions of higher learning and technical colleges (*Zimbabwe* 1991b:77)

According to the Plan, output of teachers would be increased with the opening of Chinhoyi Technical Teachers' College in 1991. Its mandate would be to produce teachers and instructors needed in high schools in technical fields, such as automotive and mechanical engineering, construction, applied arts and crafts, agriculture, business studies, computer studies, home economics and others (*Zimbabwe* 1991b:78). In addition, the number of teachers with a techno-scientific orientation would be increased during the Plan period by about 1 200 graduates returning from Cuba under the Zimbabwe/Cuba Teacher Education programme. Furthermore, the Plan envisages the easing of shortages of technical and science personnel in all sectors of the economy as a result of the establishment of the National University of Science and Technology (NUST) in Bulawayo.

For example, the Bachelor of Technology degree programme would be housed by NUST from 1991 (*Zimbabwe* 1991b:85). To consolidate these efforts, the Plan encourages more private sector participation in human resource development.

In pursuance of the goal of human resource development in technical fields, the Plan clearly spells out government's intentions and policy positions on technical, vocational and industrial training. According to the *Zimbabwe Second Five-Year Development Plan* (1991b:79), government would:

- consolidate all existing colleges and institutions in order to achieve full capacity utilisation in the Plan period, and replace antiquated equipment in line with new technological developments.
- standardise technical and vocational education through five certificate structures in order to streamline the multiplicity of courses offered by the different types of institutions. At every level, students could opt for employment or continue their studies up to university level.
- ensure that technical colleges develop a national and regional outlook. They would be expected to provide outreach services to their immediate environments and would retain their national character through their enrolment policies.
- provide, as part of the capital programme for existing colleges, additional tutorial facilities to accommodate new programmes and to expand existing ones; additional office space; residential accommodation for staff; hostels and related facilities for students from rural areas; and to eliminate the need for hotel accommodation for apprentices with college attachments.

Furthermore, the Plan highlights the possibility of introducing technical courses in the evening and vacation periods. The Plan envisages that enrolment at existing technical colleges would reach 20 000 by 1995 (*Zimbabwe* 1991b:79). In addition, the capacities of Msasa and Westgate Vocational Training Centres (in Harare and Bulawayo respectively) would be increased to 1 000 trainees each. Government would also establish a vocational training centre in each town. This would only be achieved through a partnership with the private sector, local authorities and charitable organisations (*Zimbabwe* 1991b:80). Annual intake of apprentices would be increased as a result of the increased number of designated trades. Greater commitment by industry and employers to industrial training would be developed.

Finally, to ensure maintenance of standards in institutions of higher learning, the Plan provides for supervision of institutions by the National Council for Higher Education (*Zimbabwe* 1991b:81).

2.1.6 Rationalisation of courses and qualifications

The democratisation of the educational system in Zimbabwe at independence (1980) led to a multiplicity of courses and various levels of training at different institutions, namely; private, parastatals, local authorities and government institutions (*Zimbabwe* 1990c:1). As a result, some basically equal qualifications were certificated differently and disparities were also noted in terms of course content, duration, facilities, methodology, quality of staff and entry requirements. The *Rationalisation of Vocational and Technical Education Policy Committee* (*Zimbabwe* 1990c:2) further notes that, "in some cases we even have practical courses offered by correspondence!". Consequently, the unstandardised accreditation has caused concern to both the government and the beneficiaries of training programmes *vis-a-vis*

employers.

In December 1990, the government of Zimbabwe adopted the policy on "Rationalisation and New Structure of Vocational and Technical Education in Zimbabwe" (*Zimbabwe* 1990c:1). Rationalisation was intended to establish a co-ordinated approach in the development of professional and skilled manpower. In addition, as a result of rationalisation, levels of expertise to be produced by tertiary education would be distinguishable and certificates awarded would be terminal and reflect specific competencies, and serve as entry qualifications for other allied or higher courses (*Zimbabwe* 1990c:2-3; *Director, Curriculum, Examinations and Distance Education Circular Number 2 of 1995:3*). In terms of the new policy, the products of the system must be viable in it self or formal employment. Of importance, too, the system has to have a general acceptance by the community at large (*Zimbabwe* 1990c:3).

The new policy establishes that vocational and technical education be structured at 5 levels: Pre-Vocational Certificate (PVC), National Foundation Certificate (NFC), National Certificate (NC), National Diploma (ND), and Higher National Diploma (HND). This entails qualitative changes in terms of the target population and the content of post-secondary education. The policy further stipulates that the National Examinations Council for Higher Education (HEXCO) should be the authority responsible for setting and controlling standards and the award of the certificates and diplomas at non-degree level (*Zimbabwe* 1990c:1).

In terms of the new dispensation, salient details relating to structure, entry requirements, duration of courses and purpose of technical and vocational education at each of the 5 levels may be outlined as follows:

- **Pre-Vocational Certificate (PVC):**

It is a multi-discipline basic course undertaken by persons who have completed Grade 7, that is, seven years of primary schooling or its equivalent. The course is intended to prepare and equip the individual to be a handperson or operative in more than one industry. This training should be offered by secondary schools.

- **National Foundation Certificate (NFC):**

Trainees must have completed Form 2 or PVC or its equivalent. NFC is issued to skilled operatives in single subject courses, such as carpentry, metalwork, building, commerce, agriculture, typing and home economics. NFC holders are expected to be able to assist skilled workers or to be self-employed. Thus, this qualification is designed to further consolidate and develop understanding of the world of work and a more realistic entrepreneurial spirit in the trainees. This training should be offered by vocational training schools and technical high schools.

- **National Certificate (NC):**

Trainees must have completed Form 4 or NFC or its equivalent. Generally, training lasts one year and this qualification is issued for single discipline advanced courses. Holders of NC are expected to be productive and understand the basic principles and laws governing the operations in a single area of specialisation in a given industry. Training should be offered by vocational training centres, technical colleges and polytechnics.

- **National Diploma (ND):**

Trainees must have completed Form 6 or NC or its equivalent. ND is equated to first year university work and holders of ND are expected to demonstrate an understanding of advanced principles in areas of specialisation and also carry out supervisory duties. Generally, training should last two years. Such training should be offered by technical colleges and polytechnics.

- **Higher National Diploma (HND):**

Trainees must have completed ND. Generally, training lasts one year and holders of HND are expected to demonstrate an understanding of more advanced principles in areas of specialisation. HND is equated with the first two years of university work. Holders of HND are technologists who conduct practical research to adjust technologies to the local environment and they may even devise substitutes. Such training should be offered at polytechnics. However, in reality, technical colleges also offer HND in areas for which they have the capacity (*Zimbabwe* 1990c:3, 6).

From this discussion, it is clear that through rationalisation government hoped to systematically generate manpower needed to sustain the economy, monitor, control and manage the essential processes of skilled manpower development and training. However, it was keenly aware that rationalisation would require heavy investment in terms of money, materials and appropriate human resources (*Zimbabwe* 1990c:9).

2.1.7 Implications of the policy documents

Close scrutiny of the policy documents on the provision of technical education in post-independence Zimbabwe reveals significant implications for successful implementation of policy measures.

For example, introduction of a new political ideology would call for new socio-economic orientation among Zimbabweans of all social and racial groups. Thus, new attitudes and dispositions would be highly called for. Provision of technical-vocational education would have to be viewed as a shared responsibility by private sector, parastatals, local authorities and government. Only in this way would the requisite heavy financial outlay, expertise and infrastructural investment be availed for the provision of education and training to the large numbers of trainees requiring it. Implied also was the need for a sound economy capable of sustaining training efforts and absorbing products of education and training. Above all, policy provisions would demand true commitment from all involved in the provision of technical-vocational education.

2.2 Post-independence development of technical-vocational education

2.2.1 Establishment and development of technical colleges and polytechnics

The establishment and development of technical colleges and polytechnics can only be understood against the background of developments in this area in pre-independence Zimbabwe. This is the case because the oldest technical institutions came into being before independence in 1980. It is also important to note that since periodisation and provision of

details of the establishment of institutions tend to be characterised by controversy, consultation of principals of institutions and some written documents was done to achieve considerable accuracy and certainty. Principals' responses were obtained through the use of a questionnaire (Appendix A). Furthermore, one is only able to outline a few key developments with reference to individual colleges in a study of this nature.

2.2.1.1 Establishment and mandates of individual colleges

Both Harare and Bulawayo Polytechnics were established before independence and they have experienced a lot of developments since then. As indicated in Chapter 2, (see pp. 74-79) Harare Polytechnic was initially concerned with the training of personnel in mechanical engineering. Thus, its mandate was to provide industry with technically qualified personnel. Its mission expanded to include commerce. According to the *Manpower Monitor* (1994b:12), Harare Polytechnic seeks to play its full part in the overall development of a national skills base necessary for economic development, and in response to the everchanging manpower needs of commerce and industry. To achieve this, it provides trainees with vocational, technical and entrepreneurial skills that prepare them for wage or self employment in the various sectors of the economy. The management of the college, however, admits that at the moment the polytechnic is reacting to developments in industry rather than lead in research and development and contribute to technology generation (*Manpower Monitor* 1994b:14).

On the other hand, in terms of development, Bulawayo Technical College became a polytechnic in 1989. Before this change in status, it had received significant support from external donors in 1987. It received computer equipment from USAID and more equipment for the Hotel School (which is part of the Polytechnic) was received from the Zimbabwe Sun

Hotel group (*Technical College Bulawayo: Annual Report 1987:5*). The original mandate of the polytechnic was to train craftsmen. It now covers craftsmen, technicians and the requisite personnel for commerce and other sectors of the economy.

Apart from the above two polytechnics, three technical colleges, namely, Gweru, Kwekwe and Mutare Technical Colleges have their origins in pre-independence Zimbabwe as small centres for commercial courses. For example, Gweru Technical College started as a satellite or annex of Bulawayo Technical College at Chaplin High School in 1975 (*Gweru Technical College: Annual Report 1984:2*). The Gwelo Technical Centre moved to the present site in 1982, still as a department of Bulawayo Technical College. In that same year the centre became a fully-fledged technical college. The college became poised for great development in 1985 and thereafter. With technical assistance being received from the European Economic Community (EEC), automotive, electrical and mechanical engineering were introduced (*Gweru Technical College: Annual Report 1984:2*). The first intake of trainee lecturers was enrolled in 1986 soon after the EEC had completed equipping the workshops (*Gweru Technical College: Prospectus 1994-1995:5*).

Gweru Technical College became an associate college of the University of Zimbabwe in 1995 after a rigorous process to try and meet the prerequisites for associate status. Under the Scheme of Association, the University's Department of Teacher Education (DTE) provides both academic and professional guidance to the College. This has been found to upgrade standards and strengthen the lecturer training programme. In terms of its mandate, Gweru Technical College has witnessed a lot of development. Its original mandate was to produce skilled secretaries and book-keepers. The mission has now expanded, with main focus on producing and developing technical lecturers, training officers and instructors for public and

private technical and vocational institutions in order to produce the technically skilled personnel to serve the needs of the national economy (Gwarinda 1994:2; *Gweru Technical College: Mission Statement* 1996:1). In addition, Gweru Technical College is also committed to producing skilled personnel for commerce and industry in those fields for which it has the capacity. Thus, parallel specialisation is allowed for those wishing to join commerce and industry and those for lecturer training.

The present Kwekwe Technical College owes much to *Union Carbide Zimbabwe (Pty) Ltd* for its establishment and equipmentation in order to prepare skilled personnel for industry (*Manpower Monitor* 1995b:12). The completion of the construction of the institution coincided with Zimbabwe's independence in 1980. *Union Carbide Zimbabwe (Pty) Ltd* donated the institution to the government and people of Zimbabwe on 4 December 1981, with classes commencing in 1982 following the transfer of 54 mechanical craft practice apprentices from Harare and Bulawayo (*Manpower Monitor* 1995b:12). Its original mandate was to train apprentices in designated trades and support manpower development. The mission has been broadened to cover more sectors of the economy, beyond apprentices. In this regard, the *Manpower Monitor* (1995b:12) reveals that Kwekwe Technical College is committed to providing quality technical and vocational education that is responsive to the needs of the individual and the demands of the private and public sectors of the national economy.

Before independence, what has become known as Mutare Technical College operated from the city Centre of Mutare as a small centre for commercial courses. At one stage it operated as a satellite centre for Harare Polytechnic. Its original mandate was to equip individuals with skills required in the commercial sector of the economy. The present Mutare Technical College was established in 1986, with considerable donor funding for its capital projects. Its

mission statement or mandate can be summarised as follows :

to facilitate the development of technical, professional and entrepreneurial skills relevant to the individual, local, national and regional needs, through providing quality vocational and technical education and training, taking into account equity considerations (*Manpower Monitor* 1995a:13).

The mission now also includes engineering courses.

The Kushinga-Phikelela Technical College was established in 1981 as the school of stenography. Its original mandate was to train ex-combatants in self-reliance skills. It was officially opened in 1986 and changed its name from Kushinga-Phikelela School of Stenography to the Kushinga-Phikelela Technical College (Manyuchi 1986:15). With changed circumstances, the ex-combatant element is no longer central to recruitment of students. However, the College has remained committed to producing skilled self-reliant people who are able to contribute to nation-building (*Kushinga-Phikelela Technical College: Annual Report* 1987:1). Since its inception, it tried to uphold the socialist ideology through collective pooling and utilisation of resources. For this reason, the Business and Secretarial Departments at Kushinga-Phikelela Technical College were able to extend their activities to the Marondera and Rusape satellite centres (*Kushinga-Phikelela Technical College: Annual Report* 1986:1). However, its satellite centres at Murewa and Macheke were closed at the end of 1985.

Of interest, too, is the establishment of Masvingo Technical College. Operations began in 1984 with two departments, namely, Business Studies and Secretarial Studies, housed at Mucheke Hall in Masvingo (*Masvingo Technical College: Prospectus* s.a:2). The college moved to its present site in 1988 and it also offers courses in automotive, electrical and

mechanical engineering disciplines. According to the *Masvingo Technical College:Prospectus* (s.a:2), the college was instituted as part of the government policy of providing training programmes that would meet the growing needs of business, industry and government for skilled personnel that would contribute to the development of Zimbabwe and enable it to participate in the world economy. The College is committed to mobilising the technological, human, material and physical resources to provide total customer satisfaction (*Masvingo Technical College:Prospectus* s.a.2) More specifically, Masvingo Technical College's mandate is to develop human resources mainly for the sugar industry which is considerably successful in this region. The management of the college, however, feels that the mandate could be altered as follows: be demand led, market-oriented, clientele-driven and more responsive (see Appendix A).

The eighth technical institution to be considered under this section is the *Harare Institute Of Technology* (HIT). It was established in 1988 as a vocational training centre charged with the responsibility to upgrade skills of semi-skilled personnel and engage in curriculum development. It now offers technical courses in automotive, electrical and mechanical engineering. Business courses are yet to be introduced.

Finally, the government, in pursuance of its goal to provide technical and vocational training to many people, has embarked on a programme to establish over 20 vocational training centres throughout the country. Government is working on introducing partnership with not only local authorities but also other non-governmental organisations to boost national vocational training capacity (*Chronicle* (The) 17 August, 1998:2). It is hoped that with the escalating level of unemployment in the country, school leavers and other people requiring technical and vocational training will benefit more from these training efforts.

2.2.1.2 Rationale behind the establishment of technical colleges and polytechnics

Although the history of technical institutions in Zimbabwe dates back to the colonial era, significant developments have been noted in this area in post-independence Zimbabwe. These massive developments in technical-vocational education seem to be linked with the ZANU government's socialist orientation, particularly in the early 1980s.

Government has always felt that technical-vocational education leads to the development of the total person since it integrates theory and practice. It has also been felt that a person's multifarious faculties are easily developed through the provision of polytechnical education which is by nature multifaceted education capable of empowering people to earn a living under difficult economic circumstances. In addition, graduates of this type of education would constitute the requisite multi-skilled human resources.

According to the Zimbabwe Economic Policy Statement of 1990 (*Zimbabwe* 1990b:9), education represents a long-term investment in human resources and its provision needs to be balanced with investment in immediately productive sectors to enable the economy to sustain the implied costs. With this view in mind, government established and developed technical institutions alongside other institutions in the education sector.

It is also important to note that the ZANU government felt from the beginning that it was embarking on its second revolution, the socio-economic revolution which would be partly won through enskilling the unskilled and the semi-skilled so as to correct the manpower situation inherited from the past (*Zimbabwe* 1981:5; *Zimbabwe* 1982:i). Enskilling more people would increase the number of key players in the mainstream of the country's economy. Productivity

would be increased and subsequently development would be achieved. It was also hoped that import substitution would be achieved and this would lead to vital saving of valuable foreign currency.

In addition, government also felt that technical institutions would encourage creativity and innovation in their graduates. Such graduates would be job creators rather than job seekers. Thus, employment creation would be achieved and graduates of technical institutions would be self-reliant. Consequently, community upliftment would be enhanced and people would enjoy improved quality of life.

2.2.1.3 External aid

Although most technical institutions in Zimbabwe might have benefitted in one way or the other from external assistance in the past, the situation seems to have changed. For example, Harare Institute Of Technology (HIT) which used to benefit from G.T.Z.¹⁹ and USAID²⁰ is no longer enjoying similar benefits. Responding to a questionnaire (see Appendix A) 5 out of eight 8 principals indicated that their institutions had no sources of external aid. One principal acknowledged benefitting from external aid in the form of donations, a benefit which other institutions enjoy to varying extent. However, Masvingo Technical College and Kushinga-Phikelela Technical College reported that they were still receiving considerable external assistance. Masvingo Technical College is still benefitting from G.T.Z. and Kushinga-

¹⁹G.T.Z. is an abbreviation for Deutschen Gesellschaft für Technische Zusammenarbeit (GTZ) or Germany Foundation for Technical Cooperation for financial, technical assistance and skilled personnel. Its main objectives include, needs assessment, equipmentation of some colleges, manpower development, technical advice and financial assistance.

²⁰USAID is the United States Agency for International Development. It is a bilateral assistance agency of the US government whose primary objective is to assist Third World countries with educational grants, special-interest loans, and technical assistance. It also offers military assistance to friendly Less Developed Countries (LDCs); Todaro 1992:439, 497, 508).

Phikelela Technical College is benefitting from the Holland Committee for Southern Africa and Council for the Blind, specifically for blind students.

What this essentially means is that technical institutions have to rely heavily on ZIMDEF²¹ and voted funds or budget allocation by government. However, according to the *Annual Report of the Secretary for Higher Education for the year ended 31st December 1992* (Zimbabwe 1992a:1), favourable progress has been maintained in the area of technical co-operation with Australia, Britain, Canada, France, Germany, Ireland, Sweden, Switzerland and the United Nations group, with new agreements being initiated in technical-vocational education.

2.2.1.4 Administration and control of technical colleges and polytechnics

At independence the Ministry of Labour, Manpower Planning and Social Welfare was charged with the responsibility of, among other things, establishing national training needs and promoting the provision of the requisite skills to ensure national economic development. For this reason, all technical and vocational institutions were placed under the Ministry of Labour, Manpower Planning and Social Welfare until January 1988 when they were transferred to the newly established Ministry of Higher Education.

According to the *Manpower Monitor* (1994a:3), the Ministry of Higher Education consists of three departments, namely, Manpower Planning and Development; Curriculum, Examinations and Distance Education; and Administration and Finance. Its mission is to provide, regulate

²¹ZIMDEF is the Zimbabwe Manpower Development Fund, established by the Manpower Planning and Development Act, 36 of 1984. The Fund is sustained by industrialists who pay a 1% levy in support of technical training and human resources development in general.

and facilitate tertiary education and training in order to meet the national requirements for trained manpower (*Manpower Monitor* 1994a:3). According to the *Manpower Monitor* (1994a:3), the objective will be accomplished by, among other things:

- formulating and implementing a programme of research aimed at determining manpower needs in the short, medium and long terms.
- formulating and implementing manpower policies and plans.
- developing and implementing manpower training programmes and schemes in vocational, technical and teacher education.
- provision of resources and management of institutions.
- developing and maintaining effective liaison with commerce and industry.
- coordinating with agencies concerned with or involved in human resources development.

At college level the Ministry of Higher Education (now Ministry of Higher Education and Technology) encourages institutions to set up such structures as college management boards (CMB) and academic boards to ensure the smooth running of operations and effective execution of training which is their core business. A college management board (CMB) may be composed of the vice principal, heads of departments and registrar. The CMB is chaired by the principal. It affords the principal a consultative forum on matters pertaining to the

general administration of the institution. In cases where CMBs exist, they formulate college policies regarding the smooth running of the college and its relations with its public.

On the other hand, college academic boards (CAB) seem to be invariably composed of heads of departments and chaired by principals. College academic boards (CAB) concern themselves with the academic issues of their respective institutions. Among other things, they are responsible for syllabus development at college level, structuring of courses, ratification of results at college level, sourcing of non-human and human resources, and evaluating adequacy of resources and effectiveness of training staff.

In addition to these structures, there are also nodal structures which assist institutions in a purely advisory capacity. They include the National Manpower Council (NAMACO) which advises the Ministry of Higher Education and Technology (as revealed earlier on), the College Advisory Council (CAC) and the Departmental Advisory Committee (DAC).

The College Advisory Council (CAC) is established in terms of statutory provisions. In terms of the *Rhodesia Government Notice, No. 115 of 1979, Act 33/79 (Rhodesia 1979:528)*, the Minister may establish a council for any college and the council shall consist of an ex officio member and 9 other members appointed by the Minister after consultation with such organisations and persons representing the community and the interests served by the college as he may consider appropriate. More specifically, the 9 members represent commerce and industry, and the principal of the respective college serves on the council in an ex officio capacity (*Rhodesia 1979:528*). The College Advisory Council (CAC) is chaired by one of the members, other than the ex officio member, and its terms of reference are:

- to advise and make recommendations to the principal on matters connected with the welfare, education and training of students.
- to make recommendations to the Director through the principal, on matters pertaining to the educational and training content of courses offered within the college; and the introduction of new courses (*Rhodesia* 1979:530).

In addition, the College Advisory Council (CAC) advises the principal on the requirements of industry and commerce in relation to manpower needs and how the changes in industry would affect the operations of the college (*Gweru Technical College: Prospectus 1994-1995:8*).

The third level requiring advice consists of the college departments themselves. According to the *Structure and Guidelines for Curriculum Research and Development (Zimbabwe 1994b:10)*, all college departments are expected to establish departmental advisory committees. A Departmental Advisory Committee is composed of lecturers of the relevant college department, and representatives of the local industry and commerce, parastatals and other government departments who are specialists in the relevant disciplines (*Zimbabwe 1994b:10*). The functions of a Departmental Advisory Committee include the following:

- to advise the department on issues relating to training.
- to advise the department on issues relating to the curriculum and examination where necessary.

- to make their deliberations known to the curriculum committee chairman (*Zimbabwe* 1994b:10).

A clear *modus operandi* is noted in the administration and control of technical institutions in Zimbabwe, with the Ministry of Higher Education and Technology having overall control on the colleges and advisory councils providing vital advice to them.

2.2.2 Provision of human and non-human resources

To ascertain the adequacy of human and non-human resources at individual technical institutions, principals were requested to respond to a questionnaire (See Appendix A). Their responses to the relevant questions in the questionnaire constitute the basis of this discussion.

Two principals did not comment on this matter for undisclosed reasons. However, 3 indicated that the provision of non-human resources was somehow satisfactory, especially with regard to equipment and consumables. One respondent who sounded more tolerant remarked, "We are sufficiently catered for within the usual constraints of government funding".

However, 4 respondents expressed their dissatisfaction concerning a number of inadequacies being experienced by their institutions. Inadequacies highlighted include teaching space in the form of laboratories and purpose-built classrooms, equipment and consumables. In the area of human resources the legal authorised establishment for lecturing staff was deemed to be too small and, therefore, inhibited course diversification. To worsen the situation, respondents revealed that funds allocated continue to dwindle. Thus, there was need for more human and non-human resources to enable institutions to utilise the existing capacities in full.

2.2.3 Programmes and courses

Technical institutions offer technical-vocational education which is characterised by diversity of courses or areas of specialisation, possible combinations and depth of study. Variations in infrastructure and availability of the requisite human resources also determine the range and levels of courses individual institutions can offer. The responsiveness of technical institutions to local needs also tends to vary quite considerably. In terms of organisation some institutions are organised into departments while others run departments grouped into divisions.

What has been observed is that, in keeping with the rationalisation of technical-vocational education of 1990, technical institutions which offer business studies tend to offer courses in this area at NC, ND and HND levels (see pp. 118-119). While mechanical and electrical engineering are offered at NC and ND levels, construction courses, such as carpentry and joinery, plumbing, bricklaying and wood technology are not being offered beyond NC level at technical institutions in Zimbabwe. The automotive engineering discipline also seems not to have the capacity to upgrade its courses beyond NC level at the moment.

Further observations are that all technical institutions in this study except the Harare Institute of Technology offer business and secretarial studies and computer studies. In addition, all technical institutions except Kushinga-Phikelela Technical College offer the following disciplines: automotive, electrical and mechanical engineering. Four technical institutions, namely, Bulawayo, Masvingo, Harare and Mutare also offer hairdressing. In addition, Harare Polytechnic and Masvingo Technical College offer clothing technology.

It is also important to highlight a few unique areas offered by selected technical institutions in Zimbabwe. For example, the Bulawayo Polytechnic runs a hotel school which is making significant contributions to the hotel and tourism industry. The above Polytechnic also trains personnel in foundry, refrigeration, horticulture, applied art and design, rubber technology, laboratory technology, and library and information science.

Similarly, the Harare Polytechnic offers a range of courses in 10 major disciplines which include unique areas such as: printing and graphic arts, mass communication, science and technology, and library and information science (*Manpower Monitor* 1994b:12). The Mass Communication Division started in 1981 as an institute under the auspices of the Zimbabwe Mass Media Trust (ZMMT), and then moved to the Harare Polytechnic in 1983. It has two departments, namely, print journalism, and radio and television broadcasting (*Manpower Monitor* 1994b:12).

The Science and Technology Department at the Harare Polytechnic trains technicians for chemical, mining, floriculture, rubber and plastics industries as well as for hospitals and pharmacies (*Manpower Monitor* 1994b:13).

In a bid to produce highly skilled personnel, the Ministry of Labour, Manpower Planning and Social Welfare introduced the Bachelor of Technology Degree programme (B.Tech) in 1986 in the following areas: mechanical engineering, electrical engineering, civil engineering, business management and applied science (Manyuchi 1986:24). The programme was housed at the Harare Polytechnic and the Bulawayo Polytechnic (then a technical college). Manyuchi (1986:23) points out that the programme had massive demands in lecturing staff, consumables, classrooms, laboratories and workshops. Consequently, the programme was

placed under the University of Zimbabwe which already had the requisite infrastructure and human resources, particularly in the engineering disciplines. However, the University of Zimbabwe (UZ) decided to phase out the B.Tech programme in the wake of the establishment of the National University of Science and Technology (NUST). Despite this decision by the UZ, 2nd, 3rd and 4th year students studying the B.Tech programme continued to be taught at both the Harare and Bulawayo Polytechnics (*National University of Science and Technology Yearbook 1998/9* 1998:40). The NUST was eventually established and opened on 8th April 1991 with a science and technology bias (*National University of Science and Technology Yearbook 1998/1999* 1998:38, 41).

It is also important to highlight a few rather unique developments in programmes and courses which took place at Kushinga-Phikelela Technical College. Since its inception, it placed emphasis on co-operation, education with production and self-reliance. For this reason, it established a training with production department. The production unit afforded students opportunities to engage in productive undertakings, such as poultry, rabbitry and gardening (*Kushinga-Phikelela Technical College: Annual Report 1986:2*). The Department of Co-operative Development at the college was also involved in a 3-year long programme which commenced in May 1986 to train co-operative managers under the Zimbabwe/Italy Technical Aid Project (*Kushinga-Phikelela Technical College: Annual Report 1986:3-4*). Although this has not been a permanent feature of the College, it is a clear indication of its commitment to empowering the community with skills for the achievement of self-reliance.

Mutare Technical College should be highlighted for its well established Wood Technology Department over and above other rather common departments. It is located in a region with abundant timber resources and thus focuses on timber utilisation (*Manpower Monitor*

1995a:13).

Masvingo Technical College should also be highlighted for its effort to respond to community needs through mounting programmes and courses in relevant areas. For example, in addition to the traditional areas, the College now runs a vibrant division of non-formal training to meet the needs of the informal sector (*Masvingo Technical College: Prospectus s.a:2*).

In addition to this, all technical institutions in this study, except 2, offer the Zimbabwe Further Education Teacher's Certificate (ZFETC or simply FETC) and the Further Education Teacher's Diploma (FETD). One of the remaining 2 colleges offers the Diploma in Technical and Vocational Education and Diploma in Education. These programmes and courses are intended to equip trainers with teaching skills. This aspect shall be dealt with in considerable detail in a subsequent section (see pp. 141-145). Considering the diversity of programmes and courses offered in technical institutions, the discussion thus far cannot claim to be exhaustive, but selective on highlights.

2.2.4. Enrolment

A discussion of enrolment trends demands reference to college enrolments in general, racial composition of student population, gender participation and college enrolment of apprentices. This information is presented in tabular form below.

TABLE VI

Enrolment of students at technical institutions (1981-1994)

Tech Inst ²²	1981	1982	1983	1984	1985	1986	1988	1989	1990	1991	1992	1993	1994
Harare	3816	4045	4561	5063	6480	5492	5980	4500	4582	2193	5603	5131	8266
Byo	4288	4582	4710	4456	3771	3801	3080	1882	1897	2383	2507	2649	4744
Kwekwe		339	597	603	835	670	1025	571	508	550	699	700	777
Gweru	195	283	475	395	479	347	455	533	674	273	576	580	686
Mutare			467	511	390	408	953	987	807	937	902	1149	1753
Ku-Ph			100	220	387	371	234	394	327	344	364	385	441
Masvi				125	142	162	232	245	280	500	617	1170	1494
HIT									308	876	634	820	849

Sources: Manyuchi, E.P. 1986. *The Directorate of Vocational and Technical Training Institutions: Annual Report for 1986*. Harare: Government Printer. (This has been the source of enrolment figures for the period 1981 to 1986).

Zimbabwe. 1994a. *Annual Report of the Secretary for Higher Education* (for the year ended 31st December 1994). Harare: Government Printer. (This have been the source of enrolment figures for the period 1988 to 1994).

²²Tech inst - Technical Institution
 Byo - Bulawayo
 Ku-Ph - Kushinga-Phikelela
 Masvi - Masvingo
 HIT - Harare Institute of Technology

Notes: Enrolment figures include both full-time and part-time students.

Table VI (see p. 137) shows a generally high demand for technical-vocational education, although figures have not remained consistent. According to the Annual Report of the Secretary for Higher Education for the year 1990 (*Zimbabwe* 1990a:6), technical colleges significantly increased their enrolments, given the benefits of technical lecturers from Gweru Technical College and continued efforts of recruiting contract lecturers. However, a gradual decline in the numbers of European students has been noted as the majority have tended to enrol at private training centres such as Delta Training Centre in Harare. The few remaining at technical institutions are in specialised areas such as art and refrigeration.

Tables VII and VIII (see pp. 138-139) highlight gender participation in engineering and science areas and business and secretarial studies for the period 1990-1993 respectively.

TABLE VII

Gender participation in engineering and science areas in technical institutions (1990-1993)

Year	Males	Females	Total	% Males	% Females
1990	3042	229	3271	93	7
1991	3789	220	4009	95	5
1992	4559	342	4901	93	7
1993	4448	350	4798	93	7

Source : *Zimbabwe. 1993 Annual Reports of the Secretary for Higher Education for the year ended 31st December 1993.* Harare: Government Printer.

TABLE VIII

Gender participation in business and secretarial studies in technical institutions (1990-1993)

Year	Males	Females	Total	% Males	% Females
1990	2656	1586	4242	63	37
1991	1573	1586	3159	49,79	50,21
1992	3318	2366	5684	58,4	41,6
1993	3146	2374	5520	57	43

Source : Zimbabwe. 1993 Annual Report of the Secretary for Higher Education for the year ended 31st December 1993. Harare: Government Printer.

Notes : Enrolment figures used for business and secretarial studies are based on Third term college enrolments.

The Annual Report of the Secretary for Higher Education for the year ended 31st December 1991 (*Zimbabwe 1991a:5*) observes an overall increase in female enrolment reflecting Ministry's deliberate policy of improving the participation and status of females in the economy and the determination of females to play an active economic role in national development. However, Table VII (see p. 138) shows that females are significantly outnumbered by males in engineering and science areas. Table VIII (see above) also shows that females are outnumbered by males even in the traditionally female-dominated areas, namely, business and secretarial studies.

College enrolment of apprentices should also receive attention in this study. Enrolment figures are presented in Table IX below.

TABLE IX

College (technical institution) enrolment of apprentices (1990-1993)

Year	Apprentices requiring college training	Apprentices enrolled in colleges	Apprentices whose college training was postponed
1990	2315	960	1355
1991	3688	1248	2440
1992	3573	1616	1957
1993	3340	1504	1836
TOTAL	12916	5328	7588

Source:

Zimbabwe. 1993 Annual Reports of the Secretary for Higher Education for the year ended 31st December 1993. Harare: Government Printer.

Table IX (see above) shows that 5328 apprentices (41%) were enrolled in colleges and 7588 apprentices (59%) had their college training postponed. This seems to be the trend five years later too. The demand for training in all departments of technical institutions continues to rise and each year technical institutions have to turn away large numbers of suitable applicants.

2.2.5 Staffing

2.2.5.1 Lecturer-training programmes

According to Gwarinda (1994:2), the role of the technical-vocational teacher is to develop in trainees skills, attitudes and behaviour essential in the future producer in industry. Furthermore, the technical-vocational teacher is expected to contribute to curriculum design, development and delivery (Gwarinda 1994:4). He or she is also expected to perform management functions. The complexity of his or her role clearly shows the need for education and training.

a) Further Education Teacher's Certificate (ZFETC or FETC)

Bwerazuva (1991:136) points out that the Zimbabwe Further Education Teacher's Certificate (ZFETC or simply FETC) was the pioneer programme for the training of technical teachers in Zimbabwe. FETC caters for technical instructors, social workers, health educators, adult literacy educators, army and police trainers.

According to the FEEB (Further Education Examinations Board) Committee on Lecturer Training (1986:5), external consultation was carried out with employers, the University of Zimbabwe Adult Education Department and the City and Guilds of London Institute. FETC follows the City and Guilds of London Institute 730 syllabus. FETC is intended to among other things introduce teachers to relevant principles of learning, enable them to choose teaching methods, draw up schemes of work and evaluate their work, (FEEB Committee on Lecturer Training 1986:5). This seems to be in keeping with the British Further Education

Unit's (FEED Committee on Lecturer Training 1986:35) observation that staff development for further education of staff was synonymous in many institutions with "survival" pedagogic skills. These would be elementary classroom performance skills.

FETC is currently being offered at all technical institutions, except Gweru Technical College and the Harare Institute of Technology. It is a one-year part-time in-service course of basic teacher training organised on a part-time day, evening or block release basis (FEED Committee on Lecturer Training 1986:6).

According to Bwerazuva (1991:136), FETC faced problems of curriculum interpretation, programme management and lack of resources. In addition, it relaxed objective criteria on student selection and it lowered the quality of recruits and, by implication, lowered the quality of its products (Bwerazuva 1991:137). Finally, it also places heavy emphasis on the assessment of practical teaching as compared to academic and intellectual aspects of theory (Bwerazuva 1991:137).

b) Cadet Pilot Scheme (CPS)

The Cadet Pilot Scheme (CPS) was a Zimbabwean innovation in an attempt to turn out technical teachers for technical colleges and polytechnics from "O" level school leavers (Bwerazuva 1991:140). The CPS provided the quickest and most practical solution to the problem of technical teacher shortage in the country. Although it is no longer offered, it paved the way for the National Diploma in Technical and Vocational Education (NDTVE) (see section c below).

c) National Diploma in Technical and Vocational Education (NDTVE)

While Ministry still found the ZFETC practically sound, it felt that its need in terms of content, Theory of Education and supervised Teaching Practice were not adequately addressed. This necessitated the mounting of the National Diploma in Technical and Vocational Education (NDTVE). Gweru Technical College was given the mandate to be the executing agency in this process of producing qualified lecturing staff for both technical colleges and vocational training centres (*Zimbabwe s.a.:2*).

While this programme seemed to be intended for class one skilled workers who hold a National Craft Certificate and are already serving as instructors or lecturers in the Ministry of Higher Education, implementation largely focused on students in the engineering departments at Gweru Technical College. These went through the technological phase for three years and then completed their training by going through the pedagogical phase for one year.

The NDTVE is currently being offered on the one-year-option and two year in-service mode and it is awarded by the Higher Education Examinations Council (HEXCO). Applicants are holders of a minimum of National Diploma in their areas of specialisation. Following the granting of associate status to Gweru Technical College by the University of Zimbabwe, the Diploma in Education with specialisation in technical vocational education which is an equivalent of the NDTVE has been on offer since 1995. Its duration is 16 months. Both diplomas are aimed at producing and developing:

competent, efficient, versatile, progressive, perceptive, resourceful, interactive, innovative, reflecting and problem-solving lecturers, training officers and instructors who will serve

in public and private technical and vocational institutions to produce the technically skilled personnel for Zimbabwe's economic development (*Gweru Technical College: Mission Statement* 1998:1).

According to Bwerazuva (1991:142), from its inception the NDTVE programme had full support of government, donor agency funding, consultancy expertise in both the technological and pedagogical components. Formative evaluation determined quality of the programme and its products (Bwerazuva 1991:143). Students on the NDTVE course identify themselves with the course as a teachers' course rather than with the technical trade areas (Bwerazuva 1991:143). The diploma have the greatest potential to succeed since they are being offered in contemporary infrastructure.

d) Further Education Teacher's Diploma (FETD)

The Further Education Teacher's Diploma (FETD) has been mounted to equip its graduates with the requisite skills for proper management of training and development of curricula in their respective organisations or fields of operation (*Zimbabwe*. 1994c:2). In addition, it is also intended to enable its recipients to evaluate learning, teaching and resources. The course also seeks to develop research skills in trainees. Its target group includes trainers at both practitioner and managerial levels who hold recognised teaching qualifications, such as FETC, IPMZ certificate or Diploma in training or an equivalent. The FETD course is offered on a one-year full-time or two-year part-time basis (*Zimbabwe* 1994c:2,4).

While the necessary external consultation with the University of Zimbabwe (UZ), Curriculum Research and Development Unit and large training centres was done, implementation seems

to be problematic. Some lecturers seem to be ill-equipped to teach the new course effectively and differently from the ZFETC. Staff development may become necessary.

2.2.6 Supporting Services

For technical institutions to function efficiently they depend on outside help in the form of curriculum and examination services. These services were offered under the Further Education Examinations Board (FEEB) before it was transformed into the Higher Education Examination Council (HEXCO) (*Zimbabwe* 1990a:7). Functions of HEXCO include establishment of policies and guidelines on the development and evaluation of training programmes and courses, ratifying new syllabuses, amending existing syllabuses and ratifying of examination results (*Zimbabwe* 1994b:6).

HEXCO is chaired by the Director of Curriculum, Examinations and Distance Education. Its members are: principals of colleges, the deputy and assistant directors of the Curriculum and Examinations section, representatives of industry and commerce and the Zimbabwe Congress of Trade Unions (ZCTU). Examinations and curriculum officers are ex officio members of HEXCO.

2.2.6.1 Curriculum service

The curriculum service is provided by the Curriculum Research and Development Unit (CRADU) which is a division of the Directorate of Curriculum, Examinations and Distance Education within the Ministry of Higher Education (*Zimbabwe* 1994b:i).

The Curriculum Research and Development Unit (CRADU) is responsible for research, development, standardisation and inspection, implementation, monitoring and evaluation of technical and vocational curricula (*Zimbabwe* 1989:7; *Zimbabwe* 1994b:i).

Curriculum development is a complicated process which has many stakeholders and interested parties. For this reason, CRADU establishes and maintains links with relevant organisations, such as HEXCO, NAMACO, commerce and industry, Industrial Training Department (ITD), Examinations and Trade Testing, international organisations, universities, curriculum committees and departmental advisory committees (*Zimbabwe* 1994b:3-4).

It is vital to emphasise that CRADU maintains the linkages referred to above and carries out research to establish technological and socio-economic changes and be able to engage in comparative analysis of systems of other countries. On this basis, it is able to focus on the needs of the learner and the socio-economic conditions of the country (*Zimbabwe* 1994b:1).

Before curriculum implementation, CRADU submits all syllabuses to HEXCO for ratification or approval. To ensure effective curriculum implementation, CRADU distributes syllabuses and disseminates information to relevant training institutions. It also defines the requisite infrastructure, equipment, target groups, methodology and staff, among other conditions (*Zimbabwe* 1994b:2). Training programmes are evaluated in terms of content, input, process and product. Thus, the curriculum service is an on-going activity with room for renewal.

2.2.6.2 Examination service

The National Examinations Research Development Unit (NERDU) institutes and manages a system of setting, marking, moderating and documenting all national examinations under HEXCO (formerly FEEB) (*Zimbabwe* 1989:7). Before results are published, they are submitted to HEXCO for ratification.

The National Examinations Research Development Unit is credited with localising courses and examinations which used to be offered by external boards (Manyuchi 1986:9). It is also working frantically to improve its service delivery since it is sometimes accused of inefficiency.

2.2.7 Problems experienced by technical institutions

The Ministry of Higher Education has received complaints from students and the public concerning the high failure rate in colleges. For example, 46% of the students, that is (7 114 out of 15 362), received full awards in 1992, whereas only 41%, that is (5 408 out of 13 139), had full awards in 1995 (*Zimbabwe* 1996:1). The cause of this and other unsatisfactory issues may be sought in the problems experienced by institutions. Since individual technical institutions experience problems which vary in magnitude, breadth and effect upon their operations, an attempt is made to discuss those that seem to be common to all.

Financial constraints seem to be a major persistent problem which has serious impact on the operations of technical institutions (*Zimbabwe* 1988:1; 1990a:6; 1991a:1). This arises from

inadequate allocations and shortage of foreign exchange for spares, equipment and other imported supplies. As a result performance of colleges has been adversely affected (*Zimbabwe* 1989:6; 1993:26). The situation has been worsened by the strains and stresses which affect the economy. For example, the depreciation of the Zimbabwe Dollar and the scarcity of foreign exchange have forced the institutions to operate on shoe-string budgets and some training necessities have become scarce (*Zimbabwe* 1993:26).

Technical institutions also experience a shortage of properly qualified lecturers. Lecturers are generally demotivated due to unattractive conditions of service and this leads to high staff turnover as some seek better-paid jobs elsewhere. Those that remain over-stretch themselves elsewhere or at their stations as part-time lecturers (*Zimbabwe* 1993:26; *Zimbabwe* 1996:9). In some cases, the lecturers tend to become obsolete and cannot cope with new concepts and technologies. To worsen matters, opportunities for staff development are either very limited or non-existent for the majority of lecturers. Unfortunately, recruitment of staff for higher levels and specialised areas is characterised by serious problems. This has led to an overdependence on part-time lecturers from commerce and industry who are sometimes not easily disciplined by the relevant colleges (*Zimbabwe* 1996:8).

Shortage of residential and tuition facilities affects colleges in its unique way. Despite several building projects and completed infrastructure at technical institutions, lack of accommodation in the form of staff housing and boarding hostels has remained a constraint in terms of substantially increasing student enrolments (*Zimbabwe* 1988:8; 1994a:51). In addition, classroom, workshop, library and office space should be increased. Deficiencies have also been observed in the equipmentation and provision of resources in libraries, laboratories and

workshops (*Zimbabwe* 1996:9). Shortages of equipment range from the need for sophisticated state-of-the art machinery so that courses could reflect modern technological developments to the acquisition of sufficient hand tools to meet departmental requirements (*Zimbabwe* 1988:8).

According to the Annual Report of the Secretary for Higher Education for the year ended 31st December 1993 (*Zimbabwe* 1993:26), the rather bureaucratic, circuitous and protracted procedures for acquisition of goods and services have remained a source of problems. Suppliers and colleges alike have sometimes become frustrated. Bureaucratic procedures also delay maintenance services and training is affected.

Programmes are further affected by transport constraints. These have mainly affected programmes such as Teaching Practice (TP) and follow up on trainees on industrial attachments (*Zimbabwe* 1989:6; 1994a:1). In spite of the financial and transport constraints, supervision of students is, however, undertaken. However, observations are that industrial attachment has largely become a token exercise which does not achieve its purpose since colleges do not seem to provide practical training schedules to guide both students and employers on the requirements of the programme.

Student behaviour has also become a problem which colleges have to resolve. Due to shortage of funds, students have had to put up with a diversity of shortages and deficiencies. However, delays in the payment of students' Vocational Training Loans (VTLs) have often created volatile conditions which are not conducive to teaching, learning and preparation for examinations (*Zimbabwe* 1996:11).

Through the use of a questionnaire (see Appendix A) principals verified and confirmed most of the problems raised above. In addition, some felt that political interference from Head Office could be reduced. To expedite issues, government should not take long to make decisions on crucial issues affecting institutions.

3. Résumé and conclusion

A survey of the development of technical education in post-independent Zimbabwe has been presented in this chapter. ZANU PF's rise to power, its perception of the colonial era and its initial socialist ideological stance have been considered as major factors influencing post-independence educational dispensation.

The findings and some policy positions of the Manpower Survey of 1981 have been highlighted. This led to a detailed treatment of the following policy documents on technical education : the Transitional Plan (1981-1983), the Manpower, Planning and Development Act, 36 of 1984, the First and Second 5-year Development Plans on Technical Education and rationalisation of courses and qualifications.

Post-independence development of technical-vocational education has also been presented. Under this sub-section, the establishment and development of technical institutions received attention, more specifically, their mandates and the rationale for establishing these institutions were presented. Programmes such as lecturer training programmes and the range of courses offered by technical institutions were presented.

Since technical institutions also depend on external assistance, the curriculum and examination services have been presented as vital supporting services. It has been revealed that delivery of these services is a demanding undertaking.

Finally, problems experienced by technical institutions were presented since these have a definite impact on the operations of institutions. These include financial and transport constraints, shortage of suitably qualified staff, shortage of equipment and consumables. A direct consequence of these constraints has been the high student failure rate, for example, in 1992 and 1995.

Developments and issues raised in this chapter clearly show the significant achievements made in technical education in post-independent Zimbabwe. However, the inherent problems are a clear indication that the present situation is entropic and should be transformed into a future ectropic (rectified) situation.

AN EVALUATION OF THE STATUS OF TECHNICAL EDUCATION AND ITS ROLE IN COMMUNITY UPLIFTMENT IN ZIMBABWE

1. Introduction

Any discussion and decisions on the status and role of technical education in community upliftment can only be made on the basis of information sought from society itself. For the sake of complete representation of diverse views of members of society, such vital information may be obtained from the providers of technical education, beneficiaries and others who may not observe benefits that could be accrued from it.

It must also be added that the perceived status of technical education and its role in community upliftment are inseparable and they imply each other. Society is likely to accord a high status to technical education if it makes significant contributions to its economic advance and social progress. According to Fägerlind & Saha (1983:196), education and society are engaged in a dialectical process in which education is a product of society which in turn transforms society.

In this chapter, the debate on the possible benefits of technical education introduced in chapter 1 (see pp. 4-7) is renewed with vigour on the basis of the views of different scholars and empirical evidence.

2. Technical education and community upliftment

Despite the possible contribution of technical education to community upliftment, some scholars still question whether the high cost to society is justifiable. For example, Rogers (1979:13) holds the view that the European industrial revolution occurred amidst a largely illiterate population, and "education for all was a result of, not a prerequisite for, economic growth". In addition, Rogers (1979:16) warns that if educational expansion exceeds the expansion of jobs, the interaction between the educational and other systems tends towards destabilisation.

Furthermore, unintended wastage and uneconomic use of both human and non-human resources are experienced in the provision of technical education. In this regard, Lynch (1979:149) observes:

Society generates the need for large numbers of expensively trained operatives and then discards them at regular periods, and re-training and re-education of these masses presents an enormous task of recurrent education.

Instead, such human resources should contribute to the betterment of society through innovation (Lynch 1979:148).

There is also the view that academic education is superior to technical education since the former is sustained by a sense of freedom from immediate gain or vocational obligation (Bantock 1980:37). It may be argued that there is no need for a dichotomy between academic and technical education since they benefit from each other.

Despite views to the contrary, this dissertation regards education, including technical education, as the *raison-d'être* and *sine qua non* of development. Scholars agree that education and development are inextricably linked together; social progress and prosperity would be inconceivable without education (Riddell 1980:24; Chung & Ngara 1985:16). In addition, it may be stated that the quality of society is the quality of its human resources. In this regard, Todaro (1982:266) maintains that education contributes to aggregate economic growth by, *inter alia*, creating a more productive labour force and endowing it with increased knowledge and skills. Thus, human resources of a nation are largely responsible for its overall economic and social development (Todaro 1992:312).

In addition, an eminent economist, Gardiner (as quoted in Rose 1970:13) points out that training of manpower is the only way of increasing income per capita, reducing mortality rate, and enhancing industrial development and agricultural production. Organisations may become scientifically advanced as a result of the services of their scientific, technical, industrial, commercial, and design personnel. In this way they may be able to innovate, deliver goods and services of higher quality, and thus maintain a competitive edge. In this sense, human resources, in terms of both quantity and quality, are a vital force in production and the attainment of the good society. Colman & Nixson (1994:414-415) also point out that technical knowledge enables indigenous people to master new technologies, adapt them to local conditions and improve upon them and less developed economies become less technologically dependent.

Lindley (1981:158) adds that education provides a means of screening applicants for certain jobs, enhances the cultural life of the nation and provides a major channel for social mobility. More specifically, Rogers (1979:13) points out that education is the "gateway to a new, more

agreeable, more comfortable and more interesting life". In support of this view, Kadhani & Riddell (in Stoneman 1981:59) observe that school achievement has been the one route of escape from the poverty of rural subsistence and payment of sub-poverty wages for most Africans.

This study thus observes that technical education has the potential to contribute towards community upliftment. Most technical courses are characterised by their diversity and capacity to multi-skill recipients of such training. This could enable graduates of technical education to engage in self-employment and thus improve their life chances, that is all those rewards and advantages afforded by their skills.

Thus far, it has been tried to demonstrate both the intended and achieved correlation between education, including technical education, and community upliftment. In the next subsection this is pursued on the basis of empirical evidence.

3. Empirical analysis of the status of technical education and its role in community upliftment

The information and tables in this subsection are based on the data collected by means of questionnaires (see Appendices). Where sampling was done, stratified randomisation was used. As a result, all units had an equal chance of being selected for this exercise. In the subsequent paragraphs, vital background information on the five categories of respondents involved in this study is provided.

level 255 (43%) and degrees 6 (1,0%). While a few came from middle status backgrounds,

TABLE XII

Heads of Departments' views on the status of technical colleges and polytechnics *vis-a-vis* other institutions of higher learning

INSTITUTION	RANKING			AVERAGE RANKING
	1	2	3	
Technical Colleges/polytechnics	14 29,2%	25 52%	9 18,8%	1,9
Teachers' Colleges	5 10,4%	17 35,4%	26 54,2%	2,4
Universities	34 70,8%	6 12,5%	8 16,7%	1,5

Observations: The responses to this question reveal that heads of departments accord universities the highest status *vis-a-vis* other institutions of higher learning. Technical colleges and polytechnics, and teachers' colleges are second and third respectively.

In assessing the status of technical colleges and polytechnics, the staffing position in the selected departments for the year 1995 was evaluated. The HODs' responses on their departments' staffing positions are summarised in Tables XIII and XIV (see pp. 161-162).

TABLE XIII

Heads of Departments' responses on local and expatriate lecturers in selected technical college and polytechnic departments for 1995

	LOCAL	EXPATRIATE	TOTAL
No. of lecturers	571	28	599
%	95,3	4,7	100

Observations: The 48 HODS who responded to the questionnaire reported that 95,3% of the lecturers in their departments were locals. Expatriates comprised only 4,7% of the lecturers in the concerned departments for 1995. By comparison, the 38 HODS who responded to the supplementary questionnaire (see Appendix Bii) reported that 97% of the lecturers in their departments were locals and 3% were expatriates in 1999. A slight change has been observed.

TABLE XIV

Heads of Departments' responses on teaching qualifications of lecturing staff in selected departments at technical colleges and polytechnics for 1995

	Lecturers with teaching qualifications	Lecturers without teaching qualifications	Total
No. of lecturers	379	220	599
%	63,3	36,7	100

Observations: 63,3% of the lecturers in the selected departments had teaching qualifications which included the Bachelor of Education (B.Ed.), Graduate Certificate in Education (Grad. C.E.), T1, T2A, T2B, T3, Certificate in Education (C.E.), Further Education Teacher's Certificate (FETC), Further Education Teacher's Diploma (FETD) and the Diploma in Technical and Vocational Education (Dip. Ed. Tech-Voc.). On the other hand, 36,7% of the lecturers did not have teaching qualifications, but were suitably qualified in their areas of specialisation. By comparison, the 38 HODs who responded to the supplementary questionnaire reported that the number of lecturers with teaching qualifications had risen to 71,4% of 451 lecturers in 1999. The remainder (28,6%) still had to acquire teaching qualifications.

3.1.3 Responses by National Diploma students

Table XV (see below) summarises National Diploma students' responses to the question: Was coming to the technical college or polytechnic your first choice?

TABLE XV

National Diploma students' responses on whether or not coming to the technical college or polytechnic was their first choice

	YES	NO	TOTAL
No. of students	253	334	587
%	43,1	56,9	100

Observations: 43,1% of the students indicated that coming to the technical college or polytechnic was their first choice since this afforded them the opportunity to acquire vital technical and vocational skills. They felt that such skills would make them employable. 56,9% of the students preferred alternative occupations or forms of training such as apprenticeship, university, teachers' college and nursing.

Table XVI below reveals the students' views on the status of technical colleges and polytechnics *vis-a-vis* other institutions of higher learning.

TABLE XVI

National Diploma students' responses on the status of technical colleges and polytechnics *vis-a-vis* other institutions of higher learning

INSTITUTION	RANKING			AVERAGE RANKING
	1	2	3	
Technical Colleges/polytechnics	127 21,6%	378 64,4%	82 14,0%	1,5
Teachers' Colleges	36 6,1%	101 17,2%	450 76,7%	2,7
Universities	438 74,6%	108 18,4%	41 7,0%	1,3

Observations: The responses to this question reveal that ND students accord universities the highest status *vis-a-vis* other institutions of higher learning. Technical colleges or

polytechnics follow closely with an average ranking of 1,5. Teachers' colleges are ranked third with an average ranking of 2,7.

3.1.4 Responses by members of the public

Members of the public were asked whether they had sound knowledge of what goes on at technical colleges and polytechnics. Their responses are shown in Table XVII below.

TABLE XVII

Responses of members of the public on whether or not they have sound knowledge of what goes on at technical colleges and polytechnics

	YES	NO	TOTAL
No. of members of the public	161	36	197
%	81,7	18,3	100

Observations: 81,7% of the members of the public indicated that they knew what went on in technical colleges and polytechnics. Only 18,3% did not know what went on in these technical institutions.

Members of the public were also asked to specify the sort of people who receive their training at technical colleges and polytechnics in Zimbabwe. Most respondents revealed the following: post 'O' and 'A' level students, career-oriented people, technically-minded people, apprentices, people who have passed practical subjects, mathematics, English and science, and

anyone requiring skills upgrading. Other members of the public thought that the following groups of people received training at technical colleges and polytechnics: people incapable of passing 'O' level, those who have passed at least three subjects at 'O' level, those who can afford the fees, and those who have failed to secure places at universities and teachers' colleges.

Table XVIII (see below) shows the status members of the public accord to technical colleges and polytechnics *vis-a-vis* other institutions of higher learning.

TABLE XVIII

Responses of members of the public on the status of technical colleges and polytechnics *vis-a-vis* other institutions of higher learning

	RANKING			AVERAGE RANKING
	1	2	3	
Technical Colleges/polytechnics	23 11,6%	126 64,0%	48 24,4%	2,1
Teachers' Colleges	17 8,6%	58 29,4%	122 62,0%	2,5
Universities	160 81,0%	18 9,0%	19 10,0%	1,3

Observations: The responses to this question show that members of the public accord universities the highest status *vis-a-vis* technical colleges or polytechnics and teachers'

colleges. Technical colleges and polytechnics have an average ranking of 2,1, whilst teachers' colleges have 2,5. Thus, teachers' colleges are ranked third of the three institutions of higher learning.

3.1.5 Responses by industrialists or employers

Industrialists or employers were asked to indicate whether they had ever employed institutional graduates from technical colleges or polytechnics. They were further asked to indicate who they would prefer to the other between an apprenticeship trained and an institutional trained graduate. In addition, they were requested to indicate whether City and Guilds of London Institute qualifications were stronger than local Zimbabwean technical qualifications. This was aimed at establishing whether employers had contact with institutional graduates and what their attitudes towards the graduates were. On the basis of such responses, it was hoped to infer the status accorded to technical colleges and polytechnics by employers or industrialists. Their responses are summarised in Tables XIX, XX and XXI.

TABLE XIX

Responses by industrialists or employers indicating whether or not they have ever employed institutional graduates from technical colleges or polytechnics

	YES	NO	TOTAL
No. of employers	57	13	70
%	81,4	18,6	100

Observations: 81,4% of the employers who responded to the questionnaire indicated that they had employed institutional graduates from technical colleges or polytechnics before. 18,6% had not employed graduates from these technical institutions. However, some may have supervised institutional trainees during industrial attachment periods.

TABLE XX

Responses by industrialists or employers indicating who they would prefer to the other between an apprenticeship trained and institutional trained graduate

	Apprenticeship trained	Institutional trained	Total
No.of employers	55	15	70
%	78,6	21,4	100

Observations: 78,6% of the employers indicated that they preferred apprenticeship trained to institutional trained graduates. Only 21,4% of the employers involved in this exercise indicated their preference for institutional trained graduates.

TABLE XXI

Views of industrialists or employers on whether City and Guilds of London Institute qualifications are stronger than local Zimbabwean qualifications

	YES	NO	NOT SURE	TOTAL
No. of employers	40	26	4	70
%	57	37	6	100

Observations: Those industrialists or employers (57%) who felt that City and Guilds of London Institute qualifications were stronger than local Zimbabwean qualifications argued that the former were internationally recognised, were more up to date and syllabuses followed were more practical-oriented.

37% of the industrialists or employers felt that City and Guilds of London Institute qualifications were not superior to local Zimbabwean qualifications, but were equivalent. 6% of the industrialists or employers who could not say whether or not City and Guilds qualifications were better than local qualifications, felt that Zimbabwean courses were undergoing a lot of changes and were therefore experimental and not comparable to City and Guilds of London Institute qualifications.

3.2 Empirical analysis of the role of technical education in community upliftment

3.2.1 Responses by principals

Principals were asked to state the graduate output of their technical institutions by 1995. While the two polytechnics provided approximate figures of their graduate output, the six technical colleges seemed more exact. Their responses are summarised below:

Harare Polytechnic	:	15 000 graduates, with an average of 3 000 graduates per year from 1991 to 1995.
Bulawayo Polytechnic	:	30 to 40 thousand graduates
Gweru Technical College	:	2 100 graduates
Kwekwe Technical College	:	2 880 graduates
Kushinga-Phikelela Technical College	:	3 000 graduates
Mutare Technical College	:	6 500 graduates
Masvingo Technical College	:	3 112 graduates
Harare Institute of Technology	:	760 graduates

By 1995 the six technical colleges had a total graduate output of about 18 352. The two polytechnics had an approximate graduate output of between 60 000 and 80 000. Thus, all the eight technical institutions had a combined output of approximately 80 000 to 100 000 graduates.

Principals were also requested to reveal the nature of comments made by commerce and industry on the quality of graduates from technical institutions. Their responses are shown in Table XXII below.

TABLE XXII

Responses by principals on the nature of comments from commerce and industry on the quality of graduates from technical institutions

	POSITIVE COMMENTS	NEGATIVE COMMENTS	TOTAL
No. of Principals	7	1	8
%	87,5	12,5	100

Observations: 87,5% of the principals indicated that they received encouraging comments from commerce and industry. Comments included: 'highly employable', 'well above average', 'fine' and 'very good'. However, one principal noted that comments varied from one industry to another. Some industrialists or employers are said to have encouraged institutions to train students on new technologies.

Table XXIII (see p. 171) shows approximate percentage of applicants who were able to enrol at the eight technical institutions for 1995.

TABLE XXIII

Responses by principals on the approximate percentage of applicants who were able to enrol at technical institutions for 1995

	0-20%	21-30%	31-40%
No. of Principals	5	2	1
%	62,5	25	12,5

Observations: 62,5% of the principals reported that approximately 0-20% of all applicants were able to enrol at their technical institutions for 1995. 25% of the principals felt they had accommodated approximately 21-30% of all applicants who sought to enrol at their institutions for 1995. Only one principal felt 31-40% of applicants had secured places at his institution.

Principals were also asked if they agreed with the claim that graduates from technical colleges and polytechnics have difficulties in securing employment. Their responses are shown in Table XXIV (see p. 172).

TABLE XXIV

Responses by principals indicating whether or not they agree with the claim that graduates from technical colleges and polytechnics have difficulties in securing employment

	SA	A	D	SD	TOTAL
No. of Principals		2	4	2	8
%		25	50	25	100

Key: SA = Strongly Agree

A = Agree

D = Disagree

SD = Strongly Disagree

Observations: 25% of the principals agree that graduates from technical colleges and polytechnics had difficulties in securing employment while 50% disagreed that such a problem existed. The remaining 25% strongly disagreed with the claim that graduates of technical institutions experienced problems in securing employment. The overall picture portrayed by principals is one where graduates do not face problems in securing employment.

Principals were further requested to state the approximate percentage of graduates from technical institutions who secured employment in the chosen field within one year of graduation. Their responses are indicated in Table XXV (see p. 173).

TABLE XXV

Responses by principals on the approximate percentage of graduates from technical institutions who secure employment in the chosen field within one year of graduation

	31-40%	51-60%	61-70%	71-80%	81-90%	91-100%
No. of principals	1	3	1	1	1	1
%	12,5	37,5	12,5	12,5	12,5	12,5

Observations: 50% of the principals reported that over 60% of the graduates from technical institutions secured employment in the chosen field within one year of graduation. The other principals (37,5%) felt that the number of the graduates securing employment within one year of graduation was largely between 51% and 60%. One principal reported a significantly low employment rate of between 31% and 40% while another principal reported an employment rate of between 91% and 100%.

Table XXVI (see p.174) reveals principals' views on the nature of current training offered at technical institutions.

TABLE XXVI

Principals' views on the nature of current training offered at technical institutions

	YES	NO	TOTAL
No. of principals	6	2	8
%	75	25	100

Observations: 75% of the principals agreed that current training at technical institutions makes graduates job seekers while 25% did not support this view.

Principals were also asked to indicate whether or not future training should be geared at producing more job creators than job seekers. Their responses are summarised in Table XXVII below.

TABLE XXVII

Principals' responses on whether or not future training at technical institutions should be geared at making graduates more of job creators than job seekers

	YES	NO	TOTAL
NO. OF RESPONSES	8	3	11
%	72,7	27,3	100

Observations: Some principals selected both options since they felt that technical skills and the right attitudes must co-exist in the future producer. It was also felt that although new jobs should be created, existing essential services should be maintained. Those principals (72,7%) who felt that future training should focus on producing job creators expressed the following sentiments: conventional job markets are shrinking under the Economic Structural Adjustment Programme (ESAP), and self-sufficiency is required for the country to experience rapid economic development and stability. Graduates would then be able to liberate themselves from poverty.

Principals were also asked to express their views on the desirability of incorporating the course Principles of Business Management in all programmes offered at technical institutions. Their responses are summarised in Table XXVIII below.

TABLE XXVIII

Principals' views on whether or not the course Principles of Business Management should be incorporated in all programmes offered at technical institutions

	YES	NO	TOTAL
No. of responses	6	3	9
%	66,7	33,3	100

Observations: Some principals selected both options and analysis is thus based on number of responses given. Those principals (66,7%) who are in favour of the incorporation of the course Principles of Business Management advanced the following arguments: it can inculcate

in students the spirit of self-reliance, it is the basis of entrepreneurship, self employment or job creation. If it is interwoven with technical skills thus can cultivate a business enterprising culture. Thus, students can be equipped with vital skills for starting their own businesses. 33,3% who are not in favour of the course felt that some jobs such as health inspector may not require it. In addition, they wanted to know what the content of the course would be since special courses very specific to a market were already on offer in technical institutions.

Table XXIX (see below) shows principals' responses on whether the course Principles of Business Management should be examinable or non examinable.

TABLE XXIX

Principals' responses on whether the course Principles of Business Management should be examinable or non-examinable

	Examinable	Non examinable	Not applicable	Total
No. of responses	6	1	2	9
%	66,7	11,1	22,2	100

Observations: (also see Table XXVIII on p. 175). Table XXIX shows that all principals (66,7%), who feel that Principles of Business Management should be incorporated in all programmes at technical institutions would also like it to be examinable. Two principals (22,2%) felt the question was not applicable to them in view of their response in Table XXVIII. Only one principal (11,1%) felt that the course should be non-examinable.

Table XXX (see below) summarises principals' responses on whether they hold open days for members of the public to familiarise themselves with what goes on at technical colleges and polytechnics.

TABLE XXX

Principals' responses on whether or not they hold open days for members of the public to familiarise themselves with what goes on at technical colleges and polytechnics

	YES	NO	TOTAL
No. of principals	5	3	8
%	62,5	37,5	100

Observations: 62,5% of the principals indicated that they held open days for members of the public. A few had symposia at their institutions. Closer analysis revealed that graduation ceremonies were also regarded as open days by some principals. On the other hand, 37,5% of the principals had not organised open days at their institutions.

Principals were also asked to comment on the contribution of technical institutions to community upliftment in Zimbabwe. Their comments include the following:

- human resources development for economic enhancement.
- provision of general education which equips students with general knowledge and awareness.

- development of skilled personnel to meet fundamental labour needs of the community and ensure that wealth is created and business does not decline.
- preparing students for both salaried employment and self-employment.
- strong technical skills base makes indigenisation of the economy possible.
- enskilled students are able to reduce their socio-economic misery and enjoy an improved quality of life.
- provision of adult education courses, usually on part-time basis.
- upgrading of semi-skilled personnel.
- in the case of Kushinga-Phikelela Technical College imparting rural development skills to workers and peasants.

Some principals felt that research, especially into indigenisation of the economy should be encouraged in institutions. It was also felt that there must be a refocus of strategy and approach to technical education to cater mainly for informal sector development of the economy. Unfortunately, all technical institutions experience serious perennial problems which impact negatively on their capacity to contribute much more to community upliftment. The main constraints include inadequacies in finance, equipment, consumables, staff and purpose-built rooms (also see pp. 147-150).

3.2.2. Responses by heads of departments

Heads of departments (HODS) were requested to state the general pattern of student enrolment in their departments since independence in 1980, referring to, among other things, enrolment figures, race and gender. Invariably, all heads of departments reported significant increase in student enrolment figures since independence. However, there has been a marked decrease

in the number of Europeans, Asians and Coloureds enrolling for the different courses offered at government-run technical institutions. Some departments last enrolled Europeans between 1984 and 1990. In 1995, Africans constituted 100% of the student enrolment in the majority of the forty-eight college departments that were involved in this study. Only 9 Coloureds, 29 Europeans and 9 Asians enrolled for courses in the applied sciences, mechanical, automotive and electrical engineering at technical institutions in 1995. These constituted between 1% and 6% of the concerned departments' student enrolment. It was reported that these students were probably apprentices coming to college for their theoretical phase.

Although more females are enrolling for courses at technical institutions, they are still outnumbered by their male counterparts in such areas as business studies, mass communication, and engineering. However, clothing technology and secretarial studies are female-dominated. For example, females constituted 98% of the total enrolment in secretarial studies at Mutare Technical College between 1992 and 1996. In addition since 1985 86% of the graduates in secretarial studies at Kushinga-Phikelela Technical College have been female.

Heads of departments (HODS) were also asked if they agreed with the claim that graduates from technical colleges and polytechnics have difficulties in securing employment. Their responses are summarised in Table XXXI (see p.180).

TABLE XXXI

Responses by heads of departments indicating whether or not they agree with the claim that graduates from technical colleges and polytechnics have difficulties in securing employment

	SA	A	D	SD	TOTAL
No. of heads of departments	1	21	21	5	48
%	2	43,8	43,8	10,4	100

Key : SA = Strongly Agree
 D = Disagree
 A = Agree
 SD = Strongly Disagree

Observations: 43,8% of the heads of departments agreed that graduates from technical colleges and polytechnics experienced problems in securing employment. An equal number (43,8%) disagreed that graduates faced problems in securing employment while 10,4% strongly disagreed that such problems existed. Only 2% of the HODs strongly agreed that graduates faced problems in securing employment.

Table XXXII (see p. 181) reveals heads of departments' views on the nature of current training offered at technical institutions.

TABLE XXXII

Heads of departments' views on current training offered at technical institutions

	YES	NO	TOTAL
No. of heads of departments	41	7	48
%	85	15	100

Observations: 85% of the heads of departments agreed that the nature of current training at technical institutions makes graduates job seekers, while 15% did not support this view. The latter (15%) argued that there was nothing wrong with current training, but everything depended on individual graduates and the availability of finance for establishing income generating projects.

Heads of departments were also asked to rate the effect which training had in developing selected qualities in graduates from their departments. Their responses are summarised in Table XXXII (see p. 182).

TABLE XXXIII

Views of heads of departments on the effect training has had in developing selected qualities in graduates from their departments

QUALITIES	SCORES						TOTAL
	0	1	2	3	4	5	
problem-solving	1	5	11	14	13	4	48
skills transfer	0	2	6	12	15	13	48
practical skills	0	1	5	12	15	15	48
theoretical skills	0	0	4	16	16	12	48
independent work and responsibility	2	3	9	16	9	9	48
ability to bear stress	3	13	14	6	10	2	48
initiative	1	5	11	18	9	4	48
leadership	1	7	15	14	8	3	48
decision-making ability	1	6	12	12	13	4	48
job proficiency	0	1	5	14	21	7	48
Total	9	43	92	134	129	73	480
%	1,9	9	19	28	26,9	15,2	100

Key: 0 = no effect
 1 = slight effect
 2 = significant effect
 3 = great effect

4 = very great effect

5 = complete effect

Observations: an analysis of responses to this question reveals that training has had great effect in developing in graduates practical skills, theoretical skills, and job proficiency, among other qualities. Areas of concern include the need for ability to bear stress, leadership and decision-making ability. The overall picture is that training has been successful. The combined responses for great effect (28%), very great effect (26,9%), and complete effect (15,2%) add up to 70,1%.

Table XXXIV (see below) indicates responses given by heads of departments on the nature of comments from commerce and industry on the quality of graduates from technical institutions.

TABLE XXXIV

Responses given by heads of departments on the nature of comments from commerce and industry on the quality of their graduates

	POSITIVE	NEGATIVE	TOTAL
No. of heads of departments	40	8	48
%	83,3	16,7	100

Observations: 83,3% of the heads of departments indicated that they received positive comments from commerce and industry on the quality of their graduates. Their graduates were viewed as disciplined, hardworking, dependable, adaptable and competent performers,

despite the harsh economic conditions in the country. According to these heads of departments (83,3%), comments from commerce and industry were favourable because they consulted industrialists or employers in syllabi development and advisory councils advised colleges appropriately.

On the other hand, 16,7% of the heads of departments said they received negative comments from commerce and industry on the quality of their graduates. Some felt that industry was difficult to satisfy and it insisted on what they called the old training order. Comments received by these heads of departments (16,7%) include the following:

- there is insufficient training, some students require retraining.
- courses are too theoretical, more practicals are desirable.
- training needs to be up to date with current technology.
- students lack hands-on skills.
- students lack human or public relations skills.
- they should develop independent thinking, initiative, originality and self-confidence.

It must, however, be pointed out that the nature of comments varied from department to department, one area of specialisation to another and from one industry to another.

Heads of departments were also asked whether or not the course Principles of Business Management should be incorporated in all programmes offered at technical institutions. Their responses are given in Table XXXV (see p.185).

TABLE XXXV

Responses given by heads of departments on whether or not the course Principles of Business Management should be incorporated in all programmes offered at technical institutions

	YES	NO	TOTAL
No.of heads of departments	43	5	48
%	89,6	10,4	100

Observations: 89,6% of the heads of departments who responded to the questionnaire were in favour of the introduction of the course Principles of Business Management. They felt that the course would encourage and promote entrepreneurship in students. Job seekers would be transformed into job creators. Thus, students would be prepared to create and manage their own businesses effectively and efficiently. With sharpened business acumen, graduates would be able to achieve high productivity and self-reliance. On the other hand, 10,4% were not in favour of the introduction of the course Principles of Business Management because not all trainees were business-oriented. In addition, there were subjects being offered by business studies departments which covered the area adequately. Some heads of departments pointed out that they were producing manpower to do the actual work not to manage.

Heads of departments were also asked whether or not Principles of Business Management should be examinable. Their responses are summarised in Table XXXVI (see p.186).

Table XXXVI

Responses of heads of departments on whether or not Principles of Business Management should be examinable

	Examinable	Non examinable	Not applicable	Total
No. of heads of departments	37	8	3	48
%	77,1	16,7	6,2	100

Observations: 77,1% of the heads of departments felt Principles of Business Management should be examinable, while 16,7% felt it should be non examinable. 6,2% indicated that the question was not applicable to them since they were part of the 10,4% which was not in favour of the introduction of Principles of Business Management (see Table XXXVp.185).

Heads of departments were also asked to state the specific contributions made by their departments towards community upliftment. Their contributions include the following:

- providing necessary skills to graduates and upgrading semi-skilled personnel in industry.
- training and providing the community with technicians in education, health, research, agricultural, mining and industrial institutions.
- providing professional communicators for various media and a few graduates start their own publications.
- imparting computer skills to members of the society.

- production of highly qualified trainers.
- alleviating shortage of skilled manpower.
- producing items for sale and repairing domestic appliances at affordable prices.
- providing career guidance to prospective students
- organising part-time, short and hobby courses for the general public.
- running courses for the informal business sector.

The heads of departments felt that their departments could make more significant contributions towards community upliftment if the serious problems they were experiencing were addressed urgently. The following serious problems were highlighted:

- Staffing problems: small staff establishments leading to high lecturer/student ratios, shortage of qualified staff, low qualifications, lack of staff development opportunities, high staff turnover leading to heavy teaching loads and heavy dependency on part-time lecturing staff.
- Poor conditions of service: poor remuneration for lecturers and lack of incentives for posts of responsibility, the consequences of which have been low staff morale and failure by the Ministry to attract skilled and highly qualified personnel.
- Inadequate non-human resources: inadequate training equipment, lack of relevant textbooks, lack of teaching media such as models and projection aids, lack of appropriate machinery and equipment to match modern technology, shortage of machine spares, poorly equipped libraries and laboratories, and general shortage of purpose-built rooms, including hostel accommodation for students.

- Bureaucratic procurement procedures: delays are experienced in the acquisition of training consumables and repair of machinery.
- Shortage of transport: most departments at technical institutions fail to go on educational trips and supervise industrial attachment.
- Lack of funds: the lack of necessary funds hinders expansion of departments and purchase of vital equipment and consumables.
- Inappropriate curricula: some courses seem not to reflect correct content levels such as the National Diploma in automotive engineering.
- Some trainees do not seem to take training seriously.

3.2.3 Responses by National Diploma students

National Diploma (ND) students were asked to state whether or not graduates from technical colleges and polytechnics have difficulties in securing employment. Their responses are summarised in Table XXXVII on p. 189.

TABLE XXXVII

Responses given by National Diploma students indicating whether or not graduates from technical colleges and polytechnics have difficulties in securing employment

	SA	A	D	SD	TOTAL
No. of students	140	271	140	36	587
%	23,9	46,2	23,9	6,0	100

Key: SA = Strongly Agree
 SD = Strongly Disagree
 A = Agree
 D = Disagree

Observations: 46,2% of the students who responded to the questionnaire agreed that graduates from technical colleges and polytechnics experienced difficulties in securing employment. 23,9% of the students strongly agreed that graduates had problems in securing employment. Thus, 70,1% agreed that graduates faced problems when seeking employment. 23,9% of the students disagreed that graduates from technical colleges and polytechnics had difficulties in securing employment, while 6,0% of the students strongly disagreed that such difficulties were experienced. Overall, 29,9% of the students disagreed that graduates experienced difficulties in securing employment.

Students were also asked whether or not current training at technical institutions made graduates job seekers and not creators. Their views are given in table XXXVIII below.

TABLE XXXVIII

Views of National Diploma students on whether current training at technical institutions makes graduates job seekers and not job creators

	YES	NO	TOTAL
No. of students	458	129	587
%	78	22	100

Observations: 78% of the students agreed that current training at technical institutions made graduates job seekers and not job creators. Only 22% of the students felt that current training also produced job creators.

Students were also asked to rate the effect which training has had in developing selected qualities in them. Their responses are summarised in Table XXXIX (see p. 191).

TABLE XXXIX

National Diploma students' rating of the effect which training has had in developing selected qualities in them

QUALITIES	SCORES						TOTAL
	0	1	2	3	4	5	
problem-solving	42	87	136	160	89	73	587
skills transfer	41	70	120	164	112	80	587
practical skills	84	76	88	118	100	121	587
theoretical skills	11	21	83	127	154	191	587
independent work and responsibility	51	70	103	133	121	109	587
ability to bear stress	120	82	102	90	108	85	587
initiative	35	74	101	159	123	95	587
leadership	58	70	104	123	126	106	587
decision-making ability	31	48	91	127	148	142	587
job proficiency	49	63	100	122	128	125	587
Total	522	661	1028	1323	1209	1127	5870
%	8,9	11,3	17,5	22,5	20,6	19,2	100

Key: 0 = no effect 1 = slight effect
 2 = significant effect 3 = great effect
 4 = very great effect 5 = complete effect

Observation: Table XXXIX (see p. 191) reveals that training has had the greatest effect in imparting theoretical skills to students. On the other hand, the highest 'no effect' value has been recorded for 'ability to bear stress'. This study regards ratings from 0 to 2 as a cause for concern, whereas 3 to 5 as a acceptable. On the basis of this categorisation, 62,3% of the students revealed that training either had 'great effect,' 'very great effect' or 'complete effect' in developing the selected qualities in them. On the other hand, 37,7% of the students felt that training either had 'no effect,' 'slight effect' or 'significant effect' in developing the selected qualities in them.

In addition, students were asked whether or not the course Principles of Business Management should be incorporated in all programmes offered at technical institutions. Their responses are indicated in Table XL below.

TABLE XL

Views of National Diploma students on whether or not the course Principles of Business Management should be incorporated in all programmes offered at technical institutions

	YES	NO	TOTAL
No. of students	530	57	587
%	90,3	9,7	100

Observations: 90,3% of the students were in favour of the incorporation of the course Principles of Business Management in all programmes offered at technical institutions. They felt that this course would equip students with vital skills for job creation and management

of businesses. Those students (9,7%) who were not in favour of the incorporation of Principles of Business Management in all programmes offered at technical institutions advanced the following reasons to justify their position:

- students might have an overload in the curriculum.
- there is need for a balance between job creators and job seekers.
- not all people are business-oriented or are interested in business.
- people in business courses should be allowed to specialise in courses including business management and those in other areas should focus on their areas and, therefore, the course Principles of Business Management is irrelevant to some areas.

Students were further asked whether the course Principles of Business Management should be examinable or non-examinable. Their views are summarised in Table XLI (see below).

TABLE XLI

National Diploma students on whether Principles of Business Management should be examinable or non examinable

	Examinable	Non examinable	No response	Total
No. of students	428	118	41	587
%	72,9	20,1	7	100

Observations: 72,9% of the students were in favour of Principles of Business Management being examinable, while 20,1% felt the course should be non-examinable. 7% of the students

did not respond to this question and it was clear that they were part of the group (9,7%) which was not in favour of the incorporation of Principles of Business Management in all programmes offered at technical institutions.

Students were also asked to state how technical institutions were contributing towards community upliftment. The positive contributions made by technical institutions which were highlighted by some students include the following:

- equipping students with knowledge and skills for community development.
- producing skilled, efficient and innovative workers who are able to improve the quantity and quality of goods and services.
- promoting praxis.
- providing students with the opportunity for furthering their education.
- enabling graduates to create employment for themselves and for others.
- indigenising the economy.
- reducing the number of people who roam the streets.
- reducing rate of crime or gangsterism.
- inculcating a sense of discipline in the students.
- developing potential leaders of the community.
- introducing modern technology.

On the other hand, the majority of the students who responded to the questionnaire felt that technical institutions were making very little contribution to community upliftment owing to the economic hardships being experienced by the country. In their opinion, there were no jobs being created and a large number of graduates ended up depending on their parents due

to unemployment. Thus, students felt technical institutions had only succeeded in 'creating a shoal of learned, unemployed and hopeless citizens'. To worsen matters, some students observed weak ties between technical institutions and the community.

More radical respondents felt that technical institutions themselves required upliftment more than the community they were supposed to serve. They recommended that curricula of technical institutions be improved as follows:

- making subjects more community-oriented and help graduates become self-reliant.
- upgrading syllabuses to match the current economic trends.
- stepping up the practical component of courses to suit industrial requirements and facilitate self-help projects
- improving equipment and machinery.
- engaging services of suitably qualified lecturers.
- improving the operations of the examining board.

Furthermore, a graduate support programme could be instituted. Some students felt that although society was bankrupt, government could play a vital role by investing not only in training of students but also in providing funding to graduates for self-help projects. Students also felt that institutions could also market their programmes and graduates more effectively.

3.2.4 Responses by members of the public

Members of the public were asked to indicate whether or not technical institutions were contributing to the quality of life of the people. Their responses are summarised in Table

XLII below.

TABLE XLII

Responses by members of the public on whether or not technical institutions were contributing to the quality of life of the people

	YES	NO	TOTAL
No. of members of the public	177	20	197
%	89,8	10,2	100

Observations: The majority of the members of the public (89,8%) pointed out that technical institutions were contributing to the quality of life of the people. Only 10,2% of the members of the public felt that these institutions were not contributing towards community upliftment.

In justifying their responses as reflected in Table XLII (see above), those members of the public (89,8%) who saw the positive contributions of technical institutions highlighted the benefits of the graduates, their families and society as a whole. In this regard, the technical institutions are contributing towards society's economic advance and social progress. Members of the public felt that these institutions are accessible to prospective trainees since their fees are affordable, particularly considering the provision of vocational training loans and grants by the government. Provision of part-time classes makes technical institutions more accessible and beneficial to members of the public. Trainees are enskilled in diverse and specialised disciplines. Sometimes this involves upgrading skills of semi-skilled industrial employees.

According to members of the public who responded to the questionnaire, training equips trainees with skills to solve life's problems, instils a business culture in them and disciplines them. In addition, it reduces idleness and general unemployment levels. The graduates' job performance, security and chances of promotion are enhanced. Productivity is also increased and most graduates have the potential to set up self-help income generating projects. Thus, in the opinion of members of the public (89,9%), technical institutions are an important source of human capital.

Apart from the graduates' personal benefits, their families and society as a whole benefit both directly and indirectly from technical institutions. The quality of goods and services provided by graduates is improved and some basic needs of the society are fulfilled. Some graduates are able to create employment for themselves and for others. Apart from alleviating poverty, this contributes significantly to industrialisation and technological advancement.

On the other hand, those members of the public (10,2%) who felt technical institutions were not making positive contributions to the quality of life of the people, highlighted the serious problem of graduate unemployment. These members of the public observed that some graduates experience long periods of unemployment and others fail to secure employment in commerce and industry they are mostly targeted for. Some end up taking up employment as untrained teachers. It was felt that their plight was being worsened by competition from university graduates. Some members of the public felt that dull people were trained at technical institutions and society could not expect to benefit anything from them. In addition, it was felt that graduates were not innovative, instead they appeared to lie dormant in society or at worst they 'appeared to vanish into thin air'. Blame was also placed on training which appeared to equip trainees with outdated skills.

Against this background, members of the public were asked to state how technical colleges and polytechnics can contribute towards community upliftment in Zimbabwe. Members of the public felt that institutions could be made more accessible by relaxing entry requirements for technical training, and establishing technical institutions in rural areas for development and poverty alleviation. Institutions could introduce distance learning in technical fields where such a mode of training is feasible. Provision of other outreach programmes could be explored.

It was also felt that technical institutions could diversify and upgrade both their part-time and full-time curricula. This would entail provision of more adult and continuing courses and degrees, such as the Bachelor of Technology degree (B. Tech). In this regard, institutions could affiliate or associate with universities which would monitor the standard of work of the respective institutions. A few technical institutions are either associated with or are exploring opportunities for such affiliate or associate status. Some members of the public saw benefits in twinning between local and foreign technical institutions. It was felt that such measures would enhance marketability of graduates of technical institutions. In this connection, too, students are to be taught modes of behaviour expected in the work environment, and lecturers are to be exemplary in conduct. Some respondents felt students should not mix politics with education.

In addition, members of the public felt that technical institutions should liaise and identify more with the local community. For example, it was felt that courses being offered should be relevant to the socio-economic needs of the community. This could involve establishing a balance between theory and practice in the courses being offered, equipping interested people with skills for managing small projects and teaching students modern technology. To

strengthen the ties between technical institutions and the community, some of their courses could be aligned with professional courses for the sake of exemptions. Technical institutions should provide career guidance to 'O' and 'A' level students. Institutions were also urged to hold open days for *on loco* inspection and interaction with members of the public.

Furthermore, technical institutions in conjunction with the government, non-governmental organisations and cooperating partners should assist graduates to secure or create employment in both the formal and informal sectors of the economy. Graduates could be organised into groups which are prepared to work on income generating projects. Such groups are easy to finance and they should be supported in the production of cheap but high quality technologies. Both students and graduates could help in organising clubs and cooperatives in the community in their areas of specialisation. The overall consequence of all these measures is the reduction of government's dependency on expatriate labour. Some members of the public added that skilled people should be allowed to leave the country in search of employment elsewhere with fewer restrictions.

3.2.5 Responses by industrialists or employers

Industrialists or employers were asked to express their views on the extent to which graduates from technical institutions demonstrated selected competencies. Their responses are summarised in Table XLIIX (see p. 200).

TABLE XLIIIV

Views of industrialists or employers on the extent to which graduates from technical institutions demonstrate selected competencies

COMPETENCIES	SCORES			
	1	2	3	TOTAL
problem-solving	24	42	4	70
skills transfer	20	42	8	70
practical skills	16	41	13	70
theoretical skills	6	26	38	70
independent work and responsibility	17	48	5	70
ability to bear stress	34	33	3	70
initiative	18	39	13	70
leadership	28	32	10	70
decision-making ability	29	34	7	70
job proficiency	10	48	12	70
Total	202	385	113	700
%	28,9	55	16,1	100

Key: 1 = negligible
 2 = significant
 3 = very significant

Observations: Table XLIIIV (see p. 2000) shows that graduates of technical institutions demonstrated very significant theoretical skills. However, their ability to bear stress, leadership and decision-making ability were generally negligible. Overall, 55% of the industrialists or employers felt graduates demonstrated the selected competencies to a significant extent, while 16,1% of the industrialists or employers felt the performance of the graduates was very significant. On the contrary, 28,9% of the employers felt graduates demonstrated the selected competencies to a negligible extent.

Industrialists or employers were also requested to comment on the general calibre of graduates from Zimbabwe's technical colleges and polytechnics. Calibre varied from graduate to graduate, and comments also varied from industrialist or employer to industrialist or employer. It was, however, possible to summarise positive and negative comments separately.

Positive comments by industrialists or employers on the graduates include the following:

- capable, competent and hardworking lot.
- well motivated, and respond very well to training.
- better than university graduates in terms of willingness to learn.
- adequate skill level.
- a lot of potential, and adapt very well to industrial demands.
- mature with time, especially in production.
- capable of working anywhere else in Africa.
- some are responsible, and a few are of a high calibre.

Industrialists or employers made the following negative comments on the calibre of graduates from technical institutions:

- either below average or mediocre performers and there is need for thorough screening before and during courses.
- theoreticians who lack practical skills.
- do not measure up to the required standards.
- very weak, not impressive, yet to see one who excels.
- lack practical training.
- lack in-depth skills application and specialisation.
- too theoretical.
- lack field exposure or industrial exposure.
- lack sense of maturity, self-confidence, initiative and leadership.
- lack ability to bear stress.
- lack business acumen.
- attitude towards work is generally poor.
- very little personal commitment and responsibility.
- expect salaries unproportional to output.

Against this background, industrialists or employers were requested to suggest ways how technical colleges and polytechnics could improve their contribution towards community upliftment. They felt that curriculum innovation was urgently required. The new curriculum would have to be more community-oriented, demand-driven, and responsive to industrial needs and realities. Thus, technical institutions would be expected to accord centrality to practical skills and assess practicals more often. The duration of industrial attachment would require increasing so as to afford students opportunity for more practical and industrial exposure. For increased benefits, students would be exposed to companies of different

specialisations. Industrialists or employers also felt that industrial attachment for lecturers would have to be provided for. This would expose them to real industrial processes, operations and new technologies.

In addition, industrialists or employers felt that the curriculum should promote entrepreneurship in students since the formal sector can only employ a limited number of graduates. Thus, lecturers should instil a spirit of self-reliance in students. Some industrialists or employers also emphasised the need to include industrial or public relations in the curriculum to prepare trainees for interaction with other workers and clients in industry. A few employers urged technical institutions to introduce the Higher National Diploma (HND) in engineering disciplines where courses are offered up to National Diploma (ND) level.

Industrialists or employers went further to suggest ways by which technical institutions could provide quality training to students and thus produce graduates of a high calibre for the benefit of the community. They urged the Ministry of Higher Education and Technology to employ lecturers who would have served in industry for 10 years. Institutions would have to provide new equipment and modern machinery to ensure provision of up to date training. In addition, lecturers were advised to utilise teaching methods such as role play, problem solving, group work and simulation to ensure effective and efficient training of future industrial workers.

Furthermore, quality training would lead to the formation of the correct attitudes in the graduates. Industrialists or employers felt that students should be involved in real industrial production and experience its inherent pressures. This would ensure that the graduates are

disciplined workers who are prepared to do manual work. Graduates would love their work, show respect for clients' property, demonstrate pride of workmanship and an awareness that errors at work are costly.

To further enhance the contribution of technical education towards community upliftment, industrialists or employers recommended various forms of networks and linkages between graduates, and between technical institutions and the communities they are supposed to serve. For example, they felt technical institutions should conduct career guidance sessions in schools. They should also hold open days for the public and employers. More importantly, they should increase enrolments and conduct more evening classes.

Technical institutions could conduct safety workshops for the community. Viable production units could also be set up at technical institutions and these could provide goods and services to the community. Students could also undertake supervised income generating projects in the community in their areas of specialisation.

Finally, some industrialists or employers saw the need for cooperation between technically-minded, very ordinary tradesmen and engineers who have scientific and intellectual skills to form a tremendously powerful creative force for the benefit of Zimbabwean factories. The community would then benefit from the goods and services provided by commerce and industry.

4. RÈSUMÈ AND CONCLUSION

An evaluation of the status of technical institutions and their role in community upliftment in Zimbabwe has been presented in this chapter. This empirical analysis was based on the information obtained through questionnaires completed by principals of technical colleges and polytechnics, heads of departments, National Diploma students, members of the public and industrialists or employers.

There appears to be agreement among heads of departments, students and members of the public that technical colleges and polytechnics are ranked second *vis-a-vis* universities and teachers' colleges which have been ranked first and third respectively. In addition, respondents seem to agree that training provided by technical institutions makes graduates job seekers and not job creators. As a result, unemployment of graduates does exist as a problem requiring solutions.

Despite the many problems experienced by technical institutions, the various groups that responded to the questionnaires indicated that they are playing a significant role in community upliftment. Suggestions for improvement were made, in particular by members of the public and the industrialists or employers.

From the information presented in this chapter, it can be concluded that technical education is playing a significant role in community upliftment, but more could be achieved.

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**1. Introduction**

An analysis of educational theory and practice in time perspective is made possible by a wealth of information on the spatiotemporal course of the past of humankind which has been recorded. Thus, the educational past must be uncovered, questioned and judged by asking questions arising from current difficulties in education. Such a search should take cognisance of causes, effects, consequences and relations that may have had a bearing on the phenomenon being examined. Only in this way can the present be clarified and prospects for the future be provided with considerable certainty.

Through the use of the basic scientific research method, also known as the historical-educational research method, a topical problem was identified in current education and solutions were sought (see Chapter 1, pp. 3-8). The problem-historical and metabletic approaches were adopted and it was possible to trace the development of technical education in Zimbabwe and evaluate its role in community upliftment.

It is important to state that the educational past had to be questioned and judged in the light of pedagogical criteria. For example, it must be noted that every human being has a vocation and a task in life. This is embodied in authentic adulthood as the aim of education. The following must be evident in an adult: meaningful existence, self-judgement and understanding, awareness of human dignity, responsibility, morally independent choosing,

norm-identification, philosophy of life and awareness of call (Oberholzer, Van Rensburg, Gerber, Barnard & Möller 1990:7,117).

Having gathered this vital information, it was possible to make recommendations regarding the future of the technical education dispensation in Zimbabwe and suggesting ways of enhancing its role in community upliftment.

2. FINDINGS

2.1 A critical summary of the selected periods

2.1.1 Colonial era (1890-1979)

During the colonial era (1890-1979) Zimbabwe (then Rhodesia) was a British colony and there was adherence to British educational traditions. Europeans constituted between 3,98 and 5,7 percent of the population compared with 95 percent for Africans. Fundamental to all aspects of life in the colony was the notion of white supremacy, their belief that they were purveyors of civilisation and their desire to protect their position in the colony. On the other hand, the colonised looked down upon themselves (see Chapter 2, pp. 23-29).

Society was stratified on racial lines. Separate agencies were created to handle aspects of life of each race. There was unequal treatment of the races to minimise competition among the races. For example, to promote and maintain racial supremacy, Europeans received special preparation to enable them to cope with the burdens and responsibilities of life in the colony. A racially segregated education system evolved and this led to differential provision of

education and training, including technical education. In addition, Africans were prevented from participating in the political process, although a measure of tokenism would be noted in later years.

Under these circumstances, Europeans enjoyed monopoly of skills, technical training, expertise and undisputed economic dominance, while most Africans failed to escape poverty and remained disadvantaged. Thus, the colonial laws, ideology, education system and provision of social services were all a mutually self-reinforcing system (see Chapter 2, pp. 30-39).

2.1.2 Post-colonial era (1980-2000)

ZANU PF led by Robert G. Mugabe rose to power in 1980 and ushered in new governance. The ZANU PF government has always regarded the colonial system elitist, discriminatory and segregatory. It has always believed that the colonial regime denied Africans any meaningful role in the country's political, economic, social and cultural life.

This perceptual framework has provided the basis for post-colonial state policies. The ZANU PF government made it clear that socialism would be its guiding philosophy. Focus was placed on reconciliation in order to create a united nation, with all people having equal opportunities in life. Emphasis was also placed on praxis, social justice and democracy, and self-reliance. Racial education was abolished and bold steps were made to desegregate schools. Education became more democratised and accessible (see Chapter 3, pp. 92-95).

Education has always been regarded as a crucial factor in social transformation. The government saw an urgent need to develop a formidable force of skilled artisans and

technicians. The Zimbabwe Conference on Reconstruction and Development (ZIMCORD) noted critical shortage of skills needed for development. This shortage of skilled personnel was worsened by the flight of many skilled workers to international job markets, such as South Africa. Reform and expansion of formal education was recommended. Government accorded centrality to production, science and technical subjects. However, changes in the education system have been largely quantitative rather than qualitative (see Chapter 3, pp. 95-98).

2.2. Commissions of inquiry on technical education

The activities of the following commissions were examined in this study: the Phelps-Stokes Commission (1924), the Kerr Commission (1951), the Judges Commission (1962,) and the Cameron Commission (1974). A brief analysis of their findings and recommendations reveals the nature and accessibility of technical education in Zimbabwe during the colonial era.

The Phelps-Stokes Commission (1924) was set up to inquire into native education in all its bearings in the Colony of Southern Rhodesia (see Chapter 2, p. 39). The Commission found out that there was racial segregation, with more resources being channelled towards the development of Europeans. Training of natives was neglected, except for a few who received instruction in agricultural and industrial skills. It was generally believed that education would spoil the Africans (see Chapter 2, pp. 39-40).

Recommendations made by the Phelps-Stokes Commission (1924) reveal its conviction that relevant education can improve the standard of living of the masses in health, agriculture, industry, home life and character development. For this reason, the Commission

recommended that education be adapted to daily activities of the masses, and large commercial and industrial operations. Higher education was to equip recipients for the tasks of exploring and exploiting the great resources of Africa. On the other hand, vocational education was to be provided on the Hampton and Tuskegee model. In other words, it had to be of a rudimentary type, seeking to develop the hand, heart and head for the benefit of the local community (see Chapter 2, pp. 41-42).

The Kerr Commission (1951) was set up to inquire into and report upon the efficiency and suitability of the system of education for Africans in terms of their present and future needs (see Chapter 2, pp. 42-44). The Commission learnt of homecraft training at Hasfa School and other schools which was intended to help African women in the running of their own homes. According to some witnesses (industrialists), Africans had to be provided gradually with education based on practical and Christian principles, with emphasis on dignity of manual labour. Abundant evidence obtained by the Commission confirmed the existence of a phenomenon which it referred to as occupational colour bar. It was clear that training for occupations and subsequent employment occurred on racial lines. In the opinion of the Commission, exclusion of the African from skilled trades or any forms of lucrative employment would make him or her bitter, frustrated and develop a deep sense of grievance.

In keeping with the occupational colour bar, Africans had no opportunity for training through apprenticeship. It was argued that apprenticing Africans would force skills Europeans in industry to protest by stopping production, and wages were likely to be reduced. Africans were also believed to be lazy and educating them would turn them against manual labour. However, Africans had unrestricted entry to all unskilled occupations. Some witnesses recommended that Africans be provided trade training along Domboshawa lines, that is

provision of rudimentary agricultural and industrial skills. Many witnesses were in favour of short courses for cook-boys, waiters and gardeners, but there was a shortage of specialist handicraft teachers (see Chapter 2, pp. 44-48).

The Kerr Commission (1951) noted that the quality of a country's manpower was a matter of national importance. In addition, the Commission saw the possible role of trained natives in community upliftment. Employers were urged to educate their "illiterate employees" so as to improve their standard of life. There was also need to increase industrial training for Africans to close the uneconomic skills gap between natives and Europeans. Day trades schools were to be established in the African townships in Bulawayo and Harare. The Commission desired provision of elementary industrial education to the natives. Technical education applicable to industry was to be deferred until the technically trained African could find a place in the colony's economic structure (see Chapter 2, pp. 49-52).

Among other terms of reference, the Judges Commission (1962) was set up to consider the present (1962) position of education and its future development in Southern Rhodesia (see Chapter 2, p. 52). Although Africans could now acquire skills under the *Apprenticeship Act* of 1959, trade practices and workshop customs were barriers to training of Africans. Non African skilled labour barred Africans out of training. In addition, there were unequal entry requirements for Europeans and Africans who wished to receive training in industry. Europeans were expected to hold an equivalent of the Junior Certificate (J.C.), while Africans were to produce a Cambridge School Certificate (C.S.C). The plight of Africans was worsened by their simple and basic curriculum which acted as a subtle barrier to formal training. African enrolments at the Salisbury (now Harare) and Bulawayo Technical Colleges were almost negligible in number. Perhaps residential zoning laws contributed to this

situation. Furthermore, Southern Rhodesia was over-dependent on expatriate experience.

Contrary to earlier fears that Africans were not yet ready for real technical education, the Judges Commission (1962) observed that Luvuvu Technical Teachers' College was proof that Africans could be turned into craftsmen and technicians through systematic training (see Chapter 2, pp. 52-56). Unfortunately, it was closed down after its first graduation.

The Judges Commission (1962) recommended that the state, industry and commerce increase their participation in the training of skilled manpower. Subjects such as mechanical drawing, handicraft, domestic science and hygiene were to be provided to learners of ordinary ability to enable them to serve the neighbourhood. Technical education was to be provided to learners of intellectual competence. Theory and practice would be combined for the latter in order to produce highly skilled artisans. Acceptance of trainees and recognition as qualified craftsmen or journeymen would have to be done by an authority such as an Apprenticeship Board (see Chapter 2, pp. 56-58).

The Cameroon Commission (1974) was appointed to inquire into and report on further education in the technical and commercial fields and recommend changes necessary and desirable in the national interest (see Chapter 2, pp. 58-59). The Commission noted that Rhodesia was largely dependent upon the European for its labour force. Too little use was made of African labour potential despite statistical evidence that African aspirants possessed educational attainments higher than the prescribed minimum entry level for apprenticeship training. Some employers were reluctant to train apprentices across the colour. As the number of skilled Africans increased in a particular trade, fewer Europeans were attracted to the trade for training, and journeymen tended to move to other fields of employment or leave

the country. The Commission reported the unavailability of training in the Midlands (that is Gweru, Kwekwe and their environs). In addition, there was congestion in commercial training at existing technical colleges in the country (see Chapter 2, pp. 59-61).

The Cameroon Commission (1974) recommended that a technical college to serve the needs of the Midlands area be established in the City of Gwelo (now Gweru) at the earliest possible opportunity. It also recommended optimum use of technical college facilities during evenings and holiday periods. Satellite campuses were also to be established for specific courses. To ensure improved delivery of instruction in technical colleges, the Commission recommended the introduction of short teacher training courses for instructors who lacked basic teaching qualifications. Technical colleges were to maintain links with the community through provision of career guidance in high schools and having advisory councils with the widest possible representation (see Chapter 2, pp. 61-62).

All four Commissions established that race was seriously implicated and accorded a central role in training for occupations and subsequent employment. Thus, disparities in the acquisition of vital technical skills are characteristic of the period of colonial rule.

2.3 Policy on technical education

2.3.1 Policy on technical education in the colonial era (1890-1979)

Although there was no organised apprenticeship training system in Zimbabwe (then Rhodesia) prior to 1934, control was administered in terms of the *Master and Servants Act of 1898*, which provided for a contract of apprenticeship to be registered before a magistrate. In later

years apprenticeship training was organised and provided in terms of the *Industrial Conciliation Act of 1934*, the *Southern Rhodesian Apprenticeship Act of 1959* and the *Rhodesia Apprenticeship Training and Skilled Manpower Development Act of 1968*.

The *Industrial Conciliation Act of 1934* was passed to regularise the training of apprentices under the control of industrial councils for each industry. More importantly, it made provision for the prevention and settlement of disputes between employers and employees by conciliation, registration and regulation of trade unions and employers' organisations. It ensured job reservation for Europeans since its definition of "employee" did not include natives. A European of any calibre had access to apprenticeship training, while even an intelligent native was disadvantaged. In addition, the apprenticeship training system introduced in 1934 placed emphasis on immigration for the provision of formally skilled personnel.

The *Southern Rhodesian Apprenticeship Act of 1959* which came into force in 1960 was also designed to regularise the training and employment of apprentices in certain trades. This Act was non-racial in scope, but possible hurdles in training Africans were identified by F. Bray, Adviser on Technical Education to the Federal and Southern Rhodesia governments in 1959. For example, the African could not be expected to acquire European standards, would need sound knowledge of scientific processes and sound secondary education. With European employers and workers forming a powerful stumbling block to African advancement, the African would need to seek full training elsewhere.

The *Rhodesia Apprenticeship Training and Skilled Manpower Development Act of 1968* established a Training Fund and the Apprenticeship Training and Skilled Manpower

Development Authority. The main function of the latter was to evaluate the impact of technological changes and prescribe practical and theoretical subjects for apprentice testing. This was intended to sustain, regularise and ensure relevance of training.

A direct consequence of the skewed policy on technical education in the colonial era, for example between 1961 and 1969, was the small number of Africans who were apprenticed, ranging between 0% and 9,2% (see Chapter 2, pp. 37-39).

2.3.2 Policy on technical education in the post-colonial era (1980-2000)

Policy on technical education in the post-colonial era sought to address the critical shortage of skills noted by the Zimbabwe Conference on Reconstruction and Development (ZIMCORD). Policy formulation was also influenced by the findings of the *National Manpower Survey, 1981*. The Survey was carried out to assess the manpower situation at independence in terms of size, characteristics and existing shortages. Data gathered reflected dominance of unskilled workers, imbalances on the basis of race, male domination in the labour market, skills wastage through persistent emigration, and misallocation of skills. A multiplicity of certificates of questionable standards being issued by different institutions was noted.

On the basis of the results of the Survey, policy on technical education was developed. The *Manpower Planning and Development Act, 36 of 1984* was passed to provide a legal framework for effective manpower planning and development. Among other things, this entailed establishing the National Manpower Advisory Council (NAMACO) and the Zimbabwe Manpower Development Fund (ZIMDEF), centralising recruitment of apprentices

and standardisation of skills classification. Development of comprehensive national training infrastructure and improved salaries for technical staff in the public sector were also ensured.

To further co-ordinate the development of professional and skilled manpower, the government of Zimbabwe adopted the policy on *Rationalisation of Vocational and Technical Education of 1990*. Rationalisation of vocational and technical education led to the establishment of the following qualitative terminal levels: Pre-Vocational Certificate (PVC), National Foundation Certificate (NFC), National Certificate (NC), National Diploma (ND) and Higher National Diploma (HND). Government hoped to systematically generate manpower needed to sustain the economy, and to monitor and manage skilled manpower development.

Policy on technical education was also articulated in the *Transitional National Development Plan, 1982/1983-1984/1985*, the *First Five-Year Development Plan, 1986-1990* and the *Second Five-Year Development Plan, 1991-1995*. The Development Plans were intended to lead to the achievement of national revolution, economic liberation and socialist transformation. Imbalances of the past were to be redressed through removal of exploitation, unemployment and poverty in the neglected sections of the population. This would improve the quality of life of the people. The Plans accorded a central position to technical, scientific and professional skills, as well as entrepreneurial skills for enterprise development.

The Development Plans also provided for full development and full utilisation of Zimbabwe's human resources. Education and training were regarded as a basic and fundamental right. Upgrading of semi-skilled workers was provided for and a system of bonding for all apprentices was adopted to curtail the brain-drain. The country would continue to use expatriate staff until Zimbabwe had enough qualified personnel to man its technical

institutions, especially those with a techno-scientific orientation. Increase in student enrolment was envisaged. Government also undertook to establish a Vocational Training Centre (VTC) in each town.

These policy positions had significant implications such as the need for a new mindset, and commitment by all stakeholders, private sector, parastatals and local authorities such as the government. This would ensure provision of major financial input, infrastructure and expertise required for the new dispensation in technical education (see Chapter 3, pp. 99-120).

2.4 Establishment and development of technical institutions in the colonial era (1890-1979)

2.4.1 Missionary efforts in the provision of technical-vocational education

On the example of the Hasfa School (1942) established by Miss Tully and Miss Langham, the Beit Trustees offered valuable financial assistance for the establishment and maintenance of similar schools at mission stations such as Morgenster, Emphandeni, Masase and Wanezi. Mission stations such as Mt Selinda, Tegwani, Waddilove, Gokomere, Driefontein and Silveira House are also noted for providing rudimentary but vital skills in areas such as agriculture, hygiene, bricklaying, welding, sewing, plumbing, carpentry and crocheting. Beneficiaries were converts and other interested people who had done Standard 6 or Grade 7, and sometimes the Rhodesia Junior Certificate (RJC). Skills imparted were intended to help Africans in running of their homes and in the service of Europeans (see Chapter 2, pp. 62-63).

2.4.2 Early institutions for industrial and agricultural education

H.S. Keigwin, Director of Native Development, a sub-department of the Department of Native Affairs, established Domboshawa (1920) Tjolotjo (Tsholotsho) (1921) industrial and agricultural schools. It was hoped that these institutions would lead to the development of productive native communities. Instruction was given in agriculture, woodwork and building. Tsholotsho's curriculum also included dairy work, forestry, and pig-keeping. Training combined theory and practice, and thus had practical value in terms of production and skill utilisation for community upliftment. Both institutions had limited vacancies and increasing fees could not serve as a deterrent to qualifying aspirants. In general graduate unemployment was a serious problem. Thus, their wage earning capacity could not be enhanced. To make the graduates marketable it was felt that the mission statement of Domboshawa industrial and agricultural school should be broadened to include training of agricultural and industrial teachers, as well as agricultural demonstrators (also known as Land Development Officers); (see Chapter 2, pp. 64-69.)

2.4.3 Luveve Technical Teacher Training College, 1960

The Luveve Technical Teacher Training College was established in 1960 for Africans by the Southern Rhodesia government. Its mandate was to train teachers who would offer special training to apprentices in trade and technical schools. The entry qualification was the Cambridge School Certificate (CSC) or Form 4 with credits in English, Mathematics and Science, a rare achievement then. Areas of specialisation included electrical installation, motor mechanics, brickwork, plumbing, carpentry and joinery. However, interest was primarily in the four-year practical and technical course leading to the final examinations of

the City and Guilds of London Institute, and the full-time apprenticeship course. It was believed that these course would transform the status of graduates significantly. It also provided short courses in response to societal needs.

Although the College seemed to have favourable training conditions, it faced problems such as lack of basic and essential tools, lack of opportunity for trainees for trade practice, and exclusion from the provisions of the *Industrial Conciliation Act of 1934*, the *Apprenticeship Act of 1959* and the *Workmen's Compensation Act, 10 of 1959*. It was felt that the college was duplicating the training functions of the existing technical institutions and the Parliamentary Select Committee on Technical Training recommended its closure. The college closed in 1963, and would re-open in 1965 as a technical high school with boarding facilities for boys and girls. Perhaps this was a ploy by government to deny qualifying African aspirants access to real technical education. This claim may be valid in the light of the recommendations of the Judges Commission (1962) (see Chapter 2, pp. 70-73).

2.4.4. Salisbury Polytechnical College, 1919

The establishment of the Salisbury Polytechnical College (1919) (now Harare Polytechnic) shows the importance of cooperation between government and industry. The late Sir George Chaloner organised mechanical engineering classes for a few young men working in his firm, Hubert Davis and Company, and with increased number of applications, he sought assistance from government.

Government agreed to start regular classes in 1925 and the first African students were only enrolled 40 years later in September 1965. Although a Standard 6 Certificate seemed to be

the entry requirement for most courses, non-Europeans were expected to have a Form 2 Certificate. Qualifications in the technical fields were awarded by the City and Guilds of London Institute, and the Republic of South Africa. Local examinations were provided in plumbing, and mechanical, electrical and motor engineering.

The College experienced problems such as inadequacy of classrooms and shortage of suitably qualified full-time lecturers, necessitating the hiring of part-time lecturers. Limited teaching space made it difficult for the College to offer certain classes. For example, full-time training of apprentices in building, electrical, motor and printing industries was introduced in 1969 and ceased to operate in the same year. Thus, the programmes could have been more accessible to aspiring applicants (see Chapter 2, pp. 73-79).

2.4.5 Bulawayo Technical College, 1923

Bulawayo Technical College (1923) developed from being a department of the Technical High School in Bulawayo to a regional college with technical centres or satellites at Wankie, Gwelo and Que Que. Its mandate was to meet requirements of industry and commerce through full-time and part-time commercial and technical education. Form 2 was the minimum entry requirement for most courses, Standard 7 for craft courses and a Cambridge School Certificate for technical and technological courses. Students received City and Guilds of London Institute certificates. Demand for courses, including leisure-time courses was high and Europeans were a major part of the enrolment.

The College experienced problems such as shortage of suitably qualified full-time lecturing staff and inadequate funding which affected equipment and facility provision. The College

could not cope with increased apprentices since 1969. Thus, while it played its role in community upliftment, access to courses being offered was limited. (see Chapter 2, pp. 79-83).

2.4.6 Small centres for further education

Small centres for further education were set up to meet local needs in Umtali, Gwelo, Que Que and Wankie. These were not technical colleges. Student enrolment was small and it tended to fluctuate with changing demand and circumstances. No Africans were enrolled at these centres. Students at small centres for further education sat for Rhodesian examinations as opposed to the City and Guilds of London Institute. It is clear that race was used to deny Africans access to training at small centres for further education. (see Chapter 2, pp. 88-90).

2.5. Establishment and development of technical institutions in the post-colonial era (1980-2000)

Establishment and development of technical institutions in the post-independence period can be understood against the background of developments in pre-independence Zimbabwe. Harare and Bulawayo Polytechnics were established in the colonial era and they continue to witness more developments. For example, Bulawayo Technical College became a polytechnic in 1989. Both polytechnics need to lead in research and technology generation rather than continue to react to developments in industry.

Gweru, Kwekwe and Mutare Technical Colleges also have their origins in pre-independence Zimbabwe as small centres for commercial courses. They developed into fully-fledged technical colleges with broader mandates, to meet needs of commerce and industry. The impetus for such developments came from the ZANU government's conviction that enskilling people would correct imbalances in manpower and ensure success in its socio-economic revolution.

The massive expansion in the provision of technical education was also achieved through the establishment of Kushinga-Phikelela and Masvingo Technical Colleges and Harare Institute of Technology (HIT). Government sought to empower the community with skills for self-reliance. It was hoped that self-reliant people would be able to contribute to nation-building. To complement education and training offered by technical colleges, government is currently in the process of setting up twenty vocational training centres throughout the country. Since provision of technical education is an expensive undertaking, government has benefited from assistance rendered by some local authorities, industry and co-operating partners such as Deutsche Gesellschaft für Technische Zusammenarbeit (GTZs); (German Association for Technical Cooperation) and the United States Agency for International Development (USAID).

At independence in 1980 technical institutions were under the control of the Ministry of Labour, Manpower Planning and Social Welfare. In 1988 they were placed under the Ministry of Higher Education which is charged with the responsibility to provide, regulate and facilitate tertiary education and training to meet national requirements for trained manpower. Colleges are also advised by College Advisory Councils.

A striking feature in the development of technical institutions in the post-colonial era is the diversity of courses or areas of specialisation. Infrastructure and availability of human resources determine individual technical institutions' responsiveness to local needs. For example, the two polytechnics offer specialised courses such as library and information science and rubber technology. Harare Polytechnic offers printing and graphic arts and mass communication, while Bulawayo Polytechnic offers foundry and refrigeration. In addition to the common courses, Masvingo Technical College offers non-formal training to meet the needs of the informal sector. There are also programmes to equip trainers in technical institutions with teaching skills.

Student enrolment at technical institutions has increased significantly, with Harare Polytechnic leading (see Table VI, p. 137), given the benefits of technical lecturers from Gweru Technical College. Students at technical institutions are mainly Africans as most European students tend to enrol at private training centres. The few Europeans remaining at technical institutions are in specialised areas such as art and refrigeration or will be completing the theoretical phase of their apprenticeship. Although female participation in technical education is improving, males still dominate in engineering, science and business studies (see Table VII, p. 138).

It is important to note that technical institutions are supported by the Curriculum Research and Development Unit (CRADU) and the Higher Education Examinations Council (HEXCO) in curriculum development and examinations. HEXCO is sometimes accused of inefficiency and, therefore, it needs to perform its vital functions efficiently. (see Chapter 3, pp. 120-150).

2.6 Status of technical education

An analysis of the status of technical institutions necessarily implies the status of technical education in time perspective. In the colonial era, the apprenticeship training system was very much concerned with enabling the not-so-intelligent European to survive in Rhodesian society. Even in the school system, the 1966 Education Plan made provision that learners of ordinary ability would do subjects of a technical nature, for example, domestic science, mechanical drawing and hygiene. Thus, pupils and teachers at F2 secondary schools (junior vocational-oriented secondary schools) whose curriculum had a technical-vocational bias were made to feel inferior to those at F1 secondary schools who were pursuing purely academic courses.

The empirical analysis of the status of technical institutions carried out as part of this study has revealed an improvement in the status of these institutions. Principals seem to assume that members of the public accord an equal status to both technical and teachers' training colleges. On the contrary, members of the public in agreement with heads of departments and ND students rank institutions of higher learning as follows: universities, technical institutions and teachers' training colleges respectively.

In trying to establish the status of technical education, ND students were asked whether coming to the technical college or polytechnic was their first choice. Those (43,1%) who indicated that it was their first choice saw value in technical-vocational skills. The remainder (56,9%) probably preferred receiving training through apprenticeship, universities and teachers training colleges.

It was also possible to establish the composition and quality of lecturing staff as a possible determinant of the status of technical education. In 1995 HODs indicated that 63,3% of their lecturers had teaching qualifications, while 36,7% did not have teaching qualifications, but were suitably qualified in their areas of specialisation. Towards the end of 1999, the number of lecturers with teaching qualifications was approximately 71,4%.

In this dissertation, it is evident that most industrialists or employers (81,4%) had employed institutional graduates and were, therefore, able to compare them with apprentices. Most industrialists or employers (78,6%) showed preference for apprenticeship trained graduates to institutional trained graduates. Only 21,4% preferred institutional trained graduates to apprenticeship trained graduates. It was also clear that some industrialists or employers (57%) still felt that City and Guilds of London Institute qualifications were practical-oriented and were superior to local Zimbabwean qualifications. Apart from the economic hardships being experienced in Zimbabwe, unemployment of institutional trained graduates can be explained in terms of the industrialists' preference for apprenticeship trained graduates. (see Chapter 4, pp. 155-205).

2.7. Problems faced in the provision of technical education

From the beginning technical institutions experienced and continue to experience problems which impact negatively on their operations. Consequently, the role of technical education in community upliftment is also affected.

Lack of adequate financial resources has emerged as a major persistent problem faced by technical institutions. Inadequate allocations and shortage of forex have given rise to a

variety of inadequacies in the technical teaching-learning environment. Shortages have been observed in the following areas: classrooms, boarding hostels, purpose-built rooms such as workshops and laboratories, resources in libraries, relevant textbooks, consumables, state-of-the-art equipment and hand tools. Bureaucratic procurement procedures have also been blamed for delays in sourcing training necessities. It is important to add that inadequacies highlighted this far have remained a constraint in terms of increasing student enrolments.

Technical institutions also experience shortage of properly qualified lecturers. Lecturers are demotivated by unattractive conditions of service and this has led to high staff turnover in some areas. In most cases institutions have resorted to the use of part-time lecturers who are not assured of job security. Part-time lecturers are paid on an hourly basis and this appears to be more expensive than paying salaries of full-time lecturers.

Shortage of transport continues to affect supervision of Teaching Practice and follow up of students on industrial attachment. Students would certainly benefit from regular visits by their lecturers. To worsen matters, industry has always felt that training offered by technical institutions is theoretical and the college environment is divorced from that which prevails in industry.

Problems also relate to student behaviour and performance. Delays in payment of Vocational Training Loans (VTLs) have invariably led to disruptive student behaviour. More recently, students demonstrated against privatisation of the cafeteria and this led to the closure of two technical institutions which were reopened on 18 September 2000 (*Zimbabwe. Ministry of Higher Education and Technology. 2000:1-2*). High failure rate has been experienced in technical institutions. This seems to have been worsened by some trainees who do not seem

to take training seriously.

Although 75% of the principals disagreed that graduates face problems in securing employment, in general graduate unemployment is a serious problem. The problem is being worsened by the "qualify and go" strategy adopted by some industries which train apprentices. Students blame all this on the current economic hardships being experienced in the country.

2.8. Role of technical education in community upliftment

Technical education has always had an impact on the workplace and homelife in Zimbabwean society. This has tended to hinge on the prevailing socio-economic and political circumstances, nature and accessibility of technical education, societal attitudes, quality of training, quality of graduates and utilisation of skilled personnel. It is, however, evident that it has not played its role in community upliftment to the fullest extent.

In the colonial era society was racially stratified and provision of technical education was differentiated on racial lines. Africans received rudimentary skills for developing their communities and also fetch and carry for Europeans. The Hasfa School and those modelled along its lines equipped African women with skills for running their own homes as better mothers and housewives. Vocational-biased education was viewed as a second rate type of education by the public and it was regarded as a strategy to deny Africans franchise qualifications.

On the other hand, Europeans received training through the apprenticeship system. Unfortunately, in the late 1950s methods for training were not suitable for producing efficient

and adaptable skilled workers. There was time wastage in the first two years in an apprentice's life while trying to acclimatise to the workplace. Thus, the quality of earlier apprentices was likely to be limited.

It is evident that real technical education has a transformative role in society. Such technical education integrates theory and practice, is multifaceted and diversified, which makes it possible to develop the total person. Enskilling students equips them with a new mindset.

Graduates with a techno-scientific orientation are a critical factor in nation-building. They develop new kinds of thinking which may have a positive impact on the community. Technical education equips its recipients with creative and productive skills which enable them to convert and manipulate resources so as to create the desired environment. Skilled graduates may provide goods and services of a higher quality. In addition, they may be able to create employment and generate wealth. This may lead to import substitution, indigenisation of the economy, eradication of poverty, self reliance and community upliftment. They may also facilitate technology transfer.

Empirical analysis of the role of technical education in community upliftment revealed that technical institutions are failing to accommodate large numbers of applicants. For example, in 1995 most principals (62,5%) enrolled 0-20% of the qualifying aspirants. The situation is unlikely to improve in the near future, especially in the light of limiting factors such as inadequate finance, staff and teaching-learning space.

Most principals (87,5%) and heads of departments (83,3%) reported that they received positive comments from commerce and industry on the quality of graduates from technical

institutions. While some industrialists or employers viewed technical graduates as capable, responsible and well motivated workers, others regarded them as theoreticians who lacked practical skills, industrial exposure and in depth skills application and specialisation. Attitude to work was generally poor. HODs and ND students also indicated that technical institutional graduates have sound theoretical skills but lack the ability to bear work-related stress, leadership and decision-making skills.

While 87,5% of the principals reported that over 50% of their graduates secured employment in the chosen fields within one year of graduation, ND students (70,1%) indicated that graduates from technical institutions had difficulties in securing employment. Principals (75%), HODs (85%) and ND students (78%) agreed that current training made graduates job seekers. On the need to make graduates job creators, principals (66,7%), HODs (89,6%) and ND students (90,3%) were in favour of the incorporation of the course Principles of Business Management. Principals (66,7%), HODS (77,1%) and ND students (72,9%) agreed that the new course would have to be examinable to ensure commitment by both lecturers and students.

It is evident that the role of technical education can be maximised through internal renewal of technical institutions and creation of an enabling external environment. Perhaps this is why ND students argue that technical institutions themselves require upliftment.

3. Conclusions

On the basis of the findings of the study, and in the light of the hypotheses formulated to guide the research process (see Chapter 1, pp. 10-11), the following conclusions have been

made:

- 3.1. Social, economic and political circumstances of the day are inextricably bound together with the technical education dispensation and its subsequent financing. In colonial Zimbabwe technical education was largely accessible to Europeans through the apprenticeship mode of training, and institutional training at the Salisbury Polytechnical College and Bulawayo Technical College. The Kerr Commission (1952) concluded that training for occupations and subsequent employment occurred on racial lines which it referred to as occupational colour bar. Africans were excluded from apprenticeship training. Provision of real technical education was to be deferred until the technically trained African could find a place in the country's economic structure. Instead, Africans were provided with elementary skills at Domboshawa and Tsholotsho Industrial and Agricultural schools to enable them to operate in their communities. They were also equipped with rudimentary skills at F2 secondary schools.

On the contrary, in post-colonial Zimbabwe government has demonstrated increased commitment to the provision of technical education. No legislation bars any race from receiving technical education, and there has been a marked increase in the number of technical institutions, diversification of courses and student enrolments. Thus, there has been a significant shift from an elitist to a popular dispensation in the provision of technical education at tertiary level in Zimbabwe. Technical education has become quite democratised and courses are rationalised.

- 3.2 Provision of technical education in Zimbabwe must be characterised by relevance, for example, through imparting entrepreneurial skills, broadening of curricula and serving

the community adequately. Much more should be done to achieve quality and relevance in technical education as demanded by the dynamic environment which is characterised by social and technological change, and many other challenges. Clearly, technical education has not played its role in community upliftment to the fullest extent.

3.3 Graduate unemployment is a problem and its consequence has been wastage of both human and non-human resources. Investment in human capital has not been matched with skilled manpower utilisation. It appears there has not been proper synchronisation of training and graduate output with job market requirements. In addition, the industrialists or employers seem to have a negative attitude towards institutional trained graduates. Most industrialists or employers were dissatisfied with the calibre of graduate from technical institutions. Consequently, 78,6% of the industrialists or employers preferred apprenticeship trained graduates compared to 21,4% who were in favour of institutional trained graduates.

3.4 Technical institutions experience serious problems which impact negatively on their provision of training and contribution to community upliftment. Main constraints include inadequacies in finance, equipment, consumables, staff and purpose-built rooms.

4. Recommendations

Technical education can lead to the attainment of, among other things, proper humanness or responsible adulthood, self actualisation and meaningful existence. However, this study has

revealed underutilisation and unemployment of graduates from technical institutions. The following recommendations may lead to the improvement of both the internal and external environments of technical institutions, and thereby enhance the role of technical education in community upliftment in Zimbabwe.

4.1 Importance of attitudinal change

From the preceding chapters it is evident that race has always been implicated in technical education and subsequent occupational attainment, both overtly and covertly. In post-colonial Zimbabwe, there is inherent racial conflict and xenophobic tendencies in the economy. For example, the "qualify and go" strategy adopted by some companies in the training of apprentices is explained both in terms of a poor economy and racial struggle. Such circumstances seriously limit the role of technical education in community upliftment and call for urgent attitudinal change by all stakeholders.

Government should demonstrate political will and commitment to creating an enabling environment which benefits all concerned. Such an environment is likely to boost investor confidence, stimulate the economy and promote employment creation. Principals of technical institutions are likely to benefit from the removal of bureaucratic procedures which delay the decision-making process, and provision of goods and services.

Industrialists or employers should view technical institutional training as a viable alternative to apprenticeship, particularly considering that they are involved in curriculum development and industrial attachment. Reconciliation must not be viewed in terms of surface rhetoric, but real harmonisation and mutual co-existence.

On the other hand, students and their lecturers should experience a paradigm shift in terms of their view of employment. They should shift from the traditional view of employment, and realise that some jobs are obsolete and new jobs can be created in the informal sector through innovation. Thus, they should become dynamic and proactive job creators.

All stakeholders must view themselves not as adversaries but as cogs in a wheel in human resources development and utilisation.

4.2 Role of principals as change agents

The decentralisation of management functions to technical institutions which is being envisaged is a positive development. This is likely to give institutions greater autonomy, but the principals may not be fully equipped to cope with this and other challenges. The problems being experienced by technical institutions, graduate unemployment and an unpredictable external environment require special managerial skills. More than ever before, principals ought to be men and women of vision, flexibility, and dynamism. They should be public relations managers who are informed about developments in the internal and external environment of their technical institutions. This calls for workshops and seminars on management. Furthermore, there is need for greater networking among principals.

4.3 Importance of curriculum review

It is evident that relevance and quality should be taken into account in the provision of technical education. Technical institutions should be demand-driven and courses should be community-oriented, being able to help graduates to become self-reliant. Thus, technical

education should be responsive to industrial needs and realities.

Curriculum review may involve upgrading existing syllabuses to match the current economic trends. For example, the practical component of courses would require stepping up to match industrial requirements and facilitate setting up of self-help projects. The teaching of industrial or public relations should be a requirement to prepare students for interaction with other workers and clients in industry. In addition, technical institutions would need to improve their equipment and machinery to ensure quality in training.

Technical institutions would benefit from the services of more suitably qualified lecturers. Lecturers would maximise their effectiveness in the technical teaching-learning situation by increasing focus on inquiry, both convergent and divergent thinking, and problematisation. Teaching methods, such as role play, groupwork, simulation, discovery and excursion would be useful. These methods would make it possible for lecturers to multi-skill graduates and make them more marketable and versatile. Okwuanaso (1984:17) encourages exposing students to clusters of related jobs. Specialisation would take place on a sound general foundation which enables a graduate to operate in diverse environments.

There is also need to conscientise students on the value of technical education. Departments could generate income through running production units. Provision of more adult and continuing courses would also enhance the role played by technical education in community upliftment.

4.4 Centrality of practical exposure

Despite the fact that students go on industrial attachment, they are largely regarded as theoreticians who lack practical skills. Industrialists or employers should not view students on industrial attachment as a drawback to production, but as potential assets. Students should be afforded the opportunity to attach themselves to companies of their choice during the holidays. Lecturers should also go on industrial attachment on a regular basis for them to observe new industrial and commercial processes, operations and technologies. A record of these industrial attachments must be maintained.

Skilled workers in charge of supervising students while on industrial attachment should be encouraged to take up technical teaching courses such as FETC, FETD and ND on a part-time basis. Such training would equip them with skills needed to handle institutional trainees on industrial attachment and apprentices in a more accountable way. Usually it is the training officers in industry who have some teaching qualifications but the majority of journey persons do not.

4.5 Importance of entrepreneurship education

There is general consensus that the role of technical education in community upliftment could be maximised through equipping graduates with entrepreneurial skills. Both students who have an inclination or ability to become entrepreneurs and those who wish to work in the formal sector would benefit from entrepreneurship education. Students who are specialising in Business Studies would also benefit from a specially designed course in Principles of Business Management. This course would focus on fostering a positive attitude towards self-

employment and equip students with practical skills and knowledge for success in business. The course would cover aspects such as, making a decision to start a business, writing a business plan, the personality of a successful entrepreneur, marketing strategy or mix resource management, and financing business. Decisions would have to be made whether an integrated approach or a separate course would be mounted to develop an entrepreneurial culture in students.

Students are likely to understand business principles such as customer service, profit margins and quality control. Self-employment would become an option to formal employment. In addition, a good entrepreneur is both a good manager and a good employee. Students would be able to attain economic independence which is one of the essences of proper adulthood.

Success of entrepreneurship education would depend on the preparation and utilisation of technical lecturers with an entrepreneurial orientation. For example, Gweru Technical College whose mandate is to train technical lecturers would need to engage in curriculum review to develop the new dynamic, innovative, technically literate lecturer with an entrepreneurial mindset.

4.6 Importance of efficient financial management

The lack of necessary funds has remained a major constraint on the operations of technical institutions. Financial prudence is encouraged to ensure that the limited funds are used cost-effectively. ZIMDEF (Zimbabwe Manpower Development Fund) funds should be used judiciously. For example, during setting and marking of examinations, decent but affordable centres should be identified. In addition, the sessions should be shortened.

An effective loan repayment system should be instituted. Engaging services of debt collectors is useful, but it must not lead to harassment of students who are still at college or who have never been employed ever since they graduated. The Ministry of Higher Education and Technology should involve parents or sureties in loan repayment.

Technical institutions should also generate funds by operating production units. Such funds could be used for the procurement of consumables and other training materials. Quality of training is likely to be enhanced.

4.7 Importance of linkages between technical institutions and the community

To ensure that technical education plays its role to the fullest extent, various forms of networks and linkages should be established between technical institutions and the communities they serve. It is important to sensitise the community about the opportunities that exist in technical education. Open days could be organised for members of the public to familiarise themselves with what goes on at technical institutions. They may also suggest new courses and infrastructural developments which may be useful in community upliftment.

There is a need for better organised career guidance and counselling. This would make it easier for job seekers and students to choose and prepare for an occupation. One's interests, aptitude and personality would be taken into account.

It is important to make technical education more accessible. Outreach programmes and distance learning could be organised so as to achieve real development and poverty alleviation in rural areas. Technical institutions could conduct safety workshops for the community.

Students could also undertake supervised income generating projects in the community in their areas of specialisation. In this case, technical institutions could adopt projects or functions in the community, for example, servicing municipal vehicles on a small scale at an affordable cost. To achieve all this, technical institutions should engage in capacity-building.

4.8 Importance of graduate support programmes

Most students (70,1%) agreed that graduates have difficulties in securing employment. Apart from equipping graduates with entrepreneurial skills, technical institutions could assist them in employment creation. A revolving soft loan could be established and students could be organised into groups which are easy to finance. Such groups could consist of a variety of skills, for example, technical and accounting. Experienced industrialists could lead and supervise groups of graduates who would be willing to engage in small businesses. This would prevent wastage of skilled personnel.

4.9 Importance of institution-based research

The role of technical education in community upliftment implies relevance and quality. To achieve this, technical institutions need to engage in regular needs assessment. Some technical institutions are developing a research culture but there is need for a more co-ordinated national research policy.

All technical institutions should set up research teams comprising interested and competent lecturers to gather information on employment trends, and operational problems and those relating to industrial attachment. Principals would direct the activities of research teams.

Teams could be given a small stipend to motivate them, and they may be permitted to engage in fund-raising activities to enable them to fund their research. The efforts of all research teams would need to be coordinated by the research division of the Ministry of Higher Education and Technology. Findings and recommendations should be interpreted and implemented judiciously to scientifically guide the role of technical education in community upliftment. Technical institutions are then likely to engage in constant reflection on their courses, operational challenges and application of new technologies for the upliftment of the community.

4.10 Importance of regular manpower surveys

Manpower surveys may be undertaken to assess the size and characteristics of the nation's workforce. Areas of specialisation experiencing shortages or are flooded can be identified and graduate output can then be matched with the requirements of the job market.

The Ministry of Higher Education and Technology in conjunction with other ministries involved in human resources development and NAMACO (National Manpower Advisory Council) could carry out regular manpower surveys and publish the results timeously. The surveys could be carried out cost-effectively by asking companies to submit returns of their skills distribution and requirements. Registers of skilled personnel would be kept and updated. Organisations would be expected to report deaths and newly acquired qualifications. The national pool of skills would be coordinated, thereby enhancing the role of technical education in community upliftment.

5. Final remarks

Provision of technical education in technical institutions, as a form of andragogic accompaniment, is expected to lead to the attainment of proper adulthood or humanness. This is characterised by, among other essences, self knowledge and meaningful existence. Technical education is also expected to cater for two fundamental modes of human life, namely, the working and creative modes of life which can elevate both the individual and the community to a higher niveau. This becomes virtually untenable if graduates are unemployed or underutilised. Such graduates may experience a deep sense of frustration, inadequacy and dependency and consequently fail to give a meaningful reply to life's questions. A nihilistic view of life may be engendered in the graduates by society's problems.

The above is, however, by no means an exhaustive account on this theme. The role of technical education in community upliftment in Zimbabwe is such a comprehensive theme that justice cannot be done to it in one single dissertation. The following themes may, therefore, be researched in order to further expose the possibilities in this regard :

- Tracer studies of graduates and needs assessment by technical institutions.
- Evaluation of technical lecturer effectiveness in preparing graduates for future challenges.
- Role of vocational training centres in community upliftment.
- Role of industry, commerce and the state in determining the role of technical education in community upliftment.
- Strategies to transform technical institutions into sites of relevant and quality technical education for community upliftment.

- Role of technical education in community upliftment in countries in the sub region to enrich the Zimbabwean experience.

REFERENCES

- ATKINSON, N.D. 1972. *Teaching Rhodesians*. London: Longmans.
- ATKINSON, N.D. 1988. Zimbabwe, in Postelthwaite, T.N. (ed.). *The encyclopedia of comparative education and national systems of education*. Oxford: Pergamon Press.
- BANTOCK, G.H. 1980. *Dilemmas of the Curriculum*. Oxford: Martin Robertson.
- BEACH, D.S. 1980. *Personnel: The management of People at work*. New York: Macmillan.
- BLAKE, R. 1977. *A History of Rhodesia*. London: Eyre Methuen.
- BRAND, C. 1981. The anatomy of an unequal society, in Stoneman, C. (ed.). *Zimbabwe's Inheritance*. London: Macmillan.
- BRAY, F. 1960. Skills feed on education. *The Central African Examiner*, 3 (6): 8-9.
- BWERAZUVA, J.C. 1991. *The preparation of teachers for technical colleges and polytechnics in Zimbabwe since independence*. University of Manchester, School of Education, Boston Institute of Higher Education. Unpublished MED Dissertation. Boston: Boston Institute of Higher Education.
- BWERAZUVA, J.C. 1995. *Correspondence*. 14 April, Gweru.
- CARNOY, M. 1974. *Education as cultural imperialism*. New York: Longman.
- CHALLISS, R.J. 1980. *The European Educational System in Southern Rhodesia, 1890 - 1930*. Salisbury: University of Zimbabwe.
- CHALLISS, R.J. 1983. Phelps-Stokeism and Education in Zimbabwe. *Zambezia: The Journal of the University of Zimbabwe*, II (ii) :109-125.
- CHIKOMBAH, C.E.M. 1992. Zimbabwe, in Wickremasinghe, W.(ed.). *Handbook of World Education*. Houston: American Collegiate Service.
- Chronicle (The)*. 26 September 1994: 1.
- Chronicle (The)*. 17 August 1998: 2.
- CHUNG, F. & NGARA, E. 1985. *Socialism, Education and Development: A challenge to Zimbabwe*. Harare: Zimbabwe Publishing House.
- CLAASSEN, J.C. 1992. Economic perspectives on a new education dispensation. *Educare*, 21 (1 & 2): 106-113.

- COLMAN, D. & NIXSON, F. 1994. *Economics of change in less Developed Countries*. New York: Harvester Wheatsheaf.
- Daily Gazette (The)*. 28 October 1994: 4.
- DE JAGER, P.L., REELER, G., OBERHOLZER, M.O. & LANDMAN, W.A. 1985. *Fundamental Pedagogic: Science, Content and Practice*. Pretoria: NG Kerkboekhandel.
- DEPARTMENT OF EDUCATION. INSPECTORATE. 1939. *The Polytechnic, Salisbury*. Salisbury: Government Printer.
- DESTITUTE TECHNICAL COLLEGE GRADUATE. 1995. *Personal interview*. 6 April, Gweru.
- Director, Curriculum, Examinations and Distance Education Circular Number 2 of 1995*. Harare: Government Printer.
- FÄGERLIND, I. & SAHA, L.J. 1983. *Education and National Development: a comparative perspective*. Oxford: Pergamon Press.
- FARMAN, A. 1991a. "Post-Apartheid" Education in Zimbabwe. *The Educational Journal*, 61 (1) : 4, 6.
- FARMAN, A. 1991b. Education in Zimbabwe - The First Decade: Are there lessons for South Africa? *The Educational Journal*, 61 (4) : 9-10.
- FARQUHAR, J.H. (ed.). 1960. *NADA: The Southern Rhodesia Native Affairs Department: Annual, No. 35*. Salisbury: W.T. Nesham.
- FEEB COMMITTEE ON LECTURER TRAINING. 1986. *Submission Document to the Further Education Examinations Board for the Authorisation of the Zimbabwe Further Education Teacher's Certificate*. Harare: F.E.E.B.
- FEDERATION OF RHODESIA AND NYASALAND. 1957-1959. *Report of Survey of Facilities for Technical Education in the Federation*. Salisbury: Government Printer.
- FRANTZ, C. 1960. Native Policy in the U.S.A. and S. Rhodesia, in Farquhar, J.H. (ed.). *NADA: The Southern Rhodesia Native Affairs Department: Annual, No. 35*. Salisbury: W.T. Nesham.
- FRAZER, W.J., LOUBSER, C.P. & VAN ROOY, M.P. 1990. *Didactics for the undergraduate student*. Durban: Butterworths.
- FREIRE, P. 1972. *Pedagogy of the oppressed*. Harmondsworth: Penguin Books.
- FURTHER EDUCATION UNIT. 1987. *Behaviour and motivation: disruption in further education*. York: Longman.
- GASSON, J. 1963. *Further education in Southern Rhodesia with special reference to*

- Bulawayo and Matabeleland*. Bulawayo: Bulawayo Council for Further Education.
- GATAWA, B.S.M. 1994. Zimbabwe: System of Education, in Postlethwaite, T.N. (ed.). *International encyclopedia of education*. Oxford: Pergamon Press.
- GILLESPIE, R.R. & COLLINS, C.B. 1986. Education in Zimbabwe. *Education and Society*, 4 (1): 62-68.
- GILMURRAY, J., RIDDELL, R. & SANDERS, D. 1979. *The Struggle for Health*. Gwelo: Mambo Press.
- GOOD, C.V. 1963. *Introduction to Educational Research*. New York: Appleton-Century Crafts.
- Gweru Technical College: Annual Report*. 1984. Harare: Ministry of Labour, Manpower Planning and Social Welfare.
- Gweru Technical College: Prospectus*. 1994-1995; Harare: Ministry of Labour, Manpower, Planning and Social Welfare.
- Gweru Technical College Mission Statement*. 1998 Harare: Department of Education.
- GWARINDA, T.C. 1985. *Socialism and Education: An introduction*. Harare: The College Press.
- GWARINDA, T.C. 1994. The relevance of Communication Skills in technical-vocational tertiary teacher education. Paper delivered at the Regional Conference on Teacher Education for Teaching Across the Curriculum in a Second Language, University of Zimbabwe, 6-8 December 1994.
- Herald (The)*. 31 January 1984:5.
- Herald (The)*. 23 September 1994: 8.
- Herald (The)*. 2 June 1995: 1.
- Herald (The)*. 30 December 1995: 1.
- INTERNATIONAL DEFENCE & AID FUND FOR SOUTHERN AFRICA. 1977. *Zimbabwe: The facts about Rhodesia*. London: International Defence & Aid Fund.
- JACKSON, P. 1986. *Historic Buildings of Harare (1890-1940)*. Harare: Quest Publishing.
- JONES, T.J. 1925. *Education in East Africa: A study of East, Central and South Africa by the second African Education Commission under the auspices of the Phelps-stokes Fund, in co-operation with the International Education Board*. London: Edinburgh House Press.

- JORDAAN, J.H. 1988. The "model of the essence - structure" as a useful aid for research in the History of Education. *Educare*, 17 (1 &2): 75-84.
- KADHANI, M. & RIDDELL, R. 1981. Education, in Stoneman, C. (ed.). *Zimbabwe's Inheritance*. London: Macmillan Press.
- KATEDZA, N.H. 1987. *The contribution of education to development in Zimbabwe*. Unpublished Ph.D. Thesis, Atlanta: Georgia State University College of Education.
- KUPER, A. & KUPER, J. (ed.). 1985. *The Social Science Encyclopedia*. London: Routledge & Kegan Paul.
- Kushinga-Phikelela Technical College : Annual Report*. 1986. Harare: Ministry of Labour, Manpower Planning and Social Welfare.
- Kushinga-Phikelela Technical College : Annual Report*. 1987. Harare: Ministry of Labour, Manpower Planning and Social Welfare.
- Kushinga-Phikelela Technical College : Annual Report*. 1988. Harare: Ministry of Labour, Manpower Planning and Social Welfare.
- KUTUTWA, M.W. 1996. *Personal interview*. 4 April.
- LINDLEY, R. (ed.). 1981. *Higher Education and the Labour Market*. Surrey: The Society of Research into Higher Education.
- LLOYD, B.W. 1960. Early History of Domboshawa School. Period 1920-1939, in Farquhar, J.H. (ed.). NADA. *The Southern Rhodesia Native Affairs Department Annual, No.39*. Salisbury: W.T. Nesham.
- LONEY, M. 1976. *Rhodesia; white Racism and Imperial Response*. Harmondsworth: Penguin.
- LYNCH, J. 1979. *Education for community*. London: Macmillan Education.
- MANDAZA, I. 1986. *Zimbabwe: The Political Economy of Transition 1980-1986*. Harare: CODESRIA.
- Manpower Monitor* 1994a: 3, 5.
- Manpower Monitor* 1994b: 12-14.
- Manpower Monitor* 1995a: 13.
- Manpower Monitor* 1995b: 12.
- Manpower Monitor*, 1996: 7

- MANYUCHI, E.P. 1986. *The Directorate of Vocational and Technical Training Institutions: Annual Report for 1986*. Harare: Government Printers.
- Masvingo Technical College: Prospectus*. s.a. Masvingo: 2.
- MOTHOBI, B. 1978. *Training for Development*. Salisbury: A.R.T.C.A.
- MOYANA, T.T. 1988. *Education, Liberation and the Creative Act*. Harare: ZPH.
- MURPHREE, M.W., DORSEY, B.J., CHEATER, G. & MOTHOBI, B.D. 1975. *Education, race and employment in Rhodesia*. Salisbury: Artca.
- National University of Science and Technology Yearbook 1998/1999*. 1998. Bulawayo: NUST.
- OBERHOLZER, M.O, GERBER, A.E., VAN RENSBURG, C.J.J., BARNARD, F. & MÖLLER, F.J. 1990. *Fundamental Pedagogics (B.Ed.) : Only Study guide for OF 402-N(Pedagogics as a Science)*. Revised edition. Pretoria: UNISA.
- OBERHOLZER, M.O., VAN RENSBURG, C.J.J., GERBER, A.E., BARNARD, F. & MÖLLER, F.J. 1990. *Fundamental Pedagogics (B.Ed.): Only study guide for OFP401-M*. Revised edition. Pretoria: UNISA.
- OFFICE OF THE PRIME MINISTER. 1973. *Directory of Organisations concerned with scientific Research and Technical services in Rhodesia*. Salisbury: Government Printer.
- Official Year Book of the Colony of Southern Rhodesia No. 2*. 1930. Salisbury: Rhodesian Printing & Publishing.
- OKWUANASO, S.L. 1984. The Fallacy of Vocational Education in Developing Nations. *C.V.A/A.C.F.P. Journal*, 20 (1): 16-18.
- Personal interview*. 6 April 1995.
- POSSELT, F. 1939. Native Education, in Spicer, N.H.D. (ed.). *NADA: The Southern Rhodesia Native Affairs Department ; Annual, No. 16*. Salisbury: A.A. Capell.
- POSTELTHWAITE, T.N. (ed.). 1988. *The encyclopedia of comparative education and national systems of education*. Oxford: Pergamon Press.
- PARKER, F. 1970. African Education in Rhodesia, in Rose, B. (ed.), *Education in Southern Africa*. London: Collier-Macmillan.
- PROCTER, P. 1995. *Cambridge International Directory of English*. Cambridge: Cambridge University Press.
- RAFTOPOULOS, B. 1986. Human resources development and the problem labour utilisation, in Mandaza, I. (ed.). *Zimbabwe: The Political Economy of Transition 1980-*

1986. Harare: CODESRIA.
- RHODESIA. 1964a. *Annual Report of the Secretary for African Education for the year 1964*. Salisbury: Government Printer.
- RHODESIA. 1964b. *Report on Education for the year ended 31st December, 1964*. Salisbury: Government Printer.
- RHODESIA. 1965. *Report on Education for the year ended 31st December, 1965*. Salisbury: Government Printer.
- RHODESIA. 1966a. *Annual report of the Secretary for African Education for the year 1966*. Salisbury: Government Printer.
- RHODESIA. 1966b. *Report on Education for the year ended 31st December, 1966*. Salisbury: Government Printer.
- RHODESIA. 1967. *Report on Education for the year ended 31st December, 1967*. Salisbury: Government Printer.
- RHODESIA. 1968a. *Annual Report of the Secretary for African Education for the year ended 31st December 1968*. Salisbury: Government Printer.
- RHODESIA. 1968b. *Apprenticeship Training and Skilled Manpower Development Act, (Chapter 266)*. Salisbury: Government Printer.
- RHODESIA. 1968c. *Report on Education for the year ended 31st December, 1968*. Salisbury: Government Printer.
- RHODESIA. 1969a. *Annual Report of the Secretary for African Education for the year ended 31st December 1969*. Salisbury: Government Printer.
- RHODESIA. 1969b. *Report on Education for the year ended 31st December, 1969*. Salisbury: Government Printer.
- RHODESIA. 1970a. *Annual Report of the Secretary for African Education for the year ended 31st December 1970*. Salisbury: Government Printer.
- RHODESIA. 1970b. *Report on Education for the year ended 31st December, 1970*. Salisbury: Government Printer.
- RHODESIA. 1970c. *The Statute Law of Rhodesia, 1969*. Salisbury: Government Printer.
- RHODESIA. 1971. *Annual Report of the Secretary for African Education for the year ended 31st December 1971*. Salisbury: Government Printer.
- RHODESIA. 1972. *Annual Report of the Secretary for African Education for the year ended 31st December 1972*. Salisbury: Government Printer.

- RHODESIA. 1974. *Report of the Commission of Inquiry into Further Education in the Technical and Commercial Fields (Cameron Commission)*. Salisbury: Government Printer.
- RHODESIA. 1978. *Annual Report of the Secretary for African Education for the year ended 31st December 1978*. Salisbury: Government Printer.
- RHODESIA. PARLIAMENT. 1969. *Debates*. Salisbury: Government Printer.
- RHODESIA. PARLIAMENT. 1969/1970. *Debates Vol. 76. 1969-1970*. Salisbury: Government Printer.
- RHODESIA. PARLIAMENT. 1979. *Debates*. Salisbury: Government Printer.
- RHODESIA. 1979. *Rhodesia Government Notice No. 115 of 1979, Act 33/79*. Salisbury: Government Printer.
- RIDDELL, R. 1980. *Education for employment*. Gwelo: Mambo Press.
- ROGERS, E.W.S. 1979. *Education for Socio-Economic Reality in Zimbabwe*. Gwelo: Mambo Press.
- ROSE, B. (ed.). 1970. *Education in Southern Africa*. London: Collier-Macmillan.
- SCHEU, G. 1997. *Personal interview*. 7 November, Gweru.
- SCHOFIELD, H. 1972. *The Philosophy of Education: An Introduction*. London: George Allen & Unwin.
- SILVEIRA HOUSE. s.a. *Development Education Centre*. Harare: Silveira House.
- SIYAKWAZI, B. 1991. Booker T Washington's Ideas on Curriculum Development and Strategies for Implementation. *Zimbabwe Journal of Educational Research*, 3 (2): 184-197.
- SIYAKWAZI, B.J. 1993. Booker T. Washington's Philosophy of Education that formed Tuskegee's Educational Creed. *The Zimbabwe Bulletin of Teacher Education*, 3 (2): 101-114.
- SMIT, A.J. 1989. Student Support with a view to innovation in tertiary education. *Educare*, 18 (2): 62-75.
- SOUTHERN RHODESIA. 1901. *Statute Law of Southern Rhodesia 1899-1901. Vol. 11*. Salisbury: Argus.
- SOUTHERN RHODESIA. 1935. *Industrial Conciliation Act, 10 of 1934*. Salisbury: Rhodesia Printing & Publishing Company.

SOUTHERN RHODESIA. 1952. *Report of the Native Education Inquiry Commission (Kerr Commission)*. Bulawayo: Rhodesia Printing & Publishing Company.

SOUTHERN RHODESIA. 1956. *Report of the Director of Native Education for the year 1956*. Salisbury: Government Printer.

SOUTHERN RHODESIA. 1957. *Native Education: Annual Report by the Director for the year 1957*. Salisbury: Government Printer.

SOUTHERN RHODESIA. 1960. *Native Education: Annual Report by the Director for the year 1960*. Salisbury: Government Printer.

SOUTHERN RHODESIA. 1961. *Native Education: Annual Report by the Director for the year 1961*. Salisbury: Government Printer.

SOUTHERN RHODESIA. 1962. *African Education: Annual Report by the Secretary for African Education for the year 1962*. Salisbury: Government Printer.

SOUTHERN RHODESIA. DEPARTMENT OF LABOUR. 1962. *Choosing a career? No. 25: Domestic Science*. Salisbury: Government Printer.

SOUTHERN RHODESIA. 1963a. *Report of the Southern Rhodesia Education Commission (Judges Commission)*. Salisbury: Government Printer.

SOUTHERN RHODESIA. 1963b. *Annual Report of the Secretary for African Education for the year 1963*. Salisbury: Government Printer.

SOUTHERN RHODESIA EDUCATION COMMISSION. MINISTRY OF AFRICAN EDUCATION. 1963. *Press statement by the Chairman, Professor A.V. Judges*. 17th September 1963.

Statistical Yearbook of Zimbabwe. 1987. Harare: Central Statistical Office.

STONEMAN, C. 1978. *Skilled Labour and future needs*. Gwelo: Mambo Press.

STONEMAN, C. (ed.). 1981. *Zimbabwe's Inheritance*. London: Macmillan.

SYKES, J.B. 1976. *Concise Oxford Dictionary*. Oxford: University Press.

TANDON, Y. 1984. The Post-Colonial State. *The Journal on Social Change and Development*, (8): 2-4.

The Holy Bible. 1969. Zondervan: Zondervan Publishing House.

Technical College Bulawayo: Annual Report. 1987. Harare: Ministry of Labour, Manpower Planning and Social Welfare.

TINDALL, P.E.N. 1968. *History of Central Africa*. London: Longman.

- TODARO, M.P. 1982. *Economics for a developing world: An introduction to principles, problems and policies for development*. Volume 1. Essex: Longman.
- TODARO, M.P. 1992. *Economics for a developing world: An introduction to principles, problems and policies for development*. Volume 2. London: Longman.
- VAN DYK, P.S., NEL, P.S. & LOEDOLFF, P. v Z. 1992. *Training Management*. Cape Town: Southern Books.
- VAN RENSBURG, C.J.J. & LANDMAN, W.A. 1988. *Notes of Fundamental Pedagogic Concepts*. Pretoria: NG Kerkboekhandel.
- VAN SCHALKWYK, O.J. 1988. *The Education System: Theory and Practice*. Alkantrant: Alkanto.
- VENTER, I.S.J. & VERSTER, T.L. 1986. *Educational Themes in Time Perspective*. Part 3. Pretoria: UNISA.
- VENTER, I.S.J. & VAN HEERDEN, S.M. 1989. *The grounding of History of Education: an introduction*. Pretoria: Euro Publications.
- VERSTER, T.L., VAN HEERDEN, S.M. & VAN ZYL, A.E. 1982. *Educational Themes in Time Perspective*. Part 2. Durban: Butterworths.
- Webster's New Twentieth Century Dictionary of the English Language*. 1975. Springfield: G. & C. Merriam.
- Webster's Third New International Dictionary*. 1961. London: G. Bell & Sons.
- WICKREMASINGHE, W. (ed.). 1992. *Handbook of World Education*. Houston: American Collegiate Service.
- WILLIAMS, P.J. 1988. Toward Philosophy of Technical Education. *Journal of Educational and Social Research*, 1 (1): 79-84.
- WOODHOUSE, S.C. 1965. *The Englishman's Pocket Latin-English and English-Latin Dictionary*. London: Routledge & Kegan Paul.
- WORLD BANK. 1989. *Sub-Saharan Africa: From crisis to sustainable growth*. Washington, D.C.: The World Bank.
- National University of Science and Technology Year 1998/1999*. 1998. Bulawayo: NUST.
- ZANU PF Election Manifesto*. 1980. Harare: ZANU Central Committee.
- ZANU PF Election Manifesto*. 1995. Harare: Election Directorate, ZANU PF Central Committee.

- ZIMBABWE. 1981. *National Manpower Survey, 1981. Volume 1*. Harare: Ministry of Manpower Planning and Development.
- ZIMBABWE. 1982. *Transitional National Development Plan, 1982/83-1984/85. Volume 1*. Harare: Government Printer.
- ZIMBABWE. 1984. *Manpower Planning and Development Act, 36 of 1984*. Harare: Government Printer.
- ZIMBABWE. 1985a. *Policy statement No. 15: The President's Speech at the opening of the First Session of the Second Parliament of Zimbabwe*. Harare: Government Printer.
- ZIMBABWE. 1985. *Quarterly Digest of Statistics*. Harare: Central Statistical Office.
- ZIMBABWE. 1986. *First Five-Year National Development Plan, 1986-1990. Volume 1*. Harare: Government Printer.
- ZIMBABWE. 1987. *Education Act, 5 of 1987*. Harare: Government Printer.
- ZIMBABWE. 1988. *Annual Report of the Secretary for Higher Education for the year ended 31st December 1988*. Harare: Government Printer.
- ZIMBABWE. 1989. *Annual Report of the Secretary for Higher Education for the year ended 31st December 1989*. Harare: Government Printer.
- ZIMBABWE. 1990a. *Annual Report of the Secretary for Higher Education for the year ended 31st December 1990*. Harare: Government Printer.
- ZIMBABWE. 1990b. *Economic Policy Statement*. Harare: Government Printer.
- ZIMBABWE. 1990c. *Rationalisation of Vocational and Technical Education in Zimbabwe: Policy Adopted in December 1990*. Harare: Government Printer.
- ZIMBABWE. 1991a. *Annual report of the Secretary for Higher Education for the year ended 31st December 1991*. Harare: Government Printer.
- ZIMBABWE. 1991b. *Second Five-Year National Development Plan, 1991-1995*. Harare: Government Printer.
- ZIMBABWE. 1992a. *Annual Report of the Secretary for Higher Education for the year ended 31st December 1992*. Harare: Government Printers.
- ZIMBABWE. 1992b. *Zimbabwe National Report: Census 1992*. Harare: Central Statistical Office.
- ZIMBABWE. 1993. *Annual Report of the Secretary for Higher Education for the year ended 31st December 1993*. Harare: Government Printer.

- ZIMBABWE. 1994a. *Annual Report of the Secretary for Higher Education for the year ended 31st December 1994*. Harare: Government Printer.
- ZIMBABWE. 1994b. *Structure and guidelines for Curriculum Research and Development*. Harare : CRADU.
- ZIMBABWE. 1994c. *Higher Education Examinations Council: Regulations and Syllabus for the Further Education Teachers' Diploma*. Harare: Government Printer.
- ZIMBABWE. MINISTRY OF HIGHER EDUCATION. 1994 *Harare Polytechnic: Prospectus 1994-1995*. Harare: Harare Polytechnic.
- ZIMBABWE 1996. *Investigation report on courses of high failure rate in technical colleges and polytechnics under the Ministry of Higher Education*. Harare: Government Printer.
- ZIMBABWE. MINISTRY OF HIGHER EDUCATION AND TECHNOLOGY. 2000. *Press Statement by the Minister, Dr Herbert M. Murerwa, 14 September 2000*.
- ZIMBABWE. MINISTRY OF LABOUR, MANPOWER PLANNING AND SOCIAL WELFARE. 1984. *Gweru Technical College: Annual Report*. Harare: Government Printer.
- ZIMBABWE. s.a. *The In-Service Instructor Training Diploma Course to be offered through Gweru Technical College*. Harare: Ministry of Higher Education.
- Zimbabwe: The Facts. No. 9 Education*. 1992. Harare: Government Printer.
- ZVOBGO, R.J. 1994. *Colonialism and education in Zimbabwe*. Harare: SAPES Books.

APPENDIX A

*QUESTIONNAIRE ON THE STATUS AND ROLE OF TECHNICAL COLLEGES AND
POLYTECHNICS IN COMMUNITY UPLIFTMENT*

1. *AIM OF THE QUESTIONNAIRE*

This questionnaire is aimed at establishing the status of technical colleges and polytechnics in Zimbabwe. It is also aimed at evaluating the role of these institutions in community upliftment.

2. *CONFIDENTIAL NATURE OF THE QUESTIONNAIRE*

All information obtained from this questionnaire will be regarded as confidential and will be used for research purposes only. You are, therefore, kindly requested:

- (a) not to write your name;
- (b) to respond to all questions; and
- (c) to give honest responses.

3. *PROCEDURE*

You are requested to give your responses either by means of a tick or by means of short answers where necessary.

4. *ACKNOWLEDGEMENTS*

Thank you for participating in this research project.

TO BE COMPLETED BY PRINCIPAL

SECTION A

PERSONAL PARTICULARS

1. What is your gender? F M

2. What is the length of your service at this institution?
_____ years.

3. What is your area of specialisation?

SECTION B

1. When was this institution established? 19 _____

2. Was the institution at another site before?

YES NO

If YES, please specify _____

3. What was the original status of your institution?

4. a) What was the original mandate of your institution?

b) Has it since changed?

YES NO

c) If YES, what changes have been made? _____

d) If you strongly feel that the mandate of your institution must be altered, what changes should be made?

5. Please comment on the provision of human and non-human resources to your institution by government.

6. Name the main sources of external aid for your institution.

- a) _____
- b) _____
- c) _____

7. Name the main non governmental internal aid sources for your institution.

- a) _____
- b) _____
- c) _____

8. Does your equipment match the equipment in industry?

9. What do you regard as the main problems faced by your institution?

- a) _____
- b) _____
- c) _____
- d) _____
- e) _____

10. In your opinion, what status is accorded technical colleges/polytechnics *vis-a-vis* other institutions of higher learning by the general public? Please rate as follows: 1 (first), 2 (second), or 3 (third)

Technical Colleges/Polytechnics

Teachers' Colleges

Universities

11. Do you hold open days for the general public to see what goes on at your institution?

12. To date, approximately how many graduates have come out of your institution?

13. What is the nature of the comments from commerce and industry on the quality of your graduates?

14. Approximately what percentage of the applicants was able to enrol for 1995?

0 - 20	21 - 30	31 - 40	41 - 50	51 - 60	61 - 70%

71 - 80	81 - 90	91 - 100%

15. What are your institution's specific contributions towards community?

16. Graduates from technical colleges/polytechnics have difficulties in securing employment.

- Strongly Agree Agree
 Disagree Strongly Disagree

17. Approximately what percentage of the graduates from your institution secure employment in the chosen field within one year of graduation?

0-20	21-30	31-40	41-50	51-60	61-70%

71-80	81-90	91-100%

18. Current training at technical institutions makes graduates job seekers.

- YES NO

19. Future training at technical institutions should be geared at making graduates more of job creators than job seekers.

- YES NO

Please justify your answer .

20. Should the course Principles of Business Management be incorporated in all programmes offered at technical institutions?

YES NO

If YES, why? _____

If NO, why not? _____

21. If your answer to Question 20 is YES, should the course Principles of Business Management be:

examinable or non-examinable

22. Give, if any, additional comments on the contribution of technical institutions towards community upliftment in Zimbabwe.

APPENDIX Bi

*QUESTIONNAIRE ON THE STATUS AND ROLE OF TECHNICAL COLLEGES AND
POLYTECHNICS IN COMMUNITY UPLIFTMENT*

1. *AIM OF THE QUESTIONNAIRE*

This questionnaire is aimed at establishing the status of technical colleges and polytechnics in Zimbabwe. It is also aimed at evaluating the contribution of these institutions towards community upliftment.

2. *CONFIDENTIAL NATURE OF THE QUESTIONNAIRE*

All information obtained from this questionnaire will be regarded as confidential and will be used for research purposes only. You are, therefore, kindly requested:

- a) not to write your name and that of your college;
- b) to respond to all questions; and
- c) to give honest responses.

3. *PROCEDURE*

You are requested to give your responses either by means of a tick or by means of short answers where necessary.

4. *ACKNOWLEDGEMENTS*

Thank you for participating in this research project.

SECTION A

PERSONAL PARTICULARS

1. What is your gender? F M

2. Name of Department _____

3. What is the length of your service at this institution?
_____ years.

4. What is your area of specialisation? _____

SECTION B

1. What has been the general pattern of student enrolment in your department since independence? (Please refer to, among other things, enrolment figures, race and gender).

2. What was your student enrolment position by race for 1995? (Please state actual figures).

3. In your opinion, what is the status of technical colleges/polytechnics *vis-a-vis* other institutions of higher learning? Please rate as follows:

1 (first), 2 (second), or 3 (third)

Technical Colleges/Polytechnics	<input type="checkbox"/>
Teachers' Colleges	<input type="checkbox"/>
Universities	<input type="checkbox"/>

4. What was the staffing position like in your department for 1995? (Please focus on full-time and day part-time lecturers)

a) Total number of lecturers in your department _____

b) Number of expatriates _____

c) Number with teaching qualifications (these include B.Ed., Grad. C.E., T.I., T2A, T2B, T3, C.E., FETC, FETD, Dip. Ed. Tech-Voc., etc.) _____

d) Number without teaching qualifications _____

5. Graduates from technical colleges and polytechnics have difficulties in securing employment.

Strongly Agree Agree

Disagree Strongly Disagree

6. Current training at technical institutions makes graduates job seekers and not job creators.

Yes No

7. What do you regard as the most serious problems faced by your department?

- a) _____
- b) _____
- c) _____
- d) _____
- e) _____

8. Should the course Principles of Business Management be incorporated in all programmes offered at technical institutions?

Yes No

If YES, why? _____

If NO, why not? _____

9. If your answer to Question 8 is YES, should the course Principles of Business Management be:

examinable or non-examinable

10. In what ways has your department contributed towards community upliftment?

- a) _____
- b) _____
- c) _____
- d) _____
- e) _____

11. Rate the effect which training has had in developing the following qualities in graduates from your department. Use the following key:

- 0 = no effect
- 1 = slight effect
- 2 = significant effect
- 3 = great effect
- 4 = very great effect
- 5 = complete effect

SCORES

QUALITIES	0	1	2	3	4	5
problem-solving						
skills transfer						
practical skills						
theoretical skills						
independent work and responsibility						
ability to bear stress						
initiative						
leadership						
decision-making ability						
job-proficiency						

12. What is the nature of the comments from commerce and industry on the quality of your graduates?

APPENDIX Bii

*SUPPLEMENTARY QUESTIONNAIRE TO BE COMPLETED BY HEADS OF
DEPARTMENTS*

AIM OF THIS QUESTIONNAIRE

This questionnaire is aimed at establishing the staff position in your department for 1999. Please focus on full-time and day part-time lecturers. All information obtained from this questionnaire will be regarded as confidential and will be used for research purposes only.

Name of Department _____

a) Total number of lecturers in your department.

Full-time _____

Day Part-time _____

b) Number of expatriates _____

c) Number with teaching qualifications (these include B.Ed., Grad. C.E., T.I., T2A, T2B, T3, C.E., FETC, FETD, Dip. Ed. Tech-Voc., etc).

d) Number without teaching qualifications

Thank you for your co-operation.

APPENDIX C

*QUESTIONNAIRE ON THE STATUS AND ROLE OF TECHNICAL COLLEGES AND
POLYTECHNICS IN COMMUNITY UPLIFTMENT*

1. *AIM OF THE QUESTIONNAIRE*

This questionnaire is aimed at establishing the status of technical colleges and polytechnics. It is also aimed at evaluating the role of these institutions in community upliftment.

2. *CONFIDENTIAL NATURE OF THE QUESTIONNAIRE*

All information obtained from this questionnaire will be regarded as confidential and will be used for research purposes only. You are, therefore, kindly requested:

- a) not to write your name and that of your college;
- b) to respond to all questions; and
- c) to give honest responses.

3. *PROCEDURE*

You are requested to give your responses either by means of a tick or by means of short answers where necessary.

4. *ACKNOWLEDGEMENTS*

Thank you for participating in this research project.

SECTION B

1. What do your parents do for a living?

2. Was coming to the technical college/polytechnic your first choice?

YES

NO

If YES, why? _____

If NO, what did you want to do? _____

3. In your opinion, what is the status of technical colleges/polytechnics *vis-a-vis* other institutions of higher learning? Please rate as follows:

1 (first), 2 (second), or 3 (third)

Technical Colleges/Polytechnics

Teachers' Colleges

Universities

4. Graduates from technical colleges and polytechnics have difficulties in securing employment.

Strongly Agree Agree
Disagree Strongly Disagree

5. Current training at technical institutions makes graduates job seekers and not job creators.

YES NO

6. Should the course Principles of Business Management be incorporated in all programmes offered at technical institutions?

YES NO

If YES, why? _____

If NO, why not? _____

7. If your answer to Question 6 is YES, should Principles of Business Management be:
examinable or non-examinable

8. Rate the effect which training has had in developing the following qualities in you.

Use the following key:

- 0 = no effect
- 1 = slight effect
- 2 = significant effect
- 3 = great effect
- 4 = very great effect
- 5 = complete effect

SCORES

QUALITIES	0	1	2	3	4	5
problem-solving						
skills transfer						
practical skills						
theoretical skills						
independent work and responsibility						
ability to bear stress						
initiative						
leadership						
decision-making ability						
job proficiency						

9. How are technical institutions contributing towards community upliftment?

APPENDIX D

*QUESTIONNAIRE ON THE STATUS AND ROLE OF TECHNICAL COLLEGES AND
POLYTECHNICS IN COMMUNITY UPLIFTMENT*

1. *AIM OF THE QUESTIONNAIRE*

This questionnaire is aimed at establishing the status of technical colleges and polytechnics in Zimbabwe. It is also aimed at evaluating the role of these institutions in community upliftment.

2. *CONFIDENTIAL NATURE OF THE QUESTIONNAIRE*

All information obtained from this questionnaire will be regarded as confidential and will be used for research purposes only. You are, therefore, kindly requested:

- a) not to write your name;
- b) to respond to all questions; and
- c) to give honest responses.

3. *PROCEDURE*

You are requested to give your responses either by means of a tick or by means of short answers where necessary.

4. *ACKNOWLEDGEMENTS*

Thank you for participating in this research project.

*TO BE COMPLETED BY MEMBERS OF THE PUBLIC**SECTION A**PERSONAL PARTICULARS*

1. What is your gender? F M

2. What is your age? _____ years

3. What is your occupation? _____

SECTION B

1. Do you have an idea of what goes on at a technical college or polytechnic?
 YES NO

2. In your opinion, what sort of people receive their training at technical colleges and polytechnics?

3. In your opinion, what is the status of technical colleges/polytechnics *vis-a-vis* other institutions of higher learning? Please rate as follows:

1	(first)	2	(second),	or	3	(third)
	Technical Colleges/Polytechnics					<input type="checkbox"/>
	Teachers' Colleges					<input type="checkbox"/>
	Universities					<input type="checkbox"/>

4. a) Are technical colleges and polytechnics contributing to the quality of life of the people?

YES NO

- b) Justify your answer to 4a). _____

5. What direct or indirect benefits have you enjoyed from technical colleges or polytechnics?

- a) _____
 b) _____
 c) _____
 d) _____
 e) _____

6. Give, if any, additional comments on how technical colleges and polytechnics can contribute towards community upliftment in Zimbabwe.

APPENDIX E

*QUESTIONNAIRE ON THE IMPACT OF TECHNICAL INSTITUTIONAL TRAINING
AND THE ATTITUDES OF EMPLOYERS TOWARDS GRADUATES FROM TECHNICAL
COLLEGES AND POLYTECHNICS*

1. *AIM OF THE QUESTIONNAIRE*

This questionnaire is aimed at determining the impact of technical college and polytechnical training. It is also aimed at determining the opinion of employers towards graduates of technical institutions in Zimbabwe.

2. *CONFIDENTIAL NATURE OF THE QUESTIONNAIRE*

All information obtained from this questionnaire will be regarded as confidential and will be used for research purposes only. You are, therefore, kindly requested:

- a) not to write your name;
- b) to respond to all questions; and
- c) to give honest responses.

3. *PROCEDURE*

You are requested to give your responses either by means of a tick or by means of short answers where necessary.

4. *ACKNOWLEDGEMENTS*

Thank you for participating in this research project.

4. To what extent do technical college and polytechnic graduates demonstrate the following competencies? Use the following key:

- 1 = negligible
- 2 = significant
- 3 = very significant

SCORES

COMPETENCIES	1	2	3
problem-solving			
skills transfer			
practical skills			
theoretical skills			
independent work and responsibility			
ability to bear stress			
initiative			
leadership			
decision-making ability			
job proficiency			

5. In your opinion, what is the general calibre of graduates from Zimbabwe's technical colleges and polytechnics?

6. How could technical colleges and polytechnics improve their contribution to community upliftment?

Gweru Technical College
P.O.Box 137
Gweru

The Principal

Dear Sir/Madam

Re: Research on the history of technical colleges and polytechnics in Zimbabwe and an evaluation of their contribution towards community upliftment

With reference to the above subject, I am kindly requesting you to assist me in this study. In this regard, I have also enclosed a copy of the clearance letter which I obtained from Ministry of Higher Education in January, 1995. Due to circumstances beyond my control, I could not visit your institution in 1995.

It is only now that I have been able to circulate my questionnaires, which are mainly targeted at the principals, heads of departments and students at National Diploma level.

I shall be grateful if you could spare part of your valuable time to enable me to complete this study. Findings of the study will be made available to you upon request.

Yours faithfully

A.B. Makotose