

**THE INVESTIGATION OF THE IMPACT OF TECHNICAL AND
VOCATIONAL EDUCATION ON THE SOCIO-ECONOMIC DEVELOPMENT
OF LESOTHO WITH SPECIAL REFERENCE TO MASERU DISTRICT**

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DECLARATION

I, Cyprian Mafata Tšhame, hereby declare that this dissertation being submitted for the purpose of obtaining the **Magister Technologiae Education: Educational Management** in the School of Teacher Education; Faculty of Management Science at the Central University of Technology, Free State, is the result of my independent work. Whereby the help was sought, it had been acknowledged.

Furthermore, I declare that this work has never been submitted for a degree at any faculty or university.

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DEDICATION

I dedicate this work to GOD Almighty, through Him the odds become possibilities.

To my late parents, 'M'e 'Malitsebe Anastasia Tšame and Ntate Mothebesoane Peter Tšame, you brought me in this world and raised me under the glory of God. May your souls rest in peace.

To my wife Julia, son Motlohelo, daughters 'Mapeo (Motoai) and Mamello; they both:

- ❖ Sacrificed many hours without husband's company and father's attention;
- ❖ Appreciated the lengthy hours – days and nights - it took to finish this script; and
- ❖ Prayed for me and constantly encouraged me to the end.

To Lesotho and Basotho.

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ABSTRACT

The demand for continuing reform to technical and vocational education system and its products and services had been inevitable. The challenge for both the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic had been to develop strategies, which would enable both economic and social goals to be realized. However, it had been a major concern that the present training system had been having some limitations and the Government's investments in technical and vocational education produced un-healthy results and returns. The private sector had a poor few of the quality and relevance of the training offered by the public technical institutions; more specifically the Lerotholi Polytechnic, and majority of the labour market had been reluctant to employ the graduates from the institution. If quality assurance and relevance prevailed the private sector would send their employees, supervisors and managers for skills upgrading to the Lerotholi Polytechnic.

The Government of Lesotho could promote its economic growth and poverty alleviation objectives if the existing tailored training substantiated to impact on the socio-economic development.

The study was intended to investigate the impact of the Lerotholi Polytechnic programmes on the socio-economic development on Lesotho with special reference to Maseru district. The premises lied upon access to the Lerotholi Polytechnic technical and vocational education programmes, relevance of these programmes towards socio-economic development, their quality assurance for the contribution towards the socio-economic development and the training and learning strategies employed in the Lerotholi Polytechnic.

Management issues such as planning, control and coordination also had to be envisaged with respect to the legal framework of technical and vocational education.

Both the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic formed the sample population whose responses had been triangulated in the quest for the imperative epistemic of the impact of technical and vocational education on the socio-economic

development of Lesotho with special reference to Maseru district. Results had been presented and findings acknowledged. Recommendations had been advocated for the better functioning of the Lerotholi Polytechnic programmes in the contribution towards socio-economic development of Lesotho with special reference to Maseru district.

CHAPTER ONE

1.1 INTRODUCTION

As economic, social cultural and technological change unfolded, people in all walks of life needed to develop their knowledge, attitudes and skills, on a continuous basis so that they would survive meaningfully in the society. Henceforth, the global community embarked on the creation of education and training institutions. Education and training had been contributing to people's personal development, and increased their productivity and income at work (United Nations Educational, Scientific and Cultural Organization (UNESCO), 2002:2), and facilitated everybody's participation in the economic and social life. This led to an educational demand coupled with governance with delivery for development to be met.

Worldwide governments renewed efforts to promote education and training, with strong believe that skills formation could enhance productivity and sustain competitiveness in the global economy. Given the aim of making education accessible to all, closer links between vocational education and higher education were vital in developing learning pathways and providing greater access to education (<http://www.ncver.edu.au/newsevents/insight/issue8/international.html>: on line). Internationally, education systems have been reformed and developed to strengthen these linkages. In recent years, the debate upon poverty alleviation in third-world countries had evolved around the knowledge; skills and capacity building economy that also had drawn more attention to technical and vocational education (International Institute for Education (IIEP), 2004:1). Thus necessitating more attention so as to better-informed government interventions and guided donor support towards socio-economic development enhancement.

For the purpose of this study, '**technical and vocational education**'; '**vocational training and technical education**'; '**vocational education and training**'; '**vocational education**' and '**technical and vocational education and training**' had been used synonymously, even-though other authors, to some certain extend in the empirical survey had used them as antonyms, where such an issue prevailed, citation had been avoided.

In efforts to provide skill for all (IIEP, 2004:1) attention had now been turned to technical and vocational education programmes for women, girls and marginalized groups of which had often been problematic due to their over-concentration in 'feminine' subject areas and low levels of training.

There existed three types of technical and vocational education in Lesotho:

- ❑ Private technical and vocational education (church owned schools);
- ❑ Enterprise technical and vocational education and training (geared towards the needs and demands of individual enterprises); and

- Bureaucratic Model (public) technical and vocational education controlled by the government.

The researcher decided to embark and investigate on the Bureaucratic Model (public) technical and vocational education and petition to the impact on the socio-economic development of Lesotho with special reference to Maseru district.

Increased population growth, a higher rate of unemployment and the growing participation of women in economic activities presented new demands for skilled manpower training needs in technical and vocational education in Lesotho. The problem that Lesotho faced was how to meet this ever-increasing demand against the backdrop of declining economic performance. Thus, a situation had arisen in which social and economic progress could no longer be contemplated in the absence of rigorous, consistent policy to progress and update technical and vocational education. Technical and vocational education had been envisaged to have a strong impact on various skills, industries, production and agricultural processes, to name but a few. The effect of technical and vocational education had always been operationalised and depended on management policy, attitudes of all involved, trade union bargaining strength, skill level of workers, education and training, and resource allocation.

Since independence in 1966, Lesotho had always placed education and training at the forefront of her agenda as a tool for economic development as indicated in the “*National Report on the Development of Education*”, Lesotho Ministry of Education and Training (2004:4) and mechanism for empowerment of her citizens. Lesotho Ministry of education and Training further substantiated that the biggest challenge had been opening access at all levels of education and providing opportunity for excellence. It became evident that opening an opportunity for access alone was not enough as quality, relevance and equity, and training strategies also had to be improved. Following stagnation in all these areas in the 1990s, Lesotho embarked on policy reviews toward the end of the millennium to address the decline in enrolment, low efficiency and questionable relevance in all levels of education. The focus had only been on delivery; governance too had to form the package of the operational mission.

1.1.1 Trends and Issues in Lesotho’s Technical and Vocational Education

The case study report by the Lesotho Ministry of Education and Training (MoET) of the Government of Lesotho (GOL) to the International Conference of Education: Geneva, September 2004 highlighted key policy reforms and the resultant changes in key indicators on access and quality. The report also highlighted the key changes in the provision of education and training in Lesotho in the new millennium, whereby technical and vocational education had been amongst those in the forefront (International Conference on Education: Geneva - September, 2004: 16-17).

Technical and vocational education and training had been offered in specialised post-primary and post-secondary institutions and were designed to provide individuals with occupational, technical and managerial skills required for the country’s economic advancement (Lesotho Ministry of Information

and Broadcasting, 1996:136 – 137). Lesotho Ministry of Information and Broadcasting further indicated that vocational training also needed to encourage self-employment and development of employment opportunities in the community.

Technical and Vocational Education Bureaucratic Model (public) in this study had been envisaged as the study of technologies and related sciences, acquisition of practical skills relating to occupations in various sectors of economic and social life, and as the preparation for occupational fields for effective participation in the world of work (United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Labour Organization (ILO), 2002:7) sponsored by the government. The study was aimed at investigating the impact of tertiary Bureaucratic Model (public) on the socio-economic development of Lesotho with special reference to Maseru District.

The following studies: Cambridge Education Consultants (1993:ES1-ES3); International Project on Technical and Vocational Education (UNEVOC) (1997:40-43); Southern Africa Multidisciplinary Advisory Team (1997:5-6); Resolve Group (2003:1-2); Lesotho Ministry of Education (2003:v); and Dickinson (2003:1) all stated that technical and vocational education had not been achieving its potential, in terms of its contribution to local socio-economic development in Lesotho. Such a situation also affected the Maseru district of which had always been an economic growth giant in the Mountain Kingdom.

Like many nations, Lesotho had been faced by increasing pressure to produce skilled workforce that could be responsive and competitive in a global market (Mpholo, Marite and Phakisi, 1997:11). However, considering that the need for continuing education and training related to scientific and technological development and the changing pattern of economic and social development called for immediate and adequate arrangements for education and training reform to meet new aspirations such as being responsive and competitive in a global market as in Mpholo *et al* (1997:11-16) had contemplated in their case study.

Needs and objectives of social, economic, technological and cultural debate character on Lesotho's current technological oriented skilled labour had fallen short alongside a high world of work demands (Resolve Group, 2003:1) and (Southern African Multidisciplinary Advisory team, 1997:5). Access to education was limited (UNESCO in "*Education for All*", – "*World Education Forum*" and "*Regional Frameworks for Action*", 2000: on line) its poor quality and curricula often irrelevant to the needs of learners; and of insufficiency towards social, cultural and economic development, and also outdated education systems continued to produce graduates without the requisite knowledge and skills (de Moura Castro, 1995:2). Thus, built on a weak physical and institutional base, technical and vocational education system in Lesotho had been vulnerable to natural (lack of financial support and public acceptability) and man-made (colonization and discrimination of disadvantaged groups) disasters that have hindered progress, and in some cases, even rolled back the achievements already won.

The Lerotholi Polytechnic, a government owned institution in Maseru and semi-autonomous, offered, in addition to craft level courses, diploma courses in building science, civil engineering, electrical and electronical engineering, mechanical engineering, commercial studies, dress-making and tailoring (Lerotholi Polytechnic, 2004:3) and (Lesotho Ministry of Information and Broadcasting, 1996:137). Lesotho Ministry of Information and Broadcasting also indicated that Heads of departments at Lerotholi Polytechnic had been responsible for finding attachment (experiential training) areas with relevant industries, and students on experiential training were under supervision whereby discussions were held between the instructor(s) and students' supervisor(s) within the industry to assess the relevance of their training.

Whereas the Constitution of Lesotho – '*Order Number 5 of 1993*' had been the fundamental law that laid the foundation for provision of all levels of education and training in Lesotho, several laws had been promulgated to guide policy and practice at different levels of education in the "*Report on the Development of Education*" as accorded by the Lesotho Ministry of Education and Training (2004:4) and different legislation existed for primary and secondary education; technical and vocational education training and higher education.

The "*Lesotho Technical and Vocational Training Act Number 25 of 1984*" revised in 1993, was meant to govern skills development programmes. Whereas under this Act, technical and vocational education and training (TVET) was the responsibility of the Lesotho Minister of Education and Training (Lesotho Ministry of Education and Training, 2004:4) acting on the advice of the Technical and Vocational Advisory Board on all matters relating to technical and vocational education and training (Southern African Multidisciplinary Advisory Team, 1997:8); "*Technical and Vocational Education and Training Policy Studies – Draft Report*" by the (Lesotho Ministry of Education and Training, 2004:5); "*Report on the Development of Education*" articulated by the (Lesotho Ministry of Education and Training, 2004:5); (Lesotho Ministry of Education (2002:v and 2003:v) "*Draft Policy*"; Wade, Gibbons and Townsend (2003:98); Higher Education for Development Cooperation : Consultants Report commissioned by The Ministry of Education of The Kingdom of Lesotho – "*Appendix 5*" (1993:148); Montšo (1995:22); and the Kingdom of Lesotho (1984:88-95) were acting on the advice of the Technical and Vocational Training Advisory Board on all matters relating to technical and vocational education and training. The above documents formed part of the references.

Empirical evidence suggested that technical and vocational education played an important role in economic growth and development of countries as substantiated in the Southern African Multidisciplinary Advisory Team (1997:1), social and economic progress in the industrialized and rapidly industrializing countries had invariably been accompanied by large investment in education and manpower training. This investment paid off in the form of productivity gains, since a well-trained and motivated workforce could readily maximise the output from a given capital input (Kanawaty and de

Moura Castro, 1990:n.p.) in (Southern African Multidisciplinary Advisory Team, 1997:1). Such an undertaking subsumed impact on socio-economic development.

Government controlled (Bureaucratic Model) technical and vocational education should therefore meet the criteria of access, relevance, quality and training strategies. With regard to the logical framework of this study; by access, the researcher focused on the availability and ability to attend technical institutions, by relevance; the researcher's attention was on the fit between training objectives and national economic and social needs. The question of whether technical and vocational education and training in Lesotho addressed the priorities and needs for economic and social development, the effective demand for skills in the economy, and existing or potential opportunities of economic activity needed to be explored. The yardstick would measure the effectiveness of technical and vocational education, and to determine whether the training system had been willing and able to produce the intended quantity and quality of skills and competences.

Finally, the researcher envisaged efficiency as skills production (quality) that contributed towards socio-economic development.

Technical and vocational education in Lesotho had been provided at the technical and vocational institutions, both government and privately owned, with those privately owned managed by religious communities (Higher education for Development Cooperation consultants, 1993:1-2).

Appendix G had indicated the Lesotho Ministry of Education and Training Organisational Structure. The Lerotoli Polytechnic (LP) and the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD); the study premises shown through the darkened box-and black font focus.

1.1.2 Nature of the Study

This study report had been structured so that chapter one presented the operational activities as planned and to be undertaken in the investigation and analysis of the contribution of tertiary Bureaucratic Model (public) technical and vocational education towards socio-economic development in Lesotho with special reference to Maseru district. The use of triangulation of methods in epistemic imperative utilising qualitative and quantitative paradigms in the investigation with manipulation of evaluative approach (Babbie, Mouton, Voster and Prozesky, 2001:275) and (<http://www.tele.sunyit.edu/triangulation.htm>: on line), been engaged in the study; case study and survey research in the exploration; descriptive and explanation of trends and issues of technical and vocational education in Lesotho with special reference to the Maseru district had been operationalised.

Chapter two contained the review of literature related to the impact of technical and vocational education on the socio-economic development in Lesotho and elsewhere within the labour market. The demographic premises of the research study were the Lesotho Ministry of Education and Training

Department of Technical and Vocational Education and Training Division (TVD) and the Lerotholi Polytechnic Institution (LP). The research literature consulted showed that there had been limited study on the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru.

Chapter three presented the outline of methodology undertaken in the research process of the study. Both the design and triangulation method had been outlined in this chapter. The research findings had been analysed and evaluated in chapter four and findings of results reported. Chapter five covered the summary, conclusions, deductions, and recommendations with strict adherence to research techniques and scope.

In conclusion, technical and vocational education as described in the UNESCO CD ROM 2003 in "*Trends and Development of Technical and Vocational Education*" had been seen as the connecting link between the school system and the employment market. This meant that developments in technical and vocational education was closely linked to general trends in the economy and labour market could be vulnerable to the effects of socio-economic development, the speed of which could be affected by its social acceptance.

As a result of structural, technological and organizational changes, the occupational structure of the labour force had entered a period of rapid change characterised by the following: (a) the continuing movement of economic activity and employment from agricultural to manufacturing and service sector; (b) the shift away from blue-collar jobs found mainly in outdated manufacturing processes to white collar work, primarily in the newly emerging production and service sector; (c) the tendency for employment to increase in white-collar jobs, particularly professional, technical, administrative and managerial work, which required higher education and training qualifications; and (d) the shift away from traditional occupational groupings to new skill groupings, based on new competence, and the reflective scientific and technological advancements (UNESCO CD ROM 2003: *Trends and Development of Technical and Vocational Education*). This research study had been aimed at investigating the impact of tertiary Bureaucratic Model (public) technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district having UNESCO's CD ROM perceptions in mind.

1.2 BACKGROUND OF THE PROBLEM

In the previous section Bureaucratic Model (public) technical and vocational education had been expatiated and its contribution towards socio-economic development in Lesotho with special reference to Maseru district cannot be over-emphasised. The preceding part dealt with the background of the problem.

Al-Masri (1999:9) argued that the nature of technical and vocational education; its content and methodology had strongly been rooted in educational ideals and objectives, permeated by labour market criteria and work standards. Two dimensions that guided the design of relevant schemes and systems as Al-Masri (1999:10) continued were education that catered for individual needs or work, and economic dimension. These two dimensions were for education that catered for societal needs and labour market requirements. As stated by Al-Masri (ibid), the global community and world of work required broader skills than before as perpetrated by competitiveness, and placed intense pressure on all workforce-preparation-providers to manipulate and enhance the competitiveness of such a workforce as shown by Al-Masri. Therefore, technical and vocational education had always been considered to be in the forefront, in seeking and making possible new approaches to preparing the workforce for the future and by equipping such workforce with prerequisite essential expertise to be acquired within the educational setting (UNESCO and ILO, 2002:2-4).

According to United Nations News (June – July 1999), the workplace had been changing; future predicted that in future most people would be self-employed and only a few would hold a regular job. United Nations further articulated that in the light of these changes, UNESCO's Second International Congress in Korea, China; called for the revitalisation of technical and vocational education as "a new holistic approach" integrating general and vocational education, and encouraging lifelong learning and training "with the ultimate goal of creating a learning society" UNESCO CD ROM (2003). According to UNESCO, technical and vocational education had been treated as the 'poor relation' of general education. The Second International Congress indicated that education should use new information technologies and find new ways to share information among learners. Participants at the congress stressed the need to include marginalized groups and indicated that it was important to provide individual career counselling for young people and adults.

Incidentally, the overseas consultants on Lesotho's technical and vocational education had prepared reports and made some recommendations for some action, and yet little seemed to have happened (Lesotho Ministry of Education and Training, 1987:54), (Southern Africa Multidisciplinary Advisory Team, 1997:6,11-15), (Resolve Group, 2003:1) and (Technical and Vocational Education and Training Policy Studies, 2004:16).

Considering that the need for continuing pattern of economic and social development called for immediate and adequate arrangements for education and training reform to meet new aspirations, needs and objectives of social, economic, technological and cultural debate character, Lesotho's current technological oriented skilled labour had fallen short alongside a high world of work requirements (Resolve Group, 2003:1).

In view of the above, the Lesotho Ministry of Education and Training draft policy attached a high priority to the development of technical and vocational education and training as a key element in ensuring the development of local industry and the creation of employment opportunities, especially at a time of

declining employment opportunities for Basotho in the Republic of South Africa. However, cognisant of the relatively high student unit cost of technical and vocational education and training courses offered through formal education system, Government of Lesotho (GOL) intended to move cautiously in expanding formal training capacity with more emphasis being placed on improving the relevance, quality and cost-effectiveness of the present system and an intensified focus in exploring avenues for expanding numbers of trained manpower through appropriate forms of partnership with employers in the Fifth Plan period.

1.3 IMPORTANCE OF THE STUDY

The spirit of independence that swept the African continent in the early 60s heralded a new era that saw a phenomenal expansion in education and an increased demand for available goods and services (Kerre, 1996:n.p.) in the (United Nations Cultural, Educational and Scientific Organization (UNESCO) CD ROM – 2003). Kerre further proclaimed that improvement in health care, led to higher population growth which in turn, put pressure on demand for education, food, health services, housing, transportation and other needs within the socio-economic development spectrum.

What Kerre substantiated had also been proclaimed in International Institute for Education Planning (IIEP) Newsletter July – September (2004:1), which acknowledged the need for education and training reforms that contributed towards socio-economic development. Technical and vocational education had been perceived as the most essential model towards the boom economy and attributed to its sustainability. Kerre (1996) in UNESCO CD ROM (2003:n.p) concluded that the impacts and influences on education and training in general and particularly on technical and vocational education and training had been tremendous towards the challenges that Africa had to face in the past three decades, and there had been hardly any country that had not been affected by such changes.

The world economic declines that were experienced over the past decade found Africa economy most vulnerable. Combined with prevalent economic malaise at home, most African economies experienced high rates of inflation, devaluation of national currencies, and high interest rates, all of which adversely affected the economic growth in business and industry, particularly such a malaise had been prevailing for Lesotho, in particular, the Maseru district as indicated in Leon, Browde and Shearer (2001:107-113), eroded the purchasing power of people and the situation had led to:

- ❑ Decline in enrolments in both education and training institutions;
- ❑ Falling standards in education and training;
- ❑ A steady decline in employment opportunities in the public and private sectors; and
- ❑ A rising tide of unemployment and underemployment.

The message that the researcher tried to get across was that local, home-grown system of education and training, especially that of technical and vocational education should be studied with a view to assess its effectiveness and contribution towards socio-economic development, and see how it could be assisted to improve.

The role and the impact of existing technical and vocational education should be carefully investigated and analysed in order to enable responsive demand-driven situation to become effective and socially relevant. In particular, diversification of technical and vocational education should be operationalised to be functional and should offer services to a wider clientele – the students, training officers, technical and vocational education staff and the community it served.

For a long time people were brought up to dishonour the whole idea of technical skills, or sometimes called 'blue collar job skills' (Atchoarena and Delluc, 2002:1). They even looked down upon it, and feared it, especially girls. This matter was rooted in colonial experience as indicated by Atchoarena and Delluc (2002:1-19); International Institute for Educational Planning (IIEP) Newsletter (2001:5); and Kerre (1996: 4-5), including the operation of racial, gender and marginalised groups, discriminatory employment practices and pay scales, as well as the traditional premium which clerical and administrative posts had enjoyed in the past decades.

Such a syndrome was found to be the worst barrier to successfully diversifying this second-level rated education, and International Institute for Educational Planning (IIEP) Newsletter (2001:5) tried to make clear where the influence of the educational authorities ended and where the responsibility of educators began.

The issue of technical and vocational education had come up again and again within the international spectrum such as IIEP Newsletter (2001:5) and Atchoarena and Delluc (2002:1-19). Questions such as what would be the contribution of technical and vocational education towards the socio-economic development in Lesotho, with special reference to Maseru district? Technical and vocational education for whom? What form of technical and vocational education should be established and operationalised? also arose.

These questions were used to address the specific objectives for the study; namely: the problem of access to technical and vocational education, its quality and relevance, and those training-learning strategies that must be implemented for education and training values.

This study set out to update knowledge and explore developments and weaknesses in technical and vocational education, distilled lessons as a guide to future skill developments within the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD) with suggestions for demand-driven technical and vocational education policy formulation and its implementation in the public tertiary TVE institutions in the Maseru district. However, the study had not intended to be a prescriptive curriculum policy document, but a knowledge product, for equity, efficacy

and capacity building to enhance socio-economic development premises as pertaining to educational attainment, occupational status and income generation framework as stated in (Babbie *et al*, 2001:113).

The motivation for the investigation and analyses in the study needed to be stated. Methods had been clearly characterised. Therefore, such an undertaking had been manifested and described below.

1.4 MOTIVATION FOR THE INVESTIGATION AND ANALYSES

The main motivation in this study was to explore ways of making technical and vocational education responsive and demand-driven rather than going directly to expensive, but not necessarily cost effective, western model, which found to be supply-driven. The study had been anticipated to yield a systematic way of phenomenal remedy that would be acceptable within the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training systems for technical institutions in the Maseru district.

1.5 STATEMENT OF THE PROBLEM

The purpose of the study needed to be substantiated and be accommodated within the premises. Providing limitations and demarcations within the study holistic framework. Such had been characterised below.

Access, relevance, quality and training/learning strategies were impetus to technical and vocational education as people based discipline attempting to satisfy needs and requirements to enhance socio-economic development. Technical and vocational education strived toward equipping the labour force with skill recognisant to world of work requests as the impact.

The author was of the opinion that Lesotho seemed to have a massive problem regarding an inadequately skilled labour force. Technical and vocational education as a means, which would prepare the labour force for the industrial world might be one of the answers.

According to Dickinson (2003:1) every part of technical and vocational education was functioning poorly. The Resolve Group (2003:3) and the Lesotho Ministry of Education and Training (2004:2) indicated some of the following discrepancies within Lesotho technical and vocational education system:

- ❑ The was a shortage of skilled labour force alongside a huge demand for training places;
- ❑ There was a lack of employer confidence in the graduates of the Trades Training Institutes (TTIs), demonstrated by the very low placement rates of these institutions;
- ❑ The private sector in Lesotho invested very little in the training of the workforce and new entrants;

- ❑ There was a little planning for technical and vocational education at national, industry or institutional levels. This had resulted in training being supply-driven, since it failed to address the skill needs of formal and informal sector workplaces;
- ❑ The governance and management of technical and vocational education and training (TVET) national and institutional TTIs level was weak. Private participation in TVET, particularly through the TVET Board, was largely symbolic;
- ❑ The TTIs were under-funded and under-performing;
- ❑ Quality assurance of TVET was weak;
- ❑ There was little training that was tailor made to the needs of small business and the informal sector; such as for sustainable income generating opportunities with business growth prospects; and
- ❑ Most training standards, curricula, courseware, equipment were outdated and much of the training infrastructure was in poor conditions.

Therefore, it was of the crucial importance to investigate the impact of tertiary Bureaucratic Model (public) technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district

1.6 PURPOSE OF THE STUDY

The purpose of the study was to investigate and analyse the impact of tertiary Bureaucratic Model (public) technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

A step-by step scientific enquiry for examining research related variables were highlighted for capacity building in technical and vocational education. Such variables as of skilled manpower deployment, reference to access, relevance, quality and training strategies in technical and vocational education and training system were adhered to planning, controlling and coordination of tertiary technical and vocational education were examined. These would benefit the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic in technical and vocational education pedagogy.

The workforce must learn how to learn in order to be functional and responsive towards the societal demands and development. It had been of the researcher's interest to investigate and analyse how skill competence in Lesotho, specifically Maseru were generated. To look into what might be built on the bases of responsive demand-driven tertiary Bureaucratic Model (public) technical and vocational education in order to benefit the society and the Lesotho workforce. The researcher explored whether technical and vocational education was geared towards societal and economic development as a

systematic way of phenomenal remedy that would be acceptable within the Lesotho Ministry of Education and Training policy and legal holistic framework.

Research aim needed to be stipulated and illustrated within holistic study framework. It had been given in the next sub-topic.

1.7 RESEARCH AIM

The aim of the study was to investigate and analyse the impact of tertiary Bureaucratic Model (public) technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

In the Technical and Vocational Education and Training conferences and seminars that the researcher attended with the key stakeholders in Maseru district, there were concerns pertaining to deficiency and lack of public technical and vocational education to meet the needs and demands and failing to acknowledge the achievements of the expectations and requirements of Lesotho's economy.

The scope of this study was to come up with policy proposals on the management (governance) and delivery of tertiary public technical and vocational education system, of which could be enacted and implemented during restructuring of institution instruction delivery including consideration of the following:

1.7.1 The role of the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD)

The role of the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD) in governing and managing the technical and vocational education and training system and facilitating access to technical and vocational education had to be collaborative to the needs and had to provide lifelong learning, for continuing and recurrent technical and vocational education, and in upgrading knowledge and skills in respect to technological advancement;

1.7.2 Lesotho's economic growth

In the sphere of Lesotho's economic growth, Lesotho had been in the economic transition to a market economy. In order to meet the employment requirements of such economy, restructuring would be required and incorporated into governmental planning for technical and vocational education. The implications of this phenomenon were that technical and vocational education courses should be relevant to societal and economic development, and must include in the objectives the understanding of the working of market economies and the responsibility to be assumed effective, sustained and should secure employability of the workforce. Education and training systems such as technical and vocational education system needed to

be simplified and made more efficient. Workforce should develop self-learning skills for lifelong learning and assume responsibility for their own learning. Because the workforce had been losing the assurance of a job for life as in Power ([s.a]:[s.l]), development of multi-skills had been essential to increase employability.

There had been a comprehensive need to raise the prestige and worth of technical and vocational education within society as a whole. A significant factor in accomplishing such an aim had been to establish a much closer articulation (both vertical and horizontal) within tertiary technical and vocational education. Quality coupled with prestige and value ratified the need to establish better economic rewards for those engaged in undertaking technical and vocational education and training as their career development. The teaching personnel within the technical institutions needed to be qualified and to possess a significant and relevant experience in the real world of work. Furthermore, they needed to keep on updating their knowledge and skills through links between the educational institution and employing enterprises. A closer partnership between technical and vocational education and industry should be achieved to promote quality and relevance within technical and vocational education curricula, and research is essential for this.

Research hypotheses had been outlined below.

1.8 RESEACH HYPOTHESES

Hypotheses had been the tools to be used to generate questions to research patterns (De Vos, 1998:105). While substantiating De Vos' notion, the following hypotheses had guided the researcher in the study:

1.8.1 Research Hypothesis 1

Education of either type would deal with people and their preparation for employment. Its major role included the training of young men and women who were about to enter the labour force and the re-training and upgrading of those who already would be employed.

1.8.2 Research Hypothesis 2

Technical and vocational education begins with a broad base that facilitates horizontal and vertical articulation within the educational system, starts in the managerial activities (governance) within the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training as the policy and would flow down to technical institutions and the world of work (access) manifested by its delivery. This could be carried out with a view to identify the need for institutional and instructional changes as required to align system with current best practices as transcribed in Koch (2004:5) for the Lesotho Ministry of Education and Training Department of Technical and. Vocational Training (TVD);

1.8.3 Research Hypothesis 3

The demand for access to vocational training had increased Bartram, Williams and Lene (2002:2) as the cohort of young people and adults with interests in technical and vocational education continued to grow; but access to technical and vocational education is problematic at Lerotholi Polytechnic; there exists gender disparity and lack of equity.

1.8.4 Research Hypothesis 4

Technical and vocational education programmes prepared the clientele (both males, females, able and disabled) for occupational field that aimed at providing scientific and generic skills required for rapid adaptation to new ideas and procedures and steady career development (relevance and quality);

1.8.5 Research Hypothesis 5

Improving the knowledge and skills of workers (training strategies) would increase the economy's output of goods and services and contributed to economic and social development;

1.8.6 Research Hypothesis 6

The trends of globalisation of trade and labour markets and rapidly changing technologies that characterized the world today impacted extensively upon the knowledge and skills needed for employment (Power, [s.a]:[s.l]). This phenomenon implied the need to update continually the knowledge skills of the workforce; and

1.8.7 Research Hypothesis 7

Responsive tailor-made demand-driven tertiary technical and vocational education would contribute and impact on the socio-economic development of Lesotho.

The above research hypothesis had been refined in chapter three, tested in chapter four and findings reported. These research hypotheses generated the following research objectives:

1.9 RESEARCH OBJECTIVES

To investigate and analyse the contribution of tertiary public technical and vocation education towards socio-economic development in the Maseru district. Based on access, quality, relevance and training strategies with deployment of methodology triangulation focussing in epistemic imperative - quest for truthful knowledge as in Babbie, Mouton, Vorster and Prozesky (2001:8-10); and Mouton (1996:28,109); with strict adherence on the following:

Exploration of long term effect of technical and vocational education that occurred if there had been sufficient number of 'outcomes' - short term effect that could be controlled (Bartram, 2004:n.p.) [03-04-2004]; and (<http://www.acdi-cida>:on line), and that the 'outputs' should combine to produce an 'outcome' which inturn contributed to an 'impact' that would produce a major socio-economic development;

- Description and explanation of access, relevance, quality and training/learning strategies coupled with planning, controlling and coordination that would influence the effective responsive demand-driven technical and vocational education outputs and outcomes. These substantiated and facilitated impact of technical and vocational education and training on the socio-economic development of Lesotho with special reference to Maseru district; and
- Explaining the strategies that should be identified for achieving objectives. The important strategies as adopted in (UNESCO CD ROM 2003: '*Case Studies to Accompany Guide Book for Curriculum Development and Adaptation*', 1995:18) were:

Specifically, this research study which had set sights on assisting the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic, to design a training programme with the involvement of private sector to raise the efficiency of technical and vocational education and training centres. The objectives were:

1.9.1 Research Objective 1

To strengthen training and employment links;

1.9.2 Research Objective 2

To recommendations for redesigning existing skill training structures to better address job market needs;

1.9.3 Research Objective 3

To assess viability of operation of Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and Lerotholi Polytechnic; and

1.9.4 Research Objective 4

To recommend measures to improve the efficiency and effectiveness of tertiary public technical and vocational education and training.

The above research objectives had been refined in chapter three and tested in chapter four and five. The following research questions had been attested to the above research objectives.

1.10 RESEARCH QUESTIONS

Qualitative and quantitative paradigms were used to complement and supplement each other during the inquiry whereby planning, controlling and coordination of public tertiary technical and vocational education had been studied through exploration, explanation and descriptive as the ordinal measure (Babbie *et al*, 2001:645). The following questions, as attested in reference to literature reviewed had been sustained and answered in the study:

1.10.1 Research Question 1

What are those changes/links in the world of work that must be addressed by and endorsed in public tertiary technical and vocational education to ensure genuine access and implementation of lifelong learning, lifelong career development and lifelong employment?

1.10.2 Research Question 2

What appropriate skills in technical and vocational education and training system must be acquired - both in technical and social – required to cope with the challenges presented by evolving needs of the workplace? And how should they be orientated so that they will respond adequately to the societal and economic demands in order to overcome the growing unemployment and underemployment and marginalisation of young people and the adults' workforce in the world of work? and

1.10.3 Research Question 3

What effective and relevant teaching/learning strategies need to be developed, supported and implemented in tertiary public technical and vocational education management within the Lesotho Ministry of Education and Training Department of Technical and Vocational Training (TVD) and Lerotholi Polytechnic (LP) to increase technical and vocational education's (delivery) contribution towards the efficiency and efficacy of the world of work in the Maseru district?

The above research questions were refined in chapter three. The research operational terms had been defined below.

1.11 DEFINATION OF TERMS

Mouton (1996:187-190) explained that a 'definition' could be a statement that delimited or demarcated the meaning of a word in terms of its sense and reference. Mouton added that specification of the connotative meaning of concept, such as the general intention or 'idea' that it incorporated had been usually referred to as the theoretical or connotative definition. Mouton concluded that operational definition described certain operation, presenting specific conditions for the use of a specific concept that would result in specific results.

In line with Mouton's explanation, the research came up with the following operational definitions as they applied to the study:

1.11.1 Access

The long-established definition of access to education and training, used until the late 1980s, interpreted access rather by a whisker as the entry to institution. Recent research, however, defined access to education and training as the possibility for a learner to access educational institutions, education and training of high quality and education and training which would provide the learner with work opportunities (UNESCO's International Centre for Technical and Vocational Education and Training (UNEVOC) and the Republic of Botswana - Ministry of Education Department of Vocational Education and Training, 2001:15).

Access had the following barriers; in relation to UNESCO-UNIVOC and Botswana Ministry of Education's contemplation:

1.11.1.1 Entry barriers

The disadvantages in communities (poverty, gender, education, physical resources, and so on), negative attitudes towards supply and delivery of technical and vocational education and training (TVET);

1.11.1.2 Institutional barriers

Insufficient fiscal capabilities, psycho-social, cultural and educational support for students, the use of a language as medium of learning and teaching in which there existed insufficient competence, inadequate infrastructure, inappropriate curricula and the insufficient availability of technological support; for an example, lack of computers and or up-to-date technology and state-of- the art technology;

1.11.1.3 Exit barriers

Restricted opportunities for participation in labour market (employment), poor economic conditions and inadequacy of TVET to meet enterprise needs and demands; and

1.11.1.4 Barriers at the systemic level

Lack of national legislation (Act) and national policies and the inadequate implementation of existing policy implicated to be system barriers.

1.11.2 Impact

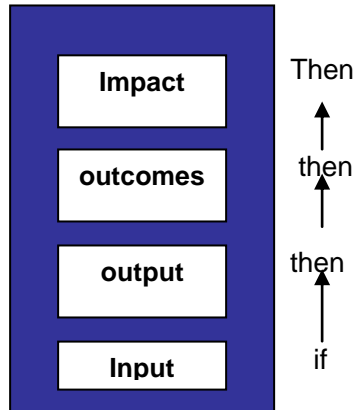
Impact had been a consequence of reverberation results and effect of outcomes and outputs of technical and vocational education as pertained to socio-economic development

as explained by Sullivan (1997:5) for maintaining closer relations with production sector of the economy;

1.11.2.1 Impact

Impact could be defined as a forceful consequence; a strong effect; consequence; effect; result; upshot; outcome; event; a phenomenon that followed and caused by some previous phenomenon (<http://thefreedictionary.com/impact>). Figure1.1 showed that the expected results had been linked in a cause effect relationship.

Figure1.1 Expected results



(The researcher for further clarity had added input)

Source: (<http://www.acid;-da ind.nsf/o/c35ebd571b6fa02985256c629966cd6f?openDocument>: on line).

Therefore, the researcher concluded that **Impact** could be the influence that would cause the effect that could affect the outcome and output upon something.

1.11.3 Technical education

Technical education could be defined as a formal education designed to provide knowledge and skills underlying production processes with a wider connotation than vocational education at secondary or higher level (UNESCO CD ROM, 2001: *Trends and Development of Technical and Vocational Education*); on the other hand:

1.11.3.1 Technical education

On the other hand, technical education had been designed for upper secondary and lower tertiary levels to prepare middle-level personnel (technicians, middle management, and so on), and at university level to prepare engineers and technologists for higher management positions. Technical education included general education, theoretical, scientific and technical studies and related skill training. The components of technical education might vary considerably depending on the type of personnel to be prepared and the education level (UNESCO; 1984:30);

1.11.4 Vocational Education

Vocational education had been that formal education designed to prepare for skilled occupations in industry, agriculture and commerce, generally at secondary level (UNESCO CD ROM, 2001: *Trends and Development of Technical and Vocational education*).

1.11.5 Technical and vocational education

Technical and vocational education was used as a comprehensive term referring to those aspects of the educational process involving, in addition to general knowledge, the study of technologies and related sciences and the acquisition of practical skills, attitudes and understanding and knowledge relating to occupations in the various sectors of economic and social life. Technical education was further understood to be:

- ❑ An integral part of general education;
- ❑ A means of preparing for occupational fields and for effective participation in the world of work;
- ❑ An aspect of lifelong learning and a preparation for responsible citizenship;
- ❑ An instrument for promoting environmentally sound sustainable development; and
- ❑ A method of facilitating poverty alleviation (UNESCO, 2001:28).

1.11.5.1 Technical and vocational education

On the other hand, technical and vocational education was that type of education mainly designed to lead participants to acquire the practical skills, know-how and understanding necessary for employment in a particular occupation, trade or group of occupations or trades. Successful completion of such programmes would to a labour market relevant to vocational qualification recognised by the competent authorities of the country in which it had been attained (Atchoarena and Delluc, 2002:17) (UNESCO Institute for Statistics (UIS), 2006:100).

1.11.6 Socio-economic development

Socio-economic development had been composed of the combination of educational attainment, occupational status and income generation (Babbie *et al*, 2002:113). Thus for this study, money in the bank, property, lineage, lifestyle, and so forth, that pertained to socio-economic development, had been ruled out. "Socio-economic development depends largely upon the availability and quality of the technical and vocational education" (UNESCO CD ROM, 2001:*Establishing Partnership in Technical and Vocational Education - Co-operation between Educational Institutions and Enterprises in Technical and*

1.12 RATIONALE OF THEORETICAL FRAMEWORK – LITERATURE REVIEW

The material indicated in this introductory sub-section formed the part of the introduction and substantiated how the literature review had been utilised.

Many countries with technical and vocational education systems had established national co-ordination or consultative bodies to assist government in the development and implementation of their technical and vocational education and training systems (Barry, 2004:10), National Training Authorities (NTAs) often played a central co-ordinating role in planning national training system, developing training policies, supervising national skills, trade testing and certification, providing information services and developing appropriate labour markets signals (Ziderman, 2003:76). In the middle-income countries, NTAs had been able to develop national training system with a strong links to industry, high quality training and substantial flexibility and responsiveness (Middleton, 1993:131).

Barry (2004:10) cited Atchoarena and Delluc (2002:260) and Middleton (1993:130-131) while advocating that internationally, the major functions of NTAs included:

- ❑ Achieving consensus between stakeholders on the broad aims of training;
- ❑ Managing national training funds;
- ❑ Accrediting training institutions;
- ❑ Analysing labour market and occupational trends;
- ❑ Undertaking and disseminating research on training issues;
- ❑ Delivering training; and
- ❑ Providing training-related services

The role of NTAs as providers had been diminished over time (International Labour Organization, 1998:3). Commentators substantiated that the performance by NTAs as training provider, overseer and financier, functions in respect of national training system, which could involve an incompatible conflict of interest, as indicated by Johanson and Adams (2003:109), particularly where an NTA funded training became a provider under its ownership or control. An example of this conflict had been the Vocational Education Training Authority (VETA) in Tanzania, where the protected status was given its own training centres (they received the bulk of training disbursements without the application of objective allocation criteria) had distorted the training market by offering training at these centres at high subsidised rates – undercutting the competition from private providers (Ziderman, 2003:66-67).

In Sub-Saharan Africa there had been a clear trend towards establishing national co-ordination and consultative bodies in relation to technical and vocational education and training. In Anglophone countries as opposed to Francophone Sub-Saharan African countries, where ministry-based governance system remained in place although new bodies such as training funds emerged, this trend in the governance of national technical and vocational education and training systems took the form of co-ordinating councils, national training boards and national training agencies (Johanson and Adams, 2003:40).

Such diverse management accountabilities made training delivery more complex, led to duplication of efforts (especially when training providers operated with little or no coordination), and these management accountabilities did not permit mutual recognition of credentials, and generated segmentation of training supply. The administrative divergence did not engage the emergence of policies regarding a joint approach to the relationship between training and employment.

At the moment technical and vocational education in Lesotho as explained by Southern Africa Multidisciplinary Advisory Team (1997:5) and Lesotho Ministry of Education and Training (2003:v) had been supply-driven.

The 1984 Act established the Technical and Vocational Training Advisory Board (TVTAB) to carry out certain specific functions related to technical and vocational education and training (Government of Lesotho – Ministry of Education and Training, 2004:66). However, there is concern amongst stakeholders that this had not been achieved in practice (Magau, 2005:37). Magau further indicated that the Department of Technical and Vocational Training (known as the TVD) had been the policy-implementing arm and the nerve-centre of the VET system. Magau further asserted that the department operated under the Director of Technical and Vocational Training had been divided into four functional sections namely:

- ❑ **Secondary Technical Studies:** Responsible for technical education and pre-vocational education and training;
- ❑ **Post-secondary Technical and Vocational Training:** Responsible for quality assurance in the delivery of curriculum in the Vocational Education and Training (VET) institutions through inspections;
- ❑ **Curriculum and Assessment:** Responsible for standards, curriculum and assessment; and
- ❑ **Industrial Training:** Responsible for all industrial training programmes and accreditation of VET Institutions.

Studies conducted on technical and vocational education in Lesotho suggested a need for further research study as a prerequisite for the effective development and operational in the contribution of technical and vocational education in public institutions towards the socio-economic development. De

Vos's notion (1998: 95-105) would be operationalised to establish the method that would assist the researcher to investigate how others had carried out the research in the contribution of TVE towards economic and social development, as well as providing insight into methods, measures, research subjects and approaches used by other researchers which could thus lead to the significance of the design as in Burns (2002:29) as cited by (Makara, 2004:8).

Higher Education for Development Cooperation (HEDCO) Consultants' Report (1993:59) depicted that serious consideration had to be given to increasing output of technical and vocational education (TVE) system in order to facilitate the required sectoral growth in Lesotho. Consultants' Report indicated the possibilities of educational felony within technical and vocational education spectra in Lesotho, if action could not be taken with immediate effect.

Krönner (1989:16) in UNESCO CD ROM (2003: *the digital library of selected UNESCO publications and documents in Technical and Vocational Education and Training*) suggested the three basic models of technical and vocational education after having analysed the numerous national systems of technical and vocational education in '*Innovative Methods of Technical and vocational Education*' report of the UNESCO International Symposium in Hamburg, June 5-9, 1989. The following three basic models were obtained:

Market Model: The government played a minor role or no role at all in vocational qualifications processes; **Bureaucratic Model:** The government had been the sole authority responsible for the planning, organization and control of technical and vocational education (state sponsored); and **Government-Controlled Market Model:** The government provided a more or less tight framework for technical and vocational education in private enterprises or other private training institutions. During the literature review, selected documents on Lesotho's TVE had been used in order to substantiate imperative survey and other researches conducted within the International Community parameter to manifest the theoretical rationale. The study bridged the theory-practice gap in international and local debate perspectives as it focused on practical day-to-day context and substantiates public tertiary TVE as one-stop-shop (Working Group on Education Sector Analysis, 2000:36-38) and (Lesotho Ministry of Education, 2003:iii – vi).

Lesotho Second Education Sector Development Project (1999-2002) had been aimed to increase number of Basotho that benefited from the education system and graduated with skills enabling them to meet labour market demands and it was found that there were four project components of which technical and vocational education and training was amongst them (http://tenders.dgmarket.com/eproc/project?activity_id=219357: on line). During the Phase I of the project, the focus had been on policy development and institutional framework for a revitalized and demand-driven system, which underpinned investments for future phases. Phase I had supported a skill needs assessment nationwide as well as in three selected industries: garments and textile; hospitality (tourism); and architecture. All these had been aimed at socio-economic development of

Lesotho, what lied ahead had been to investigate and analyse whether they impacted on socio-economic the development.

Lesotho technical and vocational education had been offered in specialized post-primary and post-secondary institutions and designed to provide individuals with the occupational skills required for the economic advancement, which sought to encourage self-employment and the development of employment opportunities in the community. The Lesotho Technical and Vocational Training Act, Number 25 of 1984 determined the regulatory and policy legal framework. This framework had recently been reviewed by the Technical and vocational Education and Training Department of the Lesotho Ministry of Education and Training (TVD), which after a consultative involving a range of stake holders, had produced a draft policy document focused on producing a demand-led training strategy processes (Lesotho Ministry of Education, 2003:v), (Resolve Group, 2003:1), and (Barry, Ziderman, Koch F. and Gunthrop, 2004:4).

This study had been established so as to study LP's operational output within the Maseru District of Lesotho.

Technical and vocational education Bureaucratic Model (public) in this study was envisaged as the study of technologies and related sciences, acquisition of practical skills relating to occupations in various sectors of economic and social life, and as the preparation for occupational fields for effective participation in the world of work (United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Labour Organization (ILO), 2002:7) sponsored by the government - of which the study aimed at investigating its impact on the socio-economic development in the Maseru District of Lesotho. The following studies: Cambridge Education Consultants (1993:ES1-ES3); International Project on Technical and Vocational Education (UNEVOC) (1997:40-43); Southern Africa Multidisciplinary Advisory Team (1997:5-6); Resolve Group (2003:1-2); Lesotho Ministry of Education (2003:v); and Dickinson (2003:1) stated that technical and vocational education were not achieving its potential, in terms of its contribution to local socio-economic development in Lesotho.

Like many nations, Lesotho had been facing increasing pressure to be responsive and competitive in a global market this required a skilled workforce (Mpholo, Marite and Phakisi, 1997:11). However, considering that the need for continuing education and training related to scientific and technological development and the changing pattern of economic and social development called for immediate and adequate arrangements for education and training reform to meet new aspirations, needs and objectives of social, economic, technological and cultural debate character, Lesotho's current technological oriented skilled labour had fallen short alongside a high world of work demand (Resolve Group, 2003:1) and (Southern African Multidisciplinary Advisory team, 1997:5).

Access to education wad limited as in UNESCO – *Education for All – World Education Forum – Regional Frameworks for Action* (1999: on line) its quality poor and curricula often irrelevant to the needs of learners; and of social, cultural and economic development, and also outdated education

systems continued to produce graduates without the requisite knowledge and skills (de Moura Castro, 1995:2). Thus, building a weak physical and institutional base, technical and vocational education system in Lesotho had been vulnerable to natural (lack of financial support and public acceptability) and man-made (colonization and discrimination of disadvantaged groups) disasters that have hindered progress, and in some cases, even rolled back the achievements already won.

The Lerotholi Polytechnic (LP), a public semi-autonomous institution in Maseru, offered leather work, bricklaying, masonry, carpentry and joinery, fitting and turning, and plumbing at the craft level and in the diploma courses; building science, civil engineering, electrical and electronical engineering, mechanical engineering, commercial studies, dressmaking and tailoring as in Lesotho 1996 (1996:137), are tailored to meet the requirements of industry, and were both reviewed periodically by panels consisting of staff and representatives of industry.

The World Bank (2004:2) accorded that skills development had been an important part of the Lesotho Government Private Sector Development (PSD) agenda. The Bank further indicated that the Poverty Reduction Strategy Paper (PRDP) had acknowledged the challenges Lesotho economy was facing in this area and had identified the creation of employment and increasing human resource capacity as key priorities. One of the action areas identified under creating employment, as the World Bank bestowed, was supporting entrepreneurship and improving labour productivity through description of the labour market characteristics and demand for technical and vocational education and training (TVET) (World Bank, 2004:3).

This study report had been established so as to study LP's operational output within the Maseru District of Lesotho, to investigate and analyse their deliverance results towards socio-economic development of the community.

1.13 DELINEATION OF THE RESEACH PROBLEM

Due to factors described below, the external validity of this study was reduced. The focus was only on Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training, the other departments were left out. Ministry of Labour also were engaged in technical and vocational education, but was not targeted. Only Lerotholi Polytechnic was surveyed while there were other tertiary technical institutions in Maseru.

1.13.1 Results

The results of this study could not be generalised to all public tertiary technical institutions in the Maseru district because the researcher had been of a belief that instructors and lecturers in other tertiary institutions within the Maseru district could have different perceptual opinions and practices

towards the impact of tertiary technical and vocational education on the socio-economic development due to different institutional settings. Therefore, the study had specific objectives:

The study only focused on the contribution of tertiary Bureaucratic Model TVE towards socio-economic development in the Maseru District. Lesotho economics relative to Maseru district was not studied in depth, where the contribution of TVE applied was given attention.

In conclusion, the study was neither intended to be a prescriptive policy document nor to be an evaluation of Maseru District's socio-economic development, but a knowledge product, for equity, efficacy and capacity building to enhance socio-economic development in Maseru District, contributed in the career development of the researcher. The focus was only on the curriculum in context substantiated to socio-economic development. Maseru was easily reachable and convenience sampling acknowledged the applicability of holistic research framework.

1.14 RESEARCH DESIGN AND METHODOLOGY

1.14.1 Research Approach

Cohen and Manion (1997:239) confirmed that triangulation could be operationalised when more holistic view of educational outcome would be sought; two or more approaches would be substantiated. In this study, qualitative approach; an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, conducted in a natural setting as explained by Creswell (1994:1-2), was established in interviews, observation and data analysis substantiating grounded theory in inductive reasoning, and quantitative approach; an inquiry to social or human problem, based on testing theory composed of variables, measured with numbers, and analysed with statistical procedures in order to determine whether the predictive generalizations of the theory holds true as argued by Creswell (1994:2), was used in questionnaires and multivariate data analysis to operationalise deductive reasoning. Both qualitative and quantitative approaches had had their strengths and weaknesses (<http://www.users.auth.gr/~avdie/griffin2002.doc>: on line) depending on the research question under investigation. For an example, qualitative research could enable one to tackle 'sensitive' issues; to appreciate the wider social context of people's experiences; and to make connections across different areas of participants' lives (<http://www.users.auth.gr/~avdie/griffin2002.doc>: on line), limitations of qualitative research included the expensive and time-consuming nature of the collection and analysis of research information; the reliance on a relatively small number of participants; and the reluctance of many academics, practitioners and policy-makers to take qualitative research seriously.

1.14.2 Research Methods

Research design addressed the planning of scientific inquiry – designing a strategy for finding out something as defined by Babbie (1995:83) for quantitative approach. In designing this study, the researcher developed a statistical plan for selecting a sample, collecting data and analysing the data. Babbie, Mouton, Voster and Prozesky (2001:79) indicated that the most common and useful purposes would be **exploration, description** and **explanation** (cf. 1.8).

In this study triangulation method; the use of two or more methods and techniques of data collection in a single study as indicated in Cohen and Manion (1997:233) had been deployed with the establishment of be exploration, description and explanation with the following interventions: **Case study**; a type of qualitative research in which in-depth data were gathered relative to a single individual, programme, or event, for the purpose of learning more about the unknown or poorly understood situation (Leedy and Ormrod, 2001:114). Thus, triangulation of methodologies for the quest for the truth had been substantiated in this study and had been detailed in chapter three.

Access to sample was obtained through requested permission from the authorities of sampled organizations, and explanation was given to respondents substantiating that information supplied will be treated with strict confidentiality and strictly for academic purposes only, and study results would be provided with requisition.

1.14.3 Population and Sample

Oliver (1997:38) asserted that population had been the group of potential respondents to which the research applied. For the purpose of this study, the population was the Lesotho Ministry Education and Training Department of Technical and Vocational Education (TVD) and the Lerotholi Polytechnic in Maseru district. Sampling procedures also decreased the generalisation of findings, as academic events in each department within the Lerotholi Polytechnic were genuine and might have been difficult to compare. Aray (2002: 17) indicated that within a single school building, one could not reproduce a given situation in its entity and with precision. Aray speculated further that social phenomena were singular events and could not be totally repetitive for the purpose of observations alone.

1.14.4 Sampling Technique

The convenience probability random sampling that established members of the population who were easily accessible and conveniently available to provide the required information (Cohen and Manion, 1997:88) was substantiated in the logic of random selection used in modified fashion and probability sampling (Babbie *et al*, 2001:213) as follows:

1.14.4.1 Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training Sample Population

Seven officers engaged in tertiary public technical and vocational education in the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training were interviewed;

1.14.4.2 Lerotholi Polytechnic Administrative Academic Personnel Sample Population

Eleven of the administrative academic personnel of the Lerotholi Polytechnic's three schools who were given questionnaires to fill returned them.

1.14.4.3 Lerotholi Polytechnic Lecturer Sample Population

Thirty-seven of the Lerotholi Polytechnic lecturers were asked to fill the questionnaires returned them.

1.14.4.4 Lerotholi Polytechnic Student Sample Population

Forty-four full-time students of Lerotholi Polytechnic; those of the completing year, were given and asked to fill the questionnaires.

1.14.4.5 Lerotholi Polytechnic Graduate Sample Population

Two hundred and thirty graduates of Lerotholi Polytechnic employed or self-employed in Maseru district were snowball sampled and asked to fill the questionnaires. The researcher found it necessary to deliver the questionnaires himself instead of using the post-office. The graduates were those of 1990 to 2005.

The above population responded to the research instruments in interviews (qualitative approach) and questionnaires (quantitative approach). This resulted in methodology triangulation. Thereafter, the researcher used their response results for data triangulation in the presentation, analysis, interpretation and discussion in chapter four.

1.14.5 Validity

The Validity of this study was decreased due to the following factors: considering that it had been conducted only in one tertiary technical institution within one district of Lesotho, one country in the Sub-Saharan Region or more specifically, one country in the South African Development Community region. The similar study would provide different results in other institutions of the same calibre.

The Lesotho Ministry of Education and Training Departments responses varied accordingly. The results if conducted in the other departments might vary considerably. And also the results of the similar study might vary in other institutions of the similar status.

1.14.6 Data Collecting Instruments

Data constituted the foundation of a study (UNESCO CD ROM 2003: '*Case Studies to Accompany Guide Book for Curriculum Development and Adaptation*' 1995:20). The study was intended mainly to use the following sources:

- ❑ Primary Data: available literature on tertiary public technical and vocational education in Lesotho and elsewhere;
- ❑ Secondary Data: available journals and articles in Lesotho tertiary public technical and vocational education and elsewhere; and
- ❑ Tertiary Data: Questionnaires, interviews and observations provided an insight to the *status quo* of the investigation of the impact of tertiary public technical and vocational education on the socio-economic development in Lesotho with special reference to Maseru district.

Qualitative researchers often used multiple forms of data in a single study, they could use observations; interviews; written documents; audiovisual materials; objects; and anything else that could help them answer their questions (Leedy and Ormrod, 2001:158). "A self-designed semi-structured interview; a face to face ... data gathering technique for extracting and transmitting information from the research subject" as explained De Vos (1998:297), had been deployed in TVD and Lerotholi Polytechnic during the investigation of the phenomenon.

In quantitative research a self-designed questionnaire; a structured set of open-ended and closed questions, eliciting qualitative or quantitative information on one theme or topic and lending itself to data capturing and analysis as indicated by Lategan *et al* (2003:34), in a form format was given to the respondents or informants to fill for data capturing (De Vos, 1998:152-3).

1.14.7 Pilot Testing

The researcher needed to be sure of whether the data-collecting instruments were both valid and reliable (Birley and Moreland, 1998:41) in (Makara, 2004:9). Therefore, pilot testing of questionnaires checked the authenticity and relevance of the data collecting instruments and was utilized in the Technical School of Leribe; institution of the similar authenticity to that of Lerotholi Polytechnic to selected few students and teaching staff.

1.14.8 Data Analyses

The data analysis procedures were best decided at the time of designing the data collecting instruments such as questionnaires (UNESCO CD ROM 2003: '*Case Studies to Accompany Guide Book for Curriculum Development and Adaptation*' 1995:21) and the designed and content of the questionnaire was mainly dependent on the variable that were to be measured. UNESCO CD ROM (ibid) accredited that the identification analysis procedures and statistical techniques at the time of designing the study instruments was of vital and articulated its extreme importance. These led to the

choice of the available techniques that were selected for analysis and depended on a number of factors such as how to form the respondent groups, number of variables involved, and the kind of data to be collected.

In data analysis for the study; data triangulation was used to analyse the qualitative data was treated in text form and responses tabulated while frequency (count), histograms and chi square was used for quantitative analysis and presented in tabular form and deductions inferred to calculations for test-of-fit were displayed below every table and conclusions thereof.

1.15 OUTLINE OF THE STUDY

Chapter 1: this chapter gave the background of the study; it had been the introductory chapter into the study;

Chapter 2: had been a literature review, related to 'The Impact of Technical and Vocational Education on Lesotho's Socio-Economic Development with Special Reference to Maseru District' and elsewhere.

Chapter 3: had been on the research design and triangulation methodology with more emphasis on sampling, instrumentation and pilot testing for the purpose of reliability and validity of the instruments and the research experimentation undertaken;

Chapter 4: had been on the research findings and data analysis; and

Chapter 5: had been a summary of findings, conclusion and recommendations.

1.16 CONCLUSION

Triangulation of methodologies as a means to produce a more complete picture of the investigated phenomenon (Kelle, 2001:8) in this study had been used in order to validate the investigation and built a valid conceptual approach in the epistemic imperative.

Triangulation as the application and combination of several research methodologies in the study of the same phenomenon as in <http://www.tele.sunyit.edu/traiungulation.htm> (on line) had been used to:

- ❑ Employ both quantitative (validation) and qualitative (inquiry);
- ❑ Find the credibility of qualitative analyses; and
- ❑ Utilise an alternative criteria to " traditional criteria like reliability and validity"

This first chapter was aimed at giving an overview of the research study. The concept of access, relevance, quality and training strategies in technical and vocational education had been manifested

and committed in the conceptualisation of the contribution of technical and vocational education towards socio-economic development coherent to planning, controlling and coordination.

A career would be fulfilled after receiving a body of knowledge, often specialised, which would usher employment in a certain field at a certain level. Even after choosing a certain career there must be opportunities to improve that career through advanced studies that would enable the recipient to be more proficient and ensure quality delivery. Failure to gain access to tertiary education programmes would leave education recipient with slim options of livelihood. It had been common knowledge that the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD) had been charged with the overall responsibility of monitoring the provision of technical and vocational education programmes as well as seeing to it that they respond to the labour market demand of Lesotho. Efforts had been therefore imperative to ensure that providers of training employed the necessary backstopping from TVD on the broad range issues, which included, inter alia, the policy framework and resources to support implementation of such a policy.

It had been therefore of an antecedent importance of investigation into the impact of tertiary technical and vocational education on the socio-economic development of Lesotho with reference to Maseru. As Moteane (2001:n.p) submitted "In Lesotho we are often constrained by the fact that after Lerotholi Polytechnic there is nowhere else to look".

The related literature survey had been outlined in the next chapter, giving the orientation of the background of the problem under investigation and findings of the similar studies. A set of hypotheses to be tested had been presented and the questions to be answered were outlined in chapter three. A synopsis of research design and methodology procedures deployed had been enunciated and definition of specific terms used in the study had been done. The holistic framework guidelines in the department of the School of Teacher Education; Magister Technologiae Education - Management; The Central University of Technology, Free State had been strictly followed in the development of the study report.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The area of discussion for this chapter focused on the Bureaucratic Model (public) tertiary technical and vocational education. The argument was conceptual within a broader understanding and contested to provide clearer concepts of variances in technical and vocational education within the context of management (governance). Delivery of tertiary Bureaucratic Model (public) technical and vocational education premises, with focus on its impact to socio-economic development was also contented.

In the development of this chapter inputs to public technical and vocational education was discussed. Outcomes and output resulting from inputs was also illustrated. It would be of salient notion to indicate that inputs would yield outcome that inturn would provide the outputs that would also subscribe to impact (cf. Figure 1.1).

Management of technical and vocational education was categorised and based on the following independent variables on the socio-economic development of Lesotho with special reference to Maseru district:

- ❑ Planning of tertiary Bureaucratic Model (public) technical and vocational education in Maseru – Lesotho within the Ministry of Education and Training Department of Technical and vocational Education and Training and the Lerotholi Polytechnic;
- ❑ Controlling of Bureaucratic Model tertiary technical and vocational education in the Maseru district of the Kingdom of Lesotho with reference to documental pragmatic research within the Ministry of Education and Training Department of Technical and Vocational Education and Training and the tertiary institution of the Lerotholi Polytechnic; and
- ❑ Co-ordinating Bureaucratic Model tertiary technical and vocational education in the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic institution.

Delivery of technical and vocational education was discussed with respect to four conceptual correlative dependent variables all-encompassing the following:

- ❑ Access to Bureaucratic Model tertiary technical and vocational education within the Lerotholi Polytechnic in the Maseru district of Lesotho, in order to promote social and economic development as pertained to planning; controlling and co-ordination of technical and vocational education in Lesotho;

- ❑ Relevance of Bureaucratic Model tertiary technical and vocational education to socio-economic development in the Maseru district of the kingdom of Lesotho as ascribed in planning; co-ordination and controlling; and delivery of technical and vocational education;
- ❑ Quality of Bureaucratic Model tertiary technical and vocational education for socio-economic development within the Maseru district of Lesotho accredited to planning, controlling and learning-training strategies and delivery of technical and vocational education; and
- ❑ Training/learning strategies as in the planning, controlling and learning-training strategies and delivery of Bureaucratic Model tertiary technical and vocational education in the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic institution. The two institutions are based in the Maseru City Centre.

The immediate section of the literature survey suggested the background for the study.

2.1.1 Documentary content analysis for literature review

It was of vital importance to establish an argument with regard to literature review conceptualising the following:

- ❑ Which key issues needed to be addressed and the extent to which their relevance prevailed;
- ❑ The quality and appropriateness of the methodologies and analytical techniques used, and the intensity that they might affect the findings;
- ❑ The extent to which the literature reflected the local contextual realities, needs, relevance and perspectives;
- ❑ How the literature contributed to capacity building; and
- ❑ The extent to which the suggestions and recommendations were realistic and implementable.

The study had been composed of both qualitative and quantitative – methodological triangulation, the researcher took cognisance of the fact that the documents had to be fully understood; hence it was essential to note, “the qualitative researcher needs to study the context in which it was produced. The author’s purpose in writing it; the author’s working conditions; the author’s intended and actual audience, and the audience purpose for reading it” (Gall, Borg and Gall, 1996:362).

The researcher relied on the documents due to the fact that there existed evidence which revealed that all the documents were compiled by different consultants and researchers who had presented their findings to the Lesotho Ministry of Education and Training officials and international bodies for scrutiny before publication or circulation (students included).

It was necessary to follow a specific procedure in carrying out documentary content analysis on the impact of technical and vocational education and training system in Lesotho. Gall *et al* (1996:356-360) suggested the following measures:

- ❑ Identified documents that were relevant to the research purpose;
- ❑ Selected a sample of documents to analyse;
- ❑ Developed a category-coding procedure;
- ❑ Conducted the content analysis; and
- ❑ Interpreted the results.

The above steps were taken for gathering the relevant information; drawn together on the impact of tertiary technical and vocational education on the socio-economic development in Lesotho with special reference to Maseru district.

2.2 BACKGROUND FOR THE STUDY

The Lesotho Ministry of Education and Training – Technical and Vocational Education and Training (TVET) Policy Development Project Sub-Component of ESDP II Phases I & II was engaged in the technical and vocational education and training policies (Lesotho Ministry of Education and Training, 2004:I-xi). Lesotho Ministry of Education and Training (*ibid*) brought forth the product of in-depth research into the present technical and vocational education and training system, its strengths and weaknesses, good technical and vocational education and training practices and careful consideration of the Lesotho socio-economic development and labour markets contexts, as well as consultations with stakeholders and key informants in Lesotho. The Lesotho Ministry of Education and Training report was conceptualised on a policy that attempted to combine contextually relevant and best international technical and vocational education and training practices and dealt with policy on technical and vocational education and training governance, funding, provision, qualifications, quality assurance and traineeships (Lesotho Ministry of Education and Training, 2004:1-89).

The Kingdom of Lesotho *Poverty Reduction Strategy Paper 2004/2005 – 2006/2007* highlighted poverty diagnosis in Lesotho, macroeconomic framework, employment creation and income generation through the acquisition of technical and vocational education.

World Bank (2004:4) stated that responsibility for TVET lied within the Lesotho Ministry of Education and Training where the Department of Technical and Vocational Training was the focal point for TVET policy formulation, planning and administration. The legal policy framework guiding TVET in the Lesotho was outlined in the '*Technical and Vocational Training Act (1984)*'. This Act allowed for the appointment of a Director of Technical and Vocational Training and the establishment of a Technical and vocational Training Board with fifteen members drawn from government officials, employers,

workers education and civil society. The private sector (employers) representatives had been the Lesotho Chamber of Commerce and Industry and the Association of Lesotho Employers. The Board had been appointed by the Minister of Education and had an advisory role on matter pertaining to TVET.

2.3 TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING LEARNING FRAMEWORK

Assessment by Lesotho Ministry of Education and Training (MOET) indicated that:

- ❑ TVE was able to accurately identify the demand for training;
- ❑ The demand for skills was being articulated in a clear and agreed set of learning standards; and
- ❑ Employers, and all other TVET stakeholders were satisfied with the quality of training provided within the new system. This required an appropriate technical and vocational education and training quality management system conducive to contribute toward socio-economic development (Lesotho Ministry of Education and Training (MOET), 2004:51).

The MOET approved the "Draft Qualifications Framework for Lesotho" prepared by the Multi-Sectoral Task Force on the Development of a Qualifications Framework for Lesotho, on 09 October 2004. The proposals in this report for a TVET Learning Framework had been fully aligned with Technical and Vocational Education and Training Qualifications structures and quality management.

2.3.1 A Technical and Vocational Education and Training Qualifications Structure

Once skills priorities had been articulated, they needed to be translated into standards that could be measured and recorded. The most widely used mechanism for this internationally recognized criterion had been outcomes-based or competency-based training. Competency-based modular training (CBMT) approach to TVET had been in place. This approach to learning standards according to Lesotho Ministry of Education and Training (2004:53-69) comprised the following key elements:

- ❑ Sector skills needs and priorities that might be translated into:
 - ✓ National qualifications and learning standards registered on a framework of skills levels;
 - ✓ Compulsory national curricula frameworks and assessment strategies to be followed by providers; and

- ✓ Core competencies to be included in all TVET learning programmes.

2.3.2 Quality Management

All providers of TVET programmes in Lesotho were to be accredited. The only distinction between providers that would be made for accreditation purposes as indicated by Lesotho Ministry of Education and Training (2004:53) was between large and small providers, or perhaps between providers offering qualifications versus providers simply offering modules against learning standards.

A three-tiered accreditation system proposed; of which had not yet been in place indicated:

- ❑ The first level of accreditation should be called legal registration and this should be a prerequisite for any provider to admit learners to any programme;
- ❑ The second compulsory level of accreditation should be designated national accreditation. All institutions should be required to achieve this within a specified period after being registered, between one and two years; and
- ❑ The final level should be a voluntary, best practice level. Those providers achieving this level would be recognised as centres of excellence.

A simple accreditation process had been envisaged, which would not require the Office of Quality Management to employ full-time institutional auditors (Lesotho Ministry of Education and Training (2004:54). Rather, it was proposed that these skills be contracted to manage registrations and accreditations as required (Lesotho Ministry of Education and Training, 2004:54-55). Lesotho Ministry of Education and Training (ibid) indicated that these skills might be accessed from:

- ❑ Auditing firms;
- ❑ Auditors from education department of the National University of Lesotho; and
- ❑ In addition, it would be advisable to train a cadre of auditors within TVET institutions.

All institutional trainers in Lesotho offering TVET learning programmes would be required to register with the Lesotho Skills Agency (LSA).

The main part of the '*assessment strategy*' were setting quality TVET benchmarks for the assessments, prescribing the quality of assessment processes, and enhancing the capacity of assessors in the system.

- ❑ The educational quality benchmarks should be the criteria against which learners were judged competence. The Sector Skills Committees would approve these when they approved learning standards and the curricula frameworks;
- ❑ The assessment process would also be set out in the curricula framework documents; and
- ❑ All staff conducting summative TVET assessments would have to be registered.

It was also recommended that summative assessments *for* the award of any TVET qualification be regulated and authorised centrally by the Assessment Committee under the LSA, following Lesotho Qualifications Authority guidelines.

Moderation should involve a system of external peer joint-management of the assessment. This performs the dual functions of moderation and capacity building.

In order to ensure assessor competence it is recommended that their registration be made compulsory, based on national assessor standards.

All learner achievements will be recorded on a central database, the integrity of which must be assured. This will be the responsibility of the Assessment Division, in consultation with the Lesotho Qualifications Authority.

2.3.3 Traineeships

Given the problems with the old apprenticeship scheme it was proposed that a new more flexible alternative termed 'Traineeships' be introduced (Lesotho Ministry of Education and Training, 2004:63-69).

A Traineeship should be defined as structured workplace learning leading to a nationally registered qualification. A traineeship should be composed of an approved ratio of structured workplace learning combined with structured theoretical learning.

2.3.4 Proposals regarding the provision of Technical and Vocational Education and Training

The main recommendations as stipulated by the Lesotho Ministry of Education and Training (2004:70-75) was to:

- ❑ Rationalise and improve provision in the Trade Technical Institutes (TTIs) and Skills Training Centres (STCs), since they constitute the primary TVET supply side capacity in Lesotho;

- Encourage non-government provision for profit making, industry and none government organisation (NGO) providers by opening up access to public funds supporting and levelling the playing fields in terms of provider regulation; and
- Improve the quality and relevance of provision through better regulation of providers, a more competitive allocation of public funds, better public distribution of information about training providers and their performance, and the promotion of closer relationships between economic sectors and training providers.

2.3.5 Alternative Sector Training Approach

The Ministry of Education and Training (MOET) should consider a strong sector-based approach when rationalising the provider sector under the new TVET strategy and, in particular, when selecting providers who would access the Funding Windows under the National Training Fund (NTF) (Lesotho Ministry of Education and Training, 2004:76-80).

In particular, the MOET should consider piloting such a sector-based training approach in two sectors: the Textile and Garment industry and the Tourism and Hospitality industry.

2.3.6 Implementing the new TVET policy

The success of the policies contained in this report depended on how effectively they would be implemented (World Bank, 2004:2). The new TVET policy would require the establishment of new institutions, the Lesotho Skills Agency and Sector Skills Committees, a National Training Fund, and all the related accountabilities, policies, procedures, systems, disbursement modalities and the like. Similarly, the establishment of new approaches to planning for skills development, determining learning standards, quality assuring training and introducing a new traineeship system, would require new policies, protocols and systems (Working Group for International Cooperation in Skills Development, 2002:7). A huge upgrading effort would be needed to bring training providers, employers, and those responsible for the running of the new system up to speed.

2.3.7 The Kingdom of Lesotho Poverty Reduction Strategy Paper 2004/2005 – 2006/2007

Although classified as least developed country, Lesotho had made substantial progress during the last decade in many areas (Kingdom of Lesotho, 2004:xi). Assessment of Poverty Reduction Strategic Paper (PRSP) provided an overview of how the Government of Lesotho (GOL) and how it intended to fight poverty in the years ahead.

Analysis of the 1999 Lesotho Labour Force Survey by the World Bank found that those in the wage employment had a higher probability of escaping poverty. Completing a secondary education increased earnings sharply, as did technical training. A technical trained individual had a median

income of M1 500.00 per month compared with M350.00 for those without training (Lesotho Ministry of Education and Training, 2004:1). Lesotho Ministry of Education and Training further indicated that the survey did not specify the type of technical skills or the characteristics about it, but added emphasis to the potential importance of skills development for poverty reduction.

The overarching development goal of PRSP was to provide a broad based improvement in the standard of welfare for the current generation of Basotho, without compromising opportunities for future generations (Kingdom of Lesotho, 2004:xi). The Kingdom of Lesotho further indicated that by 2020, such improvements should be manifested in reduced incidents of poverty, longer life expectancy, better and more appropriate educational standards, rehabilitation of the environment, and a more diversified and integrated economy with greater ownership by Basotho.

The Kingdom of Lesotho's Poverty Reduction Strategic Paper report submitted that the PRSP had been built on three inter-connected approaches:

- ❑ Rapid employment creation through the establishment of an operating environment that facilitated economic growth;
- ❑ Delivery of poverty-targeted programmes that empowered the poor and vulnerable and enabled them to secure access to income opportunities; and
- ❑ Ensuring that policies and legal framework were conducive to the full implementation of priorities, that bureaucratic constraints were removed, and that the productivity of the public sector improved (The Kingdom of Lesotho's Poverty Reduction Strategic Paper 2004).

2.3.8 The problem of unemployment

Unemployment rate in Lesotho had been considered as unacceptably high and there was a strong correlation between unemployment and poverty (Kingdom of Lesotho, 2004:xiv). The creation of employment remained the best means of addressing poverty and creating the overall conditions for sustained economic growth and the further reduction of poverty.

The Kingdom of Lesotho (2004:12-14) reported that Lesotho had been in the midst of a significant transformation of its economic base. In the late 1980s almost half of its Gross National Product (GNP) was based upon remittances from over 120,000 male migrant labourers, mostly in South Africa's Gold mines. Today, half that number of migrants was employed. By contrast, the manufacturing sector in Lesotho had grown rapidly over the past years. Today it had employed over 50,000 workers, most of whom had been women in the textile industry, although wage levels were significantly lower than those of the miners.

The Kingdom of Lesotho (2004: 18-22) added that the GOL had to counter the many local threats to further investment. These included the long and cumbersome process involved in licensing new developments; difficulties in obtaining land; inadequate water supply to industrial areas; poor rail connections; low levels of productivity among workers; a weak and divided labour movement; and poor dispute resolution systems.

2.3.9 Proposed strategies

GOL would closely monitor changes that might affect Lesotho's competitiveness (such as the exchange rate as well as trade agreements that might undermine Lesotho's current competitiveness). It would move forthrightly to address internal constraints to further industrial expansion. Thus, it would:

- ❑ Build up the skills of local entrepreneurs by seeking sustainable market opportunities and increasing support for Small, Medium and Micro-Enterprises through training, infrastructure and credit;
- ❑ Reduce administrative procedures to speed up the licensing process. By 2004 the legal framework was established to set up one stop shop that would speed up the licensing process. The Investment Promotion Centre of the Lesotho National Development Corporation (LNDC) would be strengthened to improve efficiency. Particular attention would then be given to facilitating access to land and to ensuring that immigration and work permits were efficiently processed;
- ❑ Provide basic infrastructure. GOL would give top priority to finding viable and sustainable fast-track solutions to the provision of water supply. The findings from the Lesotho Lowlands Water Supply Feasibility Study would be examined with a view to providing water to high priority wet industry zones' located close to water resources. High priority would be given to providing factory shells and upgrading the Maseru Rail Terminal Depot. A public-private-partnership (PPP) approach might be adopted;
- ❑ Promote and facilitated investment. By 2004, new investment promotion materials would have been developed and the capacity of Lesotho's overseas missions to promote Lesotho as a prime investment destination would be enhanced. Government would improve Customs efficiency and the capacity of trade negotiators;
- ❑ Improve labour productivity. This had been a multi-directional issue that needed to be addressed, in the long-term, by improving attitudes towards work and employment. In the three-year Poverty Reduction Strategic Paper (PRSP) period GOL would explore the feasibility of establishing an independent recruitment agency for the manufacturing sector and would study what measures would help to shape a stronger "culture of productivity";

- Improve labour stability. GOL will strengthen tripartite relationships through an Economic Forum or National Employment Council. Policies and legislation pertaining to labour would be reviewed and revised. Dispute resolution mechanisms would be decentralised to key districts;
- Encourage better gender balance in recruitment. In consultation with industrialists, the Government would seek to promote the inclusion of more young men in the workforce; and
- Promote the optimal use of Lesotho's natural resources in order to add value, especially in agric-business, tourism and mining (The Kingdom of Lesotho's Poverty Reduction Strategic Paper, 2004)

2.3.10 Trends

Available data to determine trends in poverty from a money-metric point of view detailed expenditure data were required. Although numerous household surveys were conducted by different agencies in Lesotho over the last decade very few had gathered sufficient detailed data to determine poverty lines. Fortunately the data collected by the Bureau of Statistics as part of the Household Budget Surveys (HBS), first in 1986/7 and again in 1994/5, did provide a basis for analysis of trends between these two points in time.

2.3.11 Access to key Basic Services

The Government of Lesotho took a holistic view in combating poverty (Kingdom of Lesotho, 2004:6). While jobs and income had been critical - and given highest priority in the Poverty Reduction Strategic Paper (PRSP), the GOL made it a point not to neglect other critical aspects. From this point of view real progress had been made in recent years and the challenge ahead would be to maintain these key trends in one of the two of the most vital basic services, which had been shown by way of example in the following subsections.

2.3.12 Education and Training

Creating employment in Lesotho had been difficult under any circumstances (Kingdom of Lesotho, 2004:8). For those who were poorly educated it was virtually impossible. A study by Kingdom of Lesotho (2004:8) found that there was a strong relationship between educational attainment of the head of the household and the incidence of poverty. A Mosotho's (one Lesotho citizen) chances of getting employment were determined by education, age and technical training, in addition to location and gender. According to the Government report nearly 80 per cent of those with a diploma; senior secondary or higher education had been employed, compared to 40 per cent of those with less education. Kingdom of Lesotho (2004:8) argued that educational achievement especially secondary

education, dramatically affected earnings, which increased marginally tripled with the completion of the last year of education.

As indicated by the Kingdom of Lesotho (2004:8-9), the GOL had made significant progress in improving access to education.

International Labour Organisation – Southern Africa Multidisciplinary Advisory Team (1997:5) reported that in Lesotho, like in other African countries, training programmes were still determined by supply considerations, such as in the existing out-dated curricula, often inadequate qualifications profile of trainers, out-dated training equipment and materials and erroneous assumptions about where graduates would manage to find jobs upon completing their training. International Labour Organisation – Southern Africa Multidisciplinary Advisory Team succumbed on the issue of irrelevant and ineffective training which did not cater for competency and being responsive demand-driven.

2.3.13 Increase Access to Technical and Vocational Education and Training

Under this objective three strategies and thirteen activities had been devised. In summary these would ensure that the quality of TVET programmes would be improved to ensure excellence and achievement by all trainees and to make sure that training programmes offered in TVET promote employment creation and income generation. The programmes would also be expanded to increase access for many students who wished to be enrolled therein. New TVET centres would be constructed in Qacha's Nek, Mokhotlong and Butha-Buthe. Training programmes would be adapted to meet production, marketing and entrepreneurship needs in the market. Top priority would be given to infusing entrepreneurship training into TVE.

The tertiary technical and vocational education sector would also revise and implement curricula and programmes, such that they would provide skilled and competencies that would be employment-related. The education sector would also formulated policy guidelines to guide higher education on HIV / AIDS issues as prevalence among young people seemed to be highest in the country. The tertiary technical and vocational education sector would also sensitise and mobilise its institutions to ensure that they would be able to implement HIV / AIDS workplace programmes effectively.

In reviewing and expanding TVET, GOL would advocate against gender misconceptions and promote the involvement of men in sectors previously considered the reserve for women (such as sewing) and visa-versa. To provide as much practical experience as possible, an apprenticeship programme would be introduced.

2.3.14 The Lesotho Vision 2020 Document

The Government of Lesotho Vision 2020 supported an export-led manufacturing industrialisation strategy, underpinned by incentives and an enabling environment that was meant to attract foreign

direct investment (FDI) and allowed Lesotho economy competition in the global market without preferential trade treatment.

The vision recognised that the industrialisation could only be achieved by the emergence of local manufacturing as a result of technology transfer and strong linkages between foreign owned and domestic manufacturers (National Vision for Lesotho, 2003:6-7).

The Vision also emphasised diversification of the economy through labour-intensive manufacturing exports, and other economic activities such as tourism and hospitality (National Vision for Lesotho, 2003:15-18).

2.3.15 Economic Context.

Lesotho's economy had few natural resources, with the primary sector of the economy constituting less than 20 per cent of economic output in 2002 (Lesotho Ministry of Education and Training, 2004:8). Approximately 75 per cent of the Lesotho population lived in the rural areas and derived their livelihood from agriculture (National Vision for Lesotho, 2003:16). It was reported that in 1966 the share of agriculture in the GDP was about 50 per cent but recently it declined to below 20 per cent (Imani Development, 2003:8). Imani Development (2003:8-9) maintained that agricultural production had been constrained by limited arable land and droughts and poor farming techniques, poor infrastructure and farming support services leading to soil erosion and low productivity. Niche production in fruit, dairy products, vegetables, eggs and poultry farming, which were more suited to the climatic conditions, were limited as concluded the Imani Development.

National Vision for Lesotho (2003:16) acknowledged that the negative performance in the sub-sector was attributable to, among others, a drop in crop production due to frequent droughts, heavy frosts and late rains experienced in recent years. The National Vision added that the fact that nine per cent of total land area in Lesotho that had been arable had put pressure on the fertility of a limited land base. The Agricultural sector had also depended heavily on external assistance. With the general decline of donor support in the country the sector became the hardest hit. The average agriculture share of total development assistance declined significantly.

The sector was however expected to show some recovery with implementation of the Agricultural Sector Investment Programmes. The challenge for Lesotho was to increase agricultural productivity to sustain food security in the country as concluded the National Vision for Lesotho.

The mining and quarrying sector's annual contribution to GDP over the period 1997 to 2002 was less than one per cent. Opportunities were available in diamonds, sandstone and clay deposits that had been used to produce bricks, ceramic wares and tiles. Production in sandstone has been constrained by poor infrastructure, credit extension and support services (Imani Development, 2003:8-9).

The manufacturing sectors constituted 80 per cent of economic output in 2002. Low savings, a small domestic market and a limited base of entrepreneurs and skills, meant that Lesotho's economy was heavily dependent on production for exports and on foreign direct investment, to support employment, incomes and to relieve the balance of payments constraint.

Lesotho successfully exploited preferential trade agreements, in particular, African Growth and Opportunities Act (GOA) and the Multi Fibre Arrangement (MFA) attracting substantial Foreign Direct Investment (FDI). Chinese Producers controlled 90 per cent of the industry and employed 97 per cent of the labour as accorded in Lesotho Ministry of Education and Training (2004:8) into a burgeoning clothing and textile industry. Growth in Lesotho's garment and textile industry (16.6 per cent in 2001) had turned it into the largest African exporter of apparel to the United States and had been responsible for driving the rate of growth of manufacturing output from zero per cent in 1999 to 4.4 per cent, eight per cent and ten per cent in 2000, 2001 and 2002. This boosted overall economic growth in 2001 and 2002 to 3.4 per cent and 4.2 per cent respectively (Lesotho Ministry of Education and Training, 2004:8). In 2001 the clothing and textile industry employed some 32,000 workers and paid M210 million in wages (Salm, Kulehle, Maseko and Pardes, 2003:33).

2.3.16 Lesotho: Skills Requirements for Increased Productivity and Growth In Lesotho. Assessment of Impact and Recommendation for Change, 2004

Skills development had been an important part of the Government private sector development (PSD) agenda (The World Bank 2004:2). The Bank reported that the Poverty Reduction Strategy Paper (PRSP) had acknowledged the challenges Lesotho economy had been facing in this area and had identified creating employment and increasing human resource capacity as key priorities.

The World Bank alleged that one of the action areas identified under creating employment was supporting entrepreneurship and improving labour productivity.

As for increasing human capacity, the Government of Lesotho sought to ensure improvements in basic and secondary education as well as development and expansion of technical and vocational education and training (TVET) to cater for the economic needs of the country (World Bank, 2004:2).

2.3.16.1 Methodologies and analytic techniques used

At the request of the Government, an assessment of skills and human capacity was conducted as part of the World Bank Economic Sector Work (ESW) (World Bank, 2004:2). The aims of the examination were to: (i) determine whether and to what degree was it a constraint and impediment to private sector development (PSD) in Lesotho, and (ii) to recommend ways to build capacity of skilled and unskilled labour (including labour redundancies from South Africa mining sector) to find employment opportunities in the sectors with the greatest potential for positive spillovers of knowledge and skills (starting with textile & garment and sand stone industries) (World Bank, 2004:2).

The methodology focused on the examination of the efficiency and effectiveness of the training and capacity building programmes (World Bank, 2004:2) currently in place as well as the institutions providing the training (supply side) and the skills requirements of the private sector (demand side). The World Bank reported that the study was based on the results and consultations with the Basotho and foreign-owned private sector, relevant training institutions as well as the Government. The study was to identify the existing gaps and mismatches between supply and demand. This, in turn, was to provide the basis for formulating recommendations on how to restructure the system into a more demand-driven one that would be responsible to the needs of the private operators and was industry-driven (the relevance of an Asian model of the Penang Skills Development Center was to be considered).

Specifically, the study was to propose ways to link foreign investment with industrial training available to Small, Medium Enterprises (SMEs) and steps to overcome foreign firms' resistance to have programmes geared toward training as accorded the World Bank. Also recommendations would indicate a framework facilitating the expansion of business and vocational training and strengthening the skills for the domestic firms (possibly through use of a matching grant facility). Finally, an examination of the legal and policy framework and its applicability to the new proposed approach was to be conducted.

The report consisted of six sections: (i) a short description of relevant analytical work already completed; (ii) assessment of the skills requirements for economic growth; (iii) description of the labour market characteristics and demand for technical and vocational education and training (TVET); (iv) rapid assessment of the existing TVET system; (v) snapshot of skills demand in the key sectors and finally, and (vi) recommendations and way forward.

2.3.16.2 *Analytical work on skills development*

As a result of the Government placing a high priority on the issue of human development sector, the donor community had already conducted some important analytical work. Namely, analysis in the Lesotho Growth and Employment Options Study of 2002 (largely translated into a Country Economic Memorandum) suggested strong correlation between wage employment and number of years of education and skills with the prospects of finding wage employment in either the domestic private sector in Lesotho, government or the Republic of South Africa (RSA) market enhanced with higher education and skills (World Bank, 2004:2).

Finally, the Value Chain Analysis of four key sectors (textile and garment, sandstone, wool and mohair and horticulture), conducted as a part of this ESW, identified low labour productivity, and limited or obsolete labour skills as the second most important constraint to PSD (first one being infrastructure) (World Bank, 2004:4). Thus far low labour costs had masked the overall labour inefficiencies faced by companies operating in Lesotho. However, in order to maintaining current level of competitiveness in

export markets will require substantial focus on labour skills development and improved labour productivity as concluded the World Bank.

2.4. SKILLS REQUIREMENTS FOR ECONOMIC GROWTH IN LESOTHO

The World Bank (2004:4) attested that the labour skills and productivity featured prominently amongst the key factors that drove economic competitiveness and growth. The Bank added that Lesotho, with a population of about 2.2 million and an unemployment rate of around 30 per cent had currently been facing multiple challenges in terms of skills development.

- (i) Firstly, male school-leavers, who traditionally depended on jobs in the South African mining sector, were now forced to seek jobs elsewhere and they did not have the necessary skills nor attitudes to become entrepreneurs or take advantage of opportunities in other sectors such as the manufacturing or agricultural sector. That of retrenched miners returning from RSA further compounded the unemployment situation;
- (ii) Secondly, predominantly female workers in the textile and garments industry needed to enhance their level and mixture of skills to enhance productivity in order for the industry to become more competitive and would be able to diversify into higher value apparel and enjoy sustained growth; and
- (iii) Finally, if Lesotho were to diversify her economy outside textile and garment, skills enhancement would need to become a critical part of the private sector-driven growth strategy.

In addition, backward and forward industrial linkages had almost been nonexistent. There were only a handful of local enterprises that had established linkages with the foreign garment multinationals that dominated the industry as attested by the Bank. This was because there had been a critical shortage of entrepreneurial and management skills amongst the local workforce that hindered the creation of domestic linkages and a locally based supply chain. Similarly in the case of sandstone industry, labour skills continue to be poor, and current labour productivity and quality had grossly limiting the ability of local enterprises to enter the high value market segment (World Bank, 2004:5).

To further exacerbate the problem, Lesotho-based exporters faced increasing competition both in terms of price and quality from other sub-Saharan and Asian countries (World Bank, 2004:5). The Bank perpetrated that this was particularly evident in the United States market for garments with the impending removal of quotas under the Multi Fibre Arrangement (MFA).

2.4.1 Labour Market Characteristics and Demand for Technical and Vocational Education

The most recent world Bank labour force survey of 1999 for Lesotho indicated about 589,000 workers employed in Lesotho with another 98,000 employed in Republic of South Africa (World Bank, 2004:5).

World Bank (2004:5) reported that about 24 per cent of those in non-subsistence employment were in paid employment mostly in small informal enterprises or in the government. The Bank accorded that the manufacturing sector employed only about 10 per cent of the wage employed. The leading employers in the manufacturing sector were the textile and garment industry (over 70 per cent and mostly female) with lesser numbers in leather and footwear (14 per cent), food and beverages (8 per cent), sandstone and brick making, and furniture and printing.

As accorded by the World Bank (2004:4) the biggest employer in the economy was the textile and garments industry; currently employed about 55,000 workers who were mostly unskilled or semi-skilled. The Bank further indicated that almost all-technical and middle level supervisory were about 1000 expatriates who provided management skills. The Integrated Value Chain Analysis revealed that average labour productivity in the garments industry was about 20 per cent lower in Lesotho compared to Kenya (for sewing and assembly operations) while in-line defect rate had been much higher, which would required additional labour input during the finishing stage to make the necessary corrections.

Similar problems of low skills and low labour productivity emerged in other potential growth sectors as had been indicated by the World Bank. In the sandstone production sector, the lack of technical skills and low labour productivity for activities such as stone extraction and dressing was affecting the quality and price competitiveness of the products in the RSA market (ibid). Very low level of skills in wool processing significantly hampered increasing the value-added in this sector, which in turn, prevented the industry from effectively competing in existing and/or for new markets. While the cost of labour in Lesotho was relatively competitive compared to South African wages and other sub-Saharan countries, without labour productivity improvements that focused on both labour output and quality, the sustainability and expansion of industries were very difficult to achieve as the World Bank conceded.

Given this scenario, there existed unique structural features of the labour market and demand for TVET in Lesotho that had implications on the provision of vocational training and skills development (World Bank, 2004:6). These were as follows:

- The linkages to and dependence on South Africa had been a key issue to be considered in trying to understand the demand for TVET. A large number (around 54,000 in 2003) of skilled Basotho workers migrated to RSA to seek employment and/or undergo TVET. This "*brain drain*" had been of concern to the government especially since scarce resources were being deployed to essentially train workers for the RSA economy. However, it was a reality that these

Basotho were gainfully employed and their remittances were an important source of income for the country (about 700 million Maloti in 2003). The question then had been how Lesotho could tap the benefits from the regional linkages with RSA job markets and training institutions;

- ❑ Despite the long established presence of the textile and garment industry in Lesotho, Basotho participation in the industry and the spillovers of knowledge and skills were marginal, which was a source of increasing social and political tensions. The majority of Basotho were employed as unskilled or semi-skilled production workers and there were only a handful of Basotho supervisors. There was little evidence of any firm level in-service training provided to workers and opportunities for upward mobility within firms were extremely rare. Unlike other countries with similar textile and garment industries, there were hardly any local enterprises that had established supply, sub-contracting or their own export operations. The issue of technical and entrepreneurial skills development to enhance the participation of domestic firms in the industry had been a matter of priority to the government;
- ❑ The mismatch between the pre-employment training provided by the existing TVET institutions and the almost total absence of linkages between these providers and the private sector was another issue to be addressed especially in the context of the textile and garment industry. The absence of a meaningful apprenticeship or industrial attachment scheme had been a missed opportunity to gain valuable shop floor experience for youth seeking employment;
- ❑ Given that about 70 per cent of the workforce was engaged in subsistence agriculture, agricultural extension services, which incorporate skills development, were important to encourage commercial scale farming as a means out of rural poverty. There had scope for private sector involvement in providing these extension services to small-scale farmers as part of out-grower schemes; and
- ❑ Finally, the gender imbalance in terms of employment in the formal sector (very few men are employed in the textile and garment industry) had been an issue to be addressed as well. The job creation potential for men in the industry was yet to be fully exploited.

2.4.2 Draft Technical and Vocational Education and Training Policy, 2004

Overall the Draft National Policy Document on technical and vocational education and training (TVET) was a brave effort to bring together in one document the wide-ranging needs of all the stakeholders in TVET in Lesotho.

The document had succeeded in describing the approach needed as well as the structures to be used and their intended activities, and in providing a series of guidelines for the TVET Board and the Technical and Vocational Education and Training Department (TVD) to apply in their functioning.

The intentions, objectives and activities described followed closely those needs and recommendations described in the series of studies and reviews of TVET in Lesotho which were carried out over the past recent years. Unfortunately the document had comprised a number of shortcomings, which would detract from its value. These shortcomings included:

- ❑ Method of presentation, which restricted the effectiveness of the document as a referential point of quotations and citations and guide for key stakeholders;
- ❑ Absence of comprehensible strategy;
- ❑ Formulation of referential objectives in terms which restricted their usefulness as management tools and measures of achievements;
- ❑ Limited information on the interrelationship between various organisations and other stakeholders in the TVET arena;
- ❑ Little indication of the role to be played by the providers and users of the end-product of the TVET system and process; and
- ❑ No indicators were meeting the prerequisite demands and needs of the disadvantaged and marginalised groups; that would be, there existed no clear mechanism of responsive criteria to equity and gender disparity.

According to Setoi, Khabele, Phafane and Sebatane (s.a: 3) the formulation and implementation of technical and vocational education and training policy indicated government's commitment to technical and vocational education but fell short of the mention of gender configurations in Technical and Vocational Skills Training. Setoi *et al.* further indicated that the policy had not said anything about gender sensitivity in the conduct of TVET activities.

2.5 LESOTHO MINISTRY OF EDUCATION AND TRAINING DEPARTMENT OF TECHNICAL AND VOCATIONAL TRAINING TVET POLICY STUDIES DRAFT REPORT, 2004

The *TVET Policy Studies Report* had been divided into four studies: *governance, finance, provision* and study number four was characterised by *apprenticeship, qualifications structure, and registration and accreditation* (Lesotho Ministry of Education and Training, 2004:1). Therefore, the report analyses were engaged in both four studies.

The study begun with the indication on legislative issues engaged in TVET in Lesotho. Thereafter, scope of the study followed by the aims to research and develop policy proposals on the governance and management of the TVET system, including:

- ❑ The role of the Ministry of Education and Training in governing and managing TVET system;
- ❑ Establishing a semi-autonomous TVET Board with executive authority for the overall management and co-ordination of the TVET system, its size, composition and appropriate governance committees for the Board;
- ❑ The appropriate structure and organisation of a TVET office under the TVET Board; and
- ❑ The appropriate assignment and delineation of the roles and responsibilities of the Minister of Education and Training, the TVET board and the TVET office.

The conclusion of this study was ratified to be in concurrence with those of finance, and study number:- apprenticeship, qualifications structure, registration and accreditation as they concerned governance and management arrangements for:

- ❑ The financing of TVET;
- ❑ Examinations, curricula and establishing a national qualification structure;
- ❑ Training provider accreditation; and
- ❑ The introduction of an industry-led apprenticeship scheme (Lesotho Ministry of Education and Training, 2004:1-89)

2.5.1 Studies on Technica and Vocational Education and Training in Lesotho 1991-2000 and 2001

According to Elberlein (2001:1-52) review of findings and recommendations affecting technical and vocational education and training (TVET) in Lesotho and two of the inescapable conclusions were perpetrated. The most obvious was that experts had studied TVET systems in Lesotho repeatedly and in great depth over the past decade or more without any major changes apparently resulting. The second, and perhaps most pertinent, was that the recommendations made over the years when grouped together formed, at this juncture, a clear pattern for future action. In essence the pattern that emerged was described simplistically as follows:

- ❑ Overarching council for human resources planning; needed to be appointed;
- ❑ A comprehensive management information system; needed to be established and maintained;
- ❑ A representative board to direct and co-ordinate TVET ought to be appointed;
- ❑ A comprehensive TVET policy needed to be provided;
- ❑ A capable executive authority to Technical and Vocational Training Board (TVTb) needed to be provided;

- ❑ A tailor-made National Qualification Framework (NQF) needed to be established;
- ❑ Outcome-based modular learning curricula needed to be developed;
- ❑ Provision of TVET through empowerment provider organisations; needed to be co-ordinated;
- ❑ A company-based apprenticeship system ought to be established; and
- ❑ Financing of TVET was to be substantiated.

Clearly these objectives emphasised the need for TVET that would be provided on business-like lines, to meet the needs of the key stakeholders and which would make the best use of available resources.

2.6 UNITED NATIONS EDUCATION, SCIENTIFIC AND CULTURAL ORGANISATION (UNESCO) AND INTERNATIONAL LABOUR ORGANISATION (ILO) RECOMMENDATIONS FOR TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING, 2002

Technical and vocational education, as part of the total educational process, and a prerequisite in education and training as described in Article 26 of the Universal Declaration of Human Rights, had been included in the term "education" as defined in the Convention and the Recommendation against Discrimination in Education adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization at its 11th session (1960) and the Convention on Technical and Vocational Education adopted by the General Conference at its 25th session (1989). The provisions of these documents are therefore applicable to it (UNESCO and ILO, 2002:7-8).

UNESCO and ILO (2002:7-8) added that the Recommendation should be understood as setting forth general principles, goals and guidelines to be applied by each individual country according to its socio-economic needs and available resources in a changing world, with a view also to enhancing the status of technical and vocational education. The application of the provisions and the timing of the implementation will depend upon the specific conditions, and constitutional provisions existing in a given country.

2.6.1 Technical and Vocational Education in relation to the Educational Process: Objectives

UNESCO and ILO (2002:9) indicated that given the necessity for new relationships between education, the world of work and the community as a whole, technical and vocational education should exist as part of a system of lifelong learning adapted to the needs of each particular country and to worldwide technological development. This system should be directed to:

- ❑ Abolishing barriers between levels and areas of education, between education and the world of work, and between school and society through:

- ✓ The appropriate integration of technical/vocational and general education at all levels;
- ✓ The creation of open and flexible educational structures; and

Taking into account individuals' educational needs, the evolution of occupations and jobs recognizing work experience as a part of learning required:

- Improving the quality of life by creating a learning culture that permitted individuals to expand their intellectual horizons, to acquire and to constantly improve professional skills and knowledge, and to engage positively in society to utilize the fruits of economic and technological change for the general welfare.

According to UNESCO and ILO (2002:9) technical and vocational education should begin with a broad base, which facilitates horizontal and vertical articulation within the education system and between school and the world of work, thus contributing to the elimination of all forms of discrimination, and should be designed so that it:

- Would be an integral part of everyone's basic general education in the form of initiation to technology, the world of work, and human values and standards for responsible citizenship;
- Might be freely and positively chosen as the means by which people develop talents, interests and skills leading to an occupation in various sectors or to further education;
- Allowed access to other aspects and areas of education at all levels, including institutions of higher learning, by being grounded in a solid general education and, as a result of the integration mentioned in paragraph 6(a), containing a general education component through all stages of specialization;
- Allowed transfers from one field to another within technical and vocational education;
- Would be readily available to all and for all appropriate types of specialization, within and outside formal education systems, and in conjunction or in parallel with training in

order to permit educational, career and job mobility at the minimum age at which the general basic education is considered to have been acquired, according to the education system in force in each country;

- Would be available on the above terms and on a basis of equality to women as well as men, and where the learning and working environment is made suitable for the participation of girls and women by removing overt and covert bias and discrimination and seeking strategies for motivating girls and women to take an interest in vocational and technical education; and

- Would be available to people with disabilities and to socially and economically disadvantaged groups such as immigrants, refugees, minorities (including indigenous peoples), demobilized soldiers in post-conflict situations, and underprivileged and marginalized youth in special forms adapted to their needs in order to integrate them more easily into society.

In terms of the needs and aspirations of individuals, technical and vocational education should:

- Permit the harmonious development of personality and character, and foster spiritual and human values, the capacity for understanding, judgement, critical thinking and self-expression;

- Develop capacities for decision-making and the qualities necessary for active and intelligent participation, teamwork and leadership at work and in the community as a whole;

- Prepare the individual for lifelong learning by developing the necessary mental tools, technical and entrepreneurial skills and attitudes; and

- Enable an individual to cope with the rapid advances in information and communication technology.

2.6.2 Policy, planning and administration

According to UNESCO and ILO, (2002:13-18) policy should be formulated and technical and vocational education administered in support of the general objectives adopted for the educational process as well as for national and, if possible, the regional social and economic requirements of the present and the future, and an appropriate legislative and financial framework adopted. Policy should be directed to both the structural and the qualitative improvement of technical and vocational education as stipulated in Article 2 of the Convention on Technical and Vocational Education (1989) and further described in the recommendations of the Second International Congress on Technical and Vocational Education (1999):

- Although governments had been carrying the primary responsibility for technical and vocational education, in a modern market economy, technical and vocational education policy design and delivery should be achieved through a new partnership between government, employers, professional associations, industry, employees and their representatives, the local community and non-governmental organizations (NGOs). This partnership must create a coherent legislative framework to enable the launching of a national strategy for change. Within this strategy the government, apart from actually providing technical and vocational education, could also provide leadership and vision, facilitated, coordinated, established quality assurance and ensure that technical and vocational education would be for all by identifying and addressing community service obligations;

- Technical and vocational education would best be served by a diversity of public and private providers. The appropriate mix could be found in many ways, with the responsibility of governments being to facilitate choice while ensuring quality;

- Government and the private sector should recognize that technical and vocational education would be an investment, not a cost, with significant returns, including the well being of workers, enhanced productivity and international competitiveness. Therefore funding for technical and vocational education should be shared to the maximum extent possible between government, industry, the community and the learner, with government providing appropriate financial incentives. Furthermore, the governments of least developed countries in particular should seek bilateral and multilateral capacity-building cooperation in technical and vocational education; and

- Within governments, there existed more often shared and overlapping responsibilities for various elements of technical and vocational education among departments and agencies. It would be desirable that governments streamlined their own public institutional framework to the maximum extent possible to coordinate the national technical and vocational education effort, created an effective partnership with the private sector, and promoted technical and vocational education for the benefit of all stakeholders.

2.6.3 Technical and Vocational Education as Preparation for an Occupational Field

Given the disparities that may exist between formal education (UNESCO and ILO, 2002:21), whether secondary or tertiary, and the employment and career opportunities available, the highest priority should be given to technical and vocational education. Consequently the structure and content of traditional education, whether general or technical and vocational, should be adapted and according to UNESCO and ILO (2002:20) these could be achieved through:

- The diversification of secondary education in the later stages so that it may be pursued in conjunction with employment or training, or may lead to employment or to higher education, thereby offering to all youth educational options corresponding to their needs and abilities; and
- The development of educational structures and programmes on all levels centred on organized and flexible interchange between educational institutions (including universities), training institutions and the world of work.

Technical and vocational education as preparation for an occupational field (UNESCO and ILO, 2002:21) should provide the foundation for productive and satisfying careers and should:

- Lead to the acquisition of broad knowledge and generic skills applicable to a number of occupations within a given field so that the individual is not limited in his/her choice of occupation and is able to transfer from one field to another during his/her working life;
- At the same time offer both a thorough and specialized preparation for initial employment, including self-employment, and also training within employment; and
- Provide the background in terms of knowledge, skills and attitudes for continuing education at any point in the individual's working life.

2.6.4 Organisation

Technical and vocational education as preparation for an occupational field should be organized on a national or provincial/local basis, so as to respond positively to overall social, economic and educational requirements and to the needs of different groups of the population without discrimination (UNESCO and ILO, 2002:23).

Several organizational patterns of technical and vocational education, including full-time, part-time, open and distance learning options, could exist within each country (UNESCO and ILO, 2002:21). The following patterns according to UNESCO and ILO (2002:23) should be considered:

- Full-time programmes including general education and practical training, provided in an educational establishment, either comprehensive or specialized;

- Part-time programmes; in which general education, theoretical and broad practical aspects of the occupational field are given in an educational establishment, while specialized practical training is acquired during work in the chosen occupation;
 - ✓ The day-release system, providing for workers and apprentices to attend an educational establishment one or two days a week.

 - ✓ The sandwich system, under which periods in an educational institution alternate with training periods in a factory, farm, business establishment or other undertaking; and

 - ✓ The block-release system, whereby workers are released to attend courses of 10 to 15 weeks per year.

- Open and distance education programmes provided through:
 - ✓ Correspondence;

 - ✓ Special radio and television broadcasting; and

 - ✓ The Internet and other computer-based media.

2.6.5 Programme Content

UNESCO and ILO (2002:27-29) contemplated that all programmes of technical and vocational education, as preparation for an occupational field should:

- ❑ Aim at providing scientific knowledge, technical versatility and a cluster of core competencies and generic skills required for rapid adaptation to new ideas and procedures and for steady career development;
- ❑ Be based on analyses and forecasts of occupational requirements by national education authorities, employment authorities, occupational organizations and other stakeholders;
- ❑ Include an appropriate balance between general subjects, science and technology, as well as subjects such as computer literacy, information and communication technology, the environment and studies of both the theoretical and practical aspects of the occupational field; and
- ❑ Stress developing a sense of values, ethics and attitudes to prepare the learner for self-reliance and responsible citizenship.

2.6.6 Technical and Vocational Education as Continuing Education

The development and expansion of technical and vocational education as continuing education, both within and outside the formal education system, with either public or private funding, and within the framework of lifelong learning, should be a priority objective of all educational strategies (UNESCO and ILO, 2002:31-33). UNESCO and ILO further recommended that broad provision should be made for allowing everyone, whatever their prior qualifications were, to continue both their professional and general education by facilitating seamless pathways for learners through articulation, accreditation and recognition of all prior learning and relevant work experience.

Within this spectrum, technical and vocational education had had a responsibility to ensure a sound initial education and training aimed at learning to learn, the most precious skill for all citizens, both young and adult.

In addition to permitting adults to make up deficiencies in general or vocational education, which had often been its sole objective, UNESCO and ILO accorded that continuing education should now:

- ❑ Offer possibilities for personal development and professional advancement by providing flexibility in programme administration and curriculum design to facilitate smooth lifelong learning and ensure continuous entry, exit and re-entry points;
- ❑ Permit the updating and renewal of knowledge and practical abilities and skills in the occupational field;
- ❑ Enable individuals to adapt to technological changes in their occupation or to enter another occupation;
- ❑ Be available throughout the individuals' working life without restriction with regard to age, sex, prior education and training or position, recognizing work experience as a substitute for prior learning;
- ❑ Be available to the increasing numbers of the aged population; and
- ❑ Be broad in scope, including general education elements and contemporary crosscutting areas.

UNESCO and ILO added that the appropriate authorities should be encouraged to provide the basic conditions for continuing technical and vocational education, such as providing for paid educational leave and other forms of financial aid.

UNESCO and ILO concluded that continuing technical and vocational education should be actively encouraged through:

- ❑ Widespread dissemination of information concerning the programmes available and ways of taking advantage of existing opportunities, including full use of the mass media and the internet; and

Recognition of successful completion of programmes by increased remuneration and professional advancement, with the involvement of employers and professional associations.

2.6.7 The Training/Learning Process

The challenges facing technical and vocational education in the twenty-first century demanded learner-centred innovative and flexible approaches including a reoriented curriculum to take account of new subjects and trends and issues such as technology methodologies, the environment, foreign cultures and languages, entrepreneurship and the requirements of rapidly growing service enterprises.

Theory and practice should form an incorporated whole and be presented in a manner that motivates the learners (UNESCO and ILO, 2002:39). Experience in the laboratory, workshop and/or enterprises should be linked to numerical and scientific foundations, and conversely, technical theory, as well as the mathematics and science underlying it, should be illustrated through their practical conceptualisations and applications.

Full use should be made of contemporary educational technology, particularly the Internet, interactive multimedia materials, audiovisual aids and mass media, to enhance the reach, cost-effectiveness, quality and richness of programmes, especially in the promotion of self-learning (UNESCO and ILO, 2002:31).

The methods and materials used in technical and vocational education should be carefully adapted to the learners' needs. In this respect UNESCO and ILO (2002:31) accorded that:

- Where the language of instruction differs from the native language, teaching materials should make maximum use of numerical and graphical representation, and written material being kept to a minimum;
- Where materials developed in one country are adapted for use in another, this adaptation should be carefully made with due regard to local factors; and
- Considering, however, the increasing mobility of labour, the acquisition of foreign language skills should be considered a vital aspect of the curriculum.

Machines and equipment used in workshops in educational institutions should be geared to the needs of the workplace, and should simulate it as closely as possible (UNESCO and ILO, 2002:40). Learners should be capable of operating and maintaining the equipment.

Evaluation/assessment should be an integral part of the teaching and learning process, and its major function should be to ensure the availability of appropriate programmes for the development of learners

in accordance with their interests and capacities, and competence in the world of work (UNESCO and ILO, 2002:40).

The learners' performance should be evaluated/assessed on an overall basis that considers class participation, interests and attitude, aptitude for acquiring practical and competencies, and relative progress, allowance being made for aptitudes and examinations and other tests skills (UNESCO and ILO, 2002:40).

Learners should participate in the evaluation/assessment of their own progress, and this system should have an in-built feedback mechanism to identify and correct training-learning problems. Continuous evaluation of the teaching and training-learning process, including formative assessment, should be undertaken with the participation of teachers, supervisors, learners and representatives from the occupational fields concerned to ensure that the programme had been effective and that the knowledge and skills imparted met the needs of the workplace, and included recent developments in the field of study.

As economic, social and technological change gathered pace, people everywhere needed to develop their knowledge and skills, on a continuous problem solving capacity building so that they could live and work meaningfully in the knowledgeable society (United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Labour Organisation (ILO), 2002:2). UNESCO and ILO further substantiated that education and training attributed to an individual's personal development augmented and intensified his/her productivity and income generation and facilitated everybody's participation in social life and economic growth. From this argument, it could be concluded that in the continuous economic, social and technological change, skills and knowledge were of central importance, and people should be given an opportunity to acquire new skills and knowledge that would benefit them in life and at work.

It was noticed that education and training helped individuals to put and elevate income at work, and escaped poverty by providing them with skills and knowledge to raise their output. This argument supplemented and relatively supported such that economic growth was increasingly driven by knowledge, no country could remain competitive without applying knowledge. Advances in the science and technology based across a wide range of fields, from communication to technology and to biotechnology, to science materials, provided potentials for countries to accelerate and strengthen their economic and social development (World Bank, 2002:v). The World Bank deliberated that the knowledge economy provided efficient ways to produce goods and services and delivered them more effectively, and at lower costs to a greater number of people.

A broad programme for lifelong learning for dynamic economies that encompassed all levels such as early childhood development, primary and secondary education, tertiary and adult continuing education within the perspective of the overall development framework promoted diversity of institutions,

programmes and procedures that permitted all people access to education and yielded social and economic growth globally, regionally and locally (International Centre for Technical and vocational Education and Training (UNEVOC) and Republic of Botswana Ministry of Education Department of Vocational Education and Training, 2000:30).

Such education should be relevant, demand-driven and responsive to societal needs, wants and demands. Much had been said and written about initial and continuing technical and vocational education; not as much had been done to provide for it. Nevertheless, job change had been becoming essential for most people and the prospect of working in five or more different occupations in a life time is becoming the norm. This obviously had had significant implications for the establishment of career paths and for obtaining sufficient experience within an occupation to be able to move up into senior management positions, which had been a norm in Lesotho's occupational arena.

Therefore, investment in education and training had been an investment in the future: knowledge and skills had been the impacts of economic growth and social development.

As accorded by UNESCO in its CD ROM (2003: *The Education, Work and the Future*) in recent years progress had been made, not only in expanding technical and vocational education and training to meet skilled manpower, but also in terms of broad reform directed at making education as a whole, to be more responsive to social and economic development requirements. As a matter of fact, countries engaged in this process had been seeking the means by which obstacles to socio-economic development and societal progress might be rapidly and effectively removed, by operationalising a demand-driven technical and vocational education and training to impact on the socio-economic development.

This part of reviewed literature indicated that international organisations such as UNESCO ILO, World Bank, consultants and individuals had been involved for a number of years in promoting the status and development of technical and vocational education in many global regions.

Recently, however, these efforts had taken a new dimension as virtually all countries had been engaged in rethinking their educational systems of which Lesotho had been amongst. Most publications had concluded that a much larger perspective must be given to technical and vocational education and training if it was to be responsive to contemporary conditions.

UNESCO-UNIVOC publications from 1996 to 2002, Lesotho Ministry of Education and Training's Technical and Vocational Education and Training Department documents, World Bank publications on technical and vocational education and training on Lesotho technical and vocational education and independent individuals' research reports on technical and vocational education in Lesotho and elsewhere had been surveyed to provide a framework for this literature review which had been acknowledged and listed under the bibliography at the end of the research report.

2.7 LESOTHO MINISTRY OF EDUCATION DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVD)

Normally referred to as TVD, it was established in 1987 to serve as the directorate of the Technical and Vocational Training Advisory Board (TVTAB) and the nerve-centre of the technical and vocational education and training system (<http://www.education.gov.ls>: on line). TVD aimed to:

- ❑ Facilitate the development of a productive labour force with links, knowledge and attitudes to promote a dynamic and sustainable economy;
- ❑ Mobilise and encourage entrepreneurial skills, and integrate them with technical and vocational education and training programmes; and
- ❑ Facilitate expansion of training and development opportunities for all Basotho irrespective of innate ability, gender, religious believes and socio-economic background.

The Department of Technical and Vocational Education and Training (TVET) of the Ministry of Education and Training was the umbrella regulatory body that aimed to improve the quality and delivery systems and mechanisms through curriculum development; inspection and assessment; accreditation of programmes and institutions; administration of trade tests to determine skill proficiency levels of workers; support in terms of provision of workshops and equipment, training of staff at TVET institutions and continual assessment of skills needed.

2.7.1 Vision of the Lesotho Ministry of Education - Department of Technical and Vocational Education and Training Division

Wade et al (2003:98) indicated that it was the vision of the Lesotho Ministry of Education through Technical and Vocational Education and Training Department (TVD) that by 2006 the technical and vocational education and training system would:

- ❑ Be demand driven;
- ❑ Be creative and responsible to the needs of its partners;
- ❑ Apply research and development to meet its needs;
- ❑ Provide competent, effective and efficient people; and
- ❑ Enable a competitive economy to impact locally, regionally and globally.

It had been apparent that with increased demand for occupational training and the escalating cost of training, there was a need to harmonize the provision of technical and vocational education and training. Responsibility for technical and vocational education at the policy level already existed in legal and constitutional frameworks. Harmonization would further enhance quality and relevance with appropriate certification.

2.7.2 Mission of the Lesotho Ministry of Education Department of Technical And Vocational Education and Training Division

It had been the Mission of the Lesotho Ministry of Education to collaborate and work with all its stakeholders through Technical and Vocational Education and Training Department (Wade et al, 2003:98). Wade et al further indicated that the mission was to:

- ❑ Manage and administer technical and vocational education and training effectively and efficiently;
- ❑ Develop and assess the achievement of national technical and vocational education and training standards;
- ❑ Ensure that national technical and vocational education and training standards met industrial and educational requirements; and
- ❑ Achieve the technical and vocational education and training objectives within an agreed financial strategy and framework.

Within holistic technical and vocational education parameter, the major purpose was to enhance sustainable stability, promote national, social and economic growth through adequate planning, coordination and control within the management spectrum of technical and vocational education as shown in (Wade et al, 2003:98).

International Project on Technical and vocational Education (UNEVOC) in 'International Workshop on Curriculum Development in Technical and Vocational' Turin, Italy on 30 August to 3 September, 1993 articulated that in the history of technical and vocational education, a systematic approach to curriculum development had been relatively recent. Due to lack of resources, experience and traditions, there had been certain tendencies in some developing countries to simply copy existing curriculum materials from industrialised nations without proper adaptation to the local situation and needs, which had often proved to be inappropriate and expensive (UNESCO CD ROM, 2001: International Workshop on Curriculum Development in Technical and Vocational).

UNEVOC in UNESCO authenticated that third world countries copied the curriculum which had characteristics of being supply-driven and sometimes such a curriculum had colonial implications.

The available empirical survey indicated that Lesotho was amongst such countries. This notion was correlated by Kerre (1996:11) when he substantiated that "it become obvious that the educational systems adapted from colonial systems were mainly academic leading to mass production of unemployable school leavers, as a result, various changes were introduced as each country reviewed and reformed its educational systems". Kerre further alleged that most of these changes came in the 1980s and the 1990s.

This incidence was also observed by Atchoarena and Delluc (2002:xiii) that in the 1990s technical and vocational education and training received little attention in sub-Saharan Africa. These authors adjudged that the Dakar commitment to education and the fact that technical and vocational education was considered as becoming absolute and not sufficiently cost-effective explained this disdain. Atchoarena and Delluc adjoined that recently most countries in the sub-Saharan region have embarked on often-ambitious reforms to improve the provision of skills.

Kerre (1996) and Atchoarena and Delluc (2002) reckoned that changes and reform movement involved important efforts to rehabilitate technical and vocational education and training with the aim of making it more flexible, of a higher quality and capable of responding better and more rapidly to the needs of labour market which according to Lesotho Ministry of Education and Training (2003:v) it had not been the case of Lesotho. Thus, at present technical and vocational education and training in Lesotho had been supply-driven and comprised of: (a) pre-vocational training; undertaken in secondary/high schools, for early school leaver with primary school leaving certificate; (b) the disadvantaged groups; (c) retrenched mineworkers; (d) trade testing for the people who acquired skills while already in the labour market and courses at post-junior and senior secondary school levels.

At the request of the Government of Lesotho, an assessment of skills and human capacity was conducted as part of the World Bank Economic Sector (ESW) (World Bank, 2004:2). The World Bank further submitted that the two key aims of the examination were to:

- (i) Determine whether and to what degree was it a constraint and impediment to private sector development (PSD) in Lesotho; and
- (ii) To recommend ways to build capacity of skilled and unskilled labour (including labour redundancies from South Africa mining sector) to find employment opportunities in the sectors with the greatest potential for positive spillovers of knowledge and skills (starting with textile and garment and sand stone industries).

In the World Bank study, the methodology relied on the examination of the efficiency and effectiveness of the training and capacity building programmes currently in place as well as the institutions providing the training (supply side) and the skills required of the private sector (demand side) (World Bank, *ibid*). The Bank further articulated that based on the results and consultations with the Basotho and foreign-owned private sector, relevant training institutions as well as the Government, the study was to identify the existing gaps and mismatches between supply and demand.

This, in turn, was to provide the basis for formulating recommendations on how to restructure the system into a more demand-driven one that would be responsive to the needs of the private operators and would be industry-driven (the relevance of an Asian model of the Penang Skills Development Centre was to be considered). Recommendations indicating a framework facilitating the expansion of business and vocational training and strengthening the skill for the domestic firms (possibly through

use of a matching grant facility) were substantiated and also an examination of the legal policy framework and its applicability to the new proposed approach were conducted.

As a result of the Lesotho Government placing a high priority on the issue of human development, some important analytical work had already been conducted by the donor community (World Bank, 2004:3). Such analysis that the Bank reported about had been in the '*Lesotho Growth and Employment Options Study (2002)*' of which had been translated into a '*Country Economic Memorandum*' suggested strong correlation between wage employment in either domestic private sector in Lesotho, Government of Republic of South Africa (RSA) market enhanced with higher education and skills '*The Integrated Framework Report*', January 2003' and '*United Nations Conference for Trade and Development (UNCTAD) Investment Policy Review*' December 2002 identified weak entrepreneurial skills and lack of linkages between small micro-medium enterprises (SMMEs) and large-scale industry as two priority areas that needed to be addressed in the medium-term.

Recommendations made included promotion of 'backward integration' between manufacturing foreign direct investment (FDI) and domestic private sector to increasing local content in other inputs, such as packaging and simple accessories (buttons, trim, and others) facilitated by development of industry-relevant skills and techniques through education and training programmes. Further the reports articulated that shift toward higher-value-added manufacturing and a more diversified export basket could only be achieved by increasing the capacity of Basotho people and institutions (including financial sector).

2.8 LEROTHOLI POLYTECHNIC

The Lerotholi Polytechnic is the oldest and most important TVET national institution charged with the task of training students in technical and vocational education in Lesotho (The World Bank African Region, 2004:9). It was established in 1905 (Lerotholi Polytechnic, 2003:8) and (The World Bank African Region, 2004:9). The institution was formerly designated as a polytechnic in 2002 based on the Lerotholi Polytechnic Act (1997) (Lesotho Government Gazette extraordinary, 1998:188). The legislation allowed for the establishment of Governing Council chaired by an individual from outside the government to manage the institution that currently was the Chair of the Lesotho Architects, Surveyors and Engineers Association (The World Bank African Region, 2004:9). The Lerotholi Polytechnic further articulated that it had been committed to striving to become the centre for excellence in technical and vocational education institute. It intended to listen more to its customers, and taking it from the valuable inputs that were generated in its most celebrated Stakeholder's Conference held in January 2001, its endeavour to transform the Polytechnic into an institution of higher learning continued unabated.

According to Lerotholi Polytechnic medium term plan (within the course of five years) new relevant courses would be introduced hopefully at Diploma level and above. The existing courses would be rationalised and consolidated to eliminate duplication and ensured efficient use of resources, and more part-time courses would be introduced with a view to continue servicing industry.

Lerotholi Polytechnic further articulated that the above challenges would undoubtedly require commitment from all those who have a stake in technical and vocational education. The Management, staff and students alike, the external stakeholders and other customers, the friends of the Polytechnic and all people of Lesotho with an interest in technical and vocational education would be involved.

2.8.1 Mission and Objectives of the Lerotholi Polytechnic

Lerotholi Polytechnic (2003:9 intended to fulfil the following mission:

- ❑ To teach and to train students in the technical and commercial fields at craft and technician levels for Lesotho's economy.

Lerotholi Polytechnic further stated that its mission was to provide short in-service courses for people in industry so as to keep them abreast of the new developments in technology worldwide.

In pursuance of the above mission statement, the Lerotholi Polytechnic embraced the following as its main objectives:

- ❑ To train students of full-time basis over two to three years period;
- ❑ To design and teach evening courses to the people in both public and private sectors who are not able to attend classes during working hours;
- ❑ To provide students with relevant entrepreneurial skills;
- ❑ To establish industrial liaison procedures so as to facilitate input development, maintenance of quality standards and students attachment;
- ❑ To conduct on-going research on issues related to technical and vocational education and training (TVET); and
- ❑ To establish links with other institutions with similar aims and objectives at regional, continental and international levels (Lerotholi Polytechnic, 2003:9-10).

It had been apparent that Lerotholi Polytechnic's mandate was established and implemented the Technical and Vocational Education and Training Department' policy as stipulated earlier in this section. Lerotholi Polytechnic's engagement had been to provide technical and vocational education that addressed access, relevance, quality and training/learning strategies.

On the threshold of a new status in the history of the Lerotholi Polytechnic in 2002, the commencement of the long awaited autonomy took off under the legislation of the Lerotholi Polytechnic Act, 1997.

2.9 ROLE OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

Quality technical and vocational education and training helped develop the individuals' knowledge of scientific and technological education in a broad perspective in occupational areas requiring technical and professional expertise and competencies, and occupational skills (UNESCO and ILO, 2003:CD ROM). National technical and vocational education systems had been envisaged as eminent needs in developing the knowledge and skills pertinent to socio-economic development in helping workforce become more flexible and responsive to the needs of local labour markets, while competing in the global economy. Thus, the major role of TVE would be to equip the labour force with essentially required skills.

Some countries had introduced TVET reforms that endeavoured to integrate work-place-based learning and training into vocational education and curriculum (UNESCO and ILO, 2000:2). UNESCO and ILO intensified the notion that TVET systems had to be open and all inclusive to provide even the most underprivileged access to learning and training, to give opportunity to people in all walks of life, in urban and rural communities to equip themselves to lead a productive and satisfying lives that would undoubtedly be critical to the prosperity and well-being of the society through diversification procedures. Competent labour force would be required and the role of TVE would be to equip the workforce with competent skills in both managerial and production activities.

Symposium report on 'Innovative Methods in Technical and Vocational education' organised by the Federal Ministry of Education and Science and the German Commission for UNESCO, Hamburg, 1989, argued that the importance of technical and vocational education for social and economic development had been widely recognised. The demands of the economy affected both industrialised and developing countries. In particular the need for technical personnel in developing countries had been crucial and placed greater pressure on systems for technical and vocational education and training and the limited national resources (UNESCO CD ROM, 2001: *Innovative Methods of Technical and Vocational Education*). Information sharing was essential. Therefore new tactics of skill production was acquired through conferences pertained to technical and vocational education.

These research reports showed that worldwide trends in the development of technical and vocational education portrayed considerable efforts to expand and modernize technical and vocational education structure. A statistical report published by UNESCO 1983, indicated that post-secondary technical and vocational institutions full-time enrolment had risen from 15.7 million in 1970 to 24.3 million in 1980, which represented 54 per cent while the rate of general education during the same period increased by 45 per cent. More recent figures in the UNESCO CD ROM (2001: Trends and Development of

technical and vocational Education) confirmed that there had been a rapid growth in enrolment of young men and women in various branches of technical and vocational education and training.

This statistical report by UNESCO outlined that chronologically there had been an improvement in access, relevance, quality and training-learning strategies to technical and vocational education throughout the regions. Global community would be abreast with the skills that would impact on economy.

It was important that the different training conditions be examined with modality related to the conditions required for the effective application, as deduced from UNESCO 1989 Hamburg symposium report, the discussion were heavily influenced by the possible consequences of new technologies on the content and structure of vocational education contemplating planning, coordination and control of the discipline. TVE's role would be to fully manage the environment for the betterment of mankind.

The programme was binary. Part One was entitled 'Micro level systems'; the criteria for classification of systems of technical and vocational education were to be developed; while Part Two was 'Micro level systems'; this part was aimed at a classification of teaching and learning methods in technical and vocational education and training. It had been, however, worth noting that the symposium was supplemented by country reports and case studies whereby the consensuses reached and agreed upon formed the rationale for this study report.

During the process of the discussion and debate UNESCO CD ROM (2001: Training of Teachers/Trainers in Technical and Vocational Education - Studies No. 11 (UNEVOC, 1997)) articulated that the following questions were seen to be pivotal to the issues addressing technical and vocational teacher education and trainer training.

1. What were the changes in the world of work that must be addressed by technical and vocational education to ensure the genuine implementation of life-long learning, life-long career development and life-long employment?
2. How could technical and vocational education co-operate with the world of employment and economic production to ensure the relevance, and employability, of human resources?
3. How could technical and vocational education encourage the assumption of responsibility by the various entities within the world of work for the protection of the environment?
4. How should technical and vocational education articulate with general education, higher education, and with training within the workplace in order to support the

maintenance of people as effective and efficient employees within the world of work?

5. How should technical and vocational education support the initiatives of non-formal education, small business enterprise and the self-employed with respect to the effective and efficient performance of employees within the productive process?
6. What teaching/learning strategies needed to be supported, or developed and implemented, by technical and vocational education to increase its contribution to the efficiency of the world of work and to the fair and just distribution of the wealth generated by the world of work?
7. What were the policies and legislation that need to be developed and implemented by governments to support the universal availability and effectiveness of technical and vocational education?
8. What financial support needed to be given by governments, and other entities, to formal and informal adult and continuing education for the world of work?
9. How could education for the world of work contribute to the removing of the disparities of economic return from employment - among countries and within countries - stemming from such factors as sex discrimination, exploitation of the disadvantaged, the internationalising of work, the restructuring of economies, migration, etc.? and
10. How could technical and vocational education contribute significantly to the social effectiveness, social responsibility, personal actualisation and the empowerment of people within the arena of work?

2.10 THE IMPACT OF TECHNICAL AND VOCATIONAL EDUCATION ON THE SOCIO-ECONOMIC DEVELOPMENT

Technical and vocational education and training had been considered as an element within socio-economic development; its capacity building of skills development has had a direct impact on the socio-economic development through acquisition and utilisation of skills acquired impetus to the world of work. In lieu to this notion, Atchoarena and Delluc (2002:1-2) in the case study on the Sub-Saharan countries observed that the situation of technical and vocational education and training varied widely across sub-Saharan African countries. Delivery systems were quite diverse, combining school-based provisions with other non-formal training arrangements. Atchoarena and Delluc accorded that the economic and financial crisis that had struck the countries of sub-Saharan Africa since the mid-1980s

had brought deep changes in the structure of the production system and to the labour market. Atchoarena and Delluc had also ruminated on the issue that the end of guaranteed access to public sector employment had contributed to graduates' increased unemployment and deterioration of the rate of return of investments in education and training.

In this context, both Atchoarena and Delluc (2002:2) and Kerre (1996:11) in the case study on selected African countries affirmed that the systems; originally shaped on the model of the former colonial powers, gradually became unable to train the young and the adults with the qualifications demanded by the world of work. In turn, as Atchoarena and Delluc, and Kerre obliged, inadequate investment in technical and vocational education and training contributed to its deterioration and further aggravated issues of effectiveness and efficiency defects. The need to break this vicious circle as Atchoarena and Delluc put it eventually manifested the reconsidering of policy options and delivery patterns.

It had been evident and widely acceptable that education and training had relevance to the existing world of work and had been innovative and creative and that quality must be determined in outcomes and outputs. Atchoarena and Delluc (2002:2-12) presupposed that today, emerging common trends could be identified. In addition to the specific crisis affecting most technical and vocational education and training systems in sub-Saharan Africa, reviewed literature indicated that globalisation associated with the rise of a market-orientated paradigm in education shaped the reform process along similar lines. Thus, shifting the focus from inputs to outputs, through new financing and certification mechanisms, involving social partners in governance, granting more autonomy to institutions, promoting private providers and company-based training were part of the approach.

No matter what the cost or rigour of education and training were, it could not be considered high quality if it did not enhance the work and income opportunities of the trainee, employee and the world of work in general. However, there had been a need to be clear about what objectives and outcomes were intended so as to evoke such an adjustment. This included being clear where there was a social function or equity dimension to skills development.

The impact of technical and vocational education and training required a detailed understanding of the major changes in the world of work in recent years. This must take an account of the nature of changes at global, national and local levels and opportunities that existed at each level for skills interventions that could support successful socio-economic activities. This included the challenge of doing skills development in a context in which service work had been growing at the expense of production as maintained in technical and vocational education and training (TVET).

According to Working Group for International Cooperation in Skills Development (2002:7), globalisation brought about rapid changes in technology and competitive environments. This promoted lifelong learning over once-and-for-all training. It encouraged more integration of education and training. It introduced a focus on knowledge value-added and a major challenge of skills development. Working

Group for International Cooperation in Skills Development further argued that the last decade had seen the spread of a new notion of skills consistent to demand-driven and responsive technical and vocational education and training that impact on the socio-economic development.

There had been a relative decline in the emphasis given to traditional craft skills and those of the industrial artisan. What Working Group for International Cooperation in Skills Development was trying to illuminate here was that a new set of skills such as those related to information and communications technology had emerged and responsiveness of other job related skills towards socio-economic development. In this sphere, Atchoarena and Delluc (2002:14) acceded to this notion by arguing that trainers were as a whole often insufficiently trained for the fulfilment of their respective tasks, often new to them were imposed upon them, as a result of their contacts with enterprises.

Equally, there had been a concern with promotion of generic skills, such as problem solving based on a holistic approach resulting from cumulative effects of influences determined by the needs for human capital developments. The latter set of skill had also been closely linked to a shift towards thinking in terms of competences. This brought a concern to measure the discrete abilities that students and workers possess rather than thinking in terms of whole trade test certificates.

Working Group for International Cooperation in Skills Development (2001:8) suggested a list of challenges that emerged from these trends, and they were as follows:

- ❑ The new skills and competences focus placed new demands on conventional skills providers. Moreover, in Africa in particular, these providers had questionable capacity to make the necessary transition;
- ❑ Many of these skills were supposed to be delivered in formal schooling. Again, the capacity for delivery in many countries was doubtful. The success or failure of such efforts in the school system clearly impacted on the role of training providers in this information and technological competence skills harnessing era;
- ❑ These notions had emerged almost exclusively in the context of development and newly industrialised economies. Their relevance and capacity building were pertinent in cases such as that of proposed Regional Qualification Frame work for Southern Africa. Indeed, it was important to note the curious cases of advice being provided by organisations from developed countries with their own major implementation problems;
- ❑ The issue of relevance was particularly questionable when the focus on skill development in developing countries was shifting to the informal sector. Whether these skills were relevant to informal sector activities needed further exploration; and
- ❑ Even if relevance was demonstrated, then these remained questionable about the appropriate mechanisms to be used. Both non-formal education and traditional

apprenticeship were important to skills transmission for the informal sector. There was still little evidence on how best, if at all, such skills could be enhanced through those pathways.

In many cases skill development was supposed to be incorporated within tertiary technical and vocational education and training sector programmes for education. Often responsibility for skills development laid, at least in part, with Ministry of Education and Ministry of Labour. Also, technological change had encountered analysts to point to the closing of historical gap between education and training. However, a gap still remained and educationalists often were sceptical about skills development and understood little about its debates (Working Group for International Cooperation in Skills Development, 2001:13).

In support to Working Group for International Cooperation in Skills Development notion, United Nations General Assembly (2002:2) deliberated and reaffirmed the need to ensure a balance between economic development, social development and environmental protection and managing the natural resources base of economic and social development by overcharging objectives of, and essential requirements for sustainable development.

After the 'Decade of Education for All', 'World Forum on Education' in Dakar, Senegal, 2000, 'International Workshop on Curriculum Development in Technical and Vocational Education', Turin, Italy, 1993 and 'Education for All, a Framework for Action in Sub-Saharan Africa', Johannesburg, South Africa, 1993, there was an urgent need for better understanding and cooperation between education and skills development in technical and vocational. It was important for this to be at all levels of the education system to enhance impact of technical and vocational education on the socio-economic development and sustain human capital to capacitate the impact of technical and vocational education in meeting global, regional and local societal demands.

The focus on skills development evoked by technical and vocational education and training for world of work had particular resonance with elements of the donor approach and stakeholders' participation in socio-economic development. The articulation of skills development activities had been an important challenge for the immediate future as competency-based training helped to acquire skills necessary to meet various job profiles. Especially if such competence-based training's quality and relevance were within the demand-driven and responsive technical and vocational education.

The Lesotho technical and vocational education and training system had shown a clear drive towards addressing national and international concerns regarding the performance of training. This was evidenced by the widespread debate (Congress on Lesotho TVET, 1998 and the World Bank engagement, 1999 – 2000) that had been engaged about the future shape of the system. It was further evident in the Lesotho Ministry of Education and Training Department of Technical and Vocational Education (TVD) attempts to improve curricula and to involve providers and potential employers in the curricula development process. Recent attempts to engage with private providers might also be seen as positive.

However, it was clear from the national debates about the need to reform TVE system that much was not functioning well or was insufficiently suited to its purpose. The governance system was a major concern with regard to lack of autonomy of the Technical and Vocational Training Advisory Board (TVTAB). Magau (2005:41) indicated that during the fieldwork, some of the respondents questioned the competence of some of those appointed in TVTAB, arguing that they lacked the necessary background for the work. Magau (ibid) further indicated that the state lacked a clear, co-ordinated strategy on skills development that could bring together the efforts of the TVD with other government department and agencies.

It was apparent that the capacity of the TVD was subject to debate. It received a small portion of the education budget and suffered from the overall poor status of TVET. This made recruitment and retention of high quality staff a major constraint.

2.10.1 Major Trends, Issues and their Implications

International Project on Technical and Vocational Education (UNEVOC) (1997:4) pointed out that the world of work required that its participants must be given the opportunity for constant personal and vocational development if the aim was to avoid the plague of unemployment and redundant workers. Lifelong learning requires personal commitment and motivation, which will only come from learning being rewarded. This had been in line with UNEVOC's perception, and such rewards would be through acquisition of technical and vocational education and training responsive acquired skills that would promote the impact of relevant personnel capital towards socio-economic development.

UNEVOC further argued that all efforts to make continuing technical and vocational education a reality in our societies will fail unless people develop the attitudes and values that encourage them to make the commitment necessary to engage in this field of specialisation. Along with such attitudes that UNEVOC argued about, there must be developed, the self-directed learning skills necessary to enhance and capacitate human capital.

The social and economic changes have had significant implications for technical and vocational education and training. It had considerable ramifications for impact on the socio-economic development and the concomitant expertise of trainees in this important sector of education.

In accordance with UNESCO's programme within the framework of its International Project on Technical and Vocational Education (UNEVOC), an 'International Round Table on Training of Teachers/Trainers in Technical and Vocational Education' was held at Curitiba, Brazil from 7-10th April 1997. The main objective of the Round Table was to assist Member States' efforts to improve their staff training in technical and vocational education, by facilitating the exchange of experience and ideas, as well as strengthening co-operation between Member States in this field. The Round Table aimed to address the issues related to technical and vocational teacher training (UNEVOC, 1997:3) from three dimensions such as:

- ❑ The new technological, economic, political social and educational developments that had taken place ten years and their impact on technical and vocational education and training;
- ❑ The implications of these developments for technical and vocational education and training, both formal and no-formal; and
- ❑ The ramifications of these developments for technical and vocational education both formal and non-formal.

Rapid technological advances could only benefit society if there existed an ability to drive from the revolution of competence in technical and vocational education and training. During this Round Table deliberations it had been envisaged that people were the real building blocks to industrialisation and development, there was an urgent need to invest generously in people by all nations of the region so that this biggest asset on manpower could be harnessed for region's development. It was clear henceforth; that it would be the quality of intellectual capital that would count on achieving development in the future.

There existed the need to innovate, co-operate and build partnerships with industry at large, especially in technical and vocational education activities. The basic existence in the future required essential skills knowledge as key tools for renewing and supplementing knowledge throughout the entire lifetime. Technology offered excellent opportunities of involving students in learning and providing them access to more information and to using it more creatively and usefully than ever before. It had been, therefore, extremely important that the workforce be trained in order to be more enlightened and technologically literate. In an increasingly technological influenced world, tertiary Bureaucratic Model technical and vocational education when being focused on its planning, co-ordination and control would certainly impact on the socio-economic development. Its access should be foreseen globally, regionally and locally. Its relevance and quality should be natured in order to thrive lifelong learning, work and the future. Learning-training strategies should be modernised to enhance the impact of technical and vocational education on the socio-economic development.

Reviewed literature indicated that there was a major mismatch between available trained manpower and the type of employment opportunities in the world of work.

Whilst developed nations had been challenged to "retool" (retrain) their work force, the developing nations had been greatly challenged to provide relevant training amidst changing work requirements and environments (Kerre, 1996:7). As Kerre attributed, many countries, particularly in developing countries, foresaw a sizeable technical and vocational education sector as constituting an important element in their development strategies, at one stroke dealing with dual issues of youth unemployment on the other hand, the provision of skilled manpower for industrial development.

The available research studies outside Lesotho – Maseru district in particular, had been found to be providing an empirical justification for human capital investment strategies for socio-economic development. Identified major or specific role for the more vocational oriented forms of education generally, unlike general education, technical and vocational education had been a form of human capital investment that is targeted specifically at the economy, to meet labour market responsive skill demands.

This notion supported by Kerre (1996:7) as cited from Lugujo & Manyindo (1993) was that a country's technical and vocational education and training system was a decisive factor determining the competitive strength and level of development of its economy. Kerre added that the education and training system had been largely determined by the country's socio-cultural, economic, demographic and technological development.

It was obvious to Kerre's point of view that technological progress changed the needs of industry and training programmes, social development changed the climate of the labour market at local, national and regional level and demographic changes influence the supply of skilled manpower on labour market and the rate of recruitment of trainees in the technical and vocational education system, their calibre and competence through acquired skill acquisition output, from relevant, quality and training strategies of Bureaucratic Model technical and vocational education and training with sound and relevant management.

The approach to the level of competence of a country's work force and technicians had been centrally important to the flexibility and productivity of its labour force. Skilled workforce and technicians enhanced the quality and efficiency of product development, usage, production and maintenance, and they supervised and trained workers with lesser abilities. The development of a competent labour force marked an important contribution to national development. Thus, enabled the supply of science and technology for transformation of materials into goods and services with a direct impact on socio-economic development, with local regional and global competitors.

A knowledgeable and capable skilled manpower had been therefore essential to economic success and national development. This would be magnified when a fully proficient technician and tradesmen ought to handle a range of new types of equipment and understand the properties of new materials.

According to NEVOC (1997:5) governments should assume responsibility in leadership role in skill development area; they should encourage and support the initiatives of other members in partnership, in social-political context of technical and vocational education. UNEVOC added that governments should ensure that all members of the partnership played an active and constructive role. In concession to UNEVOC conception, governments had a primary role of ensuring that efforts within this area of human endeavour are coordinated, and that resources were not wasted by unnecessary duplication. They were able to initiate national planning that attended to the disadvantaged, to equal

opportunity, to those with minimal power and thrust in the society, as well as to the design and commitment to long-term plans for educational development within the nation.

Obviously, governments had been essential partners in the national responsibilities for providing an effective and efficient system of education for the workforce. The preparation for the world of work was inclusive and maintaining efficient lifelong learning, work and the future lied with governments as their key responsibility in the social and economic development activities.

Any decentralisation would need to be predicted upon a major institutional development programmes designed to improve rather fragile capacities of provider such as the TVD and the Lerotholi Polytechnic. The quality of staff and facilities would be generally in need of considerable improvement. Magau (2005:41) accorded that although there were some curricula reform, there remained concerns about the relevance of curricula and their assessment. Magau (ibid) further indicated that attachments of learners during the programmes and their placement in employment after completion remained poor.

It was difficult to depict the impact of technical and vocational education on the socio-economic development of Lesotho from the literature at hand. Most of the studies indicated that the legislation needed to be revised in order to meet the current needs of the country, while some indicated that the system, curricula and facilities were outdated. One of the major constraints found in the literature with regard to the impact of technical and vocational education on the socio-economic development of Lesotho was therefore, the slowness of the policy reform process. In the slow evolution of a new policy (Lesotho TVET Draft Policy 2003), it was apparent that many stakeholders in Lesotho had become increasingly familiar with international discourse about good practices in TVET. They increasingly appeared to profess belief in these, although the proof would be largely in the extent to which they put their statements into practice (Magau, 2005:44). In the absence of policy reform, there was some piecemeal adoption of such practices in areas like curricula development.

Finally, Lesotho was faced with a tension between the low statuses of TVET and growing sense in policy circles that TVET was crucial to meeting of many country's social and economic needs (Magau, 2005:45). Capacity building in TVET system that could deliver the right skills and promote the right employment that could impact on the socio-economic development of Lesotho would be vital to changing mindsets, but required far stronger the championship of the TVD on the outset if it was to be achieved and the demand-driven curricula for the Lerotholi Polytechnic for employees' capacity building and competence for the world of work.

2.11 GENDER ISSUES IN TECHNICAL AND VOCATIONAL EDUCATION IN LESOTHO

Lesotho had several technical and vocational institutions that offered technical and vocational education at post-secondary levels and had produced technical oriented workforce (Lesotho Ministry of Education - Education Sector Plan of 1991/1992 – 1995-1996:n.p). Some of these technical

institutions had been considered higher-level schools that produced artisans; some were regarded as lower level schools that produced semi-skilled labourers and others were regarded as non-formal education institutions of which admitted any needy person to undertake specific practical skills, such as carpentry, leatherwork, sewing/knitting and business enterprise studies.

The final report of an International Labour Organisation (ILO) multidisciplinary mission in Lesotho of January 1994, stated that one of the priority areas in the Education Sector Plan of 1991/1992 – 1995-1996 was to provide sufficient number of people with appropriate occupational, technical and managerial skills to ensure development of the modern sector of the economy by widening the scope of vocational education, training and other forms of basic education. However, the Education Sector Plan did not address any gender aspects of the appropriate occupational, technical and managerial skills.

Gender issues in technical and vocational education had not been addressed even within the aims and the vision of the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (<http://www.education.gov.ls>: on line), (Ministry of Education and Training), (Lesotho Government, 1987:88), (Corcoran and Owens, 1993:3-16), (Montšo, 1995:22-24), (Althan and Spearreboom, 1997:8) and (Wade, Gibbons and Townsend, 2003:98).

Initial research showed that there was a lack of gender analysis on patterns of technical and vocational education, and how that related to employment patterns in Lesotho. However, women as well as men had been the major contributors to the social and economic survival and well being of the households and the communities in Lesotho and elsewhere. Thus, women's experience, knowledge, perspective and priorities had been likely to be very different from those of men.

The study conducted for Shillshare International by Setoi, Khabane, Phafane and Sebatane (s.a.) was meant to raise awareness on gender approach/sensitivity in the provision of technical and vocational education in order to reduce the existing gender bias in the provision and choice to TVET programmes. The study presented overwhelming gender insensitivity in the provision and choice of TVET programmes.

Setoi *et al* (s.a) suggested and recommended that a special quota be afforded both genders in order to close the gap between the two genders and female instructors positions be created in all institution where there was none. Setoi *et al* further recommended that women be encouraged to undergo trade testing at B code to certify them as artisans and skilled labourers. And the authors concluded that the TVET policy should address all the stereotypical thinking in TVET provision and education and gender should permeate the whole education system in Lesotho.

The studies covered the following themes: Planning, policy formulation, management, programme development and implementation, curriculum, industrial training and apprenticeship, certification, employment opportunities, institutional location and gender. Other studies dealt with organisational

problems within the Technical and vocational Education and Training Board, as well as problems of co-operation between Technical and Vocational Education and Training Department and industry. Gender balance in relation to enrolment and performance in technical and vocational education and training institutions, qualifications and employment after the completion of the training courses were considered an important theme addressed by the studies that reviewed by Working Group on Education Sector Analysis-UNESCO, 2000.

Generally, all the studies reviewed recommended improvement and expansion of technical and vocational education institutions, and improvement in quality of education and efficiency of Technical and vocational Education and Training Department management. However, various studies concentrated on certain areas such as technical and vocational education instructor training, employment of technical and vocational education graduates (whether employed locally or in South Africa), and the kind of employment involved, that was whether formally or self-employed. Others focused on how technical and vocational education could incorporate Basotho mineworkers retrenched from South Africa.

All the technical and vocational education studies seemed to have involved both outside and local consultants, although the latter attracted researchers who had more interest in practical issues. Some studies failed to give proper attention to technical and vocational education graduates working in South Africa because of difficulties involved in obtaining information. However, the studies showed that there had been only a small proportion of technical and vocational education graduates who obtained employment within Lesotho.

Employers recommended provision of a wider variety of training in technology, more exposure to a working environment, and longer industrial attachments. This showed that there were more needs to be done to change the attitudes of technical and vocational education and training students so that they would adjust to the work environment.

2.12 ACCESS TO TERTIARY TECHNICAL AND VOCATIONAL EDUCATION

This was an issue that permeated all national policies in technical and vocational education and training. Most of the papers submitted at the '*Learning for Life, Work and the Future (LLFW), Stimulating Reform in Southern Africa through Sub-regional Co-operation Workshop*', Gaborone, Botswana, 5th to 8th December, 2000, stated that demand for technical and vocational education and training places had been more greater than supply. Equal access and opportunity was illusory because of inadequate facilities and equipment (Swatland – UNESCO and Ministry of Education – Botswana, 2000:12).

During the deliberations in this workshop, Mbdudzi – Zimbabwe (2000:13) in Swatland – UNESCO and Ministry of Education – Botswana (2000:12), subscribed that the existing infrastructure and

programmes still needed to be improved in a number of ways to cope with the increased number of students. Kopeka and Waterman – Lesotho (2000:15), delineated that much of the demand lied not in urban areas, but in rural and remote areas where education and training facilities were under-resourced or non-existent as indicated in (Swartland – UNESCO and Ministry of Education – Botswana, 2000:12). Regarding the issue of equal opportunities, Mupanga (2000:19), the Zambian in Swartland – UNESCO and Ministry of Education – Botswana (2000:12), indicated that the equal opportunities philosophy, although written down, had been very difficult to implement. For example the retired and the retrenched workers needed retraining but there were no special courses for those people, the same applied to women and those with special needs.

The suitability of technical and vocational education and training programmes for different targeted groups and local needs also found to affect access to technical and vocational education and training. Mupanga further advocated that the 1996 policy on technical and vocational education and training emphasised demand-driven training as most programmes were completely at variance with what was happening in industry. Report from Malawi indicated that in response to this ‘demanding’ change, a system of Technical, Entrepreneurial and Vocational Education and Training was created which was flexible and demand-driven, and forces on the skills competencies required in the labour market (Swartland – UNESCO and Ministry of Education – Botswana, 2000:12).

Amidst concerns in public discourse about the vocational relevance of formal education and the employability of school leavers, there had been marginal growth in enrolment in vocational courses in local institutions (International Conference on Education: Geneva, 2004:16) whereas some had opted for technical and vocational education and training (TVET) courses offered outside Lesotho, very few school leavers had the requisite entrance requirements into these courses. According to International Conference on Education: Geneva there existed a strong gender bias in enrolment in technical courses with the old tendencies born from gender disparity. Such trends had necessitated a review of policy in TVET to address issues of access, quality and relevance. The need for a demand driven provision of TVET, dictated that the private sector played a leading role in the development of TVET programmes.

2.12.1 Activities and Target Indicators

According to the Government of Lesotho Ministry of Education and Training (2004:67), the Ministry maintained that a more radical approach was required to the restructuring of the technical and vocational education and training (TVET) system and put in good stead to better enlist private sector entry into service provision at the level of tertiary technical and vocational education (TVE) during the strategic plan period of 2005 – 2015.

2.12.2 Flexible Access to Technical and Vocational Education and Training throughout Life

Regarding challenges and issues in flexible access to technical and vocational education and training throughout life, UNESCO (1999:38) substantiated that due to high cost of technical and vocational

education the majority of those who could benefit from it because they did not have outstanding access to it. UNESCO further reported that the available technical and vocational education programmes were often de-linked from the production process and to a large extent were delivered using traditional theoretical methods. UNESCO added that technical and vocational education did not address the needs of the informal sector where most production activities went on.

The assurance of quality programmes and the award of various forms of certification had been another major challenge for technical and vocational education and training. There was a proliferation of certificated and diplomas ranging from short-term courses (days and weeks) to long term (months and years). This became difficult for employers to determine the worth as such credentialing resulting in under-employment in some cases existed (UNESCO, 1999:38).

UNESCO (1999:38) substantiated the need for appropriate skills in the discussions and recommendations on the flexible access to technical and vocational education and training throughout life were presented. The seminar proceedings substantiated that there was a need for clear government policies that gave priority to technical and vocational education and training by allocating appropriate funds for its execution.

The seminar proceedings saw a need to find alternative methods of delivery of instruction for technical and vocational education and training. Teaching institutions and teachers should be reoriented to use flexible detaching and learning materials. Some of these should include: the development of modularised curricula and assessment methods; the development and use of appropriate technologies for instruction – online services and training materials, computerised learning packages, use of CD-ROMs, intranet and internet, etc were indicated in (UNESCO, 1999:38).

In order to ascertain the quality of programmes and the award of appropriate credentials, it was necessary to:

- ❑ Develop widely recognised qualification standards to be used for certification;
- ❑ Develop appropriate tools for assessing practical skills; and
- ❑ Have flexible transferable qualifications.

Therefore, technical and vocational education and training systems must be designed to give life to this new paradigm in order to achieve flexible, innovation and productivity, imparting the skills required, addressing the implications of changing labour markets, training and retraining the employed, unemployed and the marginalized with the objective of achieving equality of opportunity for all in both the formal and informal sectors of the economy (UNESCO, 1999:62).

Lifelong learning, work and the future had been the journey with many pathways and technical and vocational education had been an integral part of the voyage. Therefore, in addition to UNESCO's reflection, technical and vocational education and training systems selection of didactic models should

be apprehended and be designed as developmental life experiences with cultural and environmental aspects in addition to their economic dimensions.

UNESCO (1999:62) suggested that to make maximum contribution to lifelong learning technical and vocational education and training needed to be open, flexible and learner-oriented, they must do more than just provide the learner with knowledge and skills for specific jobs. It must also prepare individuals more generally for life and world of work. Technical and vocational education and training for personal, social and economic perspective and benefits should be utilised.

Technical and vocational education and training needed to be based on a learning culture shared by individuals, industry in different economic sectors and government. Individuals should be empowered to take progressively more responsibility for their own knowledge-management and independent learning while public and private providers ensured programmes that facilitated access to and through the pathways of lifelong learning (UNESCO, 1999:62).

Selection of didactic models was particularly important in ensuring a seamless transition from school to the workplace. To achieve this UNESCO (1999:63), confirmed to the notion of an holistic approach, which captured the dichotomies of the academic and vocational, the theory and the applied, knowing and doing, the use of the head and the hand. This required effective partnerships with schools and with industry and other economic sectors, which embraced, shared values, shared curriculum, shared resources, and shared outcomes.

To achieve all of these aspirations for selection of didactic models in technical and vocational education and training a number of urgent considerations must be addressed, and according to UNESCO (1999:63-64), they were as follows:

- The status and prestige of technical and vocational education and training must be enhanced in the eyes of the community and the media. This included raising the status of teachers in technical and vocational education and training systems through attention to their own skills and competencies and provision of resources for their task. It would also require a strong marketing of the capabilities of technical and vocational education to its many stakeholders, accompanied by a simplification of technical and vocational education and training in the minds of many who found its language, its products and its modalities too complex. Publicizing and disseminating models of good practice in technical and vocational education were also important. There was a need to promote parity of esteem between vocational and general education, especially in developing countries;
- The sectors of education must achieve more effective inter-relationships to facilitate more seamless pathways for the learners. They did not need to be homogenized; each sector could retain its identity and they all could recognize each other's passports and visa at their borders;

- There must be flexibility in programmes administration and curriculum design to facilitate a smooth passage through lifelong learning and provided continuous entry, exited and re-entry points;
- Career guidance and counselling was of the utmost importance for all clients of the education and training systems and needed to be significantly strengthened. Career guidance should take into account the need of industry, the individual and the family and be sensitive to each learner's requirements and circumstances. Its role should be extended to prepare students and adults for the real possibility of frequent career change, which could include periods of unemployment and employment in the informal sector. It should be a recognized function of educational institutions, but should also be provided at other venues accessible to the population at large;
- All stakeholders, particularly industry and educationists, must be involved in new technical and vocational education and training partnerships. Each had much to learn from the other in approaches to lifelong learning;
- The lifelong learning continuum would be best sustained if there would be a diversity of funding, a diversity of providers, and a diversity of delivery mechanisms. Innovative approaches to flexible delivery of technical and vocational education and training including the use of information and communication technology and distance learning should be particularly welcomed;
- Quality assurance was essential to ensure a new higher status of technical and vocational education and training. Qualification standards, certification process, valid assessment methods and acceptable outcomes were all key ingredients and should be the hallmarks and benchmarks of all technical and vocational education and training systems; and
- We needed to understand and know more about critical moments of choice in the journey of lifelong learning, work and the future. More research should be encouraged to help understand the key issues, dilemmas, potential barriers and opportunities that confronted the voyage at the various phases of the journey. More longitudinal and vertical studies would be of significant benefit in this regard.

As the workplace called for more sophisticated skills, a sound selection of didactic model in technical and vocational education and training must be provided as a pre-requisite foundation. This should involve the acquisition of more complex competencies in school, including enhanced literacy and numeracy skills and the ability to understand and communicate through tools of the modern technology.

2.12.3 Enhancing Access to Technical and Vocational Education and Training

Government of Lesotho Ministry of Education and Training (2005:76) assented with flexible access to technical and vocational education and training throughout life and indicated that the Lesotho government would strive to increase equitable access to existing TVET institutions by raising the current level of enrolment by 40 per cent by 2009 and by 40 per cent by 2015. This would be achieved through the construction of additional workshops and classrooms in existing institutions as added the Government of Lesotho Ministry of Education and Training. The Ministry further indicated that the role of the private sector would enhance both the expansion of existing centres and in the establishment of new ones. With regard to equitable access, the Government would take an affirmative action to encourage women to register in the so-called 'hard' technical programmes such as engineering and related fields. While persons with physical disabilities would particularly be targeted, especially those in poorer rural areas where opportunities for gainful employment had been scarce (Government of Lesotho Ministry of Education and Training, 2004:76).

2.13 QUALITY IN TECHNICAL AND VOCATIONAL EDUCATION

Traditionally, Lesotho's education and training system was meant to provide 'academic education' for subsequent 'white collar' wage employment in the public sector. Allocations over the years to technical and vocational education and training (TVET) had a relative small part of the total resources earmarked for education training. The Government of Lesotho (GOL) had recognised this imbalance and had shifted more efforts towards the provision of technical and vocational education (Alfthan and Sparreboom, 1997:7).

In the last decade training at Lerotholi Polytechnic had been improved by up-grading facilities, assessing and revising course curricula and increasing practical training. Overall coordination and management was improved by creating a unified and autonomous polytechnic. Vocational training was expanded in order to encourage self-employment and the development of employment opportunities in the community. Students in vocational training were encouraged to accept responsibility in community development. Conditions of service and training programmes for teachers of vocational and technical subjects were improved.

Availability of an appropriate skilled labour force had been an obligatory requirement for economic development. In Lesotho the role of technical and vocational education and training was meant to respond to demands in the labour market and to impart individuals with the necessary skills and knowledge to become productive members of society. The key success in technical and vocational education had been the co-operation between potential employers, training institutions, governments, trainees and representatives of the labour force to ensure that actual needs were being met and that financing could be secured. To make this happen the Lesotho Ministry of Education drew on its

experience of the expansive international community training systems, as well as from experiences in the many countries which carried out technical and vocational education and training projects. According to Lesotho Ministry of Education Sector Development Plan 1997/1999 (1998/1999:9-10), Lesotho Ministry of Education needed to have an extensive know-how in order to respond to the needs in the field of:

- ❑ Demand-driven technical and vocational education and training programmes;
- ❑ Training needs assessment and labour market research;
- ❑ Establishment of and assistance to technical and vocational education and training institutions;
- ❑ Training methodology and instructional technology;
- ❑ Planning, specification and procurement of equipment;
- ❑ Training of technical and vocational education and training management staff teacher and trainers;
- ❑ Vocational training in the informal sector; and
- ❑ Evaluation of efficiency and relevance of technical and vocational education and training programmes.

However, the Education Sector Development Plan 1997/1999 did not address nor embarked on the salient issues on the current trends and the impact of technical and vocational education and training programmes status on the socio-economic development as pertained to 'extensively know-how to respond to the needs'.

2.14 RELEVANCE IN TECHNICAL AND VOCATIONAL EDUCATION

UNESCO and ILO (2002:9-13) submitted that given the immense scientific, technological and socio-economic development, either in progress or envisaged, which characterized the present era, more especially globalisation and the revolution in information and communication technology, technical and vocational education should be a vital aspect of the educational process in all countries, and in particular should:

- ❑ Contribute to the achievement of the societal goals of greater democratisation and social cohesion, cultural and economic development, while at the same time developing the potential of all individuals, both men and women, for manipulative and active participation in the establishment and implementation of these goals, regardless of religion, race and age;

- Lead to an understanding of the scientific and technological aspects of contemporary civilization in such a way that people comprehended their environment and were capable of acting upon it while taking a critical view of the social, political and environmental implications of scientific and technological change; and
- Empower people to contribute to environmentally sound sustainable development through their occupations and other areas of their lives.

Scientific and Cultural Organization (UNESCO) and International Labour Organization United Nations Educational (ILO) substantiated relationships between education, the world of work and the community in a nutshell, technical and vocational education should co-exist as a system of lifelong learning adapted to the needs of each particular country and to the global technological development. Such a system should be projected towards:

- Eradicating barriers between levels and areas of education, between education and the world of work, and between school and society through:
 - ✓ The appropriate integration of technical/vocational and general education at all levels;
 - ✓ The creation of open and flexible educational structures that enhance socio-economic development; and
 - ✓ The taking into consideration individuals' educational needs, the evolution of occupations and job recognizing work experiences as part of learning.

While education and initial training provided the fundamental employability requirements of individuals, continuous training and lifelong learning had given them the means to maintain it over their working lives. Human resource development and training had improved their prospects of finding and retaining a job; it had improved their productivity at work, their income-earning capacity and their living standards; and it had widened their career choices and opportunities (Kafere-UNESCO, 2000:45)

Management strategies to be deployed in tertiary Bureaucratic Model technical and vocational education, as United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Labour Organization (ILO) (2000:11) pertained; should correlate with meeting the needs and aspirations of individuals, and should:

- Permit the harmonious development of personality and character, and foster spiritual and human values, the capacity for understanding, judgement, critical thinking and self-expression;
- Prepare the individual for lifelong learning, work and the future, by developing the necessary mental tools, technical and entrepreneurial skills and attitudes towards sustainability;

- Develop capabilities for decision-making and the qualities necessary for active and intelligent participation, teamwork and leadership styles at work and in the community as a whole; and
- Acquaint and enable an individual to cope with the rapid advances in information technology and communication.

2.15 TRAINING/LEARNING STRATEGIES IN TECHNICAL AND VOCATIONAL EDUCATION

Tertiary Bureaucratic Model technical and vocational education and training, should be dealt with, and its issues approached, within the more comprehensive concept of Human Resource Development, a concept that comprises the supply side or sources of human resource power, as well as the linkages and channels between the supply and demand sides of human power. Al-Masri-UNESCO (1999:9) substantiated that the supply side would cover such sources as the various levels and fields of formal and non-formal education and training systems. Al-Masri further submitted that this had also been covered in addition to the labour force from external sources such as immigrant labour and the linkages between the supply and demand sides of human power. On the other hand, it should be considered essential elements of the concept of human resources development, comprising such components as information systems, legislative tools, occupational classifications and standards, employment services, career guidance and counselling services, research and development in the concerned fields, and the relevant institutional set-ups in the form of councils, boards, committees and administrative units.

Al-Masri (1999:9) conferred that considering the nature of tertiary Bureaucratic Model technical and vocational education and training, content and methodology, on one hand, were strongly rooted in educational ideals and objectives, on the other hand, they were thoroughly permeated by labour market criteria and work standards. To ensure both the human and professional aspects of tertiary Bureaucratic Model technical and vocational education and training, two major dimensions should always guide the design of the relevant schemes and systems for education and work.

Al-Masri presupposed that the educational dimension catered more for the individual needs and human aspects, while the work or economic dimension catered more for societal needs and labour market requirements. Thus planning, coordinating, organisation and control of tertiary Bureaucratic Model technical and vocational education and training aggravated modern approaches that guaranteed schemes and programmes were designed to correspond accurately to the world of work.

The dynamics and changing demands of the labour market required more and more the replacement of physical skills by mental skills, and hence that such schemes and programmes be liberalised and be broad-based, to promote adaptability, widen the scope of job opportunities, and enhance educational and occupational mobility.

One of the major challenges that was still encountered by policy makers and planners of tertiary Bureaucratic Model technical and vocational education and training systems, in developing as well as developed countries, was the ability to operationalise the concept of integration, rather than just that of co-ordination and coexistence, of educational and work values and standards, and hence the integration of individual and societal needs, interests and objectives (Al-Masri, 1999:9). Al-Masri subsequently adjudicated that the schism of separation between the education system and the world of work, particularly in developing countries, was imperatively the major weakness of tertiary Bureaucratic Model technical and vocational education and training systems in these countries.

Al-Masri alluded to many countries, especially industrialised ones, and presented that the centre of gravity of tertiary Bureaucratic Model technical and vocational education and training systems was generally located nearer to societal and labour market needs, at the expense of educational values and individual needed to enhance the impact to socio-economic development needs. In many other countries, especially developing ones, the centre of gravity was located nearer educational criteria and standards, at the expense of labour market needs and employment requirements.

Given the disparities that existed between formal education, whether secondary or tertiary, and employment and career opportunities available, the highest priority should be given to tertiary Bureaucratic Model technical and vocational education and training. Consequently, the structure and content of traditional education, whether general or tertiary Bureaucratic Model technical and vocational education and training, United Nations Scientific, Educational and Cultural Organization (UNESCO) and International Labour Organization (2002:21) substantiated that these should be adapted through:

- ❑ The diversification of secondary education in the later stages so that it might be pursued in conjunction with employment and training, or might lead to employment or to higher education, thereby offering to all youth educational options corresponding to their needs and abilities; and
- ❑ The development of educational structures and programmes on all levels centred on organized and flexible interchange between educational institutions (including universities), training institutions and the world of work.

Training strategies in tertiary Bureaucratic Model technical and vocational education and training should be orientated so as to agitate tertiary Bureaucratic Model technical and vocational education and training as a preparation for occupational field that should provide the foundation for productive and satisfying careers and United Nations Scientific, Educational and Cultural Organization (UNESCO) and International Labour Organization (2002:21) procured should:

- ❑ Lead to acquisition of broad knowledge and generic skills applicable to a number of occupations within a given field so that the individual would not be limited to his/her choice

of occupation and would be able to transfer from one field to another during his/her working life;

- At the same time offered both a thorough and specialised preparation for initial employment, including self-employment, and also training within employment; and
- Provide the background in terms of knowledge, skills and attitudes for continuing at any point in the individual's life.

The social status of tertiary Bureaucratic Model technical and vocational education and training in any society was, to a greater extent, a reflection of the status of work values in that society. Traditional cultures and philosophies stretched across and ranged between two extremes regarding their assessment of work values. At one extreme, the ancient Greek culture viewed work as a low-grade life activity that, nevertheless, cannot be dispensed with; while at the other extreme, the Marxist culture transgressed and viewed work as the supreme value. Al-Masri (1999:11) substantiated with the notion that a rational and balanced approach could be realised if work activities were assessed both by their material and economic returns on the individual and society, on one hand; and their social and humanising influences cohesion on the other.

Thus Al-Masri accorded with the argument that tertiary Bureaucratic Model technical and vocational education and training systems and schemes should be designed as developmental life experiences that had their own social dimension and cultural extension. And tertiary Bureaucratic Model technical and vocational education and training should do more than to provide the learner with the specific skills and knowledge needed for the world of work. It should be acknowledged that occupations had been more effectively undertaken by workers who were generally, as well as specifically prepared, taking into consideration the ongoing transformation of work processes, technologies and environment.

Other aspects of training strategies of tertiary Bureaucratic Model technical and vocational education and training should include such factors as the status of the vocational teacher, the gender issue, and the vocationalization of general education. The empirical survey outlined that this was the most under utilised phenomenon. It had not been unusual in many education and training systems to find that vocational teachers were not of equal status, socially and economically, to their general education counterparts. It also had not been unusual to find that the relevant vocational education facilities and services were structured basically around the needs of male learners, with the result that the role of females as learners, instructors, planners and providers of services, lagged considerably behind the role of males element (UNESCO, 1999:12). UNESCO submitted that a great service could be offered to the status issue, if a strong element of technical and vocational education and training, or more specifically prevocational education, was incorporated as part of general education in the form of diversified practical activities and life experiences, derived from various socio-economic sectors.

According to UNESCO (1999:16) one of the most dangerous consequences of fundamental change that was currently prevailing in politics and, of course, in education was uncertainty and following this – anxiety. UNESCO further submitted that in Eastern Europe, where nearly all established frameworks and structures had fallen apart, uncertainty and anxiety were probably the prime reasons for the failure of leadership. Also, western industrialised countries and Asian countries on their way into knowledge societies; some of them with high unemployment rates, had been shaken by a threatening economic crisis. For Africa and South-America uncertainty and anxiety were well known companions for majority of people.

Therefore, it had been one of the most important tasks of tertiary Bureaucratic Model technical and vocational education and training to enable clientele to cope successfully with uncertainty and anxiety through:

- ❑ Information sharing and knowledge about the reasons for changes, including systems' knowledge such as in computer systems, banking systems, free market systems and innovations within educational spectrum;
- ❑ Skills on how to gather and select information and knowledge, and how to use them in planning and decision-making processes;
- ❑ Problem solving and practical skills, social and team skills within lifelong learning, work and the future premises;
- ❑ The development of the learner's personality through general, vocational and professional education capacity building; and
- ❑ Entrepreneurial skills acquired through tertiary technical and vocational education and training strategies.

What tertiary Bureaucratic technical and vocational education and training could do was to facilitate preconditions of change, to develop the potential for managing change and to foster positive and creative thinking. What it could not do was to provide employment for those who had been educated and trained, to secure parity of esteem and a balance between the haves and have-nots within a nation and amongst global players.

If tertiary Bureaucratic technical and vocational education and training should act successfully in this important field, UNESCO (1999:17) substantiated that educators needed help of the whole society, not only parents. The corporate labour market and trade unions had a responsibility for co-operation with the institutions for their own sake. A main charge for tertiary Bureaucratic technical and vocational education and training must be operationalised to maintain the freedom to hold varied opinions regardless of political, religious and philosophical boundaries.

Training strategies in tertiary Bureaucratic technical and vocational education and training must be compatible and in compliance with four pillars of education. Working Group for International Co-operation in Skills Development (2003:Online) highlighted that a framework for developing life skills approach to quality education had been based on the four pillars of education such as:

- ❑ **Learning to know**; that would be acquiring the instruments of understanding;
- ❑ **Learning to be**; that would be seeing oneself as the main actor in defining a positive outcome for the future;
- ❑ **Learning to live together**; would be how to participate and co-operate with other people in all human activity; and
- ❑ **Learning to do**; so as to be able to act creatively on one's community and environment.

In liaison to Working Group for International Co-operation in Skills Development, UNESCO (1999:17) articulated that initial vocational education and training pursued in their turn the kind of educational objectives that had traditionally been the prerogative of general education, and such included:

- ❑ **Learning to learn** (on the job; integrating theory with practice; learning by reviewing practice; applying learning methods in practice; developing social capabilities that cannot be taught; and
- ❑ **Becoming a mature and responsible contributor** (acquiring overarching capabilities like acting in a group, thinking in process terms, taking responsibility for others and for one's own achievement).

Training Strategies in tertiary Bureaucratic technical and vocational education and training focused on knowledge, skills and attitudes that prepared individuals to compete effectively in the labour market and integrated fully into economic and social life. Riordan and Rosas (2003:1-2) submitted that education and training were the main competency-building instruments enabling human resources to face the rapidly changing and increasingly demanding world of work.

Competence had been a building block of knowledge, skills and attitudes that were acquired at different stages in life, starting from basic education, moving on to initial training and continuing over the adult working lifespan. It had been much more than linear, sequential acquisition of a narrow set of job-related skills and the ability to carry out specific tasks in a single work place.

UNESCO and ILO (2002:29) designated that special attention should be given to developing programmes for preparing personnel at all levels for the social service systems such as community and family work, nursing and paramedical occupations, nutrition and food technology, home economic and environmental improvement. In diversity, such interdisciplinary fields that UNESCO and ILO suggested should be deployed to include:

- ❑ Orientation to the special occupational field to raising standards of living through the services of nutritionist, hospitality management, fabrics and clothing, quantity survey and building technology, medical services, the quality of life and that of environment; and
- ❑ Adaptation to the special requirements of local and regional conditions, in particular those of climate and geography, grassroots materials available, community organization, and social and cultural patterns.

In liaison to UNESCO and ILO caricature of vocational education design, where the lack of resources had been a serious constraint, priority should be given to developing programmes for areas experiencing skilled human resources, inadequacy and shortages, taking into account the projected needs for national, local and regional economic development and the corresponding labour market.

The informal economy, as the name implied, had been made up of a large number of small businesses started generally through necessity. It had almost been impossible for anybody in the informal economy to be released to follow long formal training programmes and to acquire skills and abilities that were not going to be of immediate use (Magau, 2005:38).

There had been a concern among domestic stakeholders that existing TVET institutions in Lesotho were heavily oriented towards meeting the needs of the formal economy. The TVET system did not seem to do enough to address the training needs of people employed in informal economy activities. According to Magau (2005:38) the importance of promoting non-government provision curriculum with particular reference to the informal economy had been emphasised by the stakeholders.

Technical and vocational education in Lesotho should be designed to operate within a framework of open-ended and flexible structures in the context of lifelong learning, work and the future. It should provide development of an education designed for the acquisition and development of the knowledge and know-how needed for a skilled occupation, continuing education and training course with a new view in particular, to retrain as well as to supplement and upgrade qualifications of those whose current knowledge had become absolute due to scientific and technological progress. It should be viable for changes in the employment structures or in the social and economic situation, and also for those in special circumstances as supported in (UNESCO, 1989: *on line*).

From this World Wide Web, it had further been argued that technical and vocational education and training programmes should meet the technical requirements of the occupational sectors concerned and also provided the general education necessary for the personal and cultural development of the individual and included, inter alia, social, economic and environmental concepts relevant to occupation concerned (UNESCO, 1989: <http://www.ConventiononTechnicalandVocationalEducation.htm> - Article 3 sub-section 3: *on line*)

2.15.1 Learning Process (Technical Competence)

Competence at work had been consisted of mastering techniques that were integrated with the required tools, materials and substances so as to achieve, by way of a number of operations, the goals set. UNESCO CD ROM (2001: *Learning for Life, Work and the Future*) sustained the notion that such techniques from the occupational field, for example, of metalworking to be mastered in theory and practice were:

- ❑ Measuring, calibration, gauging and marking technology;
- ❑ Cold-working and hot working (e.g. bending);
- ❑ Cutting (e.g. sawing, chain-drilling, turning);
- ❑ Joining techniques (e.g. friction-type locking and positioning joining such as threading, riveting, welding, etc); and
- ❑ Controlling (e.g. feed rates and motions of the machine tools).

Such a process indicated skills advancement and established skills competence for the work place whereby technical and vocational education could impact on the socio-economic development.

2.15.2 Criteria for the Selection of Learning Goals

UNESCO CD ROM, (2001:) authenticated that didactic models are determined in the first place by their learning goals, which guide them and which describe their learning level and rank. UNESCO CD ROM added that the selection of learning goals could be based on the following criteria:

- ❑ Reproduction, such as in the mastery of perfect application of techniques learned;
- ❑ Polyvalence; such as in the mastery of techniques as well as social planning processes via theory-guided, integrated occupational activities in world of work; and
- ❑ Autonomy; such as in the mastery of techniques as well as social utilisation and planning process via theory guided, integrated autonomous activities in occupational field.

2.15.3 Economic Selection Criteria

The selection of learning goals always has had an economic aspect too, because the application of these goals had to take account of the organisational and financial conditions prevailing in a country (UNESCO CD ROM, 2003: *The Role of Technical and Vocational Education in the Educational System in Ghana* (UNEVOC, 1994).

UNESCO CD ROM further indicated that the economic selection criteria within didactic learning goals model had to take an account of the following economic foundations and criteria:

- Time economy; i.e. the optimisation of learning and examinations periods;
- Material economy; i.e. the optimisation of materials utilization, maintenance and repair, self-supply, economy, recycling;
- Staff economy; i.e. the optimisation of the use of teaching staff, counsellors, curriculum experts, members of examination boards; and
- Space and equipment economy; i.e. the optimisation of the use of buildings, equipment, boarding schools, of traffic and maintenance costs pertaining to central institutions of technical and vocational education and training.

Within the technical and vocational education and training paradigm, economic selection criteria in this field could be directed to better equipping human capital to solve emerging problems initiatives that could better be consolidated and might as well be concentrated on the following:

- Collection, analysis and circulation of information concerning development problems in technical and vocational education and training and approaches to their solutions; and
- Promotion of research and experimentation directed to autonomous development in the field of technical and vocational education and training whereby access to the field, relevant and quality premises were speculated upon demand-driven and responsive training strategies within the management perspective to enhance impact on socio-economic development encompassing the following areas:
 - ✓ Methods of co-ordinating educational and training planning and development with the current and projected employment situation;
 - ✓ Methods of organising research to identify needs and work-out appropriate training strategies, including development of structures, creation of facilities and initiation of experimental projects;
 - ✓ Approaches to viable curriculum development and innovation for the discipline encompassed within teacher training, and including co-ordination with enterprises;
 - ✓ Methods and procedures outlined for evaluating technical and vocational education and training approaches, including possible means of introduction of permanent supervision and evaluation of the systems as a whole;
 - ✓ Approaches to the development of locally produced equipment and learning materials, including self-learning materials especially designed for continuing education, and development at international level of model material suitable for adaptation and adoption to various local environments;

- ✓ Methods of maximising and rationalizing the use of equipment and facilities;
- ✓ Approaches to continuous staff development, including organization of exchange of personnel on an international basis for study and knowledge capacity building in research; and
- ✓ Approaches of establishing national standards, corresponding to international norms where appropriate, for curricula and subsequent professional qualification, and for facilities and equipment (UNESCO CD ROM 2003: *A comparative study*).

The above issues outlined by UNESCO enhanced economic selection criteria within technical and vocational education and training context as they brought forth the economic manner in time, financial, strategies and human capital management and utilisation.

2.15.4 Selection of Learning Contents

In many countries in Sub-Saharan Africa, the management of the technical and vocational education and training sector had been shared between various government bodies supply (Atchoarena and Delluc, 2002:257). Atchoarena and Delluc further indicated that traditionally, various ministries, in addition to the Ministry of Education or Technical Education, controlled their own training institutions. In many countries, the Ministry of Labour had been responsible for training within the framework of labour market policies. Such diversity often made training delivery complex and led to duplication of efforts, especially when training providers operated with little, or no co-ordination. 'As far as delivery was concerned, the involvement of multiple partners including public sector organizations, private training providers and firms did not permit mutual recognition of credentials and therefore generated a segmentation of the training'(Atchoarena and Delluc, 2002:257-259).

Throughout Atchoarena and Delluc confrontation to this inceptive hunched on education and training, it had been deductive that not only duplication was possible, but also obstructive defragmentation of education and training was possible within most of Sub-Saharan African countries and education and training was stagnant and incompatible in meeting the socio-economic needs and demands.

However, appropriate selection of learning contents had been essential and eminent to proliferate the impact of education and training within the context of sustainable development, of which for this study, the selection of those educational and training issues in the impact of technical and vocational education and training on the socio-economic development had been eminent.

UNESCO CD ROM (2001:Innovative Methods of Technical and Vocational Education) argued that the selection of learning contents to design and structure curricula, which must be based on learning goals, must ensure that the curricula become compulsory for a whole country, a region, a school type, an occupational field or a subject, if general goals of social policy in its widest sense were to be pursued.

UNESCO CD ROM adjoined further that the claim to a general validity of curricula was based on specific criteria in the following:

- ❑ Standardizability, i.e. learning goals, curricula, learning periods, examination level, abilities of the teaching staff and material constraints (learning aids, school building) must be described in a standardised way;
- ❑ Reproducibility; i.e. the standards described must be applicable to anyone, to any place of learning, by any teacher or instructor, at locality, and at any given time;
- ❑ Quantitative adjustability; i.e. the learning standards mentioned above must be adjustable according to quality, depending on a desired enhancement or Reduction goals; and
- ❑ Transferability; i.e. the standards described above must be transferable according to specific socio-cultural conditions, for an example, 'in the third world, in various regions of the country' without the need to abandon principles and criteria.

In addition to UNESCO CD ROM predicaments, selection of learning contents should be speculated within the paradigm of validity, reliability and consistency towards being responsive and demand-driven to local community needs and demands, which would be projected towards access compatibility, efficient and effective as pertained to relevance and denounced to quality that would appropriately intensify viable training strategies to impact on the technical and vocational education and training on the socio-economic development.

While establishing the notion that technical and vocational education and training in the socio-economic development context, had been the component of education mostly concerned with the acquisition of the knowledge and skills required by the workforce in the labour market (World Bank, 2002:48; UNESCO CD ROM, 200: *Case Studies on Technical and Vocational Education in Asia and the Pacific - Indonesia* (UNEVOC - ACEID, 1996)); Working Group for International Cooperation in Skills Development, 2001:12); and (UNEVOC, 1997:78) had to be comprehended that technical and vocational education and training might not create jobs, it could provide people with the skills required to give them better opportunities for self-employment, wage employment, re-employment and even informal sector initiatives.

Technical and vocational education and training needed to strengthen basic cognitive learning to give students and trainees more flexibility to meet the changing requirements of the workplace (<http://www.unevoc.de/congress>: on line). It must also help the students and trainees to articulate in higher institutions (<http://www.unesco.org/education>: on line). New emerging high technology jobs often required job seekers to have immediate 'plug and play' skills, cross disciplinary knowledge, better communication and interpersonal skills, and the ability to work in teams (<http://www.unevoc.de/congress>:on line) and (<http://www.unesco.org/education>: on line). <http://www.unesco.org/education>:on line) further articulated that other attributes such as motivation,

creativity, self-adjustment, commitment, attention to detail and a sense of responsibility were critical to success and must take equal priority to functional skills in technical and vocational education and training. Initial training must also equip people with fundamental knowledge that will enable them to retrain themselves in mid-career for a change of trade or profession (<http://www.uneveoc.de/congress>: on line) (<http://www.unesco.org/education>: on line) and (<http://ww.tveong.re.kr/>: on line).

The selection of learning contents should, however, evolve within the spectrum of the above initiatives contemplated in the UNESCO worldwide webs. UNESCO had manifested the investigation and critical analysis of such issues that raised an eye as pertained to socio-economic status, and further indicated that in many developing countries, particularly in Africa the following were substantiated:

- ❑ Technological change and globalisation had exacerbated existing unemployment problems that had been due, in some measures, to poor economic performance. Inefficient, labour intensive industries that could compete with transitional corporations had to close down;
- ❑ The combination of globalisation and technological developments had enabled highly skilled technological personnel in developing countries to provide services for industries in developed countries;
- ❑ Globalisation had affected some countries in a process of transition towards a market economy by confronting them with the efficiency of their industries and placing demands for new skills and trade. The absolute knowledge, skills and work attitudes of their labour forces had led to growing unemployment in those countries indicated by UNESCO;
- ❑ While globalisation had increased economic growth, it had also demanded heightened competitiveness. Production systems based on new technologies that enable greater productivity and flexibility as well as workers with updated skills and more independent initiatives had been required if industries were to survive in this climate. The basic challenge of the global economy was therefore the requirement to adjust and compete in a rapid changing environment. Central to the effort to compete in twenty-first century was the preparation of productive, flexible workforce. Every country was obliged to enable its citizens to acquire the skills necessary to survive and improve their quality of life because the demands of the workplace were likely to leave people without skills, unemployed and unemployable. Yet there were at large people unlikely to obtain formal employment and those who were even more in need of the survival skills; and
- ❑ In the last several decades, socio-economic development trends had resulted in an evolution from 'supply-driven' to 'demand-driven and responsive' technical and vocational education and training. The new global economic environment demanded a further re-orientation in technical and vocational and training to render it more responsive to the needs of students, workers and employers.

A fundamental question that confronted the stakeholders of technical and vocational education and training at that juncture, in selection of learning contents had been encompassed within the declaration by UNESCO, and were characterised by the following questions:

- Whether the need for a sustainable development paradigm predicted that technical and vocational education and training should then be 'developmental need driven';
- Should the entry requirements for a career in learning and teaching technical and vocational education and training be viewed more liberally? Should work experience be recognised as a substitute for educational qualification? What incentives would attract experienced professionals from the world of work to technical and vocational education and training?
- How could practical skills, an integral part of technical and vocational education and training be taught in distance education programmes?
- What at the most, were the effective methods to be engaged, for achieving the ultimate goal of gender-equity and equal access for all without creating new segregation?
- Whether regular technical and vocational education and training programmes were comprehensive and adequately inclusive to accommodate the needs of all learners, including previously marginalised groups? and
- What incentives should policy makers offer employers in public and private sectors to encourage commitment on their part to improve and strengthen technical and vocational education and training in relation to selection of learning contents?

Selection of learning contents should be solicited for all and should be based on the believe that if technical and vocational education and training should be successful in its complex task of responding to the multiplicity of demands, it must be organised around four fundamental types of learning stated earlier in this chapter which also Debors as cited by UNEVOC and Botswana Ministry of Education (2000:12-13) referred to as Four Pillars of education.

There seemed to be a concern within the Ministry of Education and Training and among domestic stakeholders that the new national policy on TVET had not been officially adopted or had legislation been drafted for its implementation as in Magau (2005:38). Lack of interest from the Ministry of Education and Training had been seen as a barrier to its implementation. As the legal body responsible for the promotion of TVET, the TVD did not possess the proper structure nor did it had the proper legal set-up to carry out its duties effectively and efficiently as argued Magau (ibid) which had been sitting inside the Ministry of Education and Training and had been therefore governed by all rules and regulations pertaining to education. Magau further elicited that there was a concern among domestic stakeholders that if this situation would be allowed to continue, it could result in other education priorities taking undue precedence over TVET issues. Nevertheless, there appeared to be a growing

sense within Lesotho that TVET reform would be a major instrument for alleviating poverty, reducing unemployment and providing appropriate skills (Magau, *ibid*).

Generally, the Lesotho Ministry of Education and Training recognized the existence of major challenges that had to be addressed during the 2005-2015 '*Strategic Plan*' and beyond (Government of Lesotho Ministry of Education and Training, 2004:65). The Government of Lesotho Ministry of Education and Training (2004:65) surmised that the Ministry had acknowledged the following factors that continued to compromise the realization of the technical and vocational education and training mission:

- ❑ Trades Training Institutes (TTI) were under-funded and under-performing;
- ❑ Lack of confidence by employers in Trade Training Institutes (TTI) graduates, demonstrated by the very low placement rates;
- ❑ Absence of planning for technical and vocational education and training (TVET) in the form of national, industry or institutional skills development plans, through which skills requirements could be identified. This had resulted in training being supply-driven;
- ❑ Unregulated and stagnant apprenticeship scheme;
- ❑ Weak governance and management of TVET at national and institutional level with private participation in the TVET Board being; largely symbolic;
- ❑ Limited training tailored to the needs of small business and informal sector;
- ❑ Weak quality assurance; and
- ❑ No Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD) quality assurance.

The Government of Lesotho Ministry of Education and Training further indicated that recognizing these challenges, the Government of Lesotho had challenged the TVET providers to seek alternative sources of revenue to complement state subvention. The main financial providers were:

- ❑ Government at the level of meeting salaries, bursaries to students, support towards examinations and inspection;
- ❑ Private sources;
- ❑ Students' tuition and boarding fees;
- ❑ Income generation activities; and
- ❑ Donor support.

According to The Government of Lesotho Ministry of Education and Training (2004:65) the National Craft Certificate (NCC) and the national diplomas were the only certificates that Lesotho Ministry of

Education and Training Department of Technical and Vocational Education and Training (TVD) officially awarded.

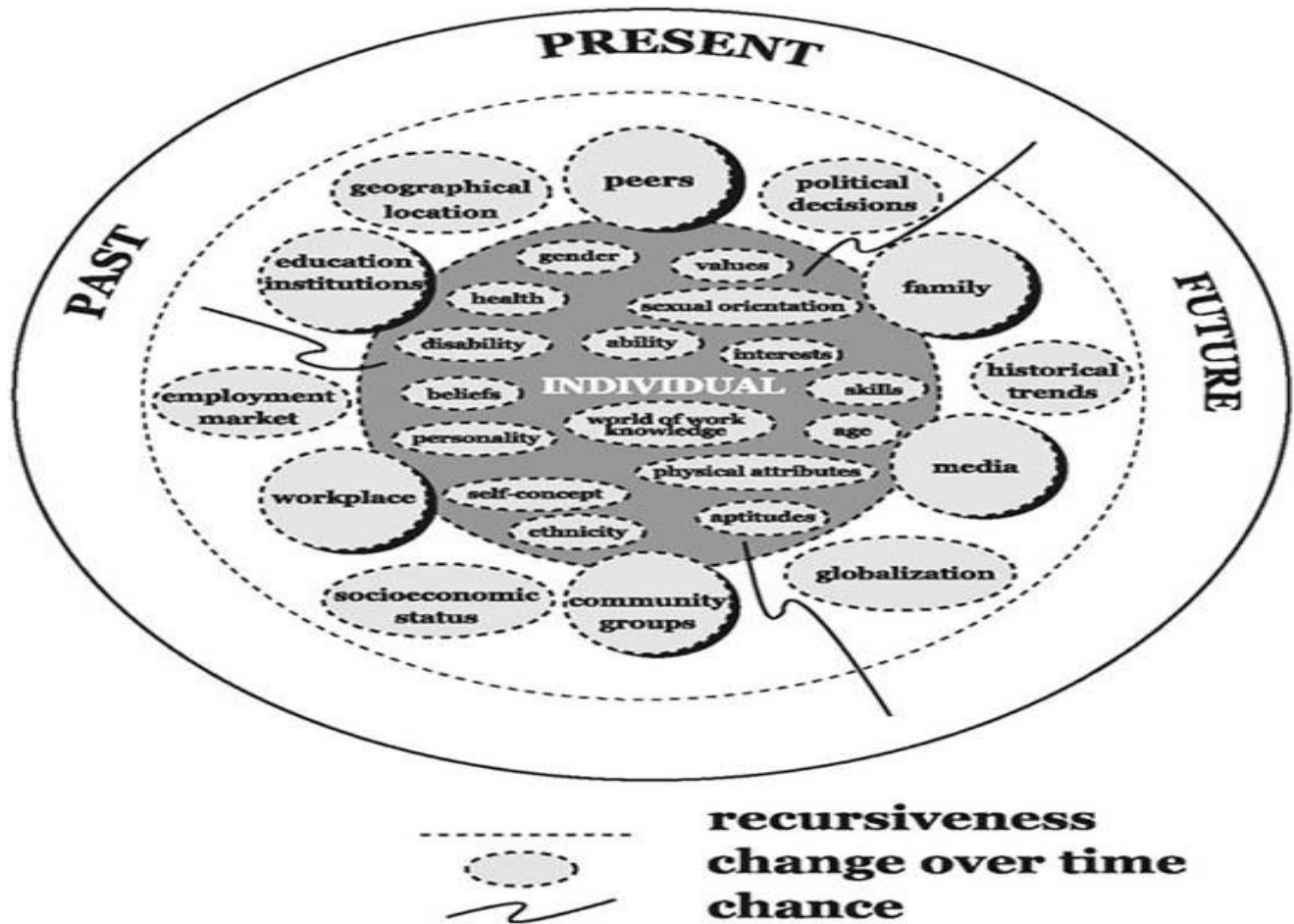
2.16.5 Social Attributes and Career Guidance

In their Systems Theory Framework of career development Patton and McMahon (1999:17-24) pointed out that individuals had been the participants in their systems of influence as well as receivers of information from those systems. Thus, the meaning of work had been shaped by people's beliefs, attitudes and values and the recursive interaction between individuals and their systems of influence. The social influences of family, school and workplace, as well as the environmental/societal influences of the employment market, political decisions, and socio-economic status, contributed to an individual's understanding of the meaning attributed to work. Increasingly, globalisation and technology also influenced the meaning of work.

Similarly, the development of work habits and attitudes had been a product of a complex combination of influences. For example, Mackay (1997:64) suggested that the approach to work of Generation Xers had been influenced by their desire for better marriages, more time with their children, and a more balanced lifestyle than that of their parents (the baby boomers).

Figure 2.1 had illustrated how work habits and attitudes might be developed in individuals through complex recursive interactions with the elements of the system.

Figure 2.1 Social Attributes, Influence and Career Guidance



Source: UNESCO CD ROM, 2002: *Technical and Vocational Education and Training in the 21st Century: New Roles and Challenges for Guidance and Counselling* (IAC - IAEVG - UNESCO, 2002).

The recursive influence might be direct or indirect. For example, a young person's work habits and attitudes might be influenced by a parent's attitude to work, which was itself influenced by long-term unemployment resulting from the closure of a mine brought about by an international trade policy agreed to by the South African national government and or Lesotho's Letšeng la Trae Diamond Mine and or any other retrenchment. Underemployment and long-term unemployment had emerged as significant issues in the global economy. In a world where unemployment had been reported to be over 800 million worldwide according to International Labour Organization (1994:38), it had been possible for juveniles to be facing unemployment in their life span and to never had had the experience of witnessing an adult in their family participating in paid employment.

It should be indicated that career guidance and counselling and technical and vocational education and training might be an influence in the development of work habits and attitudes in young people at both an individual level and at a broader systems level. At an individual level, programmes such as career education, work experience, work observation and mentoring might be influential. In Lesotho,

specifically in the Maseru district, there had not been any extensive government funding and promotion of technical and vocational education and training programmes involving school-based traineeships and apprenticeships. Such programmes would not only forge closer links between schools and workplaces, but would also assist in the development of “work habits and attitudes” in young people.

Such programmes also had been having the potential to individualize the nature of the technical and vocational education and training pathways taken by young people as they moved through the school system. However, in many countries these programmes focused on fitting young people into the existing labour market rather than on the more holistic concept of lifespan career development, which prepared them for life/career management (Hiebert & Bezanson, 2000:64). At a broader systems level, career guidance and counselling professionals could thus play an advocacy role, urging governments and education authorities to provide career development programmes for all young people (UNESCO CD ROM, 2002: *Technical and Vocational Education and Training in the 21st Century: New Roles and Challenges for Guidance and Counselling (IAC - IAEVG - UNESCO, 2002)*).

2.16 CONCLUSION

UNESCO (1999:19) reckoned that the changes in technology, business, politics and society, all had an impact on technical and vocational education and it was therefore necessary to re-examine the aims, contents, qualifications and methods of all educational systems. Thus, that would be checking whether aims, contents, qualifications and methods would help or hinder societal development.

All over the world tertiary Bureaucratic Model (public) technical and vocational education and training – standards had been benchmarked, newly developed or revised as the literature proved. The setting of new educational standards were more than just another reform, it had become a movement. This new movement had been well described by Turker and Coddling (1998) in UNESCO (1999:19).

Technical and vocational education and training needed an early global warning and more futuristic studies to enable preparation for changes in the workplace and in society. Industry must be involved with the government and research centres in identifying the knowledge, skills and competencies, which would be required by the changing economy so that technical and vocational education systems could adapt and impact on socio-economic development. Access, relevance, quality and training/learning strategies had been substantiated as important catalysts in the education and training delivery within the spectrum of impact of technical and vocational education on socio-economic development. The studies and documents of the empirical survey had also indicated the degree of importance in management (governance) of technical and vocational education and training whereby planning, co-ordination and control had been the central issues.

The impact of the literature reviewed illuminated the inadequacy of the impact of technical and vocational education and training on the socio-economic development of Lesotho – with a particular focus on Maseru district.

The literature reviewed also reflected the holistically empirical framework authenticated on governance (Legal Framework) and (Institutional Framework) of tertiary public technical and vocational education and training. Both skills and skill acquisition within the world of work and quality assurance were operationalised and generalisations on the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district made. Other researchers' experiences had been utilised within Lesotho paradigm and elsewhere were utilised.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

In the preceding chapter the literature review on the impact of tertiary Bureaucratic Model technical and vocational education on the socio-economic development had been discussed. The review was based on the premises pertaining to inputs, outputs and outcomes that in the long run would substantiate impact on the socio-economic development. The discussion was based on planning, co-ordination and control systems that could be operationalized in the facilitation of responsive demand-driven technical and vocational education and training status quo conjugal to access, relevance, quality and training strategies. The chapter had then been coherently devoted to description of the empirical research resulting from a literature review archetype.

In this chapter, the research procedures, design, method, and instruments had been discussed in order to clarify the parameters operationalised within the research holistic framework .

3.2 PROCEDURAL ELEMENTS OF INTERVENTION

According to De Vos (1998:394) by observing and studying natural occurring innovations and other prototypes, researchers could identify procedural elements for use in the intervention. De Vos added that the procedural elements including use of information, skills and training for their acquisition, environmental change strategies, policy change or enforcement strategies or reinforcement procedures – should be specified in enough detail so that they could be replicated by other typically trained change agents.

Thus, in procedural elements of the intervention, scientific inquiry would be driven by the research for 'true' or at least 'truthful' knowledge (Mouton, 1996:28). Mouton further argued that the predominant purpose of all research would be to arrive at results that were as close to the truth as possible, that would be the most valid findings possible. In this study, the researcher employed social inquiry to investigate and analyse the impact of tertiary Bureaucratic Model technical and vocational education and training on the socio-economic development of Maseru district in Lesotho, to produce quest for knowledge that its outcomes would be close to the truth. According to Mouton (1996:28) the notion of 'truth' was a complex one and scientists had either been explicitly or implicitly committed to its pursuit. Mouton further attributed to the notion that even though, more often than not, it had been impossible to attain truth, the goal for truth acts as 'regulative principle' from which scientific inquiry derived its peculiar nature and which distinguished science from other forms of knowledge productions.

The researcher apprehended this obligation to the search for truth in conviction of the 'epistemic imperative' of which Mouton (1996:28) and Babbie *et al* (2001:28) defined it in the original Greek sense

which meant 'truthful or certain knowledge', knowledge that would well be substantiated (as opposed to opinion or supposition) and hence provided us with an accurate representation of reality. Mouton further articulated that 'imperative' implied a kind of 'moral contract' willingly entered into for the sake of greater good. Therefore, the 'epistemic imperative' for this reason referred to the intrinsic moral and binding character that would be immanent in the pursuit of 'truthful knowledge' as agreed in UNESCO and ILO (2002:2), and stated that as economic, social and technological change gathered pace, people everywhere needed to develop their knowledge and skills, on a continuous basis, so that they could live and work meaningfully in the knowledgeable society. Such could be attained if there existed knowledge with regard to the truth as in Mouton (ibid).

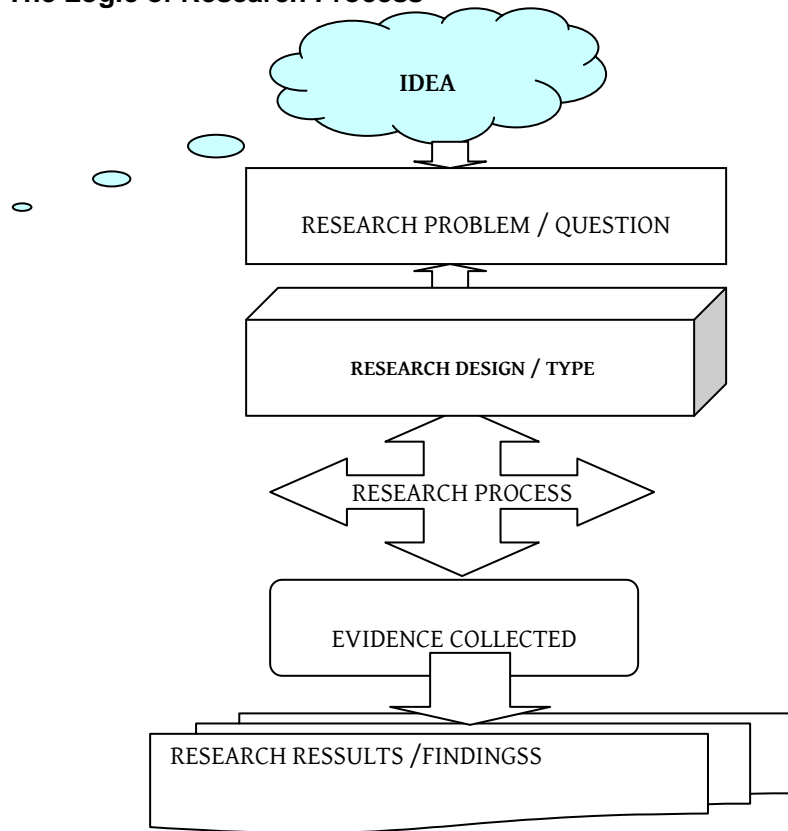
Mouton (1996:28-29) attributed that the search for the truth, the endless pursuit of true knowledge, had been hard to pin down. It involved the pursuit of a goal that, in an important sense, could never be realized. There had existed powerful factors that made it extremely difficult, if not impossible, to attain, unless research paradigm could be utilised.

The pervasive influence of the epistemic imperative manifested itself in the peculiar social arrangements and organization of science (Babbie *et al*, 2001:10). Thus, Babbie *et al* (ibid) advocated that when the researcher would have committed himself/herself to the search for the most valid results, he/she aimed at achieving this at all costs. Thus, adhering to that which scientific community placed as high premium on public scrutiny and open debate, on peer evaluation and scientific honesty.

3.2.1 Research Design

Research design addressed the planning of scientific inquiry – designing a strategy for finding out something ... (1) the researcher should specify as clearly as possible what the researcher wanted to find out, (2) the researcher should determine the best way to have it done (Babbie *et al*, 2001:72). Ultimately, Babbie *et al* (ibid) substantiated the theory that scientific inquiry came down to making observations and interpreting what the researcher had observed. Before inductive representation (argument through observation) and reasoning in qualitative paradigm such as in observation and data analysis, however, the researcher needed a plan – a plan to determine what needed to be observed and analysed. Babbie *et al* (ibid) accorded that this was what the research had been all about and suggested the diagram such as in figure 3.1

Figure 3.1 The Logic of Research Process



Source: Adapted from Babbie, Mouton, Vorster and Prozeskey (2001:73). (The researcher to intensify clarity and interrelationships had added arrows).

For the inquisitive minds there had always been an idea initiated by the need or demand. Such a need or demand would bring about the research problem to be solved or research question to be answered throughout a scientific inquiry. Thereafter, in order to establish inquisitive and analytic procedures there should be a research design or type, thus, the methodologies and methods to be operationalised in research activity, such as in paradigms or approaches, in which should exist the scientific inquiry that would generate research process such as in data gathering and analysis, in order to validate evidence collected through the interaction of research participants in targeted population. In liaison to this, 'substantiating results analysis of inquiries would advocate phenomenological reporting as in research results and findings' (Babbie *et al*, 2001:72-73).

Thyer (1993:94) in De Vos (1998:123) viewed research design as a 'blue-print' or 'detailed plan' for how a research study would be conducted. Huysamen (1993:10) in De Vos (*ibid*) further refined this definition by specifying that this plan, or blue print, offered the framework according to which data were to be collected, to investigate the research hypotheses or questions in the most economical manner. This definition had been adapted as the point of reference for the purpose of this study (cf. 1.8 and 1.14.2).

3.2.2 Organisation of the Study

Theory building and the development of research had begun with defining or describing some phenomenon or occurrence (Redmond, 1995:2). The firm research focus that had been referred over the course of study had been of a complex phenomenon relative to Redmond's notion as substantiated within the research topic, had been established in theory building and research development and also this study had been drawn upon the following five steps developed by Creswell (1994:78) and as per Redmond's notion:

- ❑ Determined and defined the research questions;
- ❑ Selected the cases and determined data gathering and analysis techniques;
- ❑ Prepared to collect data in the natural setting;
- ❑ Evaluated and analysed the data; and
- ❑ Prepared and wrote the report.

The empirical survey, definition of operational terms, purpose of the study, determination of the potential audience for the final report, significance and delimitations of the study guided how the study should be designed, conducted and publicly reported.

During the design phase multiple real-life cases had been selected as in qualitative and quantitative approaches that attempted to obtain in-depth understanding of the meanings and definitions of the situation presented by informants in the methodology triangulation approach.

Target population for this study consisted of officers in the Department of Lesotho Ministry of Education Technical and Vocational Education and Training Division, lecturers, graduates and students of the Lerotholi Polytechnic - tertiary technical and vocational institution in the Maseru district (cf. 1.14.4). These conveniently random probability selected population had an experience within the technical and vocational education activities. It was convenient to engage them as they gave the required responses to the interview and the questionnaires.

3.2.3 Research Method

Research method meant a range of approaches in educational research meant to gather data that were to be used as basis for inference and interpretation, for explanation and predictions (Cohen and Manion, 1997:38). Cohen and Manion further substantiated the notion submissive to those techniques associated with the positivistic model – eliciting responses to predetermined questions, recording measurements, describing phenomenon and performing experiments.

For the purpose of this study, relativity to Cohen and Manion, the meaning had been extended to include not only the method of normative research but also those inquisitive activities associated with interpretive paradigm such as in participant observation, role-playing, qualitative and quantitative inquest, phenomenon episodes and accounts. Triangulation of methodologies had been used such as in qualitative and quantitative approaches. Specific features of the scientific enterprise such as concepts forming questions/hypothesis, theory building models and sampling procedures had been operationalised and limited the research procedures, techniques and scope to those essential to methodology triangulation, which had been deliberately outlined under its section in this study report.

Kaplan (1973:n.p.), as cited by Cohen and Manion (1997:39), advocated that if methods referred to techniques and procedures inherent to data-gathering, then the aim of research method would be 'to describe and analyse those methods, throwing light on their limitations and resources, clarifying their presuppositions and consequences, relating their potentialities to the twilight zone at the frontiers of knowledge. It would venture to generalizability for the success of particular techniques, suggesting new applications, and to unfold the specific bearings of logical and metaphysical principles on concrete problems, suggesting new formulation'.

In a nutshell, Kaplan in Cohen and Manion (ibid) suggested that the aim of research method was to help researchers comprehend, in the extensive possible terms, not the outputs of scientific enquiry but the process in itself. In a nutshell, social scientists had come to abandon the spurious choice between qualitative and quantitative data: 'they are concerned rather with the combination of both, which made use of the most valuable features of each' as argued (Merton and Kendall, 1946) cited in (Cohen and Manion, 1997:40). Consequently, many researchers and a growing number of methodologists as in Kelle (2001:1); adopted a pragmatic perspective on paradigm wars which might be described as "take whatever seems adequate from each paradigm or methodology for your research questions and leave the rest".

In this study qualitative approach was used to provide an understanding of phenomenon within a specific context and operationalized inductive form of reasoning, whereas, in quantitative paradigm, universal propositions and generalisations as a point of departure were advocated and manifested as a with the aid of numerals as the deductive form of reasoning.

In conclusion, the researcher used triangulation of methodologies. These had been outlined under their own sub-topic within this chapter. Research instruments seemed to be essential for this study and had thereafter been outlined below.

3.2.4 Research Instruments

At the most concrete and at least complex level, tangible or observable instruments were found, techniques, procedures and skills that had been used in this social research. These were the social

scientist's 'tools'. Research techniques could be defined as the specific and concrete means that the researcher used to execute specific tasks. Such tasks were of course related to specific stages in research process, such as sampling, measurement, data collection, and data analysis (Mouton, 1996:36).

Research instruments and data gathering approaches employed in this study was interview (structured), as well as questionnaires. Their operational definitions were reflected in 3.5. The target population and sampling procedures ought to be established, and had been operationalised and discussed below.

3.2.5 Target Population and Sampling

According to Bruce (1988:22) in Makara (2004:41), a target population was that group of people to whom the researcher was interested in gaining information to draw conclusions. This target population included all the members or subjects of the population who fulfilled the description of the group the researcher wanted to study. It was the group that the researcher wanted to generalise results as explained by Eichelberger (1989:165) in (Makara, 2004:41). It was evident from both Bruce and Eichelberger that the study of the whole population in order to arrive at generalisation was often not viable, and to overcome such a problem, a sample of the population was used. Such a notion had been supported by Mouton as in the next paragraph.

During the process of selecting the sampling of research population, the aim is to get a sample that is as representative as possible of the target population' (Mouton, 2001:110). Mouton further depicted that representativeness would be the underlying epistemic criterion of a 'valid', that was, in this research study, unbiased sample, the methodological criteria applied in the process of sampling were clear definition of population, systematic drawing of the sample, drawing probability rather than non-probability samples and observing the advantages of multi-stage versus simple random sampling.

The convenience probability random sampling that established members of the population who were easily accessible and conveniently available to provide the required information (Cohen and Manion, 1997:88) was substantiated in the logic of random selection used in modified fashion convenience probability sampling (Babbie *et al*, 2001:213) (cf. 1.14.4).

Access to sample was obtained by seeking permission from the authorities of sampled organizations and explanation was given to respondents assuring them that the information supplied would be treated with strict confidentiality and would only be strictly for academic purposes only, and it was stated that the study results would be provided if required.

3.3 TRIANGULATION OF METHODOLOGIES

Creswell (1994:174) surmised that by 1978, Denzin used the term triangulation, a term borrowed from navigation and military strategy, to argue for the combination of methodologies in the study of the same phenomena. Babbie *et al* (2001:275) also referred to Denzin (1989:236), when speculating that 'triangulation is defined as the use of multiple methods, had been a plan of action that raised sociologists and other social science researchers above the personal biases that stem from single methodology'.

By combining methods in the same study, as stated by many authors the researcher might partially overcome the deficiencies that would flow from a single method.

There might be strong correlations between the results of tests but these might occur because the tests would be biased in a similar way, "so that the convergence between two research results could either be the result of the fact that both results would be right or wrong in the same way" (Kelle, 2001:7). Research methods, could however, be developed within differing research traditions carrying epistemological and theoretical assumption within them. Thus the combination of methods may add "breadth or depth to analysis" (Fielding & Fielding, 1986:33) in Kelle (ibid), but not lead to the more valid results.

Hence two meanings of triangulation had emerged in these critics: triangulation as processes of cumulative validation or triangulation as a means to produce a more complete picture of the investigated phenomenon.

This difficulty in explaining and giving a clear meaning for the term triangulation might be seen as direct consequences of the metaphoric use of this word (Kelle, 2001:8). Whereas the term represented a straightforward concept in its initial frame of reference it carried a systematic ambiguity when transferred to the realm of social science in educational research methods.

For clarity, the researcher utilised Kelle (2001:8)'s description of triangulation.

Figure 3.2 illustrated how this issue was set up specifically in research for this research study.

Figure 3.2 Triangulation in the Investigation of the impact of tertiary public technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru District

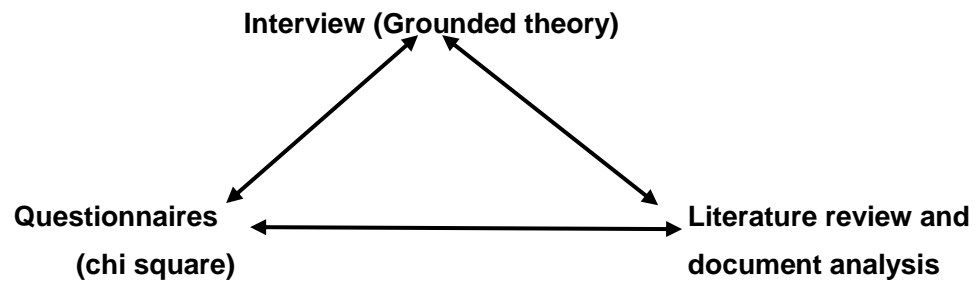
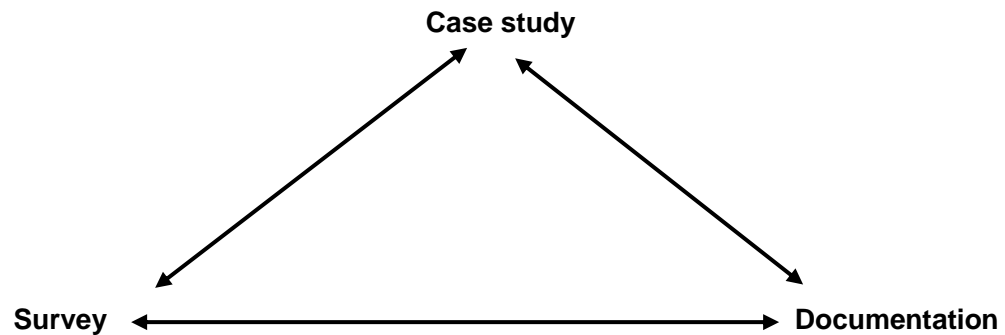


Figure 3.3 Research Methodology (Triangulation of Methodologies)



The strategies engaged had been fully described under 3.4 - the methodology section in this chapter.

1. It had become clear from the previous discussion that triangulation should not be considered as a single unique method, but as a somewhat an approach metaphor with different methodological problems and tasks

The guidelines on the purposeful pragmatic utility meaning of triangulation could be captured in empirical survey concurred by (Duffy, 1993:143) in De Vos (2002:359). Duffy substantiated that:

- **Theoretical triangulation** involved the use of several frames of reference or perspectives in the analysis of the same data;
- **Data triangulation** attempted to gather observation through the use of a variety of sampling strategies to ensure that a theory would be tested in more than one way;
- **Investigator triangulation** would be the use of multiple observers, codes, interviewers and or analysts in a particular study; and

- ❑ **Methodological triangulation** would be the use of two or more methods of data collection procedures within a single study (cf. Figure 3.3) That was the original meaning that had been utilised throughout this dissertation.

All of these concepts referred to the use of a variety of methods and techniques deployed in data collection in a single study. For this study, methodological triangulation had been used.

Qualitative approach was engaged through the interviews in Lesotho Ministry of Education and Training Department of Technical and Vocational Education convenient sampled population.

Quantitative approach was used for Lerotholi Polytechnic population whom were requested to fill the questionnaires.

Eventhough there were different methods engaged, they were aimed to investigate a single phenomenon. Lesotho Ministry of Education and Training Department of Technical and Vocational Education and the Lerotholi Polytechnic population responses were triangulated and analysed in their respective categories (cf. 4.2 and 4.5).

3.4 METHODOLOGY

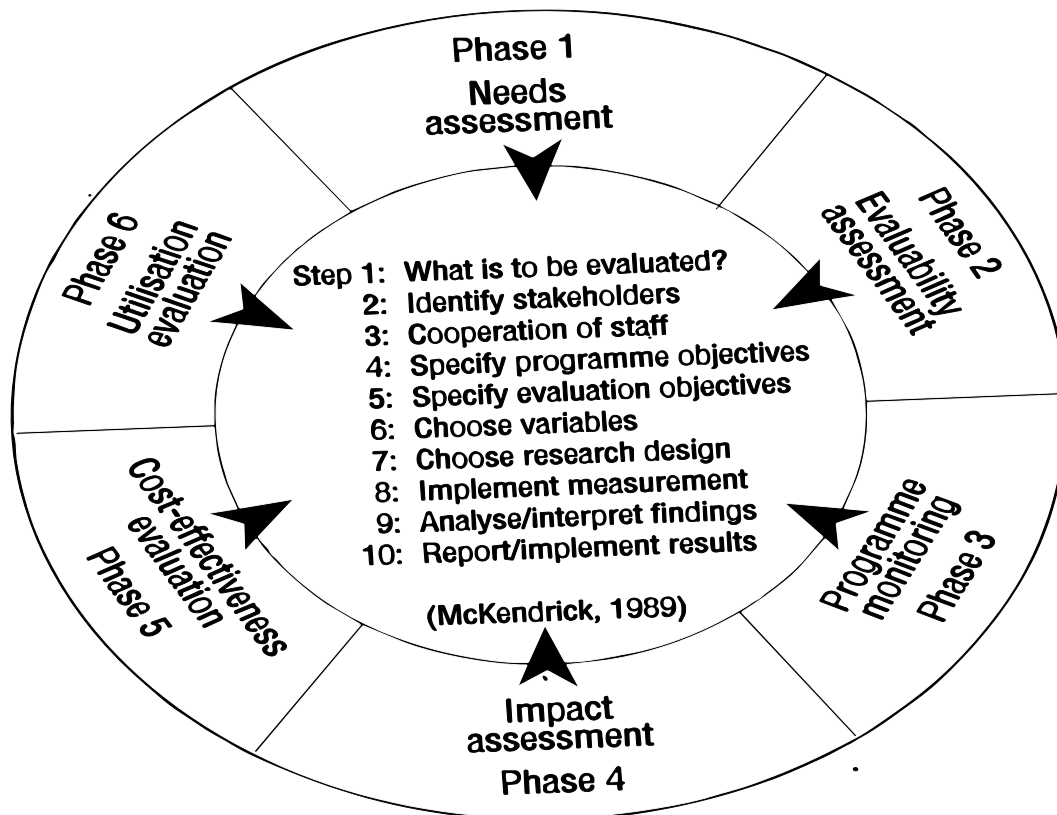
The researcher adopted the processes presented by McKendrick (1989) with recognition to Tripodi (1987), at a conference on the programme evaluation and subsequently published (De Vos, 2002:368). The process consisted of the following steps:

- ❑ **Determined what was to be evaluated:** tertiary public technical and vocational education;
- ❑ **Identified consumers:** students of tertiary public institution [Lerotholi Polytechnic] and the society at large;
- ❑ **Gained the cooperation of the staff:** the Technical and Vocational Education and Training of the Lesotho Ministry of Education and Training Department and the Lethololi Polytechnic staff;
- ❑ **Specified programme objectives:** objectives of tertiary public technical and vocational education as per the Technical and Vocational Education and Training Act of 1984, reviewed in 1986, for the Lesotho Ministry of Education and Training Department and the semi-autonomous Lerothololi Polytechnic;
- ❑ **Specified evaluation objectives:** the act or result of appraising the access, quality, relevance and training strategies in tertiary public technical and vocational education in the Maseru district, worth or efficiency of the educational process in terms of whether the desired and planned goals were being achieved;

- ❑ **Chose variables:** access, relevance, quality and training strategies of tertiary public technical and vocational education with adherence to planning, controlling and coordination;
- ❑ **Chose research design:** qualitative and quantitative research comprised of methodology triangulation, substantiating and operationalising case study and survey;
- ❑ **Implemented measurements:** as per the research design in qualitative and quantitative measurements;
- ❑ **Analysed and interpreted findings:** as per the research design in qualitative and quantitative research analysis; and
- ❑ **Reported and made suggestions for implementing results:** to write down findings, conclusions and recommendations.

The Integrated Model of Programme Evaluation (IMPE) suggested by De Vos (2002:368) had been depicted in Figure 3.9 below.

Figure 3.4 The Integrated Model of Programme Evaluation (IMPE)



Source: De Vos (1990); McKendrick (1989) in De Vos (2002:368).

According to Patton (1997:68) judgement-oriented evaluations typically followed a four-stage (deductive) pattern. The researcher implemented Patton's notion as follows:

1. Selected criteria of merit of worth;
2. Set standards of performance (for an example, outcome measures);
3. Measured performance (qualitatively and quantitatively); and
4. Synthesized results into a judgement of value.

Babbie *et al* (2001:338) contrasted that judgement oriented (developmental) evaluations would use more inductive strategies in which criteria were less formal as one searches for whatever areas of strengths (or weakness) might emerge from a detailed study of the programme.

In order to take care of such deficiencies the researcher also engaged in multivariate research methodologies as indicated earlier in the study report and sustained improvement-oriented evaluation by asking the following questions:

- ❑ What were the technical and vocational education and training programme's strengths and weaknesses? (summative evaluation);
- ❑ Was technical and vocational education and training programme been properly implemented? (summative and quality evaluation);
- ❑ What constraints existed in the proper implementation of technical and vocational education and training programme? (quality evaluation);
- ❑ To what extend were the technical and vocational education and training programme recipients responding positively to the intervention? (responsive evaluation); and
- ❑ If technical and vocational education and training programme recipients were not responding positively to the intervention, why not? (empowerment evaluation).

Thus, according to Babbie *et al* (2001:339) 'when the cook tastes the soup, that is formative; and when the guest tastes the soup, that is summative!'

In this study, different types of evaluation system was used to investigate whether there was a need to provide suggestive support system to the Department of Lesotho Ministry of Education and Training – Technical and Vocational Education and Training and the Lerotholi Polytechnic, one of its auspice tertiary technical and vocational education institution in the Maseru district and also to investigate and analyse whether the Department and the institution had achieved their goals through adequate production of human capital with acquired responsive demand-driven skills solicited to the impact of

technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

3.4.1 Case Study

Babbie *et al* (2001:640) advocated that case study research would be an intensive investigation of a single unit while Creswell (1994:12) designated that such a type of research explored a single entity or phenomenon “the case” bounded by time and activity (a programme, event, process, institution, or social group) and collected detailed information by using a variety of data collecting procedures during a sustained period of time.

Referring to the above notions, the researcher approached phenomenon through the investigation of the impact of tertiary technical and vocational education on the Lesotho’s socio-economic development with special reference to Maseru district utilising case study such as ‘*one-shot case study*’ that Babbie *et al* (2001:215 – 217) defined as a single group of subjects being measured which depended on variables following the administration of some experimental stimulus. The single group of subjects used in the case study was the population engaged directly in the utilisation of the contribution of technical and vocational education towards the socio-economic development of Lesotho with special reference to Maseru district.

Case study research excelled at bringing an understanding of a complex issue or object and extend experience or added strength to what had already been known through previous research and Soy (1996:1) emphasised that detailed contextual analysis of a limited number of events or conditions and their relationships, the case study examined individual or small group within a specific context (<http://www.writing.colostate.edu/references/relva/printformat.cfm?printformat=yes>: on line). This World Wide Web further manifested that the research data would be typically gathered through qualitative means: interviews, observations, etc. and data were usually analysed either holistically or by coding methods.

According to Leedy and Ormrod (2001:149) a case study might be especially suitable for learning more about a little or poorly understood situation. Leedy and Ormrod further explained that case study might also be useful for investigating how an individual or programme changed over time, perhaps as the result of certain circumstances or interventions. Soy, the World Wide Web, Leedy and Ormrod regarded case study as a systematic investigation of social life for the purpose of finding and understanding patterns in what was being observed.

“If you want to know about something, why not just go where it is happening and watch it happens?” (Babbie, 1995:280). Babbie reverted to call this methodology in research “Field research” and argued that it comprised participant observation and direct observation. Babbie further operationalised how to ask questions such as what other writers call ‘interview’ and how to record observations, and data processing including data analysis.

Babbie *et al* (2001:281) indicated that case study was relevant to six types of investigations, which among them had been the 'studies of organizations and institutions: typically in business and management studies, where the focus was on a firm, company, corporation, trade unions, etc'. Babbie *et al* contented that there were many foci, including studies of best practice, policy implementation and evaluation, human resource practices, management and organization issues, organisational culture, processes of change, re-engineering and so on.

In this study the researcher used the exploratory research design activities as per the literature review that described case study as the kind of research that would produce findings not arrived at by means of statistical procedures or other means of quantification. It referred to research about organizational functioning, social movements, and interactional relationships. In this case, the researcher concentrated on the organizational functioning of the Technical and Vocational Education and Training of the Lesotho Ministry of Education and Training Department and the Lethololi Polytechnic.

The researcher operationalised a non-mathematical analytic procedure that resulted in findings derived from data gathered by interview. These included observations and interviews.

Case study engaged qualitative method that was used to uncover and understand what lied behind the phenomenon about which little was known. Such little that was known to the researcher was with regard to the impact of technical and vocational education on the Lesotho's socio-economic development with special reference to Maseru district. The case study was used to gain novel and fresh slants on issues about which was little known, such as in access, relevance, quality and learning-training strategies adhered to planning, controlling and coordination of technical and vocational education at the Lerotholi Polytechnic. This was vested in the interviewing of the Technical and Vocational Education and Training of the Lesotho Ministry of Education and Training Department personnel. The researcher also sought for new and more recent documented information from this department.

Case study, also, as a qualitative method, was used to rationalize and gave the intricate details of phenomenon that were difficult to convey with quantitative methods.

First, there were the **data**, which came from various common sources through interviews and observations. The second component was **analytic** or **interpretive procedures** that were used to arrive at findings and theories. These procedures included the techniques for conceptualising data such as in "coding". **Written** and **verbal reports** made up the third component of this qualitative research methodology. These were presented in scientific journals or conferences and took various forms depending upon the audience and the aspect of findings and theories.

Furthermore, in this research study report, the researcher had concurred with Babbie *et al* (2001:282-283) and De Vos (1998:105) and conceptualised the framework of the case study as thus;

- **'Stating the purpose of the study'**: the study set out to update knowledge and explored developments and weaknesses in technical and vocational education, distilled lessons as a guide to future skill developments within the Technical and Vocational Education and Training of the Lesotho Ministry of Education and Training Department with suggestions for demand-driven technical and vocational education policy formulation and its implementation in the public tertiary technical and vocational education institution – the Lerotholi Polytechnic in the Maseru District for socio-economic development, especially in the human resource conceptualisation. However, the study had not been intended to be a prescriptive curriculum policy document, but a knowledge product, for equity, efficacy and capacity building to enhance socio-economic development premises as pertained to educational attainment, occupational status and income generation framework as in Babbie *et al* (2001:113) in the Maseru District of Lesotho.

The major premises was on the investigation of the contribution of tertiary public technical and vocational education with independent variables being planning, co-ordination and control and dependent variables being inputs, outputs, outcomes and thereafter, impact of tertiary public technical and vocational education with strict coherence on accessibility, relevance, quality and training strategies on technical and vocational education and training in Lesotho with special reference to Maseru district.

Within the premises of case study design – specifically complaisant in this research study report marvelled epistemic imperative emanated assertion of other methods such as in methodology triangulation with respect to multi-variate analysis inherent as in Yin (1984: 23) as cited by Soy (1996:1), explaining that case study method as an empirical inquiry investigated a contemporary phenomenon with its real-life context; when the boundaries between phenomenon and the context were not clearly evident; and in which multiple sources of evidence were utilised.

3.4.1.1 Grounded theory

Rubin and Babbie (1993:55) in De Vos (1998:265), defined grounded theory as a term used in reference to the creation of theory based more on observation in qualitative paradigm than on deduction. According to Strauss and Corbin (1990:24) as cited in De Vos (*ibid*) designated the grounded theory approach as a qualitative research method that was used as a systematic set of procedures to develop an inductively derived grounded theory about a phenomena. A grounded theory, in postulating critics in De Vos citations, used a prescribed set of procedures for analysing data and constructing a theoretical model from them. And Leedy and Ormrod (2001:154) substantiated that the term grounded theory referred to the idea that the theory that emerged from the study had been derived from and grounded in data that had been collected in the field rather than from the research literature.

However, the grounded theory approach had its roots in sociology and now had been used in anthropology, education, nursing, psychology and social work such as in Glasser and Stauss (1967:n.p.) and Strauss and Corbin (1994:n.p.) in (Leedy and Ormrod, 2001:154).

The main purpose for carrying out the type of category-forming described had been to produce a theory on the impact of tertiary Bureaucratic Model technical and vocational education and training on the socio-economic development Lesotho with special reference to Maseru district.

This had been a statement that established and linked together concepts and ideas, and that indicated how one concept affected the other relative to access, relevance, quality and training strategies comprehensive to planning, co-ordination and control of tertiary Bureaucratic Model technical and vocational education and training, in addition, the theory was capable of being tested by the collected empirical evidence.

The purpose of this research procedure had been to generate a theory, not to test a theory that had been determined *priori*. However, there had been a need to underpin the research with a sound framework. "Theory grounded in earlier investigation may be available" as explained Lincoln and Guba (1985:209) in Pickard (1998:2), and could be used to develop a strong theoretical base; a collection of signposts which alerted the researcher to establish concepts, without excluding the emergence and development of unforeseen issues.

Moreover, it could be argued that theory which had been grounded in the data presented a better model of the world, and enabled the researcher to relate to it, much better than would be in the case with more abstract theory. Grounded theory presented a picture of data which was more immediate and real, and which was of greater relevance to the researcher to establish epistemic imperative holistic framework. One of the major contributions grounded theory deployed, had been the stress it executed and placed upon the value of generating a theory.

The traditional approach to theory had been to try to work within the parameters set, and adapted these to the needs of inquiry and investigation of the impact of Bureaucratic Model technical and vocational education and training pertained to educational attainment, occupational status and income generation in Maseru district exhaustive and exquisitely affirmed in the access, relevance, quality and training strategies existential to tertiary Bureaucratic Model technical and vocational education and training management focussed on planning, co-ordination and control.

The grounded theory was not designated as a finite construct, which infact, was able to explain the world, both now and in the future; rather it had been viewed as an organic entity which grew, evolved and changed as it adapted to new data and circumstances.

In the grounded theory approach, research design, method, data collection procedures and theorising had been axiom to simultaneous activities. They were not viewed as temporal sequence, but rather as

activities which enforced and related to each other, and which were equally and mutually important to each other within a case study yielding multidimensional concepts in methodology triangulation – drawn from multi-disciplinary exploration. The theoretical framework was developed by integrating research from educational philosophy and psychology, learning theory, cognitive science and technical and vocational education and training research publications from organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Labour Organization (ILO), World Bank and others as they appeared in the literature review.

3.4.2 Survey

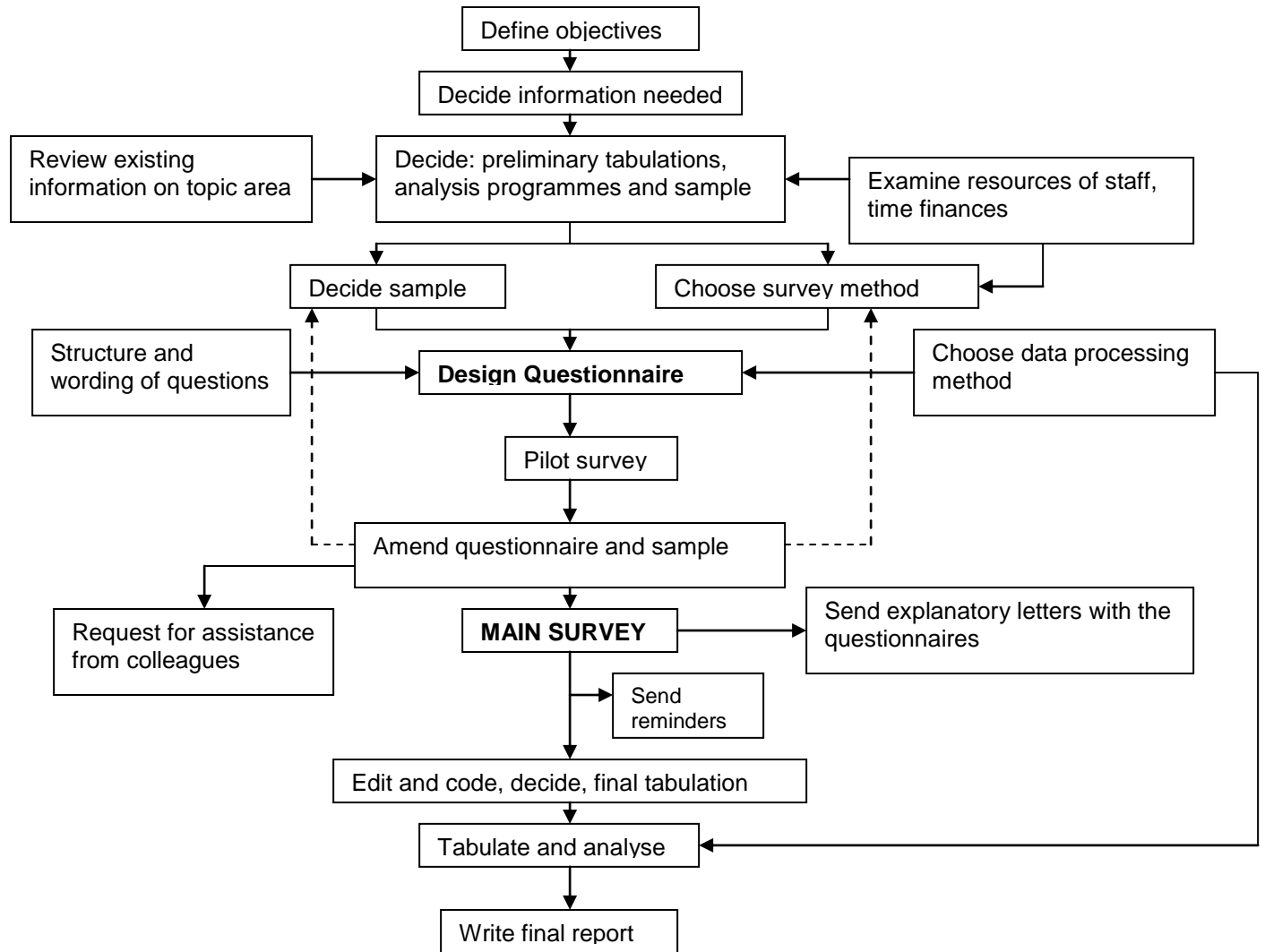
The word 'survey' was used in this study to describe a method of obtaining information from a sample of individuals from a specific population (Lategan, Vermeulen and Truscott, 2003:38). Lategan *et al* further contented that in survey the individuals were asked questions, according to standardized procedures, with intent of obtaining a composite profile of the population, with regard to particular aspects. Fowler (1988) in Creswell (1994:117) presented that a survey design provided a quantitative or numeric description of some fraction of the population – the sample – through data collection process of asking questions.

The purpose of survey research in this study was that of inferences that could be made about some distinctiveness, approaches and attitudes, and behaviour of the population as described in Lategan *et al* (2003:38), and Babbie (1990:n.p) in Creswell (1994:119), that was engaged in investigating the impact of tertiary public technical and vocational education on the socio-economic development within the Maseru district of the Kingdom of Lesotho. Cohen and Manion (1997:83) affirmed that survey had been perhaps the most commonly used descriptive method in educational research, typically, data was gathered at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions could be compared, or determined the relationships that existed between specific events.

Survey research was used to investigate and analyse the impact of tertiary Bureaucratic Model technical and vocational education, in order to obtain a detailed description of the impact on the socio-economic development, pertaining to the contribution of technical and vocational education towards socio-economic development, in the Maseru district of Lesotho through human capital in combination of educational attainment, occupational status and income generation.

The Lerotholi Polytechnic sample population that comprised of administrators, lecturers and students (new and old) were asked to fill the questionnaires. Procedures involved in processing and analysing the results of survey were finally identified. Figure 3.5 suggested stages in the planning of the survey design in this dissertation.

Figure 3.5 Survey Design



Source: Adapted from Davidson (1970) in Cohen and Manion (1997:84).

For the purpose of this study, questionnaires in survey were administered to the Lerotholi Polytechnic convenient probability population. They filled the questionnaires and thereafter were collected by the researcher for analysis (cf.4.5).

3.5 INSTRUMENTATION

Based on the research method discussed (cf.3.4) questionnaires were developed for the study. The questionnaires consisted of both closed and open-ended types of questions. Closed-ended questions on access, quality and relevance were developed for students and graduates. The items on the questionnaire had six options (Likert Scale) and these were strongly agree, agree, not sure, neutral, disagree and strongly disagree. The students were also furnished with a list of questions on the adaptation of technical and vocational education towards socio-economic development and they were

asked to indicate the frequency and adequate at which implementation of these activities in their training session were operationalised. These were meant to assist students and graduates while responding to open-ended question whereby they had to explain their responses.

Questionnaires were also distributed to the students and graduates, lecturers and instructors of the Lerotholi Polytechnic and the management personnel.

For the students and graduates, instructors/lecturers' and administrators' questionnaires the questions solicited data on access, relevance, and quality and training/learning strategies operationalised at Lerotholi Polytechnic. They were required to give their personal comments at the end of each of the four parts in the questionnaire. The requested information was based on the weakness, and strengths they observed and also to give suggestions or recommendations. At the end of the questionnaire, they were asked to comment on the salient issues that they might be aware of but the questionnaire did not address.

Observation was also done as the researcher also requested to pay a visit to the workshops and laboratories used by the lecturers and the students. Also the workplaces of the graduates granted a valid field observation as the researcher requested to be allowed to take a round and had a look on what was going on. Some of the enterprises did not allow this.

Documentation was obtained from both the Lerotholi Polytechnic and the Department of Lesotho Ministry of Education and Training – Technical and Vocational Education and Training concerning technical and vocational education.

3.5.1 Validity of the Instruments

The validity of the instruments was ascertained first, by pilot study and was given to colleagues whose comments were incorporated accordingly into the final draft of the instruments of the study. That was, the weakness of the questionnaires were reduced. And also Professor Szubarga -the Director of Institute of Research of the Central University of Technology – Free State evaluated the research instruments and data capturing.

Triangulation with the graduates, students, Lerotholi Polytechnic staff and the Department of Lesotho Ministry of Education and Training – Technical and Vocational Education and Training officered validated data collected together.

3.5.2 Choice of Research Tools

There had been a number of instruments of inquiry that could have been utilised in a scientific inquiry and were guided by the specification of the exact purpose of the inquiry as Cohen and Manion, (1997:85) stated; the population on which such an instrument was to focus and the resources that were available.

As had been accorded by Cohen and Manion, interview and observation in qualitative paradigm, had been some of the instruments for this research study report, they were utilised in order to probe deeply and to investigate intensively the multivariate levels or stages of the phenomenon. Such stages of the phenomenon constituted the cycle of the unit under investigation, with a view to establish generalizations about the wider population to which the unit belonged.

While the purpose of the inquiry in the quantitative paradigm was to be translated into specific central aim such as to obtain a detailed description of the impact of tertiary (Bureaucratic Model) public technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

The research data were collected from different data sources throughout triangulation, which were comprised of more than one method. The methods used were as follows:

- Interviews in qualitative paradigm;
- Questionnaires; and
- Documentary content analysis (dealt with in chapter two (cf.2.1.1), as had been indicated earlier in 3.3.1 in methodological triangulation.

Below had been the detailed discussion of the procedures.

3.5.2.1 *Interviews*

The researcher viewed participants in this research study report as essential collaborators as explained Maykut & Morehouse (1994:70), who together mutually shaped and determined what the researcher came to understand about their experiences, attitudes and their situation within the arena in technical and vocational education and training. Overt means of gaining access to research participants and settings was operationalised instead of covert of which most of anthropology, psychology and other fields debated against (Maykut & Morehouse, 1994:70) as the deceptive, for covert practices seemed not to keep with ethical practices. The researcher asked the questions relative to how they were affected, and how the impact of tertiary technical and vocational education fitted into socio-economic development.

Officers in each of the three divisions engaged in tertiary public technical and vocational education in the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training were visited in their offices and asked the semi-structured questions whereby they were free to express themselves and expanded where possible while sharing their experiences with the researcher. Their responses were recorded in a form beside each question and later transcribed for data analysis (cf. 4.5).

3.5.2.2 Questionnaire design

The targeted groups, which were selected, posed no problem in opting for questionnaires as a strategy for data collection. Galfo (1983:83) in Pulumo (2003:40), stated that “questionnaires are used to obtain factual data, opinions, and attitudes in a structural framework from respondents not contacted on a face-to-face basis”. Since the study dealt with the investigation of the impact of Bureaucratic Model (public) tertiary technical and vocational education on the socio-economic of Lesotho with special reference to Maseru district, there was a necessity for some opinions and attitudes that did not necessarily require face-to-face contact.

The questionnaire as an instrument for data collection was opted for whereby the researcher was far away from the research place, it was necessary to opt for a method that would be cost effective and questionnaires met such a criterion and were delivered to the participants. The researcher designed questionnaires. Amendments had to be done to some of the sections in the questionnaires. Before the data gathering, after the self-introduction and submission of the copy of the introduction letter written by the supervisor in Central University of Technology – Free State; the researcher requested for the permission to undertake the study at the afforded institution.

Where permission was granted there was a request that questionnaires brought would be handed to the management body (personnel officer) to distribute to the respondents and requested that the respondents be asked to bring them back to the same office where they would be collected. This was opted for in order to avoid interference with the labour intensive activities of the respondents. In order to maximise the return of questionnaires a follow-up was engaged.

The respondents were in liberty to air their views on issues related to inputs, outputs and outcomes rendered by Lerotholi Polytechnic tertiary public technical and vocational education. Again for the Lerotholi sample population questionnaires appealed to be the only option in data collection in the epistemic imperative inquiry.

Each of the questionnaires was divided into four parts; access, relevance; quality and training/learning strategies in the Lerotholi Polytechnic. At the end of every part of the questionnaire there had been spaces for open-ended questions of which Cooper and Schindler (2003:460) indicated that reasons for using open-ended responses included the need to measure sensitive or disapproved behaviour, to discover salience, or encourage natural modes of expression.

3.5.2.2.1 Access to TVE

This part of the questionnaire composed of questions designed to evaluate the Lerotholi Polytechnic institutional enrolment and commitment towards educational services to the clientele of both female and male subjects, able and disabled, young and adults. It was meant to evaluate the existed access to “life skills” programmes to all levels of the community relative to strengths of traditions in terms of

believes and behaviours (such as in gender disparity and marginalised groups). In addition, it investigated whether there existed financial support schemes to promote access to Lerotholi Polytechnic technical and vocational education to enhance the level of societal and economic development in the Maseru district.

3.5.2.2.2 *Relevance of TVE*

The questions in this section were designed to explore the Lerotholi Polytechnic technical and vocational education, level of educational literacy and familiarity within technology, maturity and openness to the labour market. It was meant to find out whether the outcomes had had sufficient production of outputs; that when merged, substantiated and operationalised the outputs and outcomes that would yield an impact on the socio-economic development. Surveyed whether governance and delivery of the Lerotholi polytechnic technical and vocational education impinged on the socio-economic development as per Lerotholi Polytechnic's vision, mission and objectives.

3.5.2.2.3 *Quality of TVE*

The questions in this section were designed to describe and explain the quality of the Lerotholi Polytechnic technical and vocational education; prosperity for entrepreneurial activities. Investigated whether in the Lerotholi Polytechnic there existed the effective influences for a responsive demand-driven technical and vocational education outputs and outcomes that would effect and facilitate the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

3.5.2.2.4 *Training/learning strategies in TVE*

Questions in this part were aimed to investigate the training and learning strategies (methods) identified for achieving objectives in the Lerotholi Polytechnic technical and vocational education that characterised the impact on the socio-economic development through the following:

- Product of the services offered;
- Labour market intervention and or activities on the curriculum for the economy; and
- Individuals or research subjects' views, influences and attitudes towards the development of technical and vocational education's contribution towards the socio-economic development.

3.5.3 Data Collection

Prior to data collection, permission was sought from the Directors of the Department of Lesotho Ministry of Education and Training and that of Lerotholi Polytechnic. And also from the enterprises administrative personnel. This was done through student card and the introduction letter signed by the Supervisor and the Director of the School of Teacher Education in the Faculty of Management

Sciences of the Central University of Technology – Free State. The letter written by the researcher indicated the purpose of the research study and clearly stipulated that the privacy of the respondents would be contented with and the study results would be available on request.

During the qualitative data gathering, the researcher began with a rough definition of the phenomenon and thereafter, examined appropriate cases and a possible explanation of the problem was formulated and the investigator examined further appropriate cases to establish how well the collected data fitted the hypothetical explanation. By so doing the researcher resigned to '*Analytic induction*'. If there could have been lack of it the hypothesis was likely to be reformulated and further investigation conducted. The sequence would continue until cases of inconsistency no longer prevailed.

Analytic induction was extremely demanding in that the emergence of a single case that appeared to be consistent with a hypothesis or reformulated one dictated further revision of the hypothesis and a return to the field.

Grounded theory bore certain similarities to analytic induction, in respect of networking of theorizing of data collection. After the collection and reflection in relation to a phenomenon, the researcher generated 'categories' which fitted the data. The researcher engaged and utilised further investigation until the categories were 'saturated', the researcher felt assured of their meaning, their generality and importance within the investigation and analysis. Theory was generated instead of being tested.

Coding 'the process of categorising and sorting data' as Charmaz (1983:111) stated in Bryman and Burgess (1994:5), represented a key step in the process. Charmaz (1983:112) in Bryman and Burgess (1994:5) sustained that while 'codes' were described as serving to 'summarize, synthesize, and sort many observations made out of data, the researcher broke down, examined, compared, conceptualised and categorised data' as explained Strauss (1983:n.p) and Glaser (1978:n.p) in (Bryman and Burgess, 1994:5). Coding here represented the gradual building up of categories out of data as indicated in inductive interpretation earlier in this chapter. It should be noted that, as in Richards and Richards (1991:n.p) in (Bryman and Burgess, 1994:5), the term 'coding' was widely used in qualitative analysis built, applied in more than one way: (a) to the task of fitting data concepts together in such a way that conceptualisation was under constant revision (as in grounded theory); and (b) to a process that was more or less identical to the coding of open-ended questions in survey research, where the aim was to qualify different categories of a variable.

The responses from the interviewed subjects were analysed, coding and used in more than one way to conceptualise the phenomenon and inductively reasoned in the grounded theory concept.

3.5.4 Scoring Procedure

The respondents that filled the questionnaire in Part A, B, C and D respectively were requested to indicate the extent to which they agreed with the given statements in the questionnaire, as the possible responses were:

Strongly agree

Agree

Not sure

Neutral

Disagree

Strongly disagree

At the end of every part the respondents were also requested to indicate their perspective attitudes with respect to each part's main questionnaire 'Part' with respect to weakness, strengths and suggestions or recommendations for improvement. That of the Lerotholi Polytechnic administrators had an extra question to be answered in respect of managerial activities.

The mean and standard deviations of the scored responses were determined and used in several statistical analysis done to test the research hypotheses.

When presenting the principles guiding the study De Vos (1998:105) reckoned that the hypotheses were tools used to generate questions to research for patterns. The following hypotheses as in De Vos guided the researcher in the study:

3.5.5 Hypotheses

□ Hypothesis 1 (H_1):

There had been a significant relevant relationship between technical and vocational education in Lerotholi Polytechnic and access to the education system in Lerotholi Polytechnic learning and training for the world of work irrelevant to gender biasness;

□ Hypothesis 2 (H_1):

There existed a significant relevance between Lerotholi Polytechnic programmes of technical and vocational education for the preparation of an occupational field that aimed at providing scientific and generic skills required for rapid adaptation to new ideas and procedures, and steady career development and relevance towards socio-economic development in Lesotho;

□ Hypothesis 3(H₁):

There existed a relevant significant relationship between improving the knowledge and skills of workers that would increase Lesotho economy's output of goods and services through Lerotholi Polytechnic programmes and relevant contribution towards socio-economic development substantiated by learning and training at the Lerotholi Polytechnic; and

These hypotheses; as 'tools used to generate questions' (cf. 1.7) and had been tested in data analysis of chapter four.

3.5.6 Research Questions

The research questions in qualitative study were designed to be open-ended, descriptive and non-directional, and in quantitative design, they were directional and stated a relationship or comparison, specified a multivariate relationship between independent and dependent variables, and related to a theoretical perspective as in (Creswell, 1994:181). The following questions; as in line with Creswell; were attested to both approaches:-

3.5.6.1 Research question

What characterized the enrollment of the Lerotholi Polytechnic trainees?

3.5.6.2 Research question

For what programme did Lerotholi Polytechnic candidates register to acquire their profession or trade?

3.5.6.3 Research question

With reference to equity, how were the groups of the community represented in various courses offered at the Lerotholi Polytechnic?

3.5.6.4 Research question

Did there exist gender disparity within the programmes offered at the Lerotholi Polytechnic?

3.5.6.5 Research question

Was there any financial support that trainees got in order to pursue their studies at the Lerotholi Polytechnic? And how were their studies affected by this financial assistance?

3.5.6.6 Research question

What were those changes in tertiary public technical and vocational education that must be addressed by the Technical and Vocational Education and Training policy of the Lesotho Ministry of Education and Training Department and the Lerotholi Polytechnic to ensure the genuine access to technical and vocational education and implementation of

lifelong learning, lifelong career development and lifelong employment for the world of work?

3.5.6.7 Research question

How could tertiary public technical and vocational education at Lerotholi Polytechnic contribute to the removal of disparities of economic returns of the world of work with regard to relevance?

3.5.6.8 Research question

How is quality assurance managed at the Lerotholi Polytechnic to sustain the impact on the socio-economic development?

3.5.6.9 Research question

What effective teaching/learning strategies needed to be supported, or developed and implemented in tertiary public technical and vocational education management (planning, control and coordination) within the Technical and Vocational Education and Training Department of the Lesotho Ministry of Education and Training and the Lerotholi Polytechnic to increase technical and vocational education's contribution towards the efficiency of the world of work to establish the impact on the socio-economic development?

3.6 VARIABLES

Variables had been defined by Babbie *et al* (2001:648) as logical groupings of attributes, and De Vos (2002: 347) described variables as concepts, or better still characteristics, properties or attributes of a concept that would take on different values under study, say variable *x* could be assigned 1 or 0. For an example, if gender was the construct under study, then *x* could be assigned 1 or 0, 1 standing for M (male) and 0 for F (female). For the purpose of this study 1 had been assigned for females while 2 was assigned for males in the coding for Statistical Package for Social Scientists (SPSS) analysis.

Mouton (1996:92) established that it was clearly important to distinguish between variables and the attributes or categories of which they consisted. In the case of this study, the variables had been access, relevance, quality and training/learning strategies. Hence these variables were linked to planning, controlling and co-ordination of tertiary public technical and vocational education in order to investigate its impact on the socio-economic development of Lesotho with special reference to Maseru district.

Thus, the variables as accorded by Mouton (1996:93) could be independent and dependent and Mouton articulated that an independent variable would be the presumed cause of the dependent variable, which would be the presumed effect. As subscribed by Mouton, independent variables were presumed to be variables that produced or caused effects as measured by the dependent variables as denoted below.

- **Access:** Based on the responses of the sampled population, access to tertiary public technical and vocational education in Maseru – Lesotho, as variable of input was measured relative to its contribution to establish the impact on socio-economic development.

 - The researcher investigated whether the ambitious goal ‘to ensure that the learning needs of young and adults were met through equitable access to appropriate learning and life skills programme as suggested in World forum of Education- Dakar (2000:n.p.) in UNESCO and ILO (2002:2) of tertiary public technical and vocational education system in Lesotho in the Maseru district;
 - The researcher investigated whether the effort to provide tertiary public technical and vocational education for young and adults in Maseru – Lesotho underpinned the economic and social development by ensuring the capacity of people to learn and provide the foundation for their employability and access to decent work as the key challenges in the ILO’s ‘*Global Employment Agenda*’ in ‘Education for All and Work for All’ conference report, 2002) was being administered;
 - The researcher investigated whether the community of the Maseru district in Lesotho had access to the pathways of lifelong, work and the future throughout legislation that applied to all forms and aspects of tertiary public technical education, provided in tertiary educational institutions (Lerotholi Polytechnic) and the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD); and
 - The researcher investigated whether tertiary public technical and vocational education in Maseru was readily available to all appropriate types of specializations, within the formal education system in Maseru – Lesotho, in order to permit educational career and job mobility.

- **Relevance:** A sound educational base had been a prerequisite for effective skills acquisition. The economy required a mix of low and higher end skills, increasingly shifting towards the latter. Thus establishing the input towards competitive outcome that would contribute towards impact.

 - The researcher investigated whether Lesotho’s tertiary public technical and vocational education systems had embarked on reforms to improve the provision of skills. Whether the input of such reform movements involved important efforts to rehabilitate tertiary public technical and vocational education with the aim of making it more flexible, of higher relevance and capable of responding better and more rapidly to labour demands.

- The researcher validated with the investigation the accountability of the Maseru's tertiary public technical and vocational education system authenticity's output on embarked reforms to improve the provision of skills. Whether such reforms were in concurrence with both the nature of the ongoing regional and local demands to impact on the socio-economic development. Investigated whether effort had adopted a proactive perspective, particularly whether the emphases were placed on innovations.
- **Quality:** Competitive pressures required the adoption and assimilation of more advanced technologies, requiring workers that were able to learn and adopt to new workplace conditions, such workers with a set of core skills, as well as specific job training. Training of Basotho (plural for Lesotho citizen) supervisors and managers in the manufacturing sector had the potential to raise labour productivity, lower labour costs and supported the emergence of local manufacturing business.
 - The researcher investigated whether quality of tertiary public technical and vocational education in Maseru substantiated outcomes that strengthened training capabilities for formal sector with the view of a sufficient perspective to contribute to the transition of Lesotho from cheap labour to skill-based competitiveness. And whether more attention and support was required at the institutional level to charge the community and public tertiary technical education providers with responsibility to participate in socio-economic development and improving quality of provision had been in place.
- **Training/learning strategies:** Training-learning strategies contributed to improving public sector delivery and growing the nations' human capital. Skills development enhanced government's capacity to manage the national development effort.
 - Training/learning activities in this world were based on processing specific pedagogical inputs on curriculum issues to obtain respecified outputs in the form of valued products. The tertiary public technical and vocational education required meeting the ever-changing material needs of Maseru society and local community. The institutions involved, viz, the Lesotho Ministry of Education and Training Department of Technical and vocational Education and Training and the Lerotholi Polytechnic were considered as appropriate processors for producing appropriate technical trained human resources commensurate to the needs of a society and local community. Since the activities on these organizations were systematic in nature, the inputs, processes and environmental effects were having fundamental importance and consideration. The researcher utilised these variables in the investigation.
 - According to UNESCO CD ROM (2001: *Case Studies to accompany Guide Book for Curriculum Development and Adaptation*) 'an educational institution for training skilled

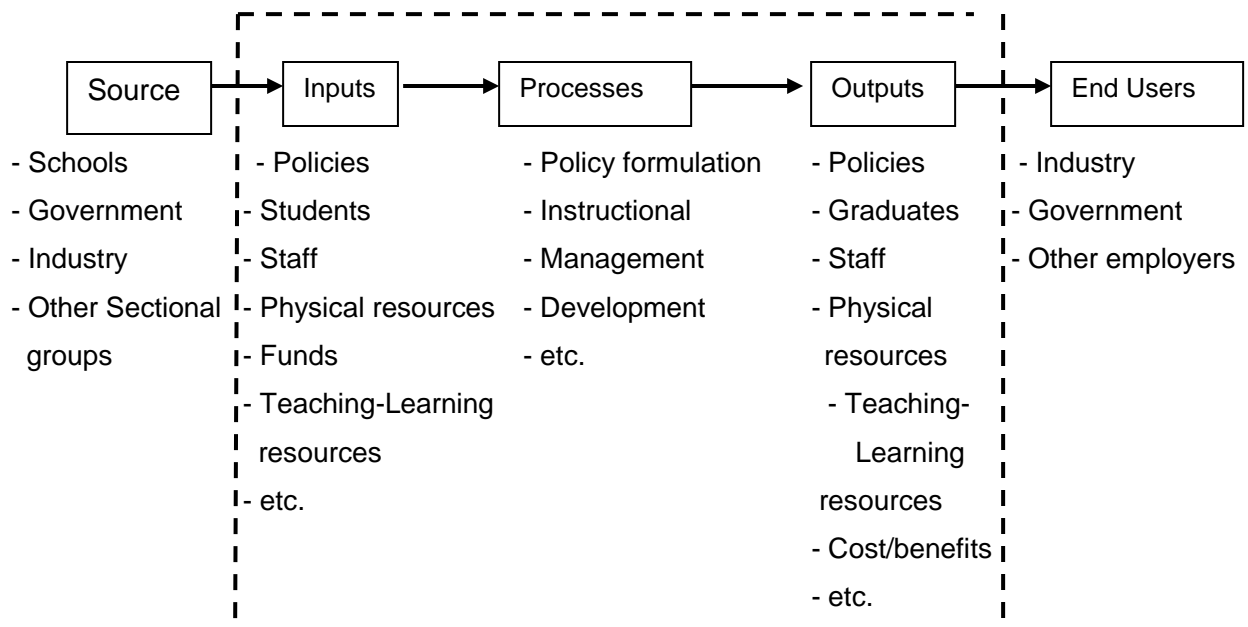
workers, technicians or technologists can best be described by considering a complete system for producing manpower for specified job specifications'. Such a system had the following components:

- **Inputs:**
Policies, curricula, students, staff, physical facilities, teaching/learning resources, financial resources and environment;
- **Processes:**
Instruction, teaching-learning activities, management, policy formulation, research and development; and
- **Outputs:**
Graduates, upgraded staff, better facilities, policies, benefits and costs.

The researcher used the above information and in the investigation of the phenomenon.

UNESCO CD ROM (2001: *Case Studies to accompany Guide Book for Curriculum Development and Adaptation*) distinguished educational institution as 'Socio-Technical System' and authenticated the illustration as in figure 3.11.

Figure 3.6 Educational Institution as Socio-Technical System



Source: adapted from UNESCO CD ROM (2001: *Case Studies to accompany Guide Book for Curriculum Development and Adaptation*).

Figure 3.6 represented an educational institution as a socio-technical system (UNESCO CD ROM, 2001:*ibid*). The system presented inputs, process and outputs; sources of inputs; end users and inputs derived from environment or inputs that were also derived by the system from its environment. The researcher adopted and replicated this notion in the rationalisation of the operation of the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic in concise to support national development goals laid down in national policies and legislations. The organizations were required to be efficient and effective in order to fulfil their goals in sustaining and enhancing development activities.

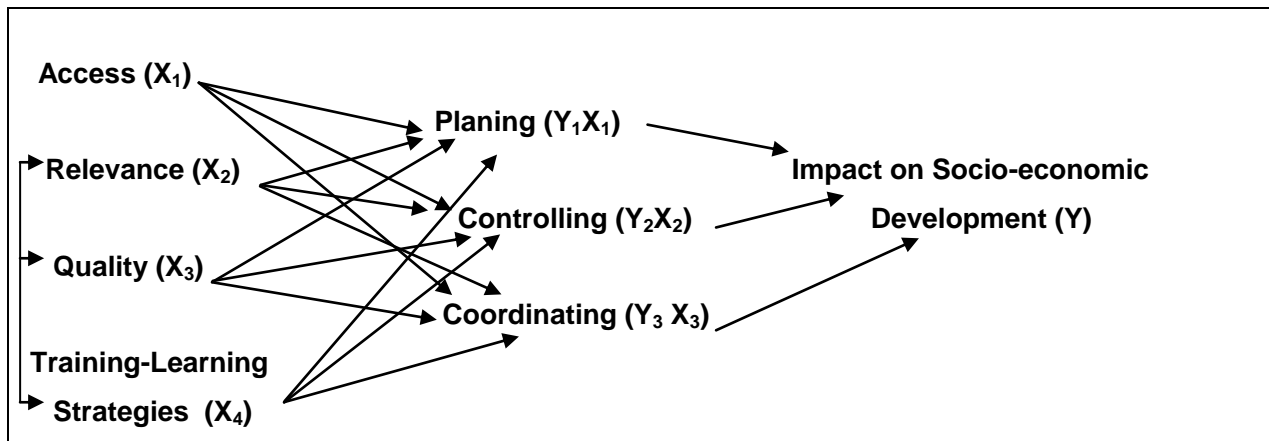
The efficiency of educational institution could be the function of a number of variables interacting within the organization. These variables consisted of attributes such as tasks, instructors, students, technology, structure, support staff, finance and those who got affected by any change to be introduced in the system. Effectiveness also depended on the responsiveness and adaptability of the organization to environmental needs and demands.

The effectiveness and efficiency of an educational system could be maintained and improved through continuous evaluation of performance (UNESCO CD ROM, 2001:*ibid*). However, the performance was dependable upon the appropriate inputs and their proper processing. Without appropriate inputs, ineffectiveness resulting in an output not acceptable to end-users would prevail.

The researcher concurred with Mouton (1996:94) and hypothetically acquired that if there would be adequate access to technical and vocational education, with viable planning, as the sound input towards human capital development, then there would be an output of sound development. Thus, controlling and coordinating technical and vocational education. If there would be relevant tertiary technical and vocational education, then there would be outputs and outcomes of great benefit to the society. Also, if there would be quality tertiary technical and vocational education, then there would be successful skill acquaintance throughout training and learning strategies that would impact on the socio-economic development.

Thus Mouton stipulated that if A, then B: this however, had been a conditional statement which articulated that if the independent variable A would be obtained, then the dependent variable B would be a consequence logically. Mouton came up with causal relationships between variables as in figure 3.7 of which the researcher slightly altered to suit the argument perceptive to this study especially in deductive reasoning as indicated earlier in this chapter.

Figure 3.7 Causal relationships between variables



Source: Mouton (1996:94).

X as Mouton accorded, represented independent variable(s) while Y was for dependent variable. The arrows joining X₂, X₃ and X₄, similarly to Mouton's Figure 15.1, indicated the relationship between variables.

3.7 DATA ANALYSIS AND INTERPRETATION

Data was collected using the questionnaire, interview and observation. The findings that emerged in the analysis formed a basis for generalisations and recommendations to be made. With regard to this important aspect in the epistemic imperative, Bell, (1999:171) remarked that data collected by means of interviews, questionnaires, diaries or any other form meant very little until they had been analysed.

Eichelberg (1989:220) in Lepota (2003:43) agreed and insisted that after data were collected in a study, the researcher must analyse them to derive frequencies, means, standard deviations, and other summaries of data. Lepota continued by submitting that data collected would show differences on most variables studied. However, Lepota overlooked the notion that data collected could also demonstrate significant relationship between variables. Moreover, the significant relationship between variables needed to be analysed by *chi-square goodness-of-fit test* to investigate the representativeness towards the meaningful significant relationship between variables; interpreted the results in order to respond to the problem and manifested answers to research questions, and or implore validity and or accountability of research hypotheses (<http://www2.chass.ncsu.edu/garson/pa765/chisq.htm>: on line).

3.7.1 Description of Data in Qualitative Paradigm

Analysis and interpretation of qualitative verbal data; data that was gathered during the interviews whereby special form filling became adequate. Such data were transcribed and analysis made from the transcripts. Indicators were identified from the responses and then similarities and differences of opinions for each indicator were inductively checked and categorised. Generalisations were then made on the basis of the findings.

The procedure for analysing and interpreting qualitative data for this study conformed to the three stages of data analysis suggested by Miles and Huberman in Wellington (2000:134) and cited by Lepota (2003:44), such that in the first stage data were collected, displayed in a tabula form and summarised to be reported in form of findings. Thus, designated the grounded theory approach as a qualitative research method that used a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon earlier mentioned (cf. 3.4.2.1).

The reason for having chosen this method was that it appeared to be practical and was applicable for this study as indicated earlier in 3.3.2 that 'in a qualitative study, one does not begin with a theory to test or verify, rather consistent with the inductive model of thinking, a theory may emerge during the data collection and analysis phase of the research or be used relatively late in the research process as a basis for comparison with other theories' Central University of Technology Research Seminar presentation (2004) .

3.7.2 Description of Data in Quantitative Paradigm

Qualitative data was interpreted and presented depending on the type of questions analysed in the investigation of the phenomenon. Tables had been used to display data and there after finding had been given below each table.

The Cronbach's alpha, which had been defined as a measure of how well a set of items (variables) measure a single unidimensional latent construct (<http://wwwats.ucla.edu/stat/spss/faq/alpha.html>: on line) was operationalised on the impact of tertiary technical and vocational education on the Lesotho socio-economic was used to test the reliability of the questionnaire. Cronbach's alpha as accorded by the above website, could be written as a function of the number of test items and the average inter-correlation among the items. Below, for conceptual purpose, the formula for the standardized Cronbach's alpha could be denoted as thus (<http://wwwats.ucla.edu/stat/spss/faq/alpha.html> on line):

$$a = \frac{N \bar{r}}{1 + (N - 1) \bar{r}}$$

Where N is the number of items and r-bar is the average inter-item correlation among the items.

3.7.3 Testing Hypotheses

Hypotheses were tested by a chi square for both dependent and independent variables (cf. 4.5.2). According to Burns (2003:212) chi square would be a simple non-parametric test of significance, suitable for nominal data where observations could be classified into discrete categories and treated as frequencies. Burns further subscribed that chi square is used to test hypotheses about independence (or alternatively the association) of frequency counts in various categories. The purpose of operationalising chi square in this research study had been to investigate whether; with relevance to access, relevance, quality and training-learning strategies deployed in tertiary public technical and

vocational education adhered to planning, coordination and controlling of tertiary public technical and vocational education of the Lerotholi Polytechnic there was any significant contribution towards socio-economic development of Lesotho with special reference to Maseru district. A question to this would be: ' Do Lerotholi Polytechnic technical and vocational education programmes have an impact on the socio-economic development of Lesotho with special reference to Maseru district?'

In Burns (2003:213) the symbol had been the Greek letter *chi*, which would be pronounced 'kye' to rhyme with 'sky', and written as χ^2 .

3.7.4 Analytical Tools

Cronbach's alpha was used to measure the reliability and validity of instruments deployed. Chi square was used to test hypotheses about independence of frequency counts in the operationalisation for the internal consistency values computed, using data reported in the study and tabulated.

SPSS was used for frequency that constituted to nominal data that had been displayed in the contingency tables for the utilisation of chi square (χ^2).

3.7.5 Answering Research Question

Data from the Lesotho Ministry of Education Department of Technical and Vocational Education and Training officers was qualitative. The question items in an interview measured in relation to access, relevance, quality and training-learning strategies of the Lerotholi Polytechnic's contribution to the impact of tertiary public technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district. The variables were adhered to planning, controlling and coordination (legal framework and governance) as the input to evoke complementary activities towards outcomes and outputs that would later substantiate impact.

Questionnaires responses of the sample population – the Lerotholi Polytechnic administrative staff, lecturers, their students and graduates (for cooperate and competence) also formed a rich concurrence towards the epistemic imperative whereby exploration, description and explanation of impact of Lerotholi Polytechnic tertiary public technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district were considered in the study.

The interview schedule had been used to build up concepts of generalisations from the perceptions and attitudes of the interviewees and there after triangulated such responses with document analyses and data collected through questionnaires. Questionnaire instruments were adhered to testing the hypothesis and to answering the research questions that had been outlined under 3.5.5 and 3.5.6 of this study report. The frequency tables and statistical analyses such as the utilisation of chi square were used to measure and test the hypotheses for answering the research questions.

3.8 CONCLUSION

In this chapter, literature that formed the basis for research methods used in this study was reviewed. Both Qualitative and quantitative paradigms formed methodological triangulation for the study whereby exploration in evaluative research, case study and survey were utilised. Also descriptive approach was engaged in both methods in order to provide explanation of the emerging variables in the phenomenon. Inductive and deductive reasoning were deployed for the better understanding of the phenomenon whereby grounded theory was operationalised in the qualitative paradigm.

Triangulation of methodologies was identified as appropriate. Yin (1984: <http://www.tele.sunyit.edu/triangulation.htm>- on line) mentioned that case study as a research tool in terms of design and analysis together with others research strategies (experiment, survey, history, and archival analysis) could be used for all three purposes: exploratory, descriptive, explanation. When to use each strategy? It depended on form of research question, required control over behavioral events, the degree of focus on contemporary events. Type of Research Question could be in the form of :

- ❑ What : exploratory, a form of how many/how much : surveys, archival analysis;
- ❑ Who and Where : predictive about outcomes: surveys, archival analysis;
- ❑ How and Why : explanatory : case studies/history/experiment ;

Three main activities in case studies were: design, analysis, and reporting issues. The problems often arose in the form of question when researcher did a case study were: how to define the case being studied, how to determine the relevant data to be collected, and what should be done with it.

A research design of a case study was the logic that linked the data to be collected and the conclusions to be drawn to the initial questions of a study. The researcher also must maximised four aspects of the quality of design: construct validity, internal validity, external validity, and reliability.

Grounded theory bore similarities to analytic induction, in respect of networking of theorizing of data collection. These methods were used at different stages of the research study as in the data collection and data analysis. Chapter four presented the research results.

CHAPTER 4

PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION OF RESEARCH RESULTS

4.1 INTRODUCTION

In the previous chapter research methods that were used in the data collection and analysis were identified, discussed and justified. In this chapter the results of the investigation of the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district had been outlined. The premises of the study rested upon the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic had been presented, analysed, interpreted and discussed.

The focus of this study had been on independent and dependent variables substantiating provision of technical and vocational education such as access to technical and vocational education, its quality and relevance subscribed in training/learning strategies. As noted in the research findings, there had been a strict coherence on the governance of technical and vocational education in the Maseru district while taking on board the establishments of planning, controlling and coordination through the legal framework.

This chapter was divided into three parts. The first part covered data presentation. The second part covered the comparative and cross sectional analysis of the findings. And the lastly part comprised of findings with regard to the research objectives, hypotheses and questions.

4.2 PRESENTATION OF QUALITATIVE DATA

4.2.1 Lesotho Ministry of Education and Training: Department of Technical and Vocational Education and Training (TVD) Interview Schedule

Seven officers of the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD) were interviewed in order to elicit their opinion about the impact of technical and vocational education on the socio-economic development and the extent to which it met the needs of the end-users (cf. 3.3.2, 3.4.3, 3.4.4, 3.5.2 and 3.7.1).

4.2.1.1 *Results presentation and discussion*

4.2.1.1.1 *Interview question number one: the role of Lerotholi Polytechnic public technical and vocational education*

The question was aimed at addressing the research hypothesis 2 (H_1) and the research question 3.5.6.6 and 3.5.6.7. Interview question to TVD personnel was:

What is the role of tertiary technical and vocational education at the moment in Lerotholi Polytechnic?

The responses were obtained in order to explicate the ways (TVD officers had come to understand, accounted for, took action and otherwise managed their day-to-day situations in TVET.

If six out of the seven interviewed participants (85.7 per cent) provided the information that the role of technical and vocational education at Lerotholi Polytechnic was to equip trainees with job-related skills. They also stated that “quality technical and vocational education and training helped to develop the individuals’ knowledge in scientific and technological education field and in a broad perspective in occupational areas that required technical and professional expertise and competencies, and occupational skills’ (cf. 2.2.1) for the cause effect relationships (cf.1.11.2).

Most of the interviewed respondents agreed that the role of technical and vocational education at Lerotholi Polytechnic was to provide skills required in the labour market. This issue of equipping individuals with labour market required skill had also appeared in (cf. 2.2.11).

One TVD personnel amongst those interviewed, stated that the role had been illusory as students failed to get appropriate jobs and also there existed lack of demand-driven, and competence biased training for specialization in the Lerotholi Polytechnic technical and vocational education. The respondent embarked on exit barriers (cf. 1.11.1).

4.2.1.1.2 Interview question number two: access to the Lerotholi Polytechnic technical and vocational education

The interview question was aimed at addressing research hypothesis1 (H₁) and the research questions 3.5.6.3 and 3.5.6.4.

What is the level of enrolment of trainees in the technical and vocational education in the Lerotholi Polytechnic?

Most of the subjects interviewed; 76 per cent indicated the deficiency of the enrolment in the Lerotholi Polytechnic for technical and vocational education and by substantiated that it was low. This state of affairs had been dominant in extremes (cf. 2.3.5) and in some cases it had even been gender biased (cf. 2.4.3). The reasons cited included lack of interest in implementing the draft policy as the legislative framework from the Lesotho Ministry of Education Department of Technical and Vocational Education and Training.

4.2.1.1.3 Interview question number three: access to technical and vocational education

The respondents supplied the information required to the research question (cf. 3.5.6.3) and the hypothesis (cf. Hypothesis 1 (H₁)).

How is access to technical and vocational education in the Lerotholi Polytechnic be supported to ensure the participation of all groups of the society (gender and disability) in the participation of economic development?

The 98 per cent of the respondents indicated that for now, measures had been taken to address gender disparity at Lerotholi Polytechnic even-though there existed ambiguous discrepancy; hopefully and gradually things would improve. However, nothing so far had been done for the disabled. The respondents also indicated gender disparity still existed (cf. 2.4.3, 2.6.1) and there was still no arrangement for the disabled. When asked whether gender issues contributed to the impact of Lerotholi Polytechnic technical and vocational education programmes; the response was that it did not. But would gender issues contribute to the impact of Lerotholi Polytechnic technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district? Through inquest had been articulated in statistical analysis deployed (cf. 4.2.2.1) the issue would need further holistic perspective approach. Literally, entry barriers prevailed (cf. 1.11.1).

4.2.1.1.4 Interview question number four: Relevance of technical and vocational education towards socio-economic development

This question was meant to test the research hypothesis 2 (H_1) and provided answer to the research question 3.5.6.6.

What are the changes in the labour market that must be addressed by tertiary technical and vocational education and training at the Lerotholi Polytechnic to ensure the genuine implementations of life long learning, lifelong career development and lifelong employment?

4.2.1.1.4.1 Lifelong learning

The responses to this question were mixed. In summary, most respondents (88 per cent) highlighted the need for relevance and quality assurance of Lerotholi Polytechnic technical and vocational education to be responsive (cf. 2.2.11, 2.4.1, 2.9.8 and 2.11) to societal needs, wants and demands in order to impact on the socio-economic development (cf.1.11.2), locally and regionally. According to the respondents institutional barriers surfaced (cf. 1.11.1) as another weakness of TVET at Lerotholi Polytechnic.

4.2.1.1.4.2 Lifelong career development

The responses had implications on the Lerotholi Polytechnic TVET's lack of being responsive demand-driven, relevant and quality assurance (cf.1.11.2) and (cf. 4.2.1.7a). The question and responses had been in line with hypotheses two and three (cf. 3.5.5). In the research methodology, and also with research questions 3.5.6.7 and 3.5.6.8 (cf. 3.5.6) the interview led to further hypothesis and provided

generalizations (Best and Kahn, 2003:242) in regard to the fact that there existed exit barriers (cf. 1.11.1).

4.2.1.1.4.3 Lifelong employment:

The responses to this question advocated the need for pedagogy in TVET at Lerotholi Polytechnic to be responsive demand-driven, to address the issues of relevance and quality assurance (cf. 1.11.2). The respondents also responded to the research hypotheses 2 (H_1) and 3 (H_1) (cf. 3.5.5) and the research questions 3.5.6.7 and 3.5.6.8 (cf. 3.5.6), which had also been tested and answered in the quantitative data analyses. The responses clearly indicated that exit barriers prevailed.

4.2.1.1.5 Interview question number five: Impact of Lerotholi Polytechnic technical and vocational education on the socio-economic development

Interview question highlighted the research hypothesis 2 (H_1) and research questions 3.5.6.6 to 3.5.6.8.

How can tertiary technical and vocational education at the Lerotholi Polytechnic co-operate with the labour market to ensure the relevance, and employability of human resources in economic production?

The responses to this question were that in order to be responsive demand-driven, Lerotholi Polytechnic as the provider, and TVD as the planner and provider, and industry as the benefiting entity should liaise with each other to provide the responsive demand-driven technical and vocational education and training in the relevance and quality assurance with respect to curriculum innovations (cf. 2.3.5 and 2.4) in order to overcome exit barriers (cf.1.11.1). The respondent's responses also had reacted to test the research hypotheses 2 (H_1) and 3 (H_1) (cf. 3.5.5) rejecting null hypotheses and responded to the research questions 3.5.6.6, 3.5.6.7 and 3.5.6.8 (cf. 3.5.6).

4.2.1.1.6 Interview question number six: Relevance and quality of the training/learning strategies in the Lerotholi Polytechnic technical and vocational education towards socio-economic

How has tertiary technical and vocational education at the Lerotholi Polytechnic been structured to encourage the assumption of responsibility by participants (trainees to be employees and employers) for the world of work?

The responses obtained indicated that classroom experience and training for competence of students posed a major concern with regard to activities engaged in Lerotholi Polytechnic programmes such as in its relevance and quality assurance (cf.2.1, 2.2.11, 2.3.5,2.4.1, 2.4.1,2.4.10, 2.9 and 2.11). The responses submitted rejected hypotheses two but accepted null hypothesis (cf. 3.5.5). The

respondents' established responses to the inquest of research questions 3.5.6.6, 3.5.6.7 and 3.5.6.8 (cf. 3.5.6).

4.2.1.1.7 TVD officers' responses presentation to interview questions seven: Management of Lerotholi Polytechnic technical and vocational education in order to utilise its impact on the socio-economic development

What initiatives has your institution put in place to make tertiary technical and vocational education at the Lerotholi Polytechnic to achieve its objectives of access, quality, relevance and training/learning strategies relative to socio-economic development?

4.2.1.1.7.1 Access:

According to the responses provided, TVD had contributed little to development of technical and vocational education programmes in Lerotholi Polytechnic despite the fact that it was the department within the Lesotho Ministry of Education and Training that administered technical and vocational education and training (cf. 2.4.4) in charge of Lesotho's technical and vocational education. The respondents indicated some barriers at the systemic level (cf. 1.11.1). The responses supported the null research hypothesis two (cf. 3.5.5) and rejected the alternative hypothesis. Research questions 3.5.6.6, 3.5.6.7 and 3.5.6.8 (cf. 3.5.6) in the research study had been also been attended to.

4.2.1.1.7.2 Quality:

On the issue of quality, the respondents were in agreement to the notion that the Department of Technical and Vocational Education and Training (TVD) of the Lesotho Ministry of Education as the governing body responsible for technical and vocational education and training in Lesotho seemed to be poorly functioning (cf. 1.12). The findings on quality of TVET at Lerotholi Polytechnic also supported the early studies of Dicknson (2003:1) and Working Group on Education Sector Analysis – Sebatane, Ambrose, Molise, Mothibeli, Motlomelo, Nenty, Nthunya and Ntoi (2000:37) and (cf. 2.4.7.1) and there existed barriers at the systemic level (cf. 1.11.1). Therefore, if there existed insufficiency in the heart and control of technical and vocational education headquarters it would be very difficult for the implementers to sustain their responsibilities; thus advocating institutional barriers (cf.1.11.1). There would be meek chances for technical and vocational education to sustain the impact on the socio-economic development and also there would be exit barriers (cf.1.11.1). The responses had suggested clarifications to be reflected to research hypotheses (Hypotheses $2H_0$ and $3H_0$; substantiated rejection of alternative hypotheses and acceptance of null hypotheses. Also had responded to research questions (cf.3.5.6) 3.5.6.7, 3.5.6.8 and 3.5.6.9 respectfully.

4.2.1.1.7.3 Relevance:

The respondents (100 per cent) agreed to the similar notion that emphasis should be placed on life-long learning schemes which were related to labour market requirements and demands. Therefore,

TVD and Lerotholi Polytechnic's liaison with industrial institutions should be of high priority in order for industrial attachment to meet the relevance of training towards labour market demands. Such that training should be geared towards the industrial demands whereby Lerotholi Polytechnic should always and constantly research for reference sake the requirements in the labour market. The respondents suggested that the institutions should collaborate – Lerotholi, industry and TVD should as an overseer.

4.2.1.1.7.4 *Training/learning strategies:*

The interviewees indicated that collaboration of the TVD, Lerotholi Polytechnic with the labour market would substantiate that the Lerotholi Polytechnic programmes be accepted to agitate (arise) its access, quality, relevance and training/learning strategies relative to socio-economic development. Respondents provided various responses towards hypothesis 3 (H_1) by stating that improving the knowledge and skills of workers would increase Lesotho economy's output of goods and services and contributed to economic and social development substantiated by learning and training at the Lerotholi Polytechnic and established the notion for rejecting null hypothesis. To reach this goal there should be collaboration between the three entities and to overcome institutional barriers (cf. 1.11.1). Also, research question 3.5.6.9 (cf. 3.5.6) had been responded to.

4.2.1.1.8 *Interview question number eight: Learning and training strategies in Lerotholi Polytechnic technical and vocational education*

What is your opinion about the extend to which technical and vocational education curriculum in Lerotholi Polytechnic met the needs of prospective technicians and, in turn, of the needs of the society they were trained to serve (labour market)?

The responses received included competence and demand-led training needed to be put in place in order to equip the trainees with the required skills in order to impact on the socio-economic development (cf. 1.11.2). Hypothesis 3 (H_1) (cf. 3.5.5) had been accepted and questions 3.5.6.7, 3.5.6.8 and 3.5.6.9 had been responded to.

4.2.1.1.9 *Interview question number nine*

What are those learning and training strategies that needed to be supported or developed in the Lerotholi Polytechnic to increase its contribution of the efficiency of the labour market and to the fair and just distribution of the wealth generated by the labour market?

The respondents provided that following answers: demand-driven learning and training competence based on strategies, demand-driven pedagogy that would implicate learning and training required for sustainable development, customer focused and diversified TVET system for skills deployment, needed the commitment of the industry and higher learning and education facilities. These issues needed to be supported or developed in the Lerotholi Polytechnic to increase its contribution of the

efficiency of the labour market and to the fair and just distribution of the wealth generated by the labour market in order to utilise the impact on the socio-economic development. '*United Nations Conference for Trade and Development (UNCTAD) Investment Policy Review*' December 2002 identified weak entrepreneurial skills and lack of linkages between small micro-medium enterprises (SMMEs) and large-scale industry as to the priority areas that needed to be addressed in the medium-term (cf. 2.3.6) and overcome exit barriers (cf. 1.11.1). Alternative research hypothesis 3 (H_1) (cf. 3.5.5) had been accepted; null hypothesis rejected and research questions 3.5.6.7, 3.5.6.8 and 3.5.6.9 (cf. 3.5.6) had been acquainted with in these responses.

4.2.1.10 Interview question number Ten: Legislative framework

What is the legislation mechanism that had been developed by your Ministry to support the universal availability and effectiveness of tertiary technical and vocational education at the Technical institutions?

The respondents indicated that Technical and Vocational Training (TVT) Act number 25 of 1984 (cf. 1.12) and (cf. 2.4.8) and Technical and Vocational Education Draft Policy guided the legislative framework of technical and vocational education. The majority of the respondents felt that since the policy was in a draft form, there emanated constrictions towards technical and vocational education at Lerotholi Polytechnic implicating barriers at the systemic level (cf. 1.11.1). The approval of the TVET draft policy by the Lesotho Cabinet would remedy the prevailing hindrances. The respondents had addressed; to some degree in pertaining circumstances; research hypotheses one, two and three, (cf. 3.5.5). And also subscribed to the research questions 3.5.6.6, 3.5.6.7, 3.5.6.8 and 3.5.6.9 (cf. 3.5.6).

4.2.1.11 Interview question number Eleven: Policy framework

What policy has been developed by your Ministry to support the universal availability and effectiveness of tertiary technical and vocational education at the Technical institutions?

The TVD respondents indicated that the Lesotho Technical and Vocational Education and Training Policy was in the draft form. By then the 1984 Act had currently been the official statement policy whereby barriers at the systemic level (cf.1.11.1) prevailed. Operationalising the Act substantiated legal framework in Lerotholi Polytechnic (cf. 2.4.8). However, the responses succumbed to the research hypotheses 2 (H_1) and 3 (H_1) (cf. 3.5.5) rejecting their null hypotheses, and were in consideration of the research questions 3.5.6.6, 3.5.6.7, 3.5.6.8 and 3.5.6.9 (cf. 3.5.6) with respect to the impact on the socio-economic development.

4.2.1.12. Interview question number Twelve: relevance and quality of Lerotholi Polytechnic technical and vocation education learning and training strategies

How can education for the world of work at the Lerotholi polytechnic technical institution contribute to the removal of disparities of economic return from employment in formal and informal sectors –

stemming from factors as gender biasness and discrimination, exploitation of the disadvantaged, the internationalising of work in the restructuring of economy?

The TVD respondents acknowledged that learning and training at the Lerotholi polytechnic should be demand-driven and try to remove disparity stigmas of social and gender discrimination (cf. 1.11.1). Respondents further indicated that learning and training at LP should be geared towards the demands of the labour market to expatiate relevance and quality assurance within the Lerotholi Polytechnic education system. The articulation of skills development activities had been an important challenge for the immediate future as competency-based training helped to acquire skills necessary to meet various job profiles (cf. 2.4) and overcame the exit barriers as a result of the impact on the socio-economic development. The respondents raised issues and trends that should be utilized within Lerotholi Polytechnic pedagogy and addressed the research hypotheses one, two and three, rejecting their null hypotheses (cf. 3.5.5). Questions 3.5.6.6, 3.5.6.7, 3.5.6.8 and 3.5.6.9 (cf3 .5.6) were answered.

4.2.1.13 Interview question number thirteen: Lerotholi Polytechnic technical and vocational education's contribution towards socio-economic development

How has tertiary technical and vocational education at the Lerotholi Polytechnic Technical institution contributed significantly to the social effectiveness, social responsibility, personal actualisation and empowerment of people within the arena of work?

The TVD respondents indicated that the Lerotholi Polytechnic technical and vocational education should equip trainees with essential required skills. The interviewees added that the articulation of skills development activities were an important challenge for the immediate future as competency-based training helped to acquire skills necessary to meet various job profiles (cf. 2.4). And also, it had to be comprehended that technical and vocational education and training might not create jobs, it could provide people with the skills required to give them better opportunities for self-employment, wage employment, re-employment and even informal sector initiatives (cf. 2.9.9) in order to subscribe to the impact on the socio-economic development. Research hypotheses 2 (H_1) and 3 (H_1) had been catered for, null hypotheses rejected (cf. 3.5.5). Research questions 3.5.6.6, 3.5.6.7, 3.5.6.8 and 3.5.6.9 (cf3 .5.6) answered.

4.2.1.14 Interview question number fourteen: hindrances in the Lerotholi Polytechnic technical and vocational education

What are those hindrances/constraints that your institution encountered and endured which were obstructive to Lerotholi Polytechnic tertiary technical and vocational education and disallowed you in meeting the required criteria?

The TVD respondents remarked on management rigidity, lack of funds and resources, and lack of qualified staff as major constraints in the smooth operation of TVET in Lesotho (cf. 2.9.9). A

knowledgeable and capable skilled manpower was suitable to be essential to economic success and national development (cf. 2.4.1).

4.2.1.15 Interview question number fifteen: development in technical and vocational education

The participants were requested to indicate those salient issues in the Lerotholi Polytechnic technical and vocational education that the interview did not touch.

What are those salient issues pertaining to development within tertiary technical and vocational education at the Technical that had been relevant and effective to societal and economic development that you would like us to share – that the asked questions in this interview did not address in terms of access, relevance, quality and training/learning strategies?

4.2.1.15.1 Access

Lack of infrastructure and resources (cf. 1.11.1) with regard to entry barriers parented the deficiency in addressing adequate access of students into the Lerotholi Polytechnic technical and vocational education programmes (cf. 2.6). Also lack of qualified instructors crippled viable access to Lerotholi Polytechnic technical and vocational education rendering institutional barriers (cf. 1.11.1). The research hypotheses 2 (H_1) and 3 (H_1) had been nullified and weakness to the impact on the socio-economic development had been illustrated and the responses had advocated answers to questions 3.5.6.6 to 3.5.6.9.

4.2.1.15.2 Relevance:

The respondents acknowledged that there should be capacity building in technical and vocational education at the Lerotholi Polytechnic adherent to institutional barriers and exit barriers that would hinder the impact on the socio-economic development. Research needed to be undertaken for needs assessment and meeting the demands. The responses tested research hypotheses 2 (H_1) and 3 (H_1) while answering the research questions 3.5.6.6 to 3.5.6.9.

4.2.1.15.3 Quality:

Quality assurance and relevance needed to be established in order to have Lerotholi Polytechnic programmes responsive demand-driven. Certification, accreditation, assessment and articulation arrangements need to be established and that TVD technical institutions and the industry should monitor the training, accreditation and certification to ensure quality assurance in conferring to exit and the systemic level barriers and articulating the impact on the socio-economic development. The research hypotheses 2 (H_1) and 3 (H_1) had been attested while answering the research questions 3.5.6.6 to 3.5.6.9.

4.2.1.15.4 Training/learning strategies:

Capacity building through research and skills up-dating should be implemented in order to overcome the institutional barriers. Technical institutions' facilities should cater for all groups of the society (such as gender and disabled) for participation in the socio-economic development in order to overcome the entry barriers (cf.1.11.1) while testing the research hypothesis 2 (H_1) and 3(H_1) attesting to answers to the research questions 3.5.6.6 to 3.5.6.9. Qualitative research analysis (case study and exploration) in utilizing grounded theory (cf. 3.5.3) had reached a saturation point. No more new issues emerged from the responses provided.

Acquiesce on the Lerotholi Polytechnic Technical and vocational education's contribution towards the socio-economic development had disapproved its capability and capacity to impact on the socio-economic development due to its intensity.

The TVD officers' responses had been counterchecked with those of the Lerotholi Polytechnic sampled population to establish consistency in research findings. The next section substantiated quantitative data analysis.

4.3 PRESENTATION OF QUANTITATIVE DATA

In this section, quantitative data obtained through operationalisation of questionnaires were analysed, interpreted and presented. Tables were employed in the presentation of the data. The investigation was methodologically triangulated between Lerotholi Polytechnic students, graduates, lecturers and administrators within the quantitative paradigm utilisation. Instruments had been defined below.

4.3.1 Choice of Research Tools

There existed a number of research tools used in this study as had been indicated earlier in chapter 3 and in 4.2 above. Cohen and Manion (1997:83) indicated that the most commonly used descriptive method in educational research is the survey. And also the important factor in designing and planning a survey had been the financial cost as Pulumo (2003:39) cited Cohen and Manion (1994).

It had been in this regard that the researcher decided to use a questionnaire for the sample population. Thus, the research data were collected through methodology triangulation.

4.3.1.1 The questionnaire contents

There had been the rationale for the questionnaire whereby the researcher explained who he was, why he undertook the study and the topic of the research was also clarified. The respondents were requested to fill the questionnaires as honestly as possible, of which the contributions would not only assist the researcher in the completion of his studies, but would also form basis of significant

improvements to the governance and delivery of technical and vocational education in the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic. The respondent was assured complete confidentiality of his/her individual survey responses. The respondent was thanked for assisting in making technical and vocational education responsive in the labour market, and promised to get the results of the study if need arose.

The researcher concluded this part by writing his name, status the e-mail address. This was incorporated in all the questionnaires; students, graduates, lecturers and administrators questionnaires. All the questionnaires had four parts; viz:

- ❑ **Part A:** access to technical and vocational education and training in Lerotholi Polytechnic;
- ❑ **Part B:** relevance of technical and vocational education at the Lerotholi Polytechnic towards the socio-economic development;
- ❑ **Part C:** quality of technical and vocational education at Lerotholi Polytechnic with respect to demands; and
- ❑ **Part D:** training/learning strategies engaged at Lerotholi Polytechnic to substantiate technical and vocational education's impact on the socio-economic development.

4.3.2 Instruments validity

The validity of the instruments was ascertained by giving it to colleagues at Lesotho College of Education who are specialists in Technical Education and research methodology and Professor Szubarga; Senior Director of Institutional Research Institute at the Central University of Technology. Their comments were incorporated into the final draft of the study. Also, the instruments were piloted at the Lesotho College of Education students and Leribe Technical School graduates. Triangulation with Lerotholi Polytechnic students, graduates, lecturers, administrators and Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD) validated data collected together.

4.3.3 Lerotholi Polytechnic Student Questionnaire

Instructions of marking the circle that fully described the situation were given to the respondents. They were requested to mark the circle with an x, for an example ◀; if they would change their mind and chose another alternative response they were requested to fill the wrong one ● and then chose the desired one ▶. The objective of items in Part A of the questionnaire was to gather information about the biographical information of the respondents.

4.3.3.1 The Lerotholi Polytechnic student questionnaire contents

In Part A the questionnaire was structured thus; to determine the demographics of the respondents. According to 2001 Lesotho Population Data Sheet there were 995 723 females and 964 346 males in Lesotho by 2000. Maseru being the urban area, the largest of Lesotho's districts and that with more socio-economic activities, one would contest that it should be more populated than the other districts. And also one might solicit that there should be more females than males as more males had found employment in the Republic of South Africa with a total of 59 233 employed females and a total of 53 145 males in urban of Lesotho (Labour Force Survey, 1999:63).

They were asked to indicate the credentials that made possible their enrolment at the Lerotholi Polytechnic, their students' status. They were also requested to indicate their programme of study at the Lerotholi Polytechnic and reason for study. In this part, they finally were requested to indicate diversity and financial status.

In Part B they were asked to choose answers that were full description of the relevance of the education and training they were acquiring in the programmes they were enrolled into. It should be noted that the student sample was the completing students; those who had been or not been engaged in industrial attachment (experiential learning). The range covered questions twelve to nineteen, while the concluding question in this part had been that which they were requested to comment as briefly as possible on the relevance of their course towards labour market and they were to indicated the course's weakness, strengths and suggestions and or recommendations for improvements.

Quality of technical and vocational education at the Lerotholi Polytechnic comprised Part C of the questionnaire, and question twenty-one to twenty-five dealt with quality issues. In question twenty-six the respondents were requested to answer the open questions whereby they were required to indicate the weakness and strengths they had observed and draw up the suggestions and or recommendations for the improvement.

Part D of the questionnaire looked into the training and learning strategies used or employed at the Lerotholi Polytechnic. Students were requested to rate their views from strongly disagree to strongly agree. Requesting the trainees to comment as briefly as possible on the weakness, strengths, suggestions and or recommendation concluded the questionnaire.

4.3.3.2 *The Lerotholi Polytechnic graduate questionnaire contents*

Lerotholi Polytechnic graduate question was the exact replica of the student's questionnaire. The only difference was that the graduate had to conceptualise the experiences and the attitudes as per environment that he or she was engaged within in the labour market. In Part A the graduates were requested to indicate their demographics, access to Lerotholi Polytechnic, diversity and financial status during their academic period. In Part B, C and D they were asked to display their attitudes respectfully in relation to relevance, quality and training or learning strategies in technical and vocational education

at Lerotholi Polytechnic towards socio-economic development; they displayed their classroom experience and industrial attachment.

4.3.3.3 *Lerotholi Polytechnic lecturer questionnaire contents*

Also, the nature of the design of the questionnaire for the Lerotholi Polytechnic lecturers was similar to that of the student and the graduate survey. The major difference was that the questionnaire of the lecturers dealt with the imparting of knowledge and it had to be a bit more comprehensive to cater for issues such as policies within the Lerotholi Polytechnic curriculum and the labour market prerequisites.

4.3.3.4 *Lerotholi Polytechnic administrator questionnaire contents*

In the same juncture, the administrators survey had been similar to that of the lecturers. The minor difference had been that the administrators were in addition requested to commend on the administration issues that the lecturer could not be engaged in. All the questionnaires had been affixed as the appendices towards the end in the study report.

4.4 DATA COLLECTION IN QUANTITATIVE APPROACH

Before data collection, permission was sought from the Lerotholi Polytechnic administration, enterprise management and the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD) Director.

The researcher administered the questionnaires through the assistances of the Senior Personnel Officers in the various enterprises and at Lerotholi Polytechnic; the Registrar and the Deputy Director Administration assisted in administering the questionnaires to Lerotholi Polytechnic students and administrators. In the end a total of 325 completed the questionnaires were as followed: 44 from the finishing students; 230 from the graduates; 40 from the lecturers and 11 from the administrators (cf. 3.2.11).

While it might raise doubts as to whether or not there existed reliability of the research data results, it had been reasonable to conclude that it did because data was triangulated with the Lerotholi Polytechnic students', graduates', lecturers' and administrators'. And also, the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD) interview responses.

4.4.1 Computation of Data

The survey design had been operationalised during computation of data. All the respondents were requested to express their views, opinions and indicated the extend to which they agreed with each given statement in the questionnaire. According to Murray (1998:6), statistics would enable researchers to furnish succinct precise summaries of large amounts of data, summarised in the form of

per centages, averages, the bonding together or spreading out data, the extend of correlation among the variables and more. The responses were tabulated and displayed in a table form; their count and per centage had been shown in this research because as accorded by Murray (1998:16), the reader's task of comparing data could often be much simpler if the statistics were displayed in a tabular form. In this section there was an exploration and explanation of the impact of technical and vocational education on the socio-economic development on the socio-economic development of Lesotho with special reference to Maseru district.

4.4.2 Chi square (χ^2)

According to <http://www2.chass.ncsu.edu/garson/pa765/chisq.htm> (on line) **Chi-square goodness-of-fit test** had been "The goodness-of-fit test is simply a different use of Pearsonian chi-square. It is used to test if an observed distribution conforms to any other distribution, such as one based on theory (exemption, if the observed distribution is not significantly different from a normal distribution) or one based on some other known distribution (exemption, if the observed distribution is not significantly different from a known national distribution based on Census data)". "The [Kolmogorov-Smirnov goodness-of-fit test](#) (on line) is preferred for interval data, for which it is more powerful than chi-square goodness-of-fit..

For the purpose of this dissertation, Pearson's chi-square had been used. According to <http://www2.chass.ncsu.edu/garson/pa765/chisq.htm> (on line) "**Pearson's chi-square** is by far the most common type of chi-square significance test. If simply "chi-square" is mentioned, it is probably Pearson's chi-square. This statistic is used to test the hypothesis of no association of columns and rows in tabular data. It can be used even with nominal data. Note that chi square is more likely to establish significance to the extent that (1) the relationship is strong, (2) the sample size is large, and/or (3) the number of values of the two associated variables is large. A chi-square probability of 0.05 or less is commonly interpreted by social scientists as justification for rejecting the null hypothesis that the row variable is unrelated (that is, only randomly related) to the column variable". The hypotheses for the chi square test would be null hypotheses (H_0) where the variables would be statistically independent, and H_1 where the variable would be statistically dependent (Burns, 2003:213).

According to Best and Kahn (2003:419) formula for computing chi square had been displayed as:

$$\chi^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

Where: χ^2 had been the symbol for chi square;

f_o had been the observed frequency (actual count);

f_e had been the expected frequency.

The formula for $f_e = \frac{\sum f_o \text{ column} \sum f_o \text{ row}}{\text{grant total}}$.

\sum had been the summation of all the population measured (Burns, 2000:213)

Degrees of freedom; all but one of the expected values from the row or column would be free to vary (within the total observed; and therefore expected) frequency of that row or column; (Connor-Linton, http://www.george.edu/faculty/ballic/webtools_chi_tut.html: on line) once the freedom to vary expected cells had been specified, the last one would be fixed by virtue of that fact that the expected frequency might add up to the observed row and column totals (from which they were derived).

The degree of freedom had been computed as: $df = (C-1)(R-1)$ (Connor-Linton, http://www.george.edu/faculty/ballic/webtools_chi_tut.html: on line).

Where df had been the degree of freedom;

C had been the number of columns or levels of the variable;

R had been the number of rows or levels of the variable.

Defining the threshold of tolerance for error, (Connor-Linton, http://www.george.edu/faculty/ballic/webtools_chi_tut.html: on line) that would be in what odds would the research accept that it would be wrong in generalizing from the results from the sample to the population it represented when disseminating the research results.

For the purpose of this study, probability error (threshold of tolerance) had been set as 1 in 20, or 0.05 for the critical value.

The null hypothesis had been rejected at 0.05 not at 0.01 (Burns, 2000:422) level of significance. Burns further showed that in a 2 x 2 table (4 cells) with 1 degree of freedom, the simple formula utilised that eliminated the need to calculate the theoretical frequencies for each cell had been:

$$X^2 = \frac{N(AD - BC)^2}{(A+B)(C+D)(A+C)(B+D)}$$

Terms in a 2 x 2 table (Burns, 2000:422);

A	B
C	D

A χ^2 test using a 2 x 2 table at 1 degree of freedom had been applied, with Yate's correction (Burns, 2000:216).

The critical value used had been necessary for rejecting the null hypothesis at the 0.05 levels.

The formulae had been used throughout the quantitative analyses in this study.

4.5 ANALYSES AND INTERPRETATION OF QUANTITATIVE DATA

In the research study, there were objectives to be achieved; that were brought about by the research hypotheses and research questions (cf. 3.5.5 and 3.5.6). Such expectations had been proven plausible or not through the verification of significant relationships between variables in the deployment of chi square (cf. 3.7.3).

Expectations resigned on generalisation to the population under inquest (the Lerotholi Polytechnic convenient probability sample population), who assisted by search for the truth (articulated epistemic imperative), through the deployment of chi square, the thought had been based on the problem situation that surfaced. Situation (investigation of the impact of technical and vocational education in Maseru – Lesotho) had not been there just by natural existence, there had been causes for it to emanate (causal relationships) and an inquest to investigate and understand them (capacity building) and develop for them generalisations and remedies where applicable.

Engagement of quantitative approach through utilisation of questionnaires and chi square data analysis had been set up and undertaken. Their deployment had been outlined below.

4.5.1 Questionnaires

Lerotholi Polytechnic students, graduates, lecturers and administrators were requested to fill in the questionnaires. Part A of the questionnaire to the respondents provided the aims and general guidelines for completing the questionnaire. Variables relating to the questions in Part A requested the respondents to indicate their demographics; in questions about diversity in technical and vocational education at Lerotholi Polytechnic and financial activities to sustain enrolment .

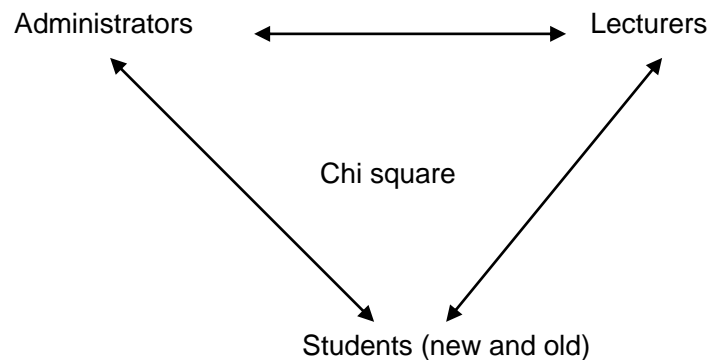
Part B of the questionnaire requested the participants to indicate their attitudes and opinions in relation to relevance of technical and vocational education offered at Lerotholi Polytechnic towards socio-economic development. Part C investigated the quality of technical and vocational education at Lerotholi Polytechnic with respect to demands. And in Part D the participants were requested to indicate their opinions and attitudes towards training and learning strategies engaged at Lerotholi Polytechnic.

For the purpose of convenient comparison between the opinion of the students, graduates, lecturers and administrators of the Lerotholi Polytechnic the results of the questionnaires had been discussed.

4.5.1.1 Data triangulation

For analyses purposes, responses were triangulated as in Figure 4.1.

Figure 4.1 Data triangulation



multiple data collected from the Lerotholi Polytechnic students, graduates, lecturers and administrators questionnaires were divided according to the following: a sample population respondent demographics; Lerotholi Polytechnic clientele's access to technical and vocational education; diversity and finances; Lerotholi Polytechnic relevance of technical and vocational education towards socio-economic development and Lerotholi Polytechnic pedagogy. These concepts had been outlined in the following sub-titles.

4.6 DEMOGRAPHICS

Classification of respondent's responses with regard to gender. Programmes offered at Lerotholi Polytechnic that respondents were engaged in and student status.

4.6.1 Gender: research question 3.5.6.4

Does gender disparity exist within the programmes offered at the Lerotholi polytechnic?

Table 4.6.1.1 Lerotholi Polytechnic Student Population Gender

Gender	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Female	12	27.3	27.9	27.9
Male	31	70.5	72.1	100.0
Total	43	97.7	100.0	
Missing System	1	2.3		
Total	44	100.0		

Table 4.6.1.2 Lerotholi Polytechnic Graduate Population Gender

Gender	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Female	79	34.3	34.3	34.3
Male	151	65.7	65.7	100.0
Total	230	100.0	100.0	

Table 4.6.1.3 Lerotholi Polytechnic Lecturer Population Gender

Gender	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Female	12	30.0	33.3	33.3
Male	24	60.0	66.7	100.0
Total	36	90.0	100.0	
Missing System	4	10.0		
Total	40	100.0		

Table 4.6.1.4 Lerotholi Polytechnic Administrator Population Gender

Gender	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Female	5	45.5	45.5	45.5
Male	6	54.5	54.5	100.0
Total	11	100.0	100.0	

Figure 4.2 Lerotholi Polytechnic Respondents' gender

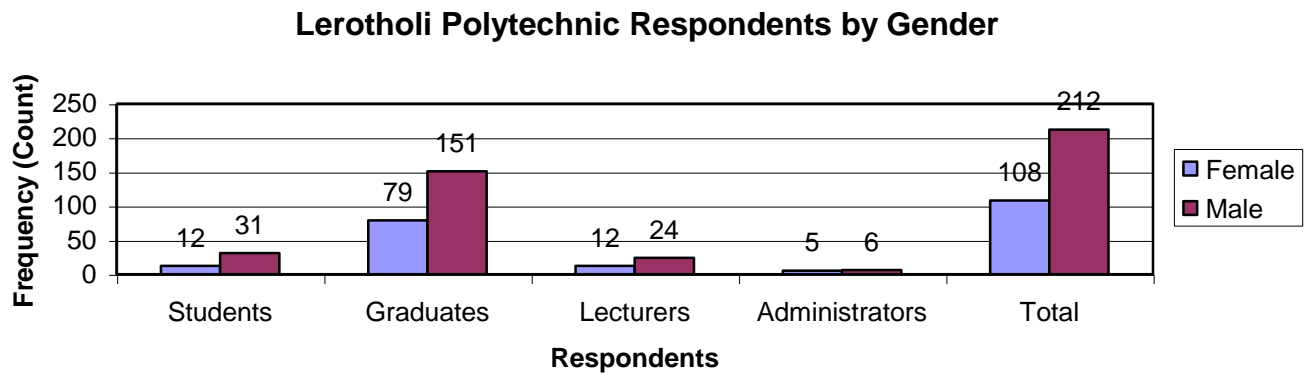


Table 4.6.1.5 displayed the computed expected frequency (f_e) and the chi square (χ^2).

Table 4.6.1.5 Lerotholi Polytechnic sample population gender and chi square (χ^2) calculations

Gender	Students			Graduates			Lecturers			Administrators			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
Female	12	14.5	0.5	79	77.6	0.03	12	12.2	0.003	5	3.7	0.46	108
Male	31	28.5	0.2	151	152.4	0.01	24	23.9	0.0004	6	7.3	0.23	212
Totals	43			230			36			11			320

$\chi^2 = 1.407$, $p = 0.5$, $df = 2$. The table value for $p = 0.05$ (cf. Appendix F) and $df = 2$ had been 5.991.

The results indicated that there was no significant relationship between the Lerotholi Polytechnic sample population and gender. This indicated that there had been gender biasness in the Lerotholi Polytechnic technical and vocational education courses and test had been in agreement with Setoi *et al* (s.a).

4.6.2 Lerotholi Polytechnic programme: research question 3.5.6.2

For what programmes did the Lerotholi Polytechnic candidates register to acquire their profession or trade?

4.6.2.1 Lerotholi Polytechnic Courses

Students and graduates were requested to indicate in the questionnaire the courses they enrolled for at the Lerotholi Polytechnic. Also, through the questionnaire, lecturers were asked to show those

courses in which they were lecturing. The objective of this was to find out whether there were new courses in extra to those found during the literature review. To investigate whether Lerotholi Polytechnic had been expanding and improving in order to meet the individual and labour market requirements in order to substantiate the impact on the socio-economic development.

As had been indicated by the respondents' responses; some of the graduates majored in more than one course and also some of the lecturers taught in more than on course. However, the scanner during the data capturing recognised their responses as missing. This did not, whatsoever, affected data reliability and validity in any way as the objective was only to find out the type of courses offered and what their colleagues had chosen.

Building Technology and Computer Systems only appeared under the respondents' responses. Tailoring did not appear under their responses.

In this case, it might have been that Building Technology and Computer Systems had been newly introduced. Still they might have not been included in the Lerotholi Polytechnic Calendar by omission. The weakness of the research instruments had been that it did not cater for the uncertainties.

Also, since nobody amongst the respondents indicated having got any instruction or instructing in Tailoring it showed that the course might have been faced-out. Or still, appropriate respondents were not found. Therefore, generalisations in this issue would be of no ground. Only data available had been used.

Tables 4.6.2.1 to 4.6.2.4 contained the respondents' course participation at the Lerotholi Polytechnic.

Table 4.6.2.1 Lerotholi Polytechnic Student Population Responses on LP Courses

In what programme are you registered?	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Bricklaying	3	6.8	6.8	6.8
Business Studies	1	2.3	2.3	9.1
Carpentry and Joinery	4	9.1	9.1	18.2
Civil Engineering	3	6.8	6.8	25.0
Computer Systems Engineering	5	11.4	11.4	36.4
Construction Engineering and Architecture	21	47.7	47.7	84.1
Electrical and Electronic Engineering	2	4.5	4.5	88.6
Electric Installation	1	2.3	2.3	90.9
Mechanical Engineering	1	2.3	2.3	93.2
Panel Beating and Spray Painting	1	2.3	2.3	95.5
Secretarial Studies	2	4.5	4.5	100.0
Total	44	100.0	100.0	

Table 4.6.2.2 Lerotholi Polytechnic Graduate Population Responses on LP Courses

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Auto - Electrics	4	1.7	2.0	2.0
Automotive	5	2.2	2.5	4.5
Bricklaying	18	7.8	9.0	13.6
Building Technology	6	2.6	3.0	16.6
Business Studies	15	6.5	7.5	24.1
Carpentry and Joinery	19	8.3	9.5	33.7
Civil Engineering	25	10.9	12.6	46.2
Computer Systems Engineering	6	2.6	3.0	49.2
Construction Engineering and Architecture	4	1.7	2.0	51.3
Dressmaking	3	1.3	1.5	52.8
Electrical and Electronic Engineering	9	3.9	4.5	57.3
Electric Installation	5	2.2	2.5	59.8
Fitting and Machining	7	3.0	3.5	63.3
Marketing and Salesmanship	25	10.9	12.6	75.9
Mechanical Engineering	2	0.9	1.0	76.9
Panel Beating and Spray Painting	6	2.6	3.0	79.9
Plumbing and sheet Metalwork	16	7.0	8.0	87.9
Secretarial Studies	19	8.3	9.5	97.5
Welding	5	2.2	2.5	100.0
Total	199	86.5	100.0	
Missing System	31	13.5		
Total	230	100.0		

Table 4.6.2.3 Lerotholi Polytechnic Lecturer Population Responses on LP Courses

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Automotive	5	12.5	19.2	19.2
Bricklaying	2	5.0	7.7	26.9
Business Studies	2	5.0	7.7	34.6
Carpentry and Joinery	1	2.5	3.8	38.5
Computer Systems Engineering	2	5.0	7.7	46.2
Electrical and Electronic Engineering	1	2.5	3.8	50.0
Electric Installation	5	12.5	19.2	69.2
Fitting and Machining	2	5.0	7.7	76.9
Marketing and Salesmanship	1	2.5	3.8	80.8
Mechanical Engineering	1	2.5	3.8	84.6
Plumbing and sheet Metalwork	2	5.0	7.7	92.3
Secretarial Studies	2	5.0	7.7	100.0
Total	26	65.0	100.0	
Missing System	14	35.0		
Total	40	100.0		

Table 4.6.2.4 Lerotholi Polytechnic sample respondents' specialization by schools

School of Built	Students	Graduates	Lecturers
Brick Laying and Plastering	3	18	2
Building Technology		6	2
Carpentry and Jionery	4	19	1
Civil Engineering	3	25	
Construction Engineering and Architecture	21	4	
Plumbing and Sheet metalwork		16	2
Total	31	88	5
School of Commerce and Applied Studies			
Business studies	1	15	2
Dressmaking		3	
Marketing and Salesmanship		25	1
Secretarial Studies	2	19	2
Tailoring			
Total	3	62	5
School of Technology			
Automotive		5	5
Auto Electrics		4	
Computer Systems Edngineering	5	6	2
Electrical and electronical Engineering	2	9	1
Electricl Installation	1	5	5
Fitting and Machining		7	2
Mechanical Engineering	1	2	1
Panel Beating and Spray Painting	1	6	
Welding		5	
Total	10	49	16

Figure 4.6.1 Lerotholi Polytechnic Participants by schools

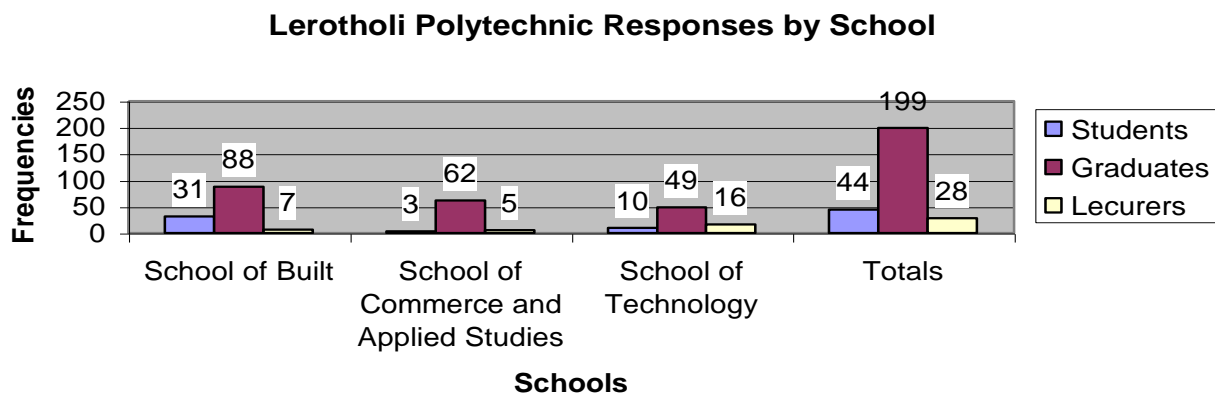


Table 4.6.2.5 Lerotholi Polytechnic sample population specialisation and computation of expected frequencies (f_e) and chi square (χ^2)

Schools	Students			Graduates			Lecturers			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
School of Built	31	14.41	119.10	88	92.52	0.22	7	13.02	2.78	126
School of Commerce and Applied Studies	3	11.36	6.15	62	51.40	2.9	5	7.23	0.69	70
School of Technology	10	12.18	26.60	49	55.07	0.67	16	7.75	8.78	75
Totals	44			199			28			271

Thus, if the expected critical value chi square (χ^2) had been 9.488, which had been less than the computed chi square value χ^2 , which were 12.25. Therefore, the null hypothesis had been rejected.

Then the test indicated that according to the respondents there was a significant relationship between the courses and schools at the Lerotholi Polytechnic.

The respondents had indicated that enrolment at Lerotholi Polytechnic four schools was based on merit. Indication of such courses in technical and vocational education in Lerotholi Polytechnic responded to the research hypothesis 1(cf. 3.5.5) had answered the research question 3.5.6.2 (cf. 3.5.6)

4.6.3 Research question 3.5.6.1

What characterised the enrolment of Lerotholi Polytechnic?

4.6.3.1 Lerotholi Polytechnic student status

Both lecturers and graduates sample population were requested to indicate the student status at Lerotholi Polytechnic in which they were engaged. This was to investigate whether there existed any arrangements for those who could not enrol for full-time courses but would like to be equipped with the labour market required skill, and those who would up-grade themselves such as in foundation courses.

Their responses had been shown in the following table and the histogram below.

Table 4.6.3.1 Lerotholi Polytechnic Graduate Responses on Student Status

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Full - time	211	91.7	95.5	95.5
Part - time	9	3.9	4.1	99.5

Foundation course	1	0.4	0.5	100.0
Total	221	96.1	100.0	
Missing System	9	3.9		
Total	230	100.0		

Table 4.6.3.2 Lerotholi Polytechnic Lecturer Responses on Student Status

	Yes		No	
	Count	Per cent	Count	Per cent
Do you instruct full-time students?	36	90.0	4	10.0
Do you instruct part-time students?	11	27.5	29	72.5
Do you instruct foundation course students?	2	5.0	38	95.0
Do you instruct in the student exchange programme.	1	2.5	39	97.5

Figure 4.6.3 Lerotholi Polytechnic Student Status

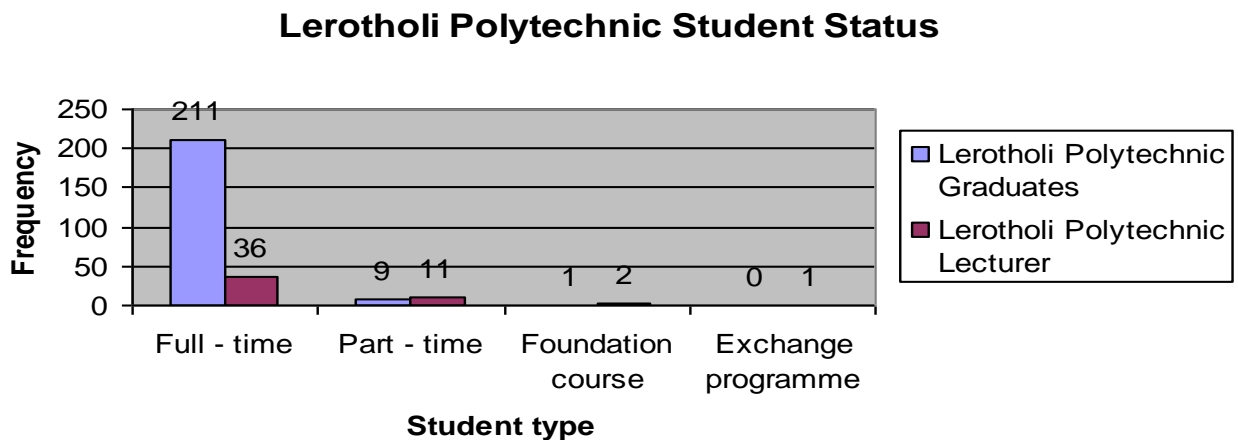


Table 4.6.3.4 Lerotholi Polytechnic student status and Chi square calculations

Student Status	Lerotholi Polytechnic Graduates			Lerotholi Polytechnic Lecturer			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	
Full - time	211	201.4	1.9	36	45.6	2.0	247
Part - time	9	16.3	3.3	11	3.7	14.4	20
Foundation course	1	2.5	0.9	2	0.6	3.3	3
Exchange programme	0	0.8	0.8	1	0.2	3.2	1
Total	221			50			271

Computed chi square $\chi^2 = 243.9$ had been greater than required critical value table chi square = 7.815 at $df = 3$ with $p = 0.05$. Then null hypothesis had been rejected.

The test indicated that there had been a significant relationship between the student status and the courses in Lerotholi Polytechnic technical and vocational education.

4.7 ACCESS TO TECHNICAL AND VOCATIONAL EDUCATION AT LEROTHOLI POLYTECHNIC

Lerotholi Polytechnic sample population was requested to indicate what made possible the enrolment of the Lerotholi Polytechnic students into technical and vocational education programmes. The tables below reflected their responses.

4.7.1 Research question 3.5.6.1

What characterised the enrolment of the Lerotholi Polytechnic trainees?

Both respondents were asked to indicate their opinion and attitude towards the reasons that would lead to enrolment in technical and vocational education offered at the Lerotholi Polytechnic. The responses had been as shown in the Tables that followed.

Figure 4.10 indicated that the Lerotholi Polytechnic sample population responses on the factors that led to enrolment of students into the Lerotholi Polytechnic programmes.

Table 4.7.1.1 Lerotholi Polytechnic Student Responses on Factors that led to Students' Enrolment at the Lerotholi Polytechnic

What made your enrolment at LP happen?	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Good results of secondary/high school.	31	70.5	93.9	93.9
Sat for a bridging course (Trade test)	2	4.5	6.1	100.0
Total	33	75.0	100.0	
Missing System	11	25.0		
Total	44	100.0		

Table 4.7.1.2 Lerotholi Polytechnic Graduate Responses on Factors that led to Students' Enrolment at the Lerotholi Polytechnic

	Good results of secondary/high school.		Sat for a bridging course (Trade test)		Enrolled for an in-service training.	
	Count	Per cent	Count	Per cent	Count	Per cent
What made your enrolment at LP happen?	147	88.6	7	4.2	12	7.2

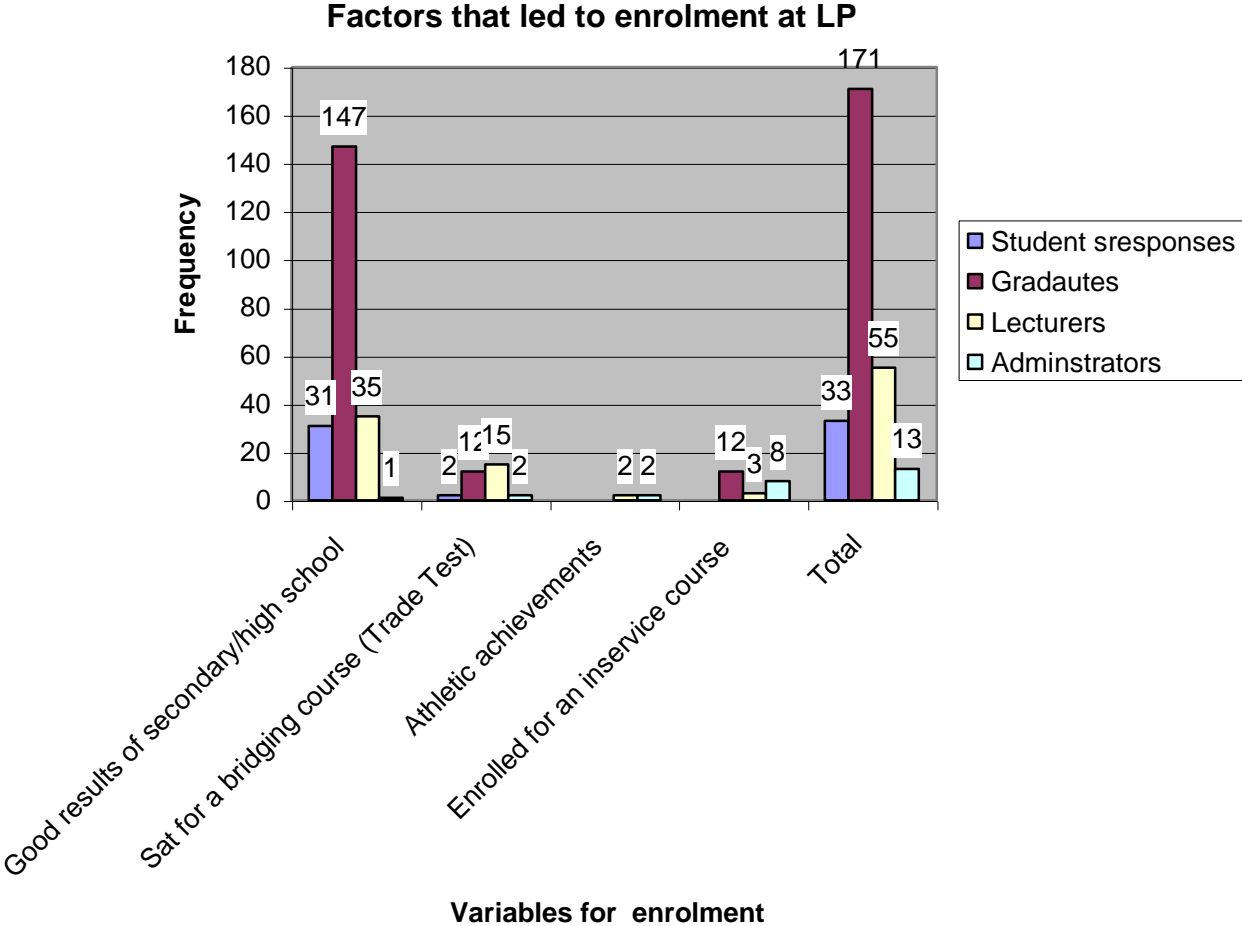
Table 4.7.1.3 Lerotholi Polytechnic Lecturer Responses on Factors that led to Students' Enrolment at the Lerotholi Polytechnic

	Yes		No	
	Count	Per cent	Count	Per cent
Results of secondary or high school lead to the enrolment of students at LP.	35	87.5	5	12.5
A bridging course lead to the enrolment of students at LP.	15	37.5	25	62.5
Athletic achievements lead to the enrolment of students at LP.	2	5.0	38	95.0
An in-service training lead to the enrolment of students at LP.	3	7.5	37	92.5

Table 4.7.1.4 Lerotholi Polytechnic Administrator Responses on Factors that led to Students' Enrolment at the Lerotholi Polytechnic

	Yes		No	
	Count	Per cent	Count	Per cent
Results of secondary high school lead to the enrolment of students at LP.	1	9.1	10	90.9
Bridging courses lead to the enrolment of students at LP.	2	18.2	9	81.8
Athletic achievements lead to the enrolment of students at LP.	2	25.0	6	75.0
An in-service training lead to the enrolment of students at LP.	8	10.0	0	0.0

Figure 4.7.1 Factors that led to students' enrolment at the Lerotholi Polytechnic



The histogram above was used to ease access of data triangulation in order to test the statistical significance between the entry requirements and access to Lerotholi Polytechnic.

Table 4.7.1.5 Factors that led to enrolment at Lerotholi Polytechnic (LP) and chi square

Questionnaire questions	Student			Graduates			Lecturers			Administrators			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
Results of secondary/high school	31	26.45	0.78	147	133.05	1.46	35	44.08	9.93	1	10.42	10.42	214
Bridging course (Trade Test)	2	3.21	0.46	7	16.17	5.2	15	0.82	17.34	2	1.27	1.27	26
Athletic achievement (sports)	0	0.49	0.49	0	2.49	2.49	2	10.42	1.69	2	0.2	0.2	4
In-service training	0	2.84	2.84	12	14.3	0.64	3	1.27	0.64	8	1.12	1.12	23
Total	33			166			55			13			267

Thus, $\chi^2 = 56.97$, $p = 0.05$, $df = 9$. The table Appendix F indicated that $p = 0.05$ and $df = 9$, the required value would be 16.919.

The value 56.97 was greater than 16.919.

If the test indicated that $\chi^2 = 56.97$, $p = 0.05$, $df = 9$; the required value would be 16.919. Null hypothesis had been rejected. Then there had been a significant relationship between entrance requirements and enrolment to the Lerotholi Polytechnic. Similarly, the respondents indicated that the enrolment was based on merit. The high school performance was the deciding factor for the enrolment. The questionnaire questions had respondent to the test of hypothesis 1 (H_1) (cf.3.5.5) had been tested and the research question 3.5.6.1) answered

4.7.2 Diversity

4.7.2.1 Research question 3.5.6.4

Did there exist gender disparity within the programmes at the Lerotholi Polytechnic?

This research question was basically aimed at finding out the number the Lerotholi Polytechnic student programme population (according to gender) enrolled in various courses.

The table below had been used to triangulate the responses of the sample population.

Table 4.7.2.1 Lerotholi Polytechnic Student Population Responses on Gender Distribution in LP Programmes

	More		Less		None	
	Count	Per cent	Count	Per cent	Count	Per cent
How is the female group of the society represented in your course?	2	4.5	41	93.2	1	2.3
How is the male group of the society represented in your course?	34	77.3	8	18.2	2	4.5
How is the disabled group of the society represented in your course?	1	2.3	26	59.1	17	38.6
How is the youth group of the society represented in your course?	32	72.7	11	25.0	1	2.3
How are the adults represented in your course?	2	4.5	37	84.1	5	11.4

Table 4.7.2.2 Lerotholi Polytechnic Graduate Population Responses on Gender Distribution in LP Programmes

	More		Less		None	
	Count	Per cent	Count	Per cent	Count	Per cent
How was the female group of the society represented in your course?	65	29.4	105	47.5	51	23.1
How was the male group of the society represented in your course?	160	72.4	43	19.5	18	8.1
How was the disabled group of the society represented in your course?	1	0.5	31	14.6	180	84.9
How was the youth group of the society represented in your course?	208	98.6	3	1.4	0	0.0
How were the adults represented in your course?	8	3.7	95	43.6	115	52.8

Table 4.7.2.3 Lerotholi Polytechnic Lecturer Population Responses on Gender Distribution in LP Programmes

	More		Less		None	
	Count	Per cent	Count	Per cent	Count	Per cent
How is the female group of the society represented in your course?	10	29.4	22	64.7	2	5.9
How is the male group of the society represented in your course?	29	82.9	4	11.4	2	5.7
How is the disabled group of the society represented in your course?	0	0.0	10	37.0	17	63.0
How is the youth group of the society represented in your course?	32	97.0	1	3.0	0	0.0
How are the adults represented in your course?	5	16.1	20	64.5	6	19.4

Table 4.7.2.4 Lerotholi Polytechnic Administrator Population Responses on Gender Distribution in LP Programmes

	More		Less		None	
	Count	Per cent	Count	Per cent	Count	Per cent
How are the female group of society represented in LP courses?	0	0.0	9	100.0	0	0.0
How is the male group of society represented in LP courses?	6	66.7	1	11.1	2	22.2
How is the disabled group of society represented in LP courses?	2	25.0	6	75.0	0	0.0
How is the youth group of society represented in LP courses?	11	100.0	0	0.0	0	0.0
How are the adults represented in your course?	5	45.5	6	54.5	0	0.0

Figure 4.7.2 Display of sample population responses

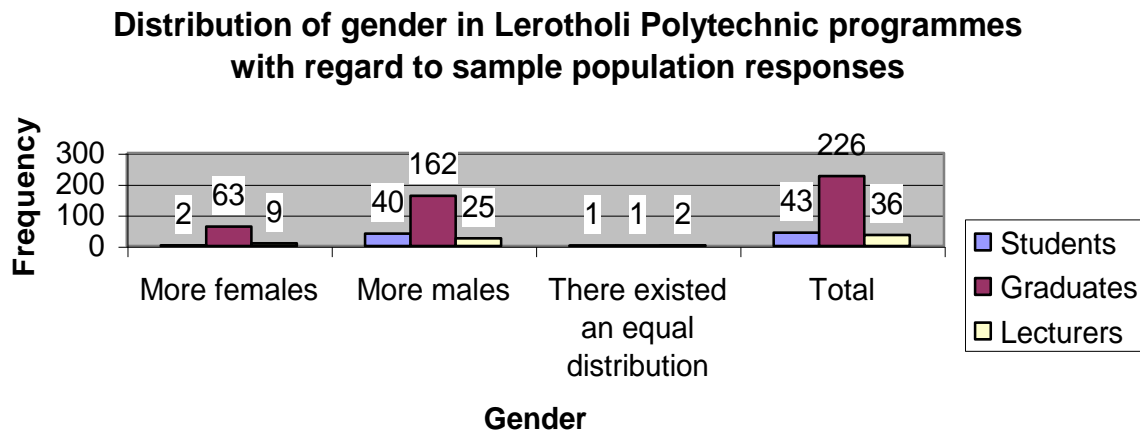


Table 4.7.2.5 Computation of significance (chi square (χ^2) for gender representation in LP courses

Students			Graduates			Lecturers			Totals
f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
2	10.4	6.8	63	54.8	1.2	9	8.7	0.01	74

$\chi^2 = 16.4116.41$ had been greater than 9.837.

If the test indicated that, according to the Lerotholi Polytechnic sample population; there existed a significant relationship between the gender of the society with regard to societal development and access to the Lerotholi Polytechnic technical and vocational education.

Then, according to the respondents, there had been a significant relationship between gender and courses offered at Lerotholi Polytechnic. Hypothesis 1(3.5.5) had been tested and the research question 3.5.6.1 answered. Gender and preferences of choice of courses had been significantly related. However, the count frequency indicated that males had been the most dominant group substantiating gender biasness.

4.7.2.2 Research question 3.5.6.3

With reference to equity, how were the groups of the community represented in various courses offered at the Lerotholi Polytechnic?

With regard to responding to the research question, there were questionnaires questions; table of responses and the histogram below had illustrated the representation of the groups of the society within the Lerotholi Polytechnic courses relative to responses obtained from the sample population.

Figure 4.7.3 All respondent's responses with regard to representation of the group(s) of the society representation within Lerotholi Polytechnic programmes

Groups of the society as represented in Lertholi Polytechnic courses

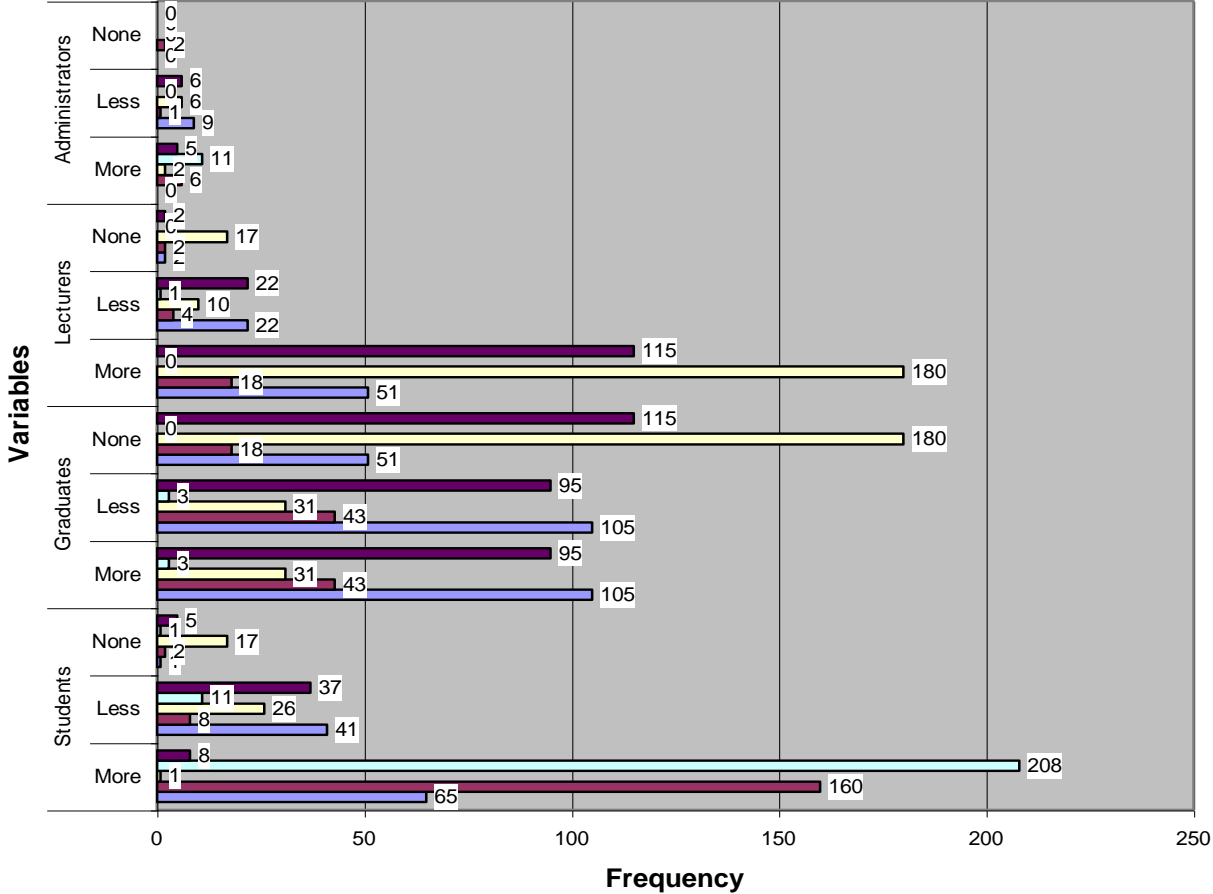


Table 4.7.3.1 Computation of expected frequency and chi square for dependent variable 'more' of student representation in Lerotholi Polytechnic courses

Questionnaire questions	Students			Graduates			Lecturers			Administrators			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
How was the female group of the society represented in your course?	65	88.2	6.1	105	55.3	44.7	51	72.7	6.5	0	4.8	4.8	221
How was the male group of the society represented in your course?	160	90.6	53.2	43	56.8	3.4	18	74.6	42.9	6	4.9	0.3	227
How was the disabled group of the society represented in your course?	1	85.5	86.5	31	53.6	9.5	180	70.4	170.6	2	4.6	1.5	214
How was the youth group of the society represented in your course?	208	88.6	160.9	3	55.6	49.8	0	73.0	73.0	11	4.8	8.0	222
How were the adults represented in your course?	8	89.0	73.7	95	55.8	27.5	115	73.3	23.7	5	4.8	0.01	223
Totals	442			277			364			24			1107

Computed $\chi^2 = 555.01$

If the calculated chi square $\chi^2 = 555.01$ had been found to be greater than the critical value chi square $\chi^2 = 21.026$ required to reject the null hypothesis as $df = 12$ for probability error $p = 0.05$. Then null hypothesis had been rejected.

Then the test indicated that there existed a significant relationship between the groups of the society with regard to societal development and access to the Lerotholi Polytechnic technical and vocational education. Thus, the most valuable commodity for Lesotho' economic development would be its skilled people to substantiate impact on the socio-economic development.

4.8 FINANCING TECHNICAL AND VOCATIONAL EDUCATION IN LEROTHOLI POLYTECHNIC

The respondents specified their responses with regard to modes of finances in Lerotholi Polytechnic technical and vocational education. Their responses had been tabulated in the proceeding tables.

4.8.1 Research question 3.5.6.5

Was there any financial support that trainees got in order to pursue their studies at the Lerotholi Polytechnic? And how were their studies affected by the assistance?

Table 4.8.1.1 Lerotholi Polytechnic Student Population Responses with regard to Financial Assistance

	Yes		No	
	Count	Per cent	Count	Per cent
Are you getting a student loan as a source of financial assistance?	16	36.4	28	63.6
Are you getting a grant as a source of financial assistance?	1	2.3	43	97.7
Is your spouse your source of financial assistance?	4	9.1	40	90.9
Are your parents your source of financial assistance?	11	25.0	33	75.0
Is your employer or sponsor your source of financial assistance?	2	4.5	42	95.5
Do you use a scholarship or bursary as a source of financial assistance?	26	59.1	18	40.9
Do you use a training levy as a source of financial assistance?	0	0.0	44	100.0
Do you use your own earnings as a source of financial assistance?	3	6.8	41	93.2

Table 4.8.1.2 Lerotholi Polytechnic Graduate Population Responses with regard to Financial Assistance

	Yes		No	
	Count	Per cent	Count	Per cent
Was there any financial support that you got in order to pursue your studies at LP?	164	73.2	60	26.8

Table 4.8.1.3 Lerotholi Polytechnic Lecturer Population Responses with regard to Financial Assistance

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Yes	36	90.0	100.0	100.0
Missing System	4	10.0		
Total	40	100.0		

Table 4.8.1.4 Lerotholi Polytechnic Administrator Population Responses with regard to Financial Assistance

	Yes		No	
	Count	Per cent	Count	Per cent
Do your students use student loans as a source of financial assistance for their studies?	6	54.5	5	45.5
Do your students use grants as a source of financial assistance for their studies?	8	72.7	3	27.3
Are student's spouses a source of financial assistance for their studies?	4	36.4	7	63.6
Are student's parents a source of financial assistance for their studies?	9	81.8	2	18.2
Are student's sponsors or employers a source of financial assistance for their studies?	0	0.0	11	100.0
Do your students use a scholarship or bursary as a source of financial assistance for their studies?	3	27.3	8	72.7
Do your students use a training levy as a source of financial assistance for their studies?	1	9.1	10	90.9
Do your students use their own earnings as a source of financial assistance for their studies?	8	72.7	3	27.3

Figure 4.8.1

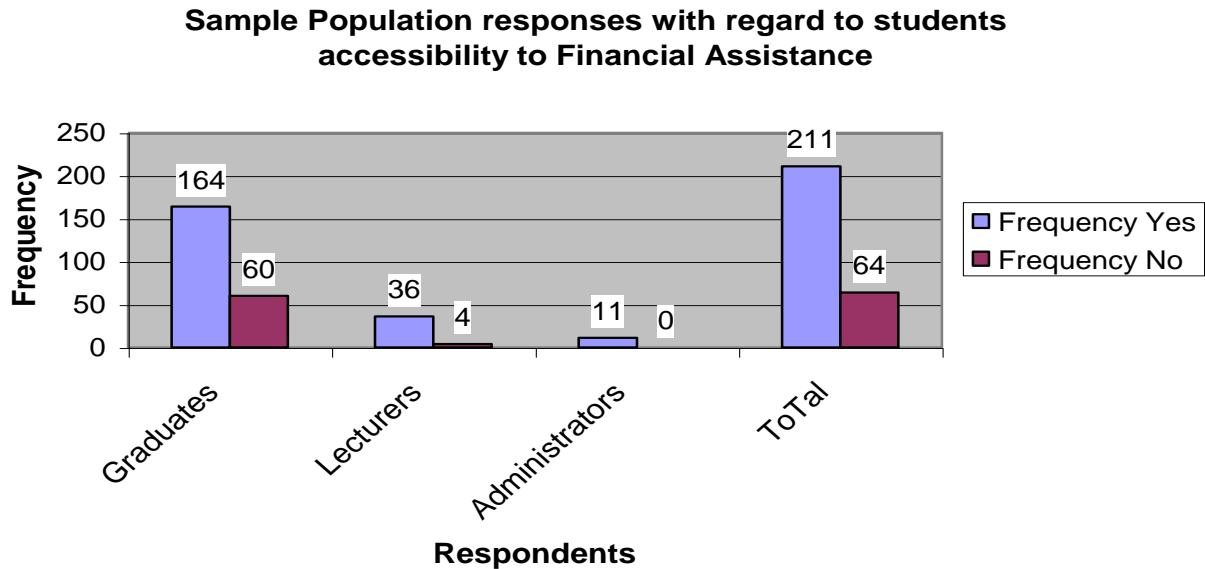


Table 4.8.1.5 Sample population responses with regard to students' financial assistance (chi square)

Is there any financial assistance that students are getting to pursue their studies at LP?	Yes			No			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	
Students	41	29.10	4.87	3	8.83	3.85	44
Graduates	164	148.16	1.69	60	44.94	5.05	224
Lecturers	36	26.46	3.44	4	8.03	2.02	40
Administrators	11	7.28	1.90	0	2.21	2.21	11
Totals	211			64			319

$$\chi^2 = 25.03$$

If the computed chi square (χ^2) value of 25.03 had been greater than the expected critical value 7.815 during the probability error; $p = 0.05$ in the degree of freedom $df = 3$. Then, as accorded the respondents; there existed a significance relationship between financial assistance and students' access into Lerotholi Polytechnic programmes. Financial assistance determined access to Lerotholi Polytechnic technical and vocational education. Then the research hypotheses 1 had been proved to be true and correct, and the research question answered.

Figure 4.8.2 Lerotholi Polytechnic Sample population responses with regard to student trainees got any financial assistance

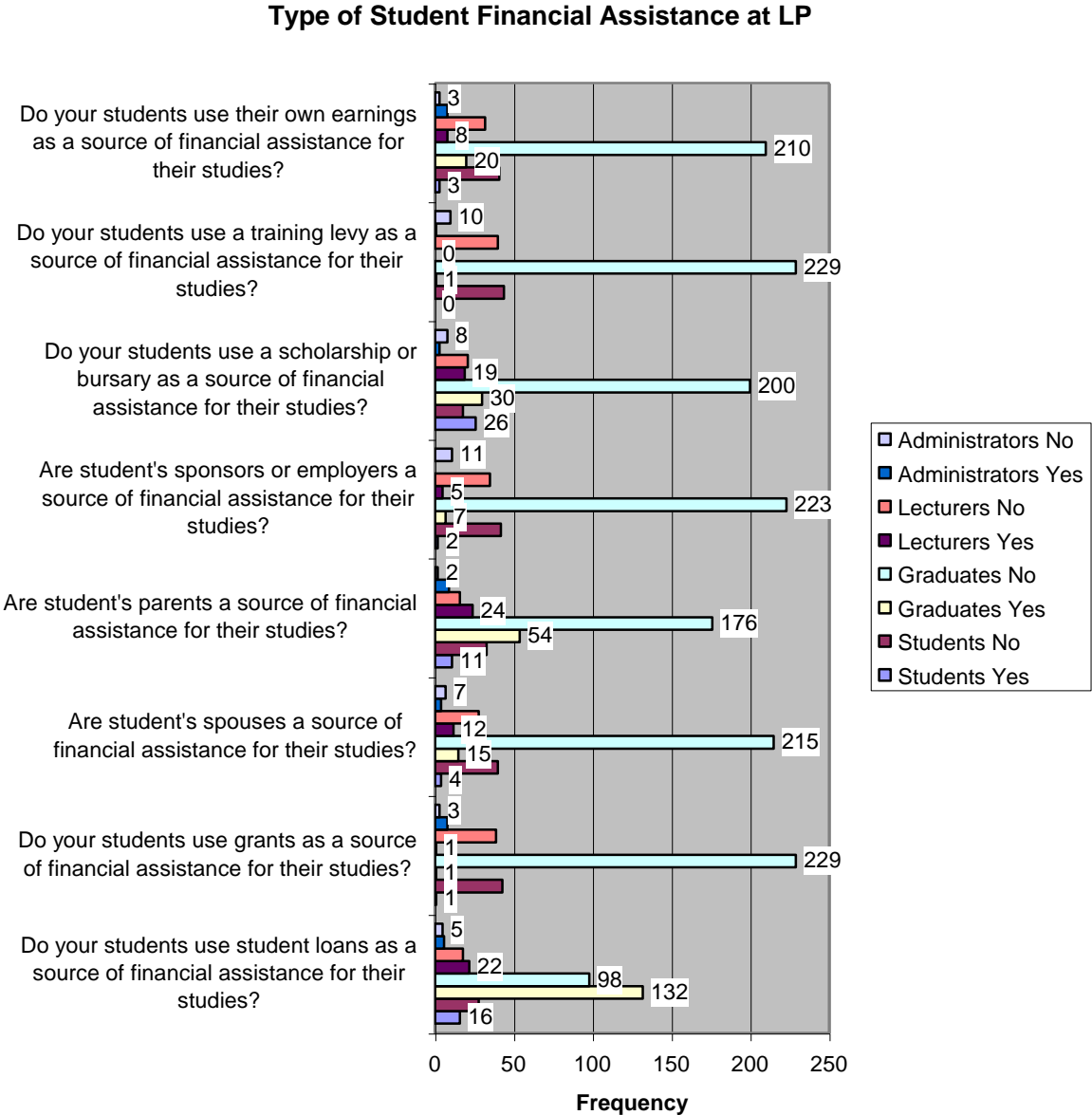


Table 4.8.1.6 Computation of Chi Square for “Yes to Finance for students” Lerotholi Polytechnic Sample Population Responses

Type of financial assistance	Students			Graduates			Lecturers			Administrators			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
Do your students use student loans as a source of financial assistance for their studies?	16	24.5	3.0	132	101.0	9.5	22	35.4	9.5	6	15.2	5.6	176
Do your students use grants as a source of financial assistance for their studies?	1	1.5	0.2	1	6.3	4.5	1	2.2	4.5	8	1.0	49	11
Are student's spouses a source of financial assistance for their studies?	4	4.9	0.2	15	20.1	1.3	12	7.0	1.3	4	3.0	0.3	35
Are student's parents a source of financial assistance for their studies?	11	13.6	0.5	54	56.3	0.1	24	19.7	0.1	9	8.4	0.04	98
Are student's sponsors or employers a source of financial assistance for their studies?	2	1.9	0.005	7	8.0	0.1	5	2.8	0.1	0	1.2	1.2	14
Do your students use a scholarship or bursary as a source of financial assistance for their studies?	26	10.9	20.9	30	8.0	60.5	19	15.7	60.5	3	6.7	2.0	78
Do your students use a training levy as a source of financial assistance for their studies?	0	0.3	0.3	1	1.2	0.03	0	0.4	0.03	1	0.2	3.2	2
Do your students use their own earnings as a source of financial assistance for their studies?	3	5.4	1.1	20	22.4	0.3	8	7.8	0.3	8	3.4	6.2	39
Total	63			260			91			39			453

$$\chi^2 = 178.865$$

If the computed χ^2 was 178.865; which had been greater than the required critical value of 32.671. The test indicated that there was a significant relationship between financial assistance and access to technical and vocational education at Lerotholi Polytechnic. Financial assistance articulated access to Lerotholi Polytechnic technical and vocational education. Then the research hypotheses 1 had been true and the research question answered.

4.8.2 Financial Status of Students' Financial Assistance

Both Lerotholi Polytechnic students, graduates, lecturers and administrators sample population were requested to rate the financial assistance afforded students at Lerotholi Polytechnic. Their attitudes and opinions had been tabulated in the tables below. Thereafter a summary had been provided in histogram illustration.

Table 4.8.2.1 Lerotholi Polytechnic Student Population Responses on Financial Status of Students' Finance

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
I was never handicapped financially	27	61.4	65.9	65.9
I had to wait for some time and my studies got somehow affected	10	22.7	24.4	90.2
I used to be out-resourced and my studies got handicapped	3	6.8	7.3	97.6
Because of financial hiccups term of my study was prolonged	1	2.3	2.4	100.0
Total	41	93.2	100.0	
Missing System	3	6.8		
Total	44	100.0		

Table 4.8.2.2 Lerotholi Polytechnic Graduate Population Responses on Financial Status of Students' Finance

Please rate the financial status of your assistance	Frequency	Per cent	Valid Per cent	Cumulative Per cent
I was never handicapped financially	202	87.8	90.2	90.2
I had to wait for some time and my studies got somehow affected	16	7.0	7.1	97.3
I used to be out-resourced and my studies got handicapped	6	2.6	2.7	100.0
Total	224	97.4	100.0	
Missing System	6	2.6		
Total	230	100.0		

Table 4.8.2.3 Lerotholi Polytechnic Lecturer Population Responses on Financial Status of Students' Finance

	Yes		No	
	Count	Per cent	Count	Per cent
The students are never handicapped financially.	16	40.0	24	60.0
Some students have to wait for some time and their studies get somehow affected.	20	50.0	20	50.0
Some students used to be out-sourced and their studies get handicapped partially.	8	20.0	32	80.0
Because of financial hiccups some student's term of study used to be prolonged.	6	15.0	34	85.0

Table 4.8.2.4 Lerotholi Polytechnic Administrator Population Responses on Financial Status of Students' Finance

	Yes		No	
	Count	Per cent	Count	Per cent
The students are never handicapped financially.	2	18.2	9	81.8
Some students have to wait for some time and their studies get somehow affected.	1	9.1	10	90.9
Some students used to be out-sourced and their studies get handicapped partially.	11	100.0	0	0.0
Because of financial hiccups some student's term of study used to be prolonged.	3	27.3	8	72.7

Figure 4.8.3 Sample Population Responses on Financial Status of Students' Finance

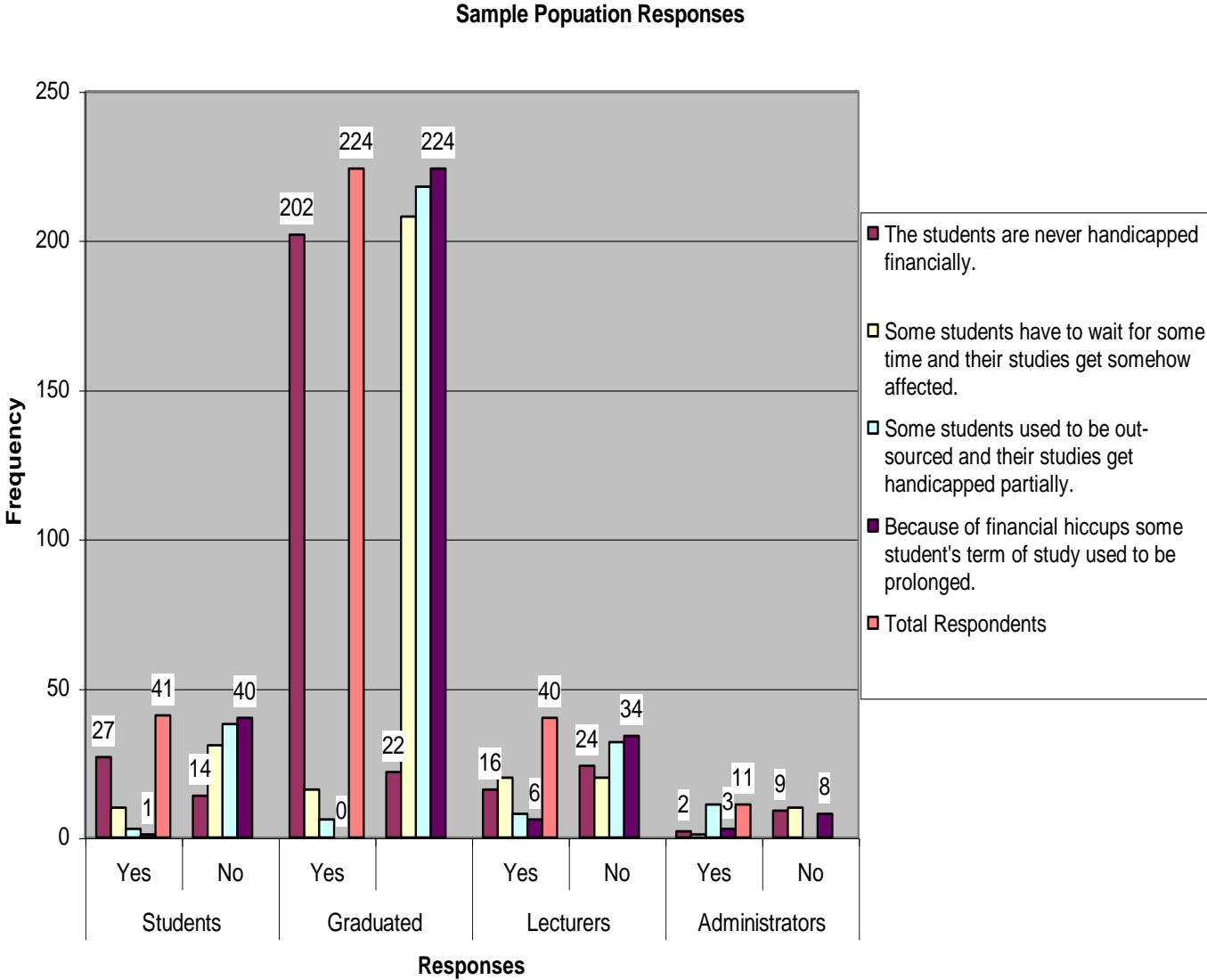


Table 4.8.2.5 Sample Population “Yes” Responses on Financial Status of Students’ Finance (chi square)

Please rate the financial status of students assistance	Students			Graduated			Lecturers			Administrators			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
The students are never handicapped financially.	27	30.5	0.4	202	166.7	7.47	16	37.2	12.1	2	12.7	9.0	247
Some students have to wait for some time and their studies get somehow affected.	10	5.8	3.0	16	31.7	7.75	20	7.1	23.4	1	2.4	0.8	47
Some students used to be out-sourced and their studies get handicapped partially.	3	3.5	0.07	6	18.9	8.8	8	4.2	3.4	11	1.4	65.8	28
Because of financial hiccups some student's term of study used to be prolonged.	1	1.2	0.03	0	6.8	6.8	6	1.5	13.5	3	0.5	20.8	10
Totals	41			224			50			17			332

$$\chi^2 = 183.12$$

The results were such that $\chi^2 = 183.12$, the degree of difference **df** = 9, level of significance; $p = 0.05$, and expected value was 16.919. Null hypothesis had been rejected the calculated chi square had been greater than the required one.

Then, research analysis suggested a significant relationship between financial status of students’ financial assistance and access to Lerotholi Polytechnic programmes. Financial assistance determined access to Lerotholi Polytechnic technical and vocational education. Then the research hypotheses 1 had been true and the research question answered.

4.8.3 Refunding of Financial Assistant by those sponsored for refurbishing those who would be engaged in future within the Lerotholi Technical and Vocational Education

Table 4.8.3.1 Lerotholi Polytechnic Student Population Responses on Refund of Financial Assistance to LP Students

Do you have to refund the financial assistance?	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Yes	42	95.5	95.5	95.5
No	2	4.5	4.5	100.0
Total	44	100.0	100.0	

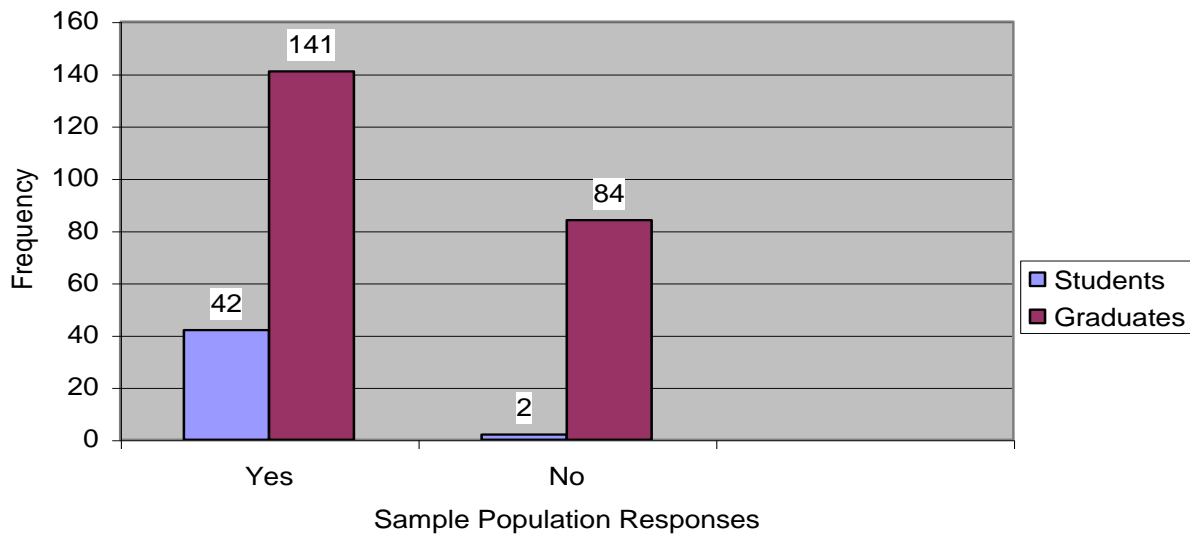
Table 4.8.3.2 Lerotholi Polytechnic Graduate Population Responses on Refund of Financial Assistance to LP Students

	Yes		No	
	Count	Per cent	Count	Per cent
Do you have to refund the financial assistance?	141	62.7	84	37.3

Table 4.8.3.3 Summary of sample population responses on reimbursement of financial assistance

Do you have to refund the financial assistance?	Students	Graduates
Yes	42(A)	141(B)
No	2(C)	84(D)
Total	44	225

Figure 4.8.4 Sample population on responses reimbursement of financial assistance



$$\chi^2 = 3.341$$

The chi square (χ^2) computed value (3.341) did not equal or exceeded the expected critical χ^2 value (3.84) necessary to reject the null hypothesis at the 0.05 level of significance. Therefore null hypothesis had been accepted and rejected the alternative hypothesis.

The test had shown that the respondents had accorded that there seemed to be no significant relationship between the financial assistant funding by the Lerotholi Polytechnic candidates and access to Lerotholi Polytechnic programmes.

4.9 SAMPLE POPULATION RESPONSES WITH REGARD TO OPEN-ENDED QUESTIONS ON ACCESS TO TECHNICAL AND VOCATIONAL EDUCATION AT THE LEROTHOLI POLYTECHNIC

At the end of Part A of the questionnaire there were open-ended questions whereby the respondents were requested to give their precise responses. They were requested to commend as briefly as possible on the enrolment into the Lerotholi Polytechnic programmes; specifically in their courses with regard to weakness, strengths and also they were requested to give suggestion or recommendations for improvements.

The information supplied hereafter had been utilised in discussions and interpretation section.

The tables below had contained the summary of the overall responses.

4.9.1 Lerotholi Polytechnic student sample population responses with regard to open-ended questions on “Access to Lerotholi Polytechnic Programmes”

With respect to weaknesses, student sample population had indicated that there were lack of resources such as machinery and equipment and inadequate infrastructure to accommodate many applicants. They also indicated that there was no articulation arrangement in place at Lerotholi polytechnic. Some of the respondents indicated that since there had been no experiential learning (industrial attachment) in some of the craft courses that hampered access. Lack of interest in Lerotholi Polytechnic had also crippled access as accorded by some of the respondents. Male students were being favoured than their female counterparts in some of the courses. Both responses rendered the test to the research hypothesis 1 (H_1) and the research questions 3.5.6.1 to 3.5.6.4.

With regard to articulation arrangement strengths, Lerotholi polytechnic student sample population had some mixed views, but in general they indicated that access to learning and training in the Lerotholi Polytechnic technical and vocational education had been offered to students for opportunity to skills required by the labour market. The responses had lent themselves to testing the research hypotheses 2 (H_1) and 3 (H_1) and answered the research questions 3.5.6.1 to 3.5.6.5.

The student sample population indicated that resources and infrastructure should be upgraded and had accorded the suggestions and recommendations for improvement. Their responses had brought light with respect to research hypotheses 2 (H_1) and 3 (H_1) and the questions 3.5.6.1 to 3.5.6.5.

4.9.2 Lerotholi Polytechnic graduate sample population responses with regard to open-ended questions on “Access to Lerotholi Polytechnic Programmes”

Similarly, both Lerotholi Polytechnic student sample population, the Lerotholi Polytechnic graduate sample population had surfaced the issue that there existed lack of facility resources, infrastructure, and discrimination between the applicants. The graduate sample population had also indicated that there was lack of financial support to students, improper admissions procedures, high competition between the applicants, lack of information about the institution, hindered their access to Lerotholi Polytechnic technical and vocational education and not a good career path had hindered the trainee population into the Lerotholi Polytechnic technical and vocational education.

Beseeking to articulation arrangement strengths, the graduate sample population had pertained to skills acquisitions and career development.

Recommendations and suggestions sustained the issue that the weak points such as delay of admission notification should be addressed.

The responses ruminated on the research hypotheses 1(H_1) to 3 (H_1) and resigned to answer the research questions 3.5.6.1 to 3.5.6.6.

4.9.3 Lerotholi Polytechnic lecturer sample population responses with regard to open-ended questions on “Access to Lerotholi Polytechnic Programmes”

Lecturer sample population conferred with both student and graduate sample population that there existed lack of resources and infrastructure in place.

They also succumbed on the impediments such as labour market's reluctance to assist students. With respect to strengths; the educator sample population attested to labour market required skills and submitted to career guidance requirements and agreed with suggestions and recommendations that resources and infrastructure deficiency should be responded to.

The Lerotholi Polytechnic lecturer sample population responded to the test of the research hypotheses 1 (H_1) to 3(H_1) and research questions 3.5.6.1 to 3.5.6.9.

4.9.4 Lerotholi Polytechnic administrator sample population responses with regard to open-ended questions on “Access to Lerotholi Polytechnic Programmes”

The Lerotholi Polytechnic administrator sample population indicated that lack of facilities and infrastructure hampered access to Lerotholi technical and vocational education. With regard to strengths of the Lerotholi technical and vocational education they pointed out that Lerotholi Polytechnic had been the only institution of its kind that offered the labour market oriented specialities to the clients.

They remarked that experienced labour market skilled personnel was required with regard to recommendations and suggestions, and there needed expansions relevant to demands.

The administrators embarked on the research hypotheses 1 (H_1) to 3 (H_1) and subscribed to the research questions (cf. 3.5.6).

4.10 RELEVANCE OF TECHNICAL AND VOCATIONAL EDUCATION (TVE) AT LEROTHOLI POLYTECHNIC TOWARDS SOCIO-ECONOMIC DEVELOPMENT

4.10.1 Research question 3.5.6.6 and 3.5.6.7

The frequency tables that followed and the histograms indicated the responses of the sample population of the Lerotholi Polytechnic responses on relevance of technical and vocational education (TVE) at Lerotholi Polytechnic towards socio-economic development.

Table 4.10.1.1 Lerotholi Polytechnic Student Population Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
There is support to student's skills training and development that substantiates impact in economy.	0	0.0	3	6.8	5	11.4	14	31.8	11	25.0	11	25.0
The course gives students the opportunity to develop competency in the use of language.	1	2.3	1	2.3	11	25.0	23	52.3	6	13.6	2	4.5
The educational environment at LP has given me a sense of belonging to the community.	1	2.3	0	0.0	5	11.6	19	44.2	13	30.2	5	11.6
Throughout the skills and quality assurance at LP, I speculate employability after successfully attaining my certificate or diploma.	1	2.3	6	14.0	4	9.3	14	32.6	8	18.6	10	23.3

Figure 4.10.1 Students Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development

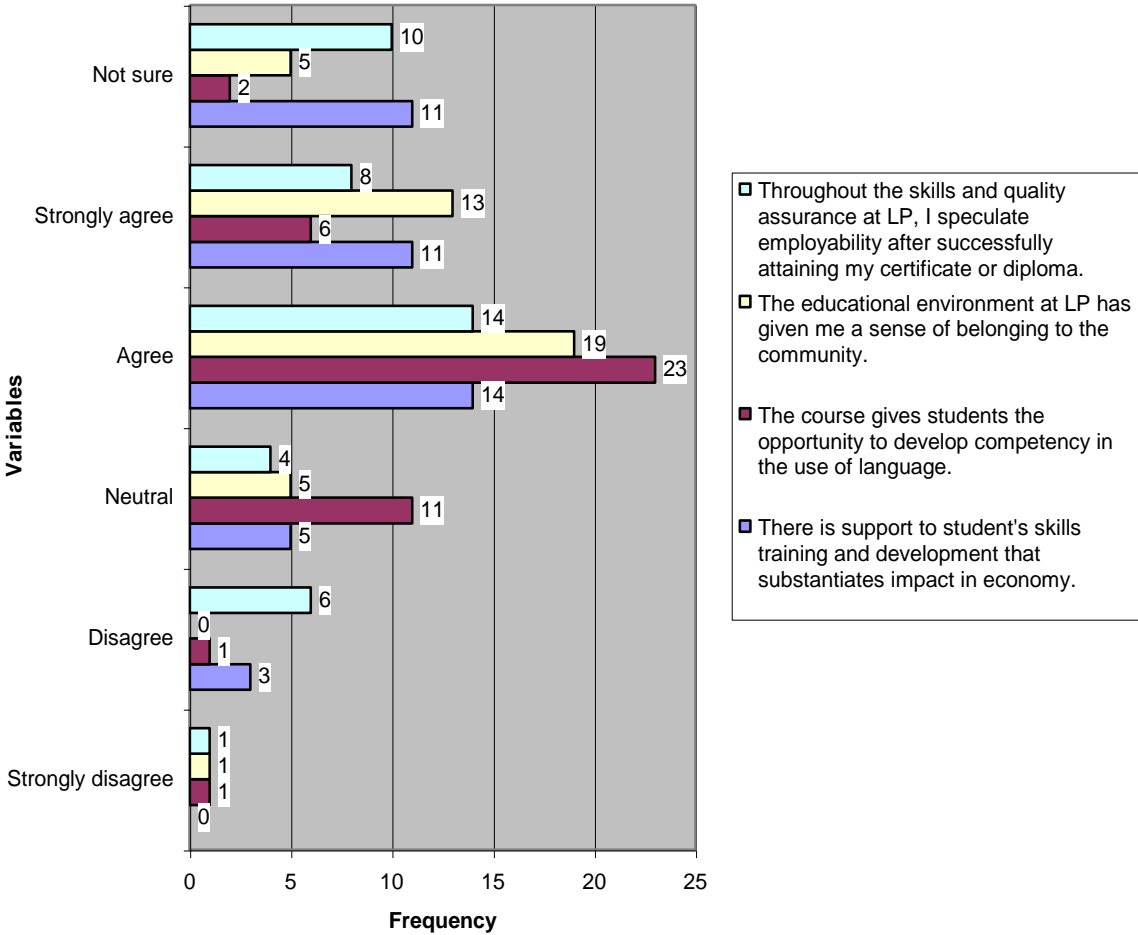


Table 4.10.1.2 LP Students Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development (chi square)

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
There is support to student's skills training and development that substantiates impact in economy.	0	0.7	0.7	0	0.7	0.7	5	6.1	0.2	14	17.2	0.6	11	9.3	0.3	11	6.8	2.6	41
The course gives students the opportunity to develop competency in the use of language.	1	0.8	0.05	1	0.8	0.05	11	6.6	2.9	23	18.4	9733.6	6	10.0	1.6	2	7.4	3.9	44
The educational environment at LP has given me a sense of belonging to the community.	1	0.8	0.05	1	0.8	0.05	5	6.6	0.4	19	18.4	0.02	13	10.0	0.9	5	7.4	0.8	44
Throughout the skills and quality assurance at LP, I speculate employability after successfully attaining my certificate or diploma.	1	0.7	0.1	1	0.7	0.1	4	5.7	0.5	14	15.9	0.2	8	8.7	0.06	10	6.4	2.0	38
Total	3			3			25			70			38			28			167

Lerotholi Polytechnic sample population was requested to indicate their opinions and attitudes on the relevance of technical and vocational education programmes in the Lerotholi Polytechnic. Their responses had been displayed in the tables above

If the computed χ^2 had been 9 753.96 at degree of difference **df** 15 whereby the critical χ^2 value was (34.996) necessary to reject the null hypothesis at the $p = 0.05$ level of significance.

Then the test had indicated that had there existed a significant relationship between the Lerotholi Polytechnic courses offered and the relevance towards socio-economic development as had been remarked by the Lerotholi Polytechnic sample population respondents. The research questions 3.5.6.6 to 3.5.6.7 had been answered. And hypotheses 2 and 3 (cf. 3.5.5) tested and found to true.

Table 4.10.1.3 Lerotholi Polytechnic Graduate Population Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
Teaching at LP provided me with learning and skills development that substantiates impact in economy.	11	4.8	11	4.8	7	3.1	131	57.7	62	27.3	5	2.2
My course gave students the opportunity to develop competency in the use of language.	5	2.2	17	7.5	14	6.2	126	55.5	61	26.9	4	1.8
My skill training at LP has given me a sense of belonging to the community.	0	0.0	11	4.9	9	4.0	102	45.3	101	44.9	2	.9

Figure 4.10.1.1 Graduates Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development

Rating provided by all respondents (230)

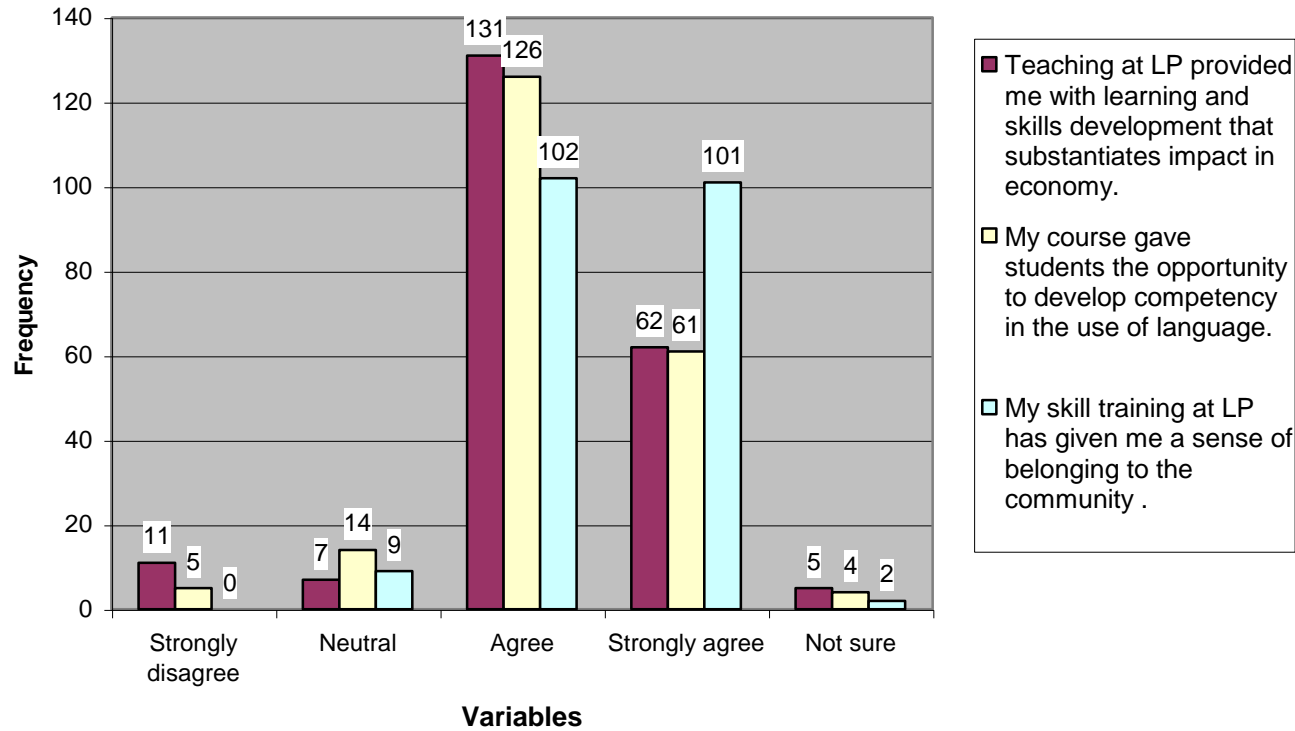


Table 4.10.1.4 Graduates Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development (Chi square computation)

Rating provided by all respondents (230)

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
Teaching at LP provided me with learning and skills development that substantiates impact in economy.	11	5.4	5.8	11	13.0	0.3	7	10.0	0.9	131	120.0	1.0	62	74.9	2.2	5	3.7	0.5	227
My course gave students the opportunity to develop competency in the use of language.	5	5.4	0.03	17	13.0	1.2	14	10.0	1.6	126	1200.	3.0	61	74.9	2.6	4	3.7	0.02	227
My skill training at LP has given me a sense of belonging to the community.	0	84.8	84.8	11	12.9	0.3	9	9.9	0.1	102	119.0	2.4	101	74.2	9.7	2	3.7	0.8	225
Total	16			39			30		2.6				224			11			679

If the calculated χ^2 had been 117.5 at degree of difference **df =10** whereby the critical χ^2 value necessary to reject the null hypothesis at the $p =0.05$ level of significance had been less.

Then the test had indicated that there existed a significant relationship between the Lerotholi Polytechnic courses offered and the relevance towards socio-economic development as the Lerotholi Polytechnic graduate sample population presented within the empirical study.

Table 4.10.1.4 Graduates Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development (Chi square computation)

Rating provided by all respondents (230)

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
Teaching at LP provided me with learning and skills development that substantiates impact in economy.	11	5.4	5.8	11	13.0	0.3	7	10.0	0.9	131	120.0	1.0	62	74.9	2.2	5	3.7	0.5	227
My course gave students the opportunity to develop competency in the use of language.	5	5.4	0.03	17	13.0	1.2	14	10.0	1.6	126	1200.	3.0	61	74.9	2.6	4	3.7	0.02	227
My skill training at LP has given me a sense of belonging to the community.	0	84.8	84.8	11	12.9	0.3	9	9.9	0.1	102	119.0	2.4	101	74.2	9.7	2	3.7	0.8	225
Total	16			39			30		2.6				224			11			679

If the calculated χ^2 had been 117.5 at degree of difference **df** =10 whereby the critical χ^2 value necessary to reject the null hypothesis at the $p=0.05$ level of significance had been less.

Then the test had indicated that there existed a significant relationship between the Lerotholi Polytechnic courses offered and the relevance towards socio-economic development as the Lerotholi Polytechnic graduate sample population presented within the empirical study

paradigm. The Lerotholi Polytechnic respondents' responses had tested the research hypotheses 2 and 3 (cf. 3.5.5); found to be true and research questions 3.5.6.6 and 3.5.6.7 answered.

Table 4.10.1.6 Lerotholi Polytechnic Graduate Population Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development (Rating provided by 85 respondents)

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
I struggled to find appropriate job.	36	43.4	13	15.7	4	4.8	16	19.3	13	15.7	1	1.2
My profession is related to my work.	4	4.8	6	7.2	3	3.6	26	31.3	43	51.8	1	1.2
My profession is just desirable.	2	2.7	4	5.5	5	6.8	41	56.2	19	26.0	2	2.7
My course is demand-driven.	1	1.3	8	10.1	8	10.1	30	38.0	29	36.7	3	3.8

Figure 4.10.1.2 Graduates Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development.

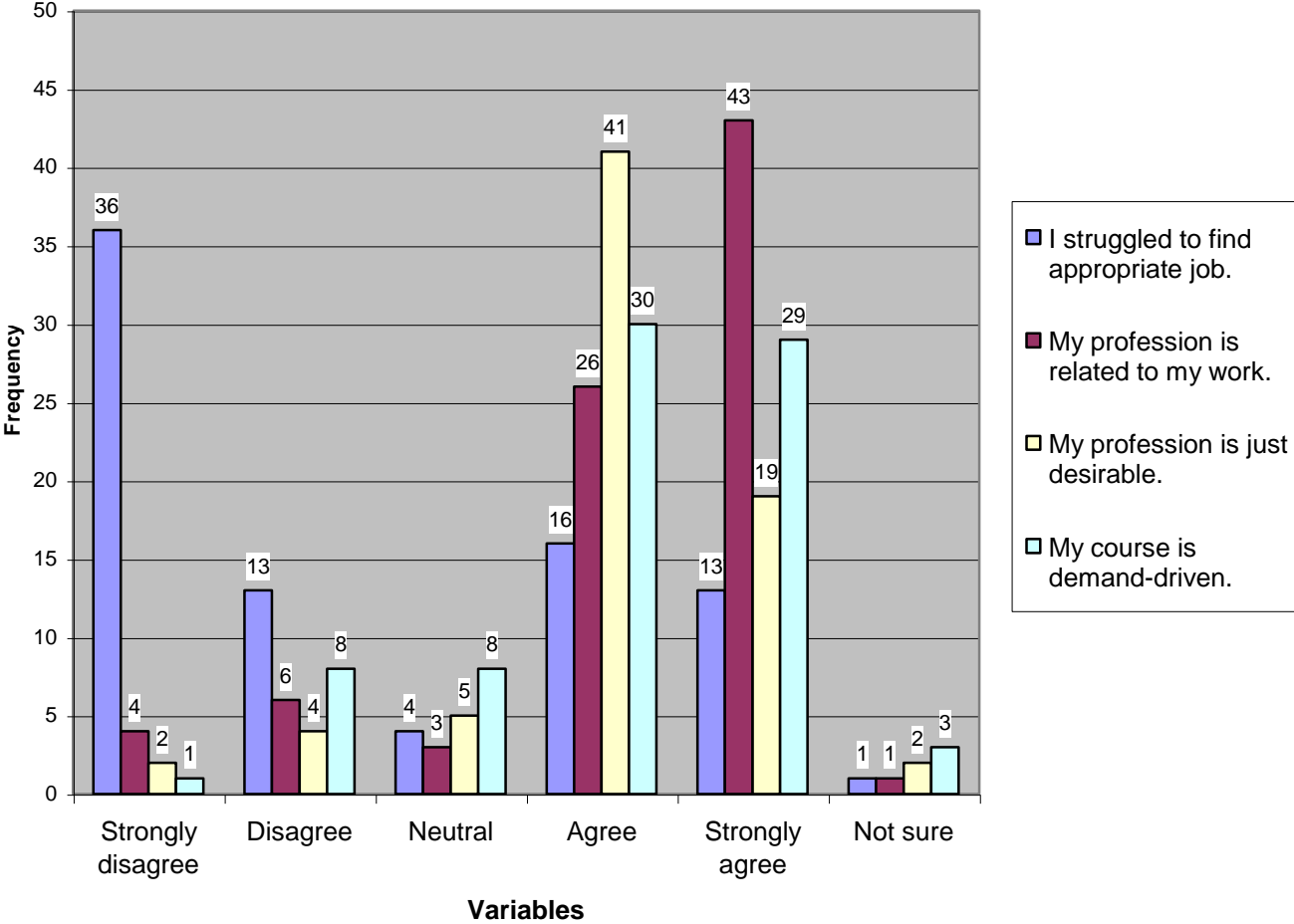


Table 4.10.1.7 Graduates Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development. (chi square)

Rating provided by 85 respondents

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
I struggled to find appropriate job.	36	11.2	54.9	13	8.1	3.0	4	5.2	0.3	16	29.5	6.2	13	27.1	7.3	1	1.8	0.4	83
My profession is related to my work.	4	11.2	4.6	6	8.1	0.5	3	5.3	1.0	26	29.5	0.4	43	27.1	9.3	1	1.8	0.4	83
My profession is just desirable.	2	9.9	6.3	4	7.1	1.4	5	4.5	0.06	41	25.9	8.8	19	23.9	1.0	2	1.6	0.1	73
My course is demand-driven.	1	10.7	8.8	8	7.7	0.01	8	5.0	1.8	30	28.1	0.1	29	25.8	0.4	3	1.7	1.0	79
Total	43			31			20			113			104			7			318

The χ^2 test using the above 4 x 6 table at 15 degree of freedom was applied at $p = 0.05$ value level. The computed $\chi^2 = 118.07$ had been greater than the χ^2 critical (34.996) tabled value required for significance at that level.

If the table indicated that with 15 **df** a χ^2 of 34.996 would be required to reject the null hypothesis at 0.05 level. Then computed χ^2 value had been 118.07 and greater than 34.996; χ^2 at 15 **df** in 0.05 level required to reject null hypothesis, then it seemed; as accorded by the Lerotholi Polytechnic graduates; the respondents had accorded that there existed a significant relationship between relevance of Lerotholi Polytechnic technical and vocational education and socio-economic development.

The sample population responses had addressed the research hypothesis 2 (H_1) and 3 (H_1) (cf. 3.5.5) while answering the research

questions 3.5.6.6 to 3.5.6.9

Table 4.14 contained the responses of the Lerotholi Polytechnic sample population that assisted by responding to the questionnaire that its responses were aimed at evaluating technical and vocational education offered at Lerotholi Polytechnic, its exploration, description and explanation on the impact on the socio-economic development.

Table 4.10.1.8 Graduates Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development.

Rating provided by 145 respondents

	Yes		No	
	Count	Per cent	Count	Per cent
My skills and competence attained at LP are not at all related to my profession.	1	0.7	143	99.3
My skills and competence attained at LP are related to my profession but are second best.	10	6.9	134	93.1
Are you not employed by choice because of skills and competence attained at LP?	0	0.0	144	100.0
Are you struggling to find an appropriate job because of the skills and competence attained at LP?	10	6.9	134	93.1
Your skills attained at LP and your current employed are desirable	58	40.3	86	59.7
Because of skills attained at LP you are demand driven, happy and motivated in your profession	73	50.7	71	49.3
Because of skills attained at LP you are competent enough to execute your skills in your profession.	65	45.1	79	54.9

Figure 4.10.1.3 Graduates Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development.

Rating provided by 145 respondents

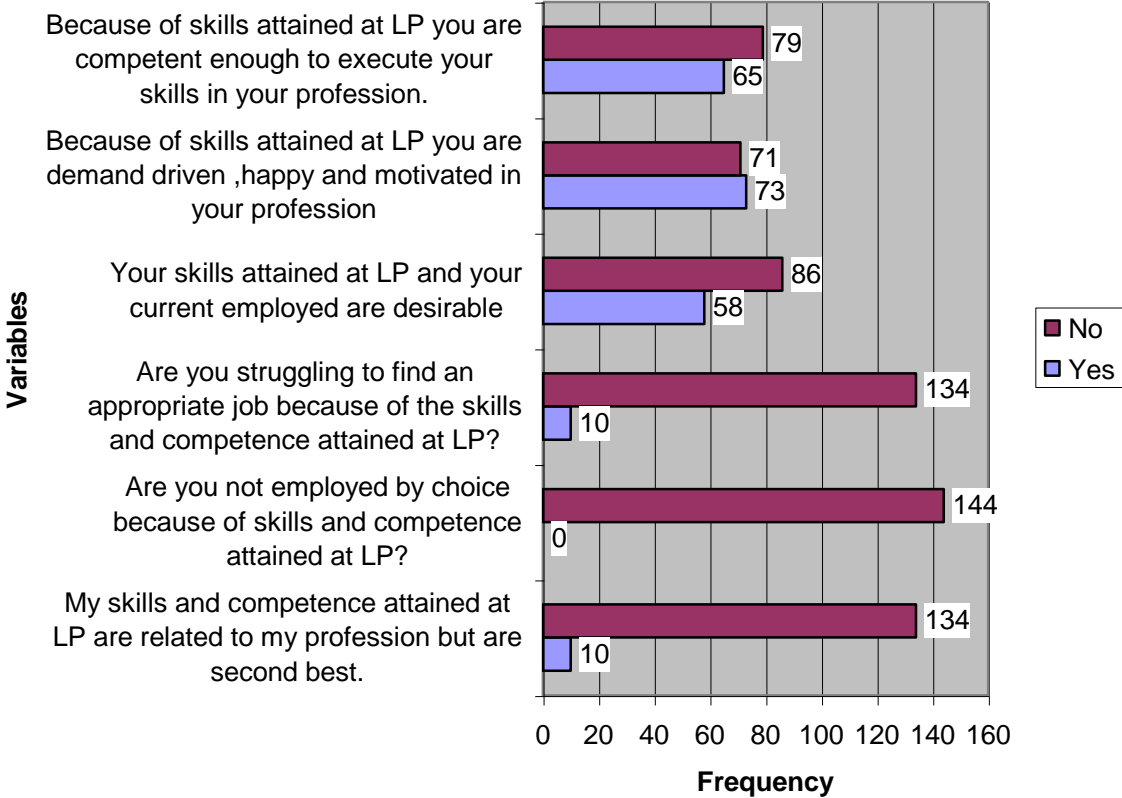


Table 4.10.1.9 Graduates Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development (Chi square computation)

Rating provided by 145 respondents

	Yes			NO			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	
Skills and competence attained at LP are not at all related to present profession.	1	31	29.0	143	113	8.0	144
Skills and competence attained at LP are related to present profession but are second best.	10	31	14.2	134	113	3.9	144
Are you not employed by choice because of skills and competence attained at LP?	0	31	31	144	113	8.5	144
Are you struggling to find an appropriate job because of the skills and competence attained at LP?	10	31	14.2	134	113	3.9	144
Your skills attained at LP and your current employed are desirable	58	31	23.5	86	113	6.5	144
Because of skills attained at LP you are demand driven, happy and motivated in your profession	73	31	56.9	71	113	15.6	144
Because of skills attained at LP you are competent enough to execute your skills in your profession.	65	31	37.3	79	113	10.2	144
Total	217		2	791			1 008

Thus, if $\chi^2 = 261.7$; the degree of freedom $df = (R - 1) (C - 1) = (7-1) (2-1) = 6 \times 1 = 6$; the critical value χ^2 at 0.05 level of significance to reject the null hypothesis had been given from the reference table in Appendix F as 12.593 had been less than the calculated chi square.

Then the test-of-fit had clearly indicated that the Lerotholi Polytechnic graduate sample population had indicated the existence of a significant relationship between independent variable – Lerotholi Polytechnic technical and vocational education programmes and dependent variable – relevance of Lerotholi Polytechnic technical and vocational education towards socio-economic development. This is concluded to be true because the chi square χ^2 computed value had been 261.7; marginally larger

than the expected chi square χ^2 value provided in the table of the Appendix F to reject the null hypothesis.

The sample population responses had addressed the research hypothesis 2 (H_1) and 3 (H_1) (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9

Table 4.10.1.10 Lecturers Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
The demand for access to technical and vocational education and training has increased.	1	2.9	0	0.0	1	2.9	4	11.8	27	79.4	1	2.9
The course has been structured in the manner that establishes a broad base for articulation within the educational system.	1	2.9	3	8.6	2	5.7	19	54.3	8	22.9	2	5.7
The course had been structured in the manner that students are provided with knowledge and skills development that substantiates impact in the economy.	1	2.8	0	0.0	2	5.6	28	77.8	5	13.9	0	0.0
The course is provided in a variety of formats to meet student needs to equip them with job-oriented skills.	1	2.9	2	5.7	6	17.1	21	60.0	4	11.4	1	2.9
The skill training at LP gives students a sense of belonging to the community.	1	2.9	2	5.7	2	5.7	25	71.4	4	11.4	1	2.9
Some students end-up taking the work not related to their profession.	0	0.0	9	25.0	6	16.7	15	41.7	2	5.6	4	11.1
The appropriateness and forward planning of the course with regard to employment possibilities are the basic principles that guide the course.	0	0.0	3	9.1	2	6.1	23	69.7	2	6.1	3	9.1
Knowledge and skills improvement increase an economy's output of goods and services for social economic development.	0	0.0	1	2.9	2	5.7	15	42.9	13	37.1	4	11.4
The trends of globalisation of trade, labour market and changing technologies imply the need to update continually.	0	0.0	1	2.9	1	2.9	12	35.3	19	55.9	1	2.9

Figure 4.10.1.4 Lecturers Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development

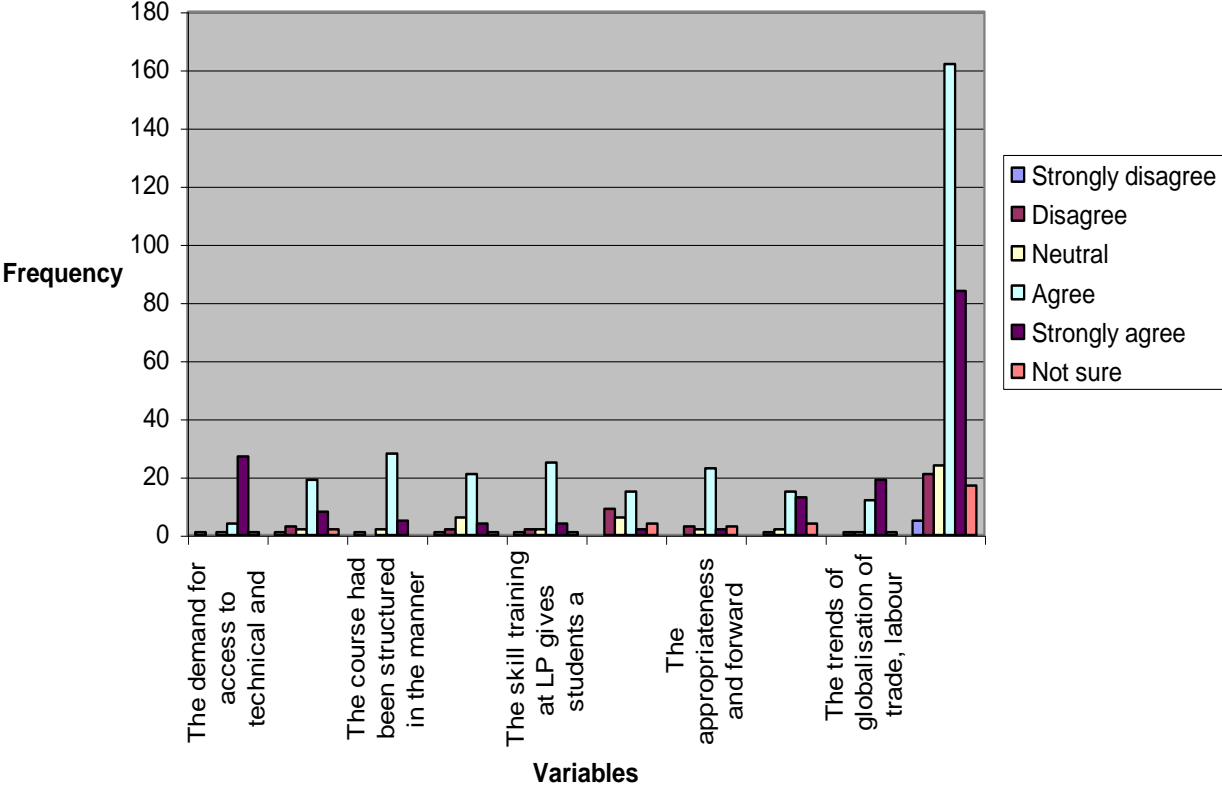


Table 4.10.1.11 Lecturers Responses on the Relevance of Lerotholi Polytechnic TVE Towards Socio-Economic Development (Chi square)

Variables	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
The demand for access to technical and vocational education and training has increased.	1	0.5	0.5	0	2.3	2.3	1	2.6	1.0	4	17.6	10.5	27	9.1	35.2	1	1.9	0.4	34
The course has been structured in the manner that establishes a broad base for articulation within the educational system.	1	0.6	0.3	3	2.3	0.2	2	2.7	0.2	19	18.1	0.05	8	9.4	0.2	2	1.9	0.005	35
The course had been structured in the manner that students are provided with knowledge and skills development that substantiates impact in the economy.	1	0.6	0.3	0	2.4	2.4	2	2.8	0.2	28	18.6	4.8	5	9.7	2.3	0	2.0	2.0	36
The course is provided in a variety of formats to meet student needs to equip them with job-oriented skills.	1	0.6	0.3	2	2.3	0.04	6	2.7	4.0	21	18.1	0.5	4	9.4	3.1	1	1.9	0.4	35
The skill training at LP gives students a sense of belonging to the community.	1	0.6	0.3	2	2.3	0.04	2	2.7	0.2	25	18.1	2.6	4	9.4	3.1	1	1.9	0.4	35
Some students end-up taking the work not related to their profession.	0	0.6	0.6	9	2.4	1.8	6	2.8	3.7	15	18.6	0.7	2	9.7	6.1	4	2.0	2.0	36
The appropriateness and forward planning of the course with regard to employment possibilities are the basic principles that guide the course.	0	0.5	0.5	3	2.2	0.3	2	2.5	0.1	23	17.1	2.0	2	8.9	5.3	3	1.8	0.8	33
Knowledge and skills improvement increase an economy's output of goods and services for social economic development.	0	0.6	0.6	1	2.3	0.7	2	2.7	0.2	15	18.1	0.5	13	9.4	1.4	4	1.9	2.3	35
The trends of globalisation of trade, labour market and changing technologies imply the need to update continually.	0	0.5	0.5	1	2.3	0.7	1	2.6	1.0	12	17.6	1.8	19	9.1	10.8	1	1.9	0.4	34
Total	5			21			24			162			84			17			313

Table 4.10.1.12 Administrators Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
The demand for access to technical and vocational education and training has increased at LP.	0	0.0	0	0.0	3	30.0	1	10.0	5	50.0	1	10.0
The courses are provided in a variety of formats to meet student needs to equip them with job oriented skills	0	0.0	0	0.0	1	9.1	0	0.0	7	63.6	3	27.3
Governance of the skill training at LP is guided by labour market needs.	0	0.0	0	0.0	7	63.6	0	0.0	2	18.2	2	18.2
TVE adequately prepares labour market clientele irrespective of gender and physical status.	1	9.1	6	54.5	1	9.1	1	9.1	2	18.2	0	0.0
TVE equips all groups of society with skills required for adaptation to new ideas for career development.	0	0.0	3	27.3	1	9.1	4	36.4	3	27.3	0	0.0
Some students end-up taking the work not related to their profession.	1	10.0	0	0.0	1	10.0	0	0.0	5	50.0	3	30.0
The student's profession is just but desirable in the labour market.	1	10.0	3	30.0	1	10.0	1	10.0	3	30.0	1	10.0
The course is demand-driven and highly appreciated in the labour market.	1	10.0	4	40.0	1	10.0	0	0.0	4	40.0	0	0.0
The appropriateness and forward planning of the course with regard to employment possibilities are the basic principles that guide the	0	0.0	0	0.0	0	0.0	0	0.0	5	50.0	5	50.0

course.												
Knowledge and skills improvement increase an economy's output of goods and services for social economic development.	0	0.0	0	0.0	1	11.1	0	0.0	6	66.7	2	22.2
The trends of globalisation of trade, labour market and changing technologies imply the need to update continually.	0	0.0	0	0.0	2	22.2	1	11.1	4	44.4	2	22.2

Figure 4.10.1.5 Administrators Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development

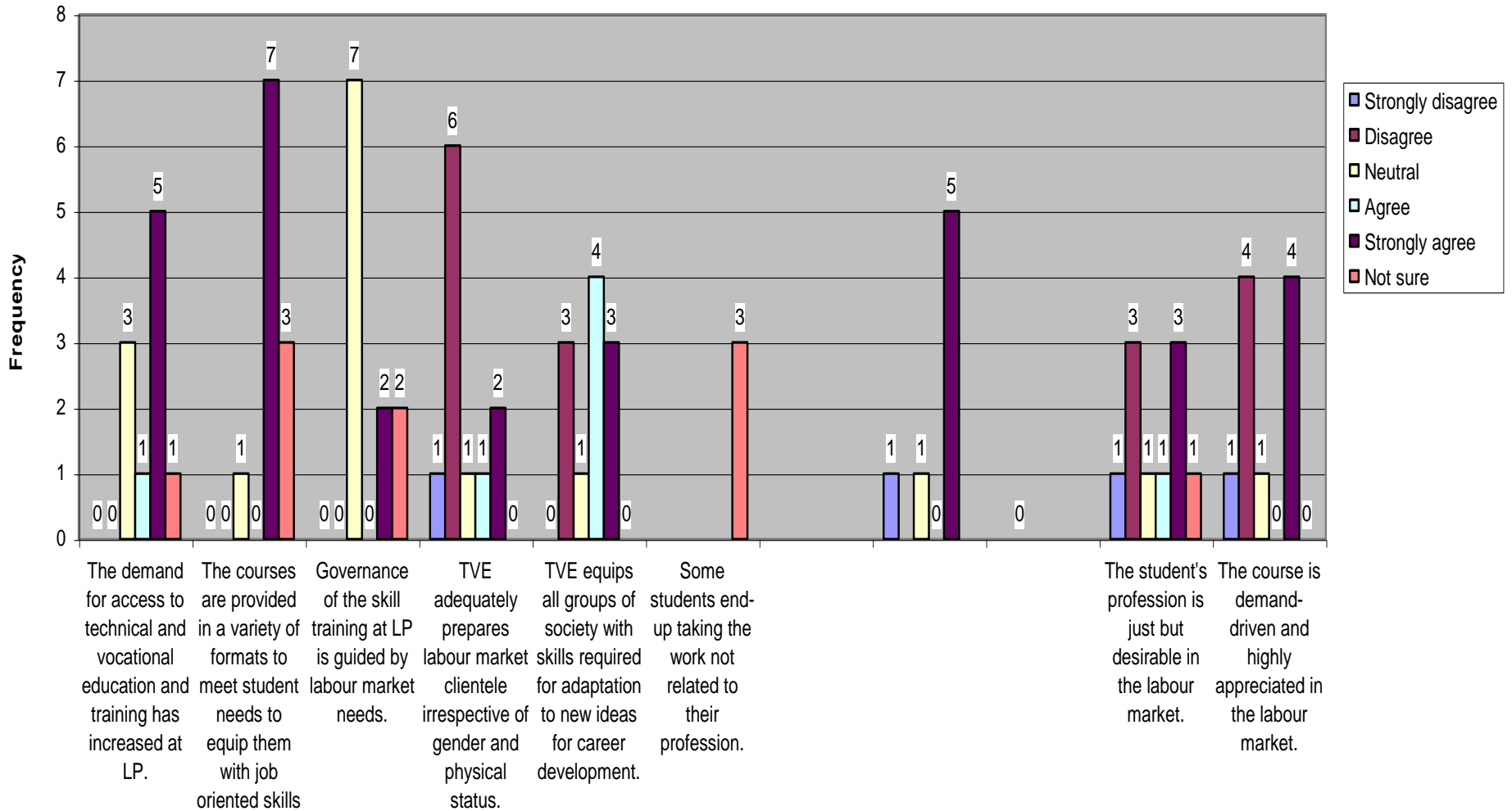


Table 4.10.1.13 Administrators Responses on the Relevance of Technical and Vocational Education (TVE) At Lerotholi Polytechnic Towards Socio-Economic Development (Chi square computation)

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
The demand for access to technical and vocational education and training has increased at LP.	0	0.4	0.4	0	1.4	1.4	3	1.7	1.0	1	0.7	0.1	5	4.1	0.2	1	1.7	0.3	10
The courses are provided in a variety of formats to meet student needs to equip them with job oriented skills	0	0.4	0.4	0	1.6	1.6	1	1.9	0.4	0	0.8	0.8	7	4.5	1.4	3	1.9	0.6	11
Governance of the skill training at LP is guided by labour market needs.	0	0.4	0.4	0	1.6	1.6	7	1.9	13.7	0	0.8	0.8	2	4.5	1.4	2	1.9	0.01	11
TVE adequately prepares labour market clientele irrespective of gender and physical status.	1	0.4	0.9	6	1.6	12.1	1	1.9	0.4	1	0.8	0.1	2	4.5	1.4	0	1.9	1.9	11
TVE equips all groups of society with skills required for adaptation to new ideas for career development.	0	0.4	0.4	3	1.6	1.2	1	1.9	0.4	4	0.8	12.8	3	4.5	0.5	0	1.9	1.9	11

Some students end-up taking the work not related to their profession.	1	0.4	0.9	0	1.4	1.4	1	1.7	0.3	0	0.7	0.7	5	4.1	0.2	3	1.7	1.0	10
The student's profession is just but desirable in the labour market.	1	0.4	0.9	3	1.4	1.8	1	1.7	0.3	1	0.7	0.1	3	4.1	0.3	1	1.7	0.3	10
The course is demand-driven and highly appreciated in the labour market.	1	0.4	0.9	4	1.4	4.8	1	1.7	0.3	0	0.7	0.7	4	4.1	0.002	0	1.7	1.7	10
The appropriateness and forward planning of the course with regard to employment possibilities are the basic principles that guide the course.	0	0.4	0.4	0	1.4	1.4	0	1.7	1.7	0	0.7	0.7	5	4.1	0.2	5	1.7	6.4	10
Knowledge and skills improvement increase an economy's output of goods and services for social economic development.	0	0.3	0.3	0	1.3	1.3	1	1.5	0.2	0	0.6	0.6	6	3.7	1.4	2	1.5	0.2	9
The trends of globalisation of trade, labour market and changing technologies imply the need to update continually.	0	0.3	0.3	0	1.3	1.3	2	1.5	0.2	1	0.6	0.3	4	3.7	0.02	2	1.5	0.2	9
	4			16			19			8			46			19			112

Thus, $\chi^2 = 94.232$. The degree of freedom $df = (R - 1) (C - 1) = (11-1) (6 -1) = 10 \times 5 = 50$.

The calculated chi square (χ^2) = 94.232; the value had been greater than the required $\chi^2 = 67.505$ level of significance in degree of freedom 50 in 0.05 error probability. Then null hypothesis had been rejected and the Lerotholi Polytechnic administrators had indicated that there existed significance between the Lerotholi Polytechnic technical and vocational education and its relevance towards socio-economic development in the Maseru district.

The sample population responses had addressed the research hypothesis 2 (H_1) and 3 (H_1) (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9

4.11 LASSROOM EXPERIENCE

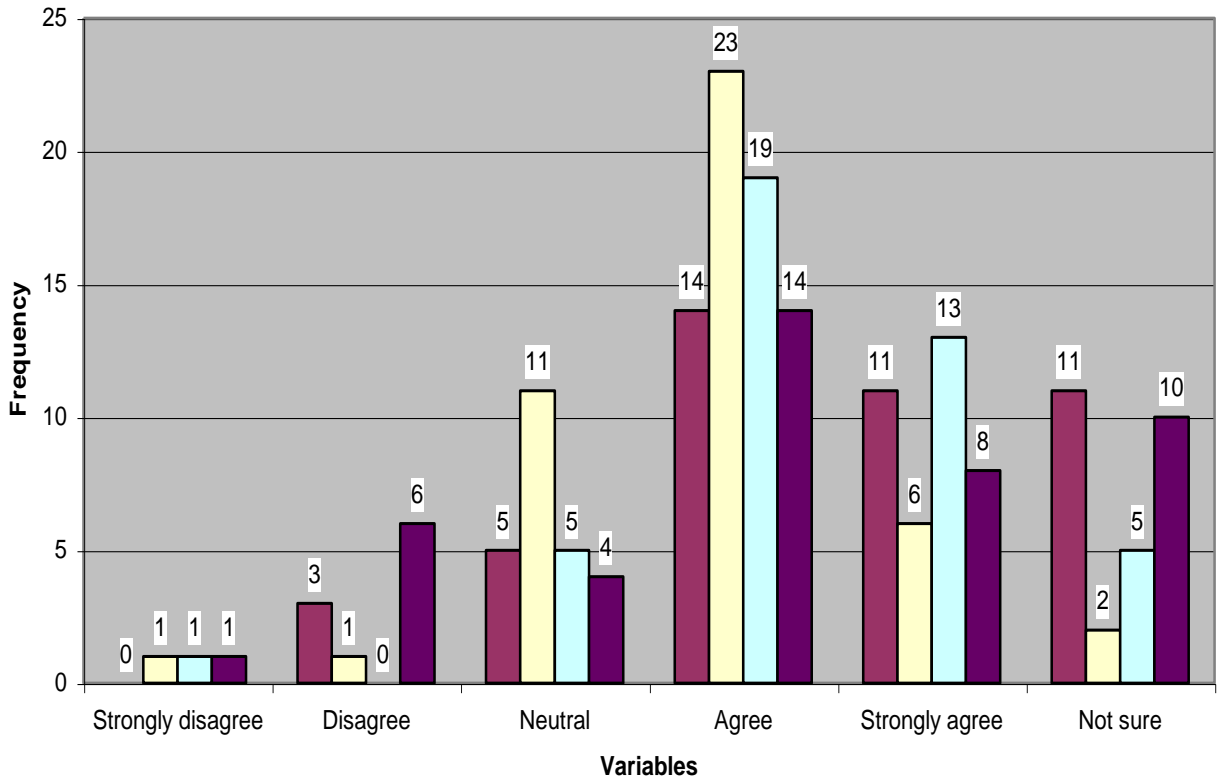
The sample population was requested to comment about classroom experience at Lerotholi Polytechnic. This was geared towards the evaluation, exploration and explaining the possible activities in the Lerotholi Polytechnic technical and vocational education that when attained and utilised could contribute towards socio-economic development. The sample population responses were:

Table 4.11.1.1 Lerotholi Polytechnic Sample Population Student Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Pedagogy

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
There is support to student's skills training and development that substantiates impact in economy.	0	0.0	3	6.8	5	11.4	14	31.8	11	25.0	11	25.0
The course gives students the opportunity to develop competency in the use of language.	1	2.3	1	2.3	11	25.0	23	52.3	6	13.6	2	4.5
The educational environment at LP has given me a sense of belonging to the community.	1	2.3	0	0.0	5	11.6	19	44.2	13	30.2	5	11.6
Throughout the skills and quality assurance at LP, I speculate employability after successfully attaining my certificate or diploma.	1	2.3	6	14.0	4	9.3	14	32.6	8	18.6	10	23.3

Figure 4.11.1.1 Lerotholi Polytechnic Sample Population Student Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Pedagogy

Lerotholi Polytechnic Student Sample Population's Responses to Classroom Experience



- There is support to student's skills training and development that substantiates impact in economy.
- The course gives students the opportunity to develop competency in the use of language.
- The educational environment at LP has given me a sense of belonging to the community.
- Throughout the skills and quality assurance at LP, I speculate employability after successfully attaining my certificate or diploma.

Table 4.11.1.2 Lerotholi Polytechnic Student Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Pedagogy – Chi Square computation

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
There is support to student's skills training and development that substantiates impact in economy.	0	0.8	0.8	3	2.5	0.1	5	6.3	0.3	14	17.7	0.8	11	9.6	0.2	11	7.1	2.1	44
The course gives students the opportunity to develop competency in the use of language.	1	0.8	0.1	1	2.5	0.9	11	6.3	3.5	23	17.7	1.6	6	9.6	1.4	2	7.1	3.7	44
The educational environment at LP has given me a sense of belonging to the community.	1	0.7	0.1	0	2.5	2.5	5	6.2	0.2	19	17.3	0.2	13	9.4	1.2	5	6.9	0.5	43
Throughout the skills and quality assurance at LP, I speculate employability after successfully attaining my certificate or diploma.	1	0.7	0.1	6	2.5	4.9	4	6.2	0.8	14	17.3	0.6	8	9.4	0.2	10	6.9	1.4	43
Total	3			10			25			70			38			28			174

The calculated chi square (χ^2) = 28.2;

Degree of freedom **df** = (R – 1) (C – 1) = (4 – 1) (6 – 1) = 3 x 5 = 15

Probability error = 0.05. Expected critical value chi square (χ^2) required for null hypothesis tabled (Appendix F) =

If the null hypothesis had been rejected because the calculated chi square (χ^2) value had been greater than the required chi square (χ^2) critical value, then, according to Lerotholi polytechnic student sample population; there had been a significant relationship between technical and vocational education classroom experience and the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

That would be, according to the responses, the frequency table and the histogram ‘training had been doing well at the Lerotholi Polytechnic technical and vocational education’. There was a total of 108 under the ‘agree’ category and 13 under the ‘disagree’ category.

The research hypothesis 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

Table 4.11.1.3 Lerotholi Polytechnic Graduate Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Pedagogy

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
The course was provided in a variety of formats to meet student needs.	10	4.4	32	14.2	11	4.9	101	44.7	59	26.1	13	5.8
A sufficient number of sub-courses were provided to meet the demands of students.	14	6.2	20	8.8	7	3.1	110	48.7	62	27.4	13	5.8
The course was offered in which students were assured the opportunity to complete the programme.	6	2.7	10	4.5	9	4.0	127	56.7	71	31.7	1	0.4
Instructors presented information clearly; opinions were separated from facts and proven conclusions.	6	2.7	14	6.2	14	6.2	126	56.0	56	24.9	9	4.0
My instructors were effective and efficient; they made a strong effort to assist me to succeed academically.	1	0.5	10	4.5	14	6.3	100	45.2	91	41.2	5	2.3
Instruction offered in my course was excellent and offered a variety of development issues.	4	1.8	9	4.1	18	8.1	115	51.8	68	30.6	8	3.6

Figure 4.11.1.2 Lerotholi Polytechnic Graduate Responses to Students Classroom Experience

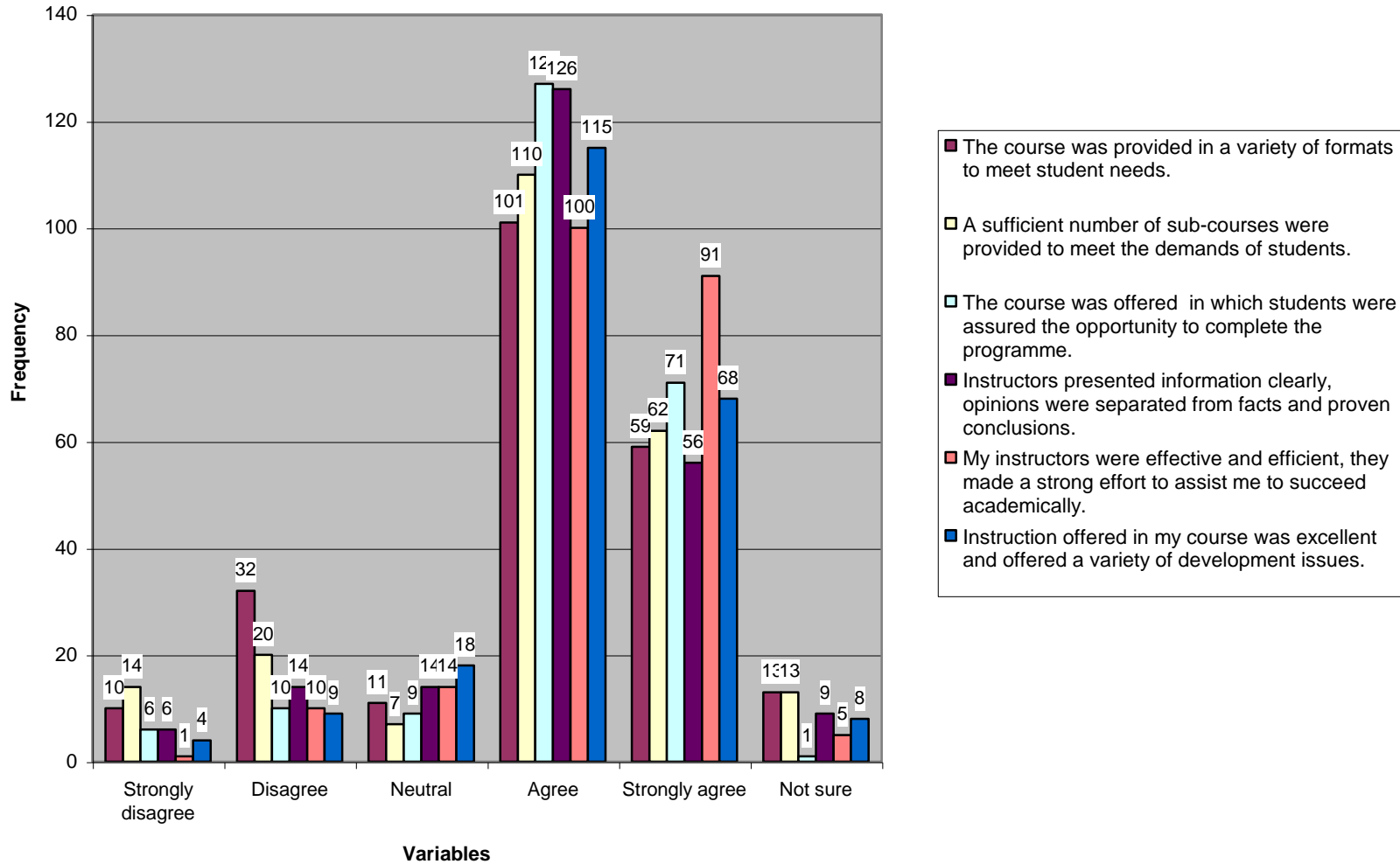


Table 4.11.1.4 Lerotholi Polytechnic Graduate Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Pedagogy - Chi square Computation

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
The course was provided in a variety of formats to meet student needs.	10	6.8	1.5	32	16.0	16.0	11	12.3	0.1	101	144.2	12.9	59	68.4	1.3	13	8.2	2.8	226
A sufficient number of sub-courses were provided to meet the demands of students.	14	6.8	7.6	20	16.0	1.0	7	12.3	2.3	110	144.2	8.1	62	68.4	0.6	13	8.2	2.8	226
The course was offered in which students were assured the opportunity to complete the programme.	6	6.8	0.1	10	15.8	2.1	9	12.2	0.8	127	113.2	1.7	71	67.8	0.2	1	8.2	6.3	224
Instructors presented information clearly, opinions were separated from facts and proven conclusions.	6	6.7	0.1	14	15.9	0.2	14	12.2	0.3	126	113.8	1.3	56	68.1	2.2	9	8.2	0.1	225
My instructors were effective and efficient, they made a strong effort to assist me to succeed academically.	1	6.7	4.9	10	15.6	2.0	14	12.0	0.3	100	111.7	1.2	91	66.9	8.7	5	8.1	1.2	221
Instruction offered in my course was excellent and offered a variety of development issues.	4	6.8	1.3	9	15.7	2.9	18	12.1	2.9	115	112.2	0.5	68	67.2	0.01	8	8.1	0.001	222
Totals	41			95			73			679			407			49			1344

The calculated chi square (χ^2) = 89.688;

Degree of freedom $df = (R - 1) (C - 1) = (6 - 1) (6 - 1) = 5 \times 5 = 25$

Probability error = 0.05

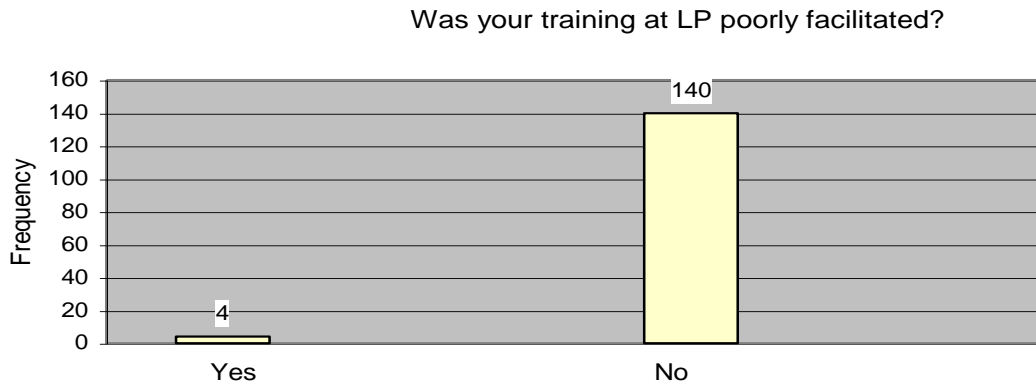
If the test had substantiated the rejection of the null hypothesis because the calculated chi square (χ^2) value had been greater than the required chi square (χ^2) critical value to reject the null hypothesis. Therefore, according to Lerotholi polytechnic graduate sample population; then there had been a significant relationship between technical and vocational education classroom experience and the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

The research hypothesis 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

Table 4.11.1.5 Lerotholi Polytechnic Graduate Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic

	Yes		No	
	Count	Per cent	Count	Per cent
Was your training at LP poorly facilitated?	4	2.8	140	97.2

Figure 4.11.1.2 Lerotholi Polytechnic Graduate Sample Population Responses to Students Classroom Experience



Under the null hypothesis of no preference there would be the expected equal response split. Therefore there would be the following results out of 144 responses:

Table 4.11.1.6 Facilitation of training in the Lerotholi Polytechnic programmes

Was training at Lerotholi Polytechnic poorly facilitated?		
Responses	Yes	No
Observed	4	140
Expected	72	72

$$\chi^2 = 128.4$$

Since the degrees of freedom are (R for observed) = (2 – 1) = 1

or

(for Yes and No responses) = (2 – 1) = 1.

Only one of these would have to be used! As there could be a complex situation than this, which would be solved in the similar manner than using the strenuous nonparametric tables.

Thus, if $\chi^2 = 128.4$, $p = 0.05$, $df = 1$. Appendix F indicated that for $p = 0.05$ and $df = 1$, the required value would be 3.841. If the calculated chi square had been greater than the tabled chi square; then, the null hypotheses would be rejected. Then there had been a significant relationship between observed and expected responses. Learning and training at Lerotholi Polytechnic had had not been poorly facilitated.

The information supplied had tested the research hypothesis 3(H₁) (cf. 3.5.5) and had partially answered the research questions 3.5.6.6 to 3.5.6.8.

Table 4.11.1.7

Lerotholi Polytechnic Lecturer Sample Population Responses to Students Classroom Experience

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
The course gives my students the opportunity to develop competency in the use of language and critical thinking.	0	0.0	1	2.9	0	.0	27	77.1	6	17.1	1	2.9
A sufficient number of sub-courses are provided to meet the demands of students.	1	2.8	3	8.3	4	11.1	21	58.3	6	16.7	1	2.8
The course is offered in a manner in which students are assured the opportunity to complete the entire programme.	0	0.0	0	0.0	1	2.9	24	68.6	6	17.1	4	11.4
Information is presented clearly, opinions are separated form facts and proven conclusions that could equip skills for the future.	2	5.6	1	2.8	4	11.1	25	69.4	3	8.3	1	2.8
Instruction offered in my course is excellent and offered a variety of development issues.	0	0.0	1	2.9	0	0.0	21	61.8	11	32.4	1	2.9
There are adequate and up-to-date machinery and equipment for workshop practical.	9	25.7	14	40.0	6	17.1	5	14.3	0	0.0	1	2.9
Information resources adequately meet student 's needs and requirements.	10	27.8	14	38.9	2	5.6	8	22.2	2	5.6	0	0.0
Instructional resources, machinery and equipment adequately meet student needs and requirements	9	25.0	15	41.7	4	11.1	5	13.9	2	5.6	1	2.8
The classroom facilities are used adequately and they meet training demands for the world of work.	3	8.3	12	33.3	3	8.3	14	38.9	1	2.8	3	8.3
The student's training is poorly facilitated.	6	17.1	16	45.7	5	14.3	6	17.1	0	0.0	2	5.7

Figure 4.11.1.3 Lerotholi Polytechnic Lecturer Sample Population's Responses to Students Classroom Experience with regard to Pedagogy

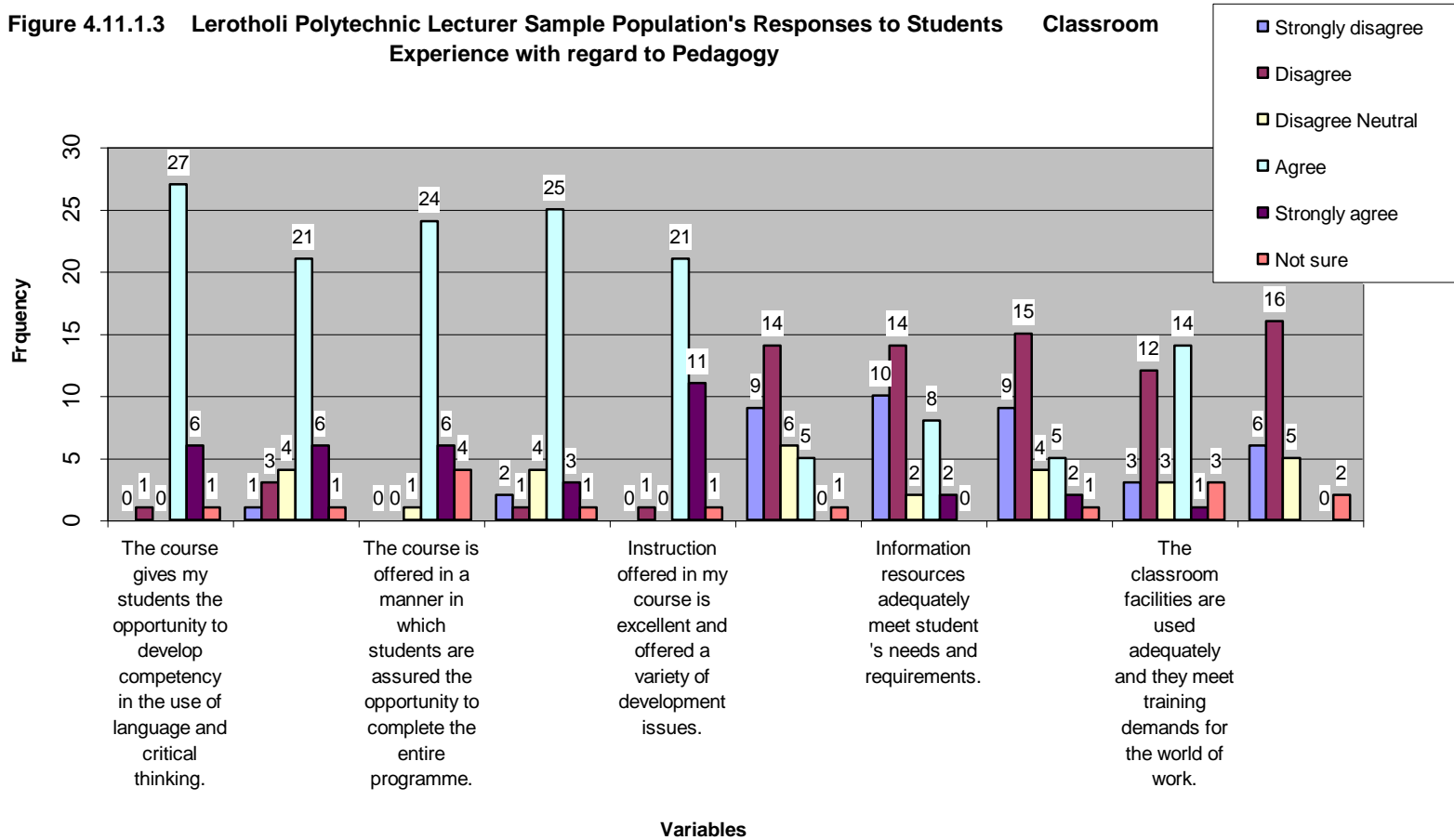


Table 4.11.1.8 Lerotholi Polytechnic Lecturer Sample Population Responses to Students Classroom Experience – chi square

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
The course gives my students the opportunity to develop competency in the use of language and critical thinking.	0	4.0	4.0	1	7.7	5.8	0	2.9	2.9	27	15.1	9.4	6	3.5	1.8	1	1.5	0.2	35
A sufficient number of sub-courses are provided to meet the demands of students.	1	4.1	2.3	3	8.0	3.1	4	3.0	0.3	21	15.5	2.0	6	3.6	1.6	1	1.5	0.2	36
The course is offered in a manner in which students are assured the opportunity to complete the entire programme.	0	4.0	4.0	0	7.7	7.7	1	2.9	1.3	24	15.1	5.2	6	3.5	1.8	4	1.5	4.2	35

Information is presented clearly, opinions are separated from facts and proven conclusions that could equip skills for the future.	2	4.1	1.1	1	8.0	6.1	4	3.0	0.3	25	15.5	5.8	3	3.6	0.1	1	1.5	0.2	36
Instruction offered in my course is excellent and offered a variety of development issues.	0	3.9	3.9	1	7.5	5.6	0	2.8	2.8	21	14.7	2.7	11	3.4	17.0	1	1.5	0.2	34
There are adequate and up-to-date machinery and equipment for workshop practical.	9	4.0	6.3	14	7.7	5.2	6	2.9	3.3	5	15.5	7.1	0	3.5	3.5	1	1.5	0.2	35
Information resources adequately meet student 's needs and	10	4.0	9.0	14	8.0	4.5	2	3.0	0.3	8	15.5	3.6	2	3.6	0.7	0	1.5	1.5	36

requirements.																				
Instructional resources, machinery and equipment adequately meet student needs and requirements	9	4.0	6.3	15	8.0	6.1	4	3.0	0.3	5	15.5	7.1	2	3.6	0.7	1	1.5	0.2	36	
The classroom facilities are used adequately and they meet training demands for the world of work.	3	4.0	0.3	12	8.0	2.0	3	3.0	0.0	14	15.5	0.2	1	3.6	1.9	3	1.5	1.5	36	
The student's training is poorly facilitated.	6	3.3	2.2	16	6.4	14.4	5	2.4	2.8	6	12.5	7.2	0	2.9	2.9	2	1.3	0.4	29	
Total	40			77			29			150			35			15			348	

The calculated chi square (χ^2) = 161.2;

Degrees of freedom $df = (R - 1) (C - 1) = (10 - 1) (6 - 1) = 9 \times 5 = 45$. Degrees of freedom for 45 had not been tabled even (Gay and Airasian, 2003:556) the last reference resort! Then, the researcher had to build a theory or concept for getting the needed degrees of freedom at the level of 45 using the statistical facts. The following was utilised:

Between the numbers 7, 8 and 9; the median had been 8 and also the mean value of 7 and 9 would be 8; and also between 25, 26 and 27; the median would be 26 and also for 25 and 27 the mean value would be 26.

The tabled degrees of freedom $df = 7$ at $p = 0.05$ had been $\chi^2 = 14.067$; the degrees of freedom $df = 9$ at $p = 0.05$ would be 16.919. By adding the degrees of freedom $df = 7$ and $df = 9$ both at $p = 0.05$ and dividing by 2 to get that of the degrees of in between; in this case for $df = 8$ at $p = 8$ would yield 15.4915. The tabled degrees of freedom $df = 8$ at the level $p = 0.05$ had been 15.507; there existed an error of 0.0155 at the said level.

. At one decimal place the researcher 's assumption would be correct!

Expanding on this theory; the researcher took three examples of the three more tabled degrees of freedom; $df = 25$, $df = 26$ and $df = 27$ at the level $p = 0.05$. Only those of the first and the last degrees of freedom were used to get those of the middle: $df = 25$ at $p = 0.05$ had been tabled as 37.652 and $df = 27$ at $p = 0.05$ had been tabled as 40.113. Adding the two and dividing by two gave 38.8825. The tabled $df = 26$ at $p = 0.05$ level had been 38.885. There had been an error of 0.0025. Still, to one decimal place the researcher would be correct!

Therefore, the researcher had used similar concept to find the expected value for $df = 44$ and $df = 46$ expected levels of significance at $p = 0.05$ to get what would be the level of significance $df = 45$ at $p = 0.05$ and had calculated it to be $\chi^2 = 61.656$ to three decimal places.

The test had substantiated the rejection of the null hypothesis because the calculated chi square (χ^2) value had been greater than that which would require chi square (χ^2) critical value to reject the null hypothesis. Therefore, according to Lerotholi polytechnic lecturer sample population; there had been a significant relationship between technical and vocational education classroom experience and the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

The research hypothesis 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

Table 4.11.1.9 Lerotholi Polytechnic Administrator Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Classroom Experience

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
The courses have been structured in the manner that establishes a broad base for articulation within education system.	0	0.0	1	9.1	0	0.0	1	9.1	8	72.7	1	9.1
The courses have been structured in the manner that students are provided with knowledge and skills development.	0	0.0	1	11.1	1	11.1	2	22.2	4	44.4	1	11.1
The courses give the students the opportunity to develop competency in the use of language, computation and critical thinking.	0	0.0	3	30.0	1	10.0	1	10.0	4	40.0	1	10.0
A sufficient number of sub-courses are provided to meet the demands of students.	0	0.0	1	9.1	3	27.3	0	0.0	5	45.5	2	18.2
The courses are offered in a manner which students are assured the opportunity to complete the entire programme.	0	0.0	0	0.0	3	27.3	3	27.3	4	36.4	1	9.1
Information is presented clearly, opinions are separated form facts and proven conclusions that could equip skills for the future.	0	0.0	0	0.0	1	9.1	1	9.1	5	45.5	4	36.4
There are adequate and up-to-date machinery and equipment for workshop practical.	0	0.0	0	0.0	1	9.1	2	18.2	6	54.5	2	18.2
Information resources adequately meet student 's needs and requirements.	1	9.1	7	63.6	1	9.1	0	0.0	1	9.1	1	9.1
Instructional resources, machinery and equipment adequately meet student needs and requirements	1	9.1	3	27.3	1	9.1	3	27.3	3	27.3	0	0.0
The classroom facilities are used adequately and they meet training demands for the world of work.	2	18.2	0	.0	1	9.1	1	9.1	7	63.6	0	0.0
The student's training is poorly facilitated.	1	9.1	3	27.3	0	0.0	2	18.2	5	45.5	0	0.0

Figure 4.11.1.4 Lerotholi Polytechnic Administrator Sample Population's Responses with regard to Students' Classroom Experience

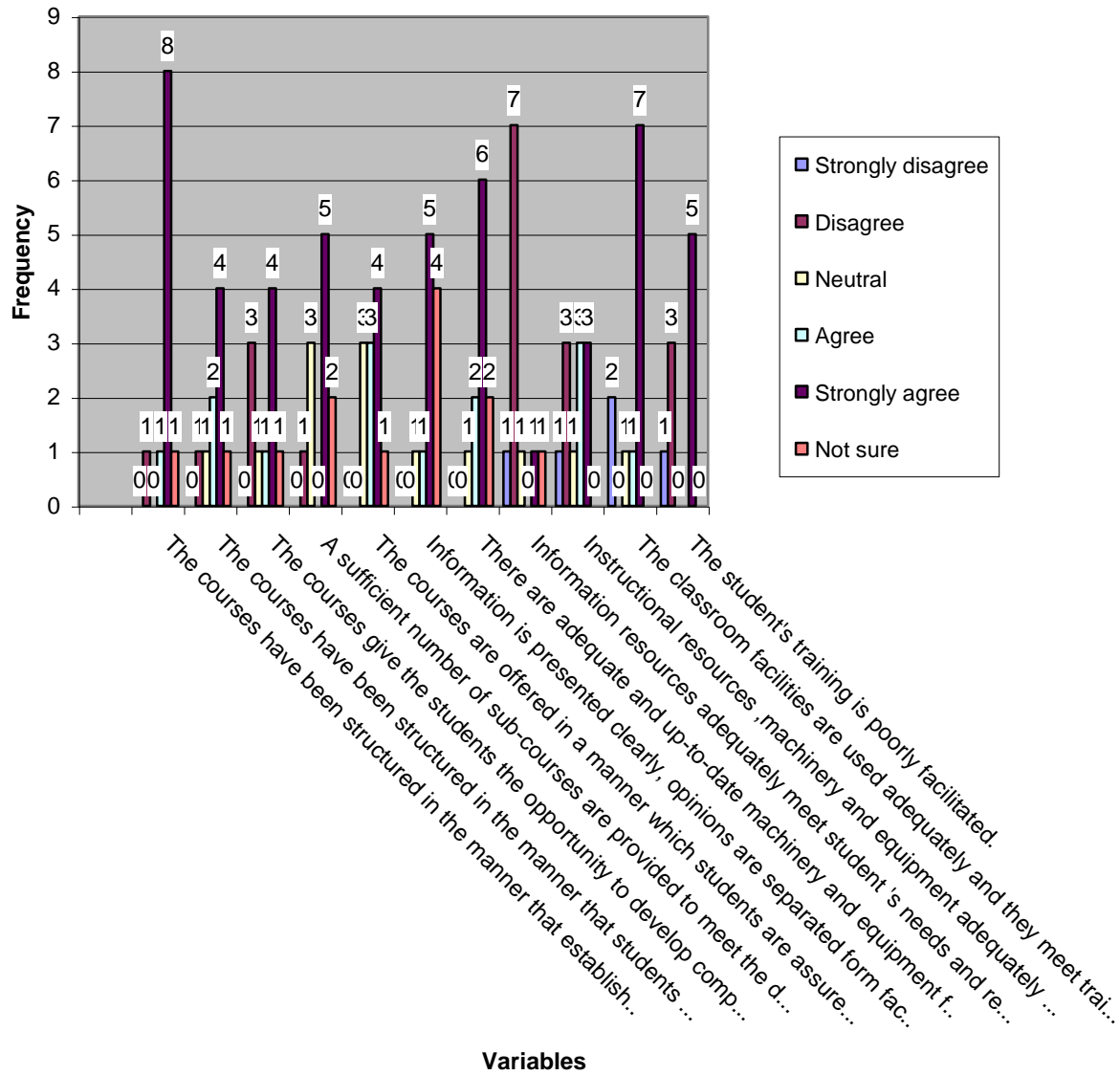


Table 4.11.1.10 Lerotholi Polytechnic Administrator Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Classroom Experience

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
The demand for access to technical and vocational education and training has increased at LP.	0	0.4	0.4	0	1.4	1.4	3	1.7	1.0	1	0.7	0.1	5	4.1	0.2	1	1.7	0.3	10
11The courses are provided in a variety of formats to meet student needs to equip them with job oriented skills	0	0.4	0.4	0	1.6	1.6	1	1.9	0.4	0	0.8	0.8	7	4.5	1.4	3	1.9	0.6	11
Governance of the skill training at LP is guided by labour market needs.	0	0.4	0.4	0	1.6	1.6	7	1.9	13.7	0	0.8	0.8	2	4.5	1.4	2	1.9	0.01	11
TVE adequately prepares labour	1	0.4	0.9	6	1.6	12.1	1	1.9	0.4	1	0.8	0.1	2	4.5	1.4	0	1.9	1.9	11

market clientele irrespective of gender and physical status.																				
TVE equips all groups of society with skills required for adaptation to new ideas for career development.	0	0.4	0.4	3	1.6	1.2	1	1.9	0.4	4	0.8	12.8	3	4.5	0.5	0	1.9	1.9	11	
Some students end-up taking the work not related to their profession.	1	0.4	0.9	0	1.4	1.4	1	1.7	0.3	0	0.7	0.7	5	4.1	0.2	3	1.7	1.0	10	
The student's profession is just but desirable in the labour market.	1	0.4	0.9	3	1.4	1.8	1	1.7	0.3	1	0.7	0.1	3	4.1	0.3	1	1.7	0.3	10	
The course is demand-driven and highly appreciated in the labour market.	1	0.4	0.9	4	1.4	4.8	1	1.7	0.3	0	0.7	0.7	4	4.1	0.002	0	1.7	1.7	10	
The appropriateness and forward planning of the course with regard to employment possibilities are the	0	0.4	0.4	0	1.4	1.4	0	1.7	1.7	0	0.7	0.7	5	4.1	0.2	5	1.7	6.4	10	

basic principles that guide the course.																				
Knowledge and skills improvement increase an economy's output of goods and services for social economic development.	0	0.3	0.3	0	1.3	1.3	1	1.5	0.2	0	0.6	0.6	6	3.7	1.4	2	1.5	0.2	9	
The trends of globalisation of trade, labour market and changing technologies imply the need to update continually.	0	0.3	0.3	0	1.3	1.3	2	1.5	0.2	1	0.6	0.3	4	3.7	0.02	2	1.5	0.2	9	
Total	4			16			19			8			46			19			112	

$$\chi^2 = 94.232$$

If the calculated chi square $\chi^2 = 94.232$ was greater than $\chi^2 = 31.410$; chi square from the table in Appendix F at degree of difference **df** = 20 for probability error $p = 0.05$. $\chi^2 = 62.505$ had been the chi square goodness-of-fit and accepted rejected the null hypothesis.

Then the test indicated that Lerotholi Polytechnic administrator sample population responded that there was a significant relationship between student classroom experience and programmes of the Lerotholi Polytechnic learning and training for the world of work.

The research hypotheses 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

Table 4.11.1.11 Lerotholi Polytechnic Student Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
There are adequate and up-to-date machinery and equipment for workshop practicals.	7	15.9	12	27.3	6	13.6	12	27.3	5	11.4	2	4.5
Information resources adequately meet my needs and demands.	12	28.6	7	16.7	7	16.7	9	21.4	5	11.9	2	4.8
Usage of instructional resources, machinery and equipment adequately meet my demands.	5	11.4	13	29.5	8	18.2	10	22.7	6	13.6	2	4.5
The classroom facilities are used adequately during the training session and are meeting my demands.	3	7.0	14	32.6	6	14.0	6	14.0	5	11.6	9	20.9

Figure 4.11.1.5 Lerotholi Polytechnic Student Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

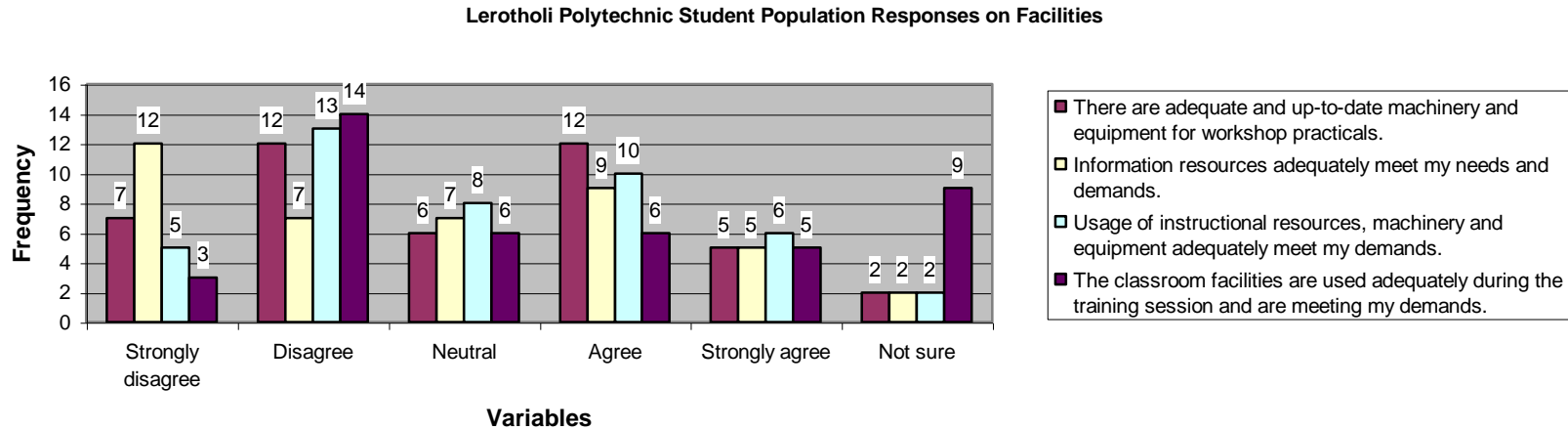


Table 4.11.1.12 Lerotholi Polytechnic Student Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia (Expected Frequency and Chi Square)

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
There are adequate and up-to-date machinery and equipment for workshop practicals.	7	6.9	0.002	12	11.7	0.01	6	6.7	0.1	12	9.4	0.7	5	5.3	0.02	2	3.8	0.9	44
Information resources adequately meet my	12	6.6	4.4	7	11.2	1.6	7	6.6	0.1	9	9.0	0.1	5	5.1	0.002	2	3.6	0.7	42

needs and demands.																			
Usage of instructional resources, machinery and equipment adequately meet my demands.	5	6.9	0.5	13	11.7	0.1	8	6.9	0.2	10	9.4	0.04	6	5.3	0.1	2	3.8	0.9	44
The classroom facilities are used adequately during the training session and are meeting my demands.	3	6.7	2.0	14	11.4	0.6	6	6.7	0.1	6	9.2	1.1	5	5.2	0.01	9	3.7	7.6	43
Total	27			46			27			37			21			15			173

The calculated chi square (χ^2) = 21.884

Degree of freedom $df = (R - 1) (C - 1) = (4 - 1) (6 - 1) = 3 \times 5 = 15$

Probability error = 0.05

Expected critical value chi square (χ^2) required for rejection of null hypothesis tabled (cf. Appendix F):

$$\begin{array}{r|l} df = 15 & 0.05 \\ \hline & 24.996 \\ \chi^2 = 21.884 & \end{array}$$

If the test showed that the calculated required critical value was less than the required value to reject the null hypothesis, then according to Lerotholi polytechnic student sample population; there had been no significant relationship between the usage of equipment and materials in technical and vocational education classroom experience and the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

The research hypotheses 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9 (cf.3.5.6).

Table 4.11.1.13 Lerotholi Polytechnic Graduate Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
There were adequate and up-to-date machinery and equipment for workshop practicals.	27	11.9	118	52.2	14	6.2	41	18.1	24	10.6	2	0.9
Information resources (library holdings, internet access) adequately meet student needs and demands.	8	3.7	61	28.0	12	5.5	104	47.7	21	9.6	12	5.5
Usage of instructional resources, machinery and equipment (computers, workshop machinery) met my needs and demands.	32	14.2	105	46.7	19	8.4	44	19.6	18	8.0	7	3.1
The classroom facilities (including shop, business training) were used adequately during the training session.	26	11.7	111	50.0	18	8.1	39	17.6	19	8.6	9	4.1
My training was very well facilitated.	3	3.5	29	34.1	6	7.1	36	42.4	11	12.9	0	0.0

Figure 4.11.1.6 Lerotholi Polytechnic Graduate Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

Lerotholi Polytechnic Graduate Sample Population Responses on Lerotholi Polytechnic Classroom Facilities

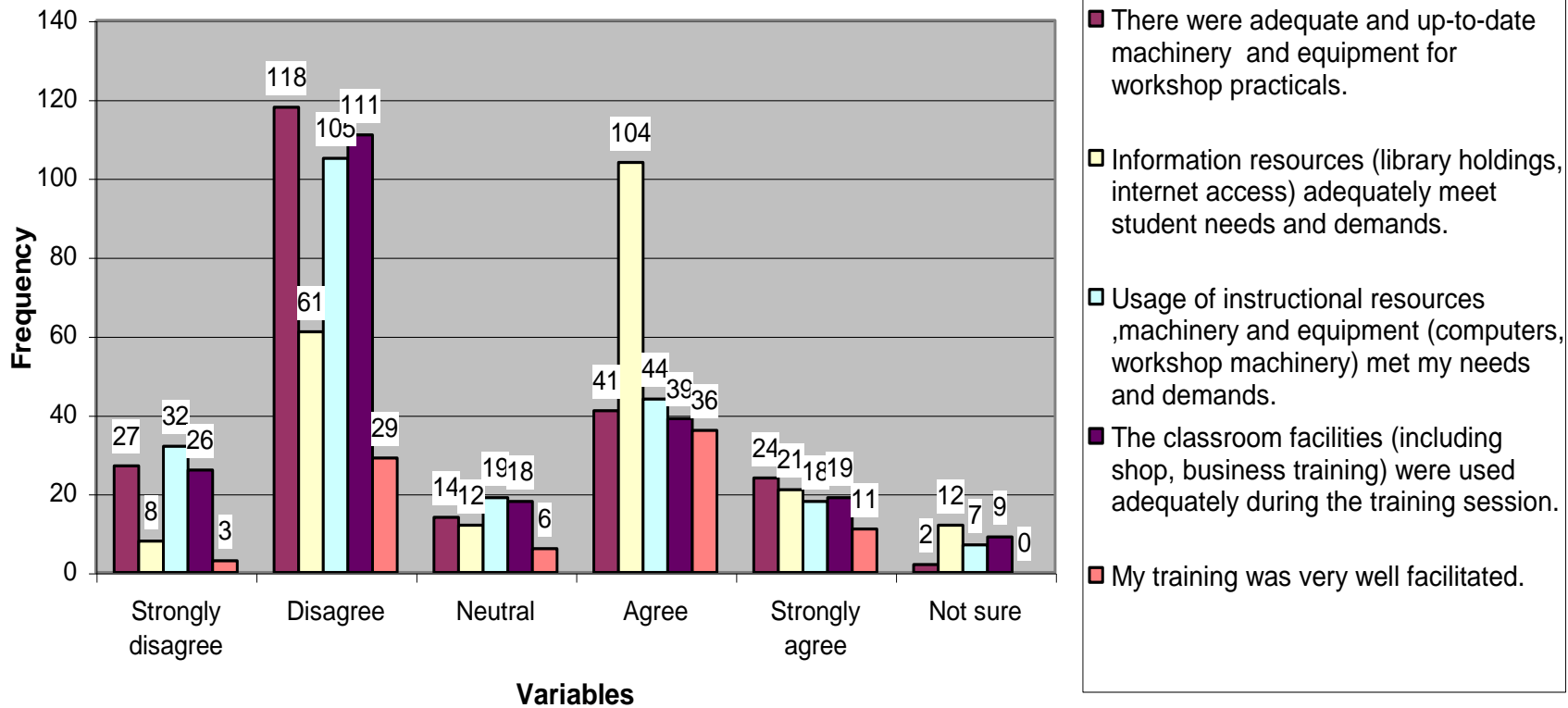


Table 4.11.1.14 Lerotholi Polytechnic Graduate Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia (Expected Frequency and Chi Square)

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
There were adequate and up-to-date machinery and equipment for workshop practicals.	27	22.2	1.0	118	98.2	4.0	14	16.0	0.3	41	61.1	6.6	24	21.5	0.3	2	7.0	3.6	226
Information resources (library holdings, internet access) adequately meet student needs and demands.	8	21.4	8.4	61	94.7	12.0	12	15.4	0.8	104	59.0	34.3	21	20.8	0.002	12	6.7	4.2	218
Usage of instructional resources, machinery and equipment (computers, workshop machinery) met my needs and demands.	32	22.1	4.4	105	97.8	0.5	19	15.9	0.6	44	60.9	4.7	18	21.4	0.5	7	6.9	0.002	225
The classroom facilities (including shop, business training) were used adequately during the training session.	26	21.8	0.8	111	96.4	2.2	18	15.7	0.3	39	60.1	7.4	19	21.2	0.2	9	6.8	0.7	222
My training was very well facilitated.	3	8.4	3.5	29	39.5	2.8	6	6.0	0.0	36	23.0	7.4	11	8.1	1.0	0	2.6	2.6	85
Total	96			424			69			264			93			30			976

Thus, the calculated $\chi^2 = 54.704$.

If the calculated chi square $\chi^2 = 94.232$ was greater than $\chi^2 = 31.410$; chi square from the table in Appendix F at degree of difference **df** = 20 for probability error $p = 0.05$. $\chi^2 = 54.704$ had been the chi square goodness-of-fit and beyond it null hypothesis had been rejected.

Then the test indicated that Lerotholi Polytechnic graduate sample population responded that there was a significant relationship between classroom experience and significant programmes of the Lerotholi Polytechnic learning and training for the world of work. However, the machinery, and instructional resources had not been up to the required standard; their use had not been well facilitated as the responses in the histogram had indicated.

The research hypotheses 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

Table 4.11.1.15 Lerotholi Polytechnic Lecturer Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
There are adequate and up-to-date machinery and equipment for workshop practical.	9	25.7	14	40.0	6	17.1	5	14.3	0	0.0	1	2.9
Information resources adequately meet student 's needs and requirements.	10	27.8	14	38.9	2	5.6	8	22.2	2	5.6	0	0.0
Instructional resources, machinery and equipment adequately meet student needs and requirements	9	25.0	15	41.7	4	11.1	5	13.9	2	5.6	1	2.8
The classroom facilities are used adequately and they meet training demands for the world of work.	3	8.3	12	33.3	3	8.3	14	38.9	1	2.8	3	8.3
The student's training is poorly facilitated.	6	17.1	16	45.7	5	14.3	6	17.1	0	0.0	2	5.7

Figure 4.11.1.7 Lerotholi Polytechnic Lecturer Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

Lerotholi Polytechnic Lecturer Sample Population Remarks of Resoureces

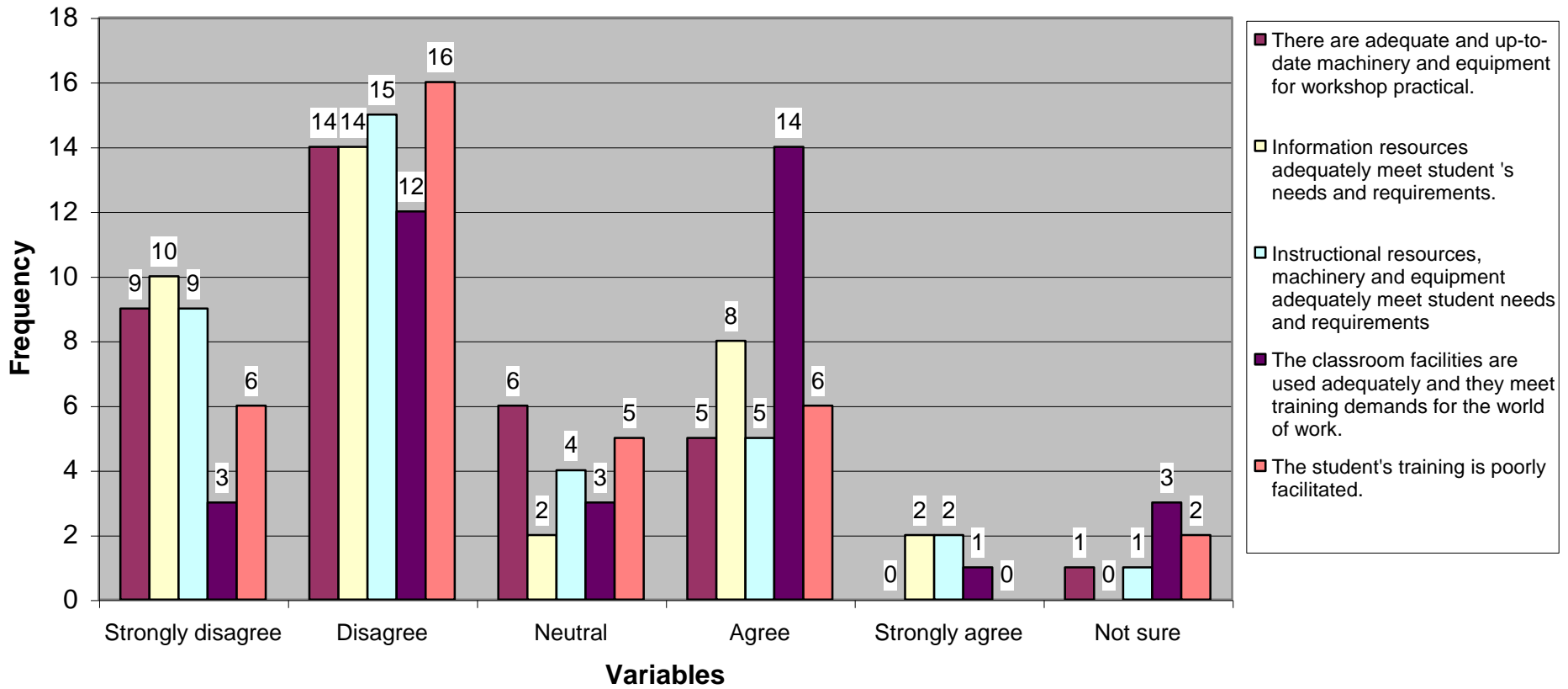


Table 4.11.1.16 Lerotholi Polytechnic Lecturer Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
There are adequate and up-to-date machinery and equipment for workshop practical.	9	7.3	0.4	14	14.0	0	6	3.9	1.1	5	7.5	0.8	0	1.0	1.0	1	1.4		35
Information resources adequately meet student 's needs and requirements.	10	7.5	0.8	14	14.4	0.01	2	4.1	1.1	8	7.7	0.01	2	1.0	1.0	0	1.4		36
Instructional resources, machinery and equipment adequately meet student needs and requirements	9	7.5	0.3	15	14.4	0.03	4	4.1	0.002	5	7.7	1.0	2	1.0	1.0	1	1.4		36
The classroom facilities are used adequately and they meet training demands for the world of work.	3	7.5	2.7	12	14.4	0.4	3	4.1	0.3	14	7.7	5.2	1	1.0	0	3	1.4		36
The student's training is poorly facilitated.	6	7.3	0.2	16	14.0	0.3	5	3.9	0.3	6	7.5	0.3	0	1.0	1.0	2	1.4		35
Total	37			71			20			38			5			7			178

Thus, the calculated $\chi^2 = 26.252$

The calculated chi square $\chi^2 = 26.252$ was greater than $\chi^2 = 31.410$; chi square from the table in Appendix F at degree of difference **df** = 20 for probability error $p = 0.05$. $\chi^2 = 26.252$ had been the chi square goodness-of-fit and accepted null hypothesis.

The test indicated that Lerotholi Polytechnic lecturer sample population responded that there was no significant relationship between student classroom experience and programmes of the Lerotholi Polytechnic learning and training for the world of work. The machinery, and instructional resources had not been up to the required standard; their use had not been well facilitated as the responses in the histogram had indicated.

The research hypotheses 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

Table 4.11.1.17 Lerotholi Polytechnic Administrator Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
The courses have been structured in the manner that establishes a broad base for articulation within education system.	0	0.0	1	9.1	0	0.0	1	9.1	8	72.7	1	9.1
The courses have been structured in the manner that students are provided with knowledge and skills development.	0	0.0	1	11.1	1	11.1	2	22.2	4	44.4	1	11.1
The courses give the students the opportunity to develop competency in the use of language, computation and critical thinking.	0	0.0	3	30.0	1	10.0	1	10.0	4	40.0	1	10.0
A sufficient number of sub-courses are provided to meet the demands of students.	0	0.0	1	9.1	3	27.3	0	0.0	5	45.5	2	18.2
The courses are offered in a manner which students are assured the opportunity to complete the entire programme.	0	0.0	0	0.0	3	27.3	3	27.3	4	36.4	1	9.1
Information is presented clearly, opinions are separated form facts and proven conclusions that could equip skills for the future.	0	0.0	0	0.0	1	9.1	1	9.1	5	45.5	4	36.4
There are adequate and up-to-date machinery and equipment for workshop practical.	0	0.0	0	0.0	1	9.1	2	18.2	6	54.5	2	18.2
Information resources adequately meet student 's needs and requirements.	1	9.1	7	63.6	1	9.1	0	.0	1	9.1	1	9.1
Instructional resources, machinery and equipment adequately meet student needs and requirements	1	9.1	3	27.3	1	9.1	3	27.3	3	27.3	0	0.0

The classroom facilities are used adequately and they meet training demands for the world of work.	2	18.2	0	.0	1	9.1	1	9.1	7	63.6	0	0.0
The student's training is poorly facilitated.	1	9.1	3	27.3	0	0.0	2	18.2	5	45.5	0	0.0

Figure 4.11.1.8 Lerotholi Polytechnic Administrator Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

Lerotholi Polytechnic Administrator Responses on LP Student Classroom Experience

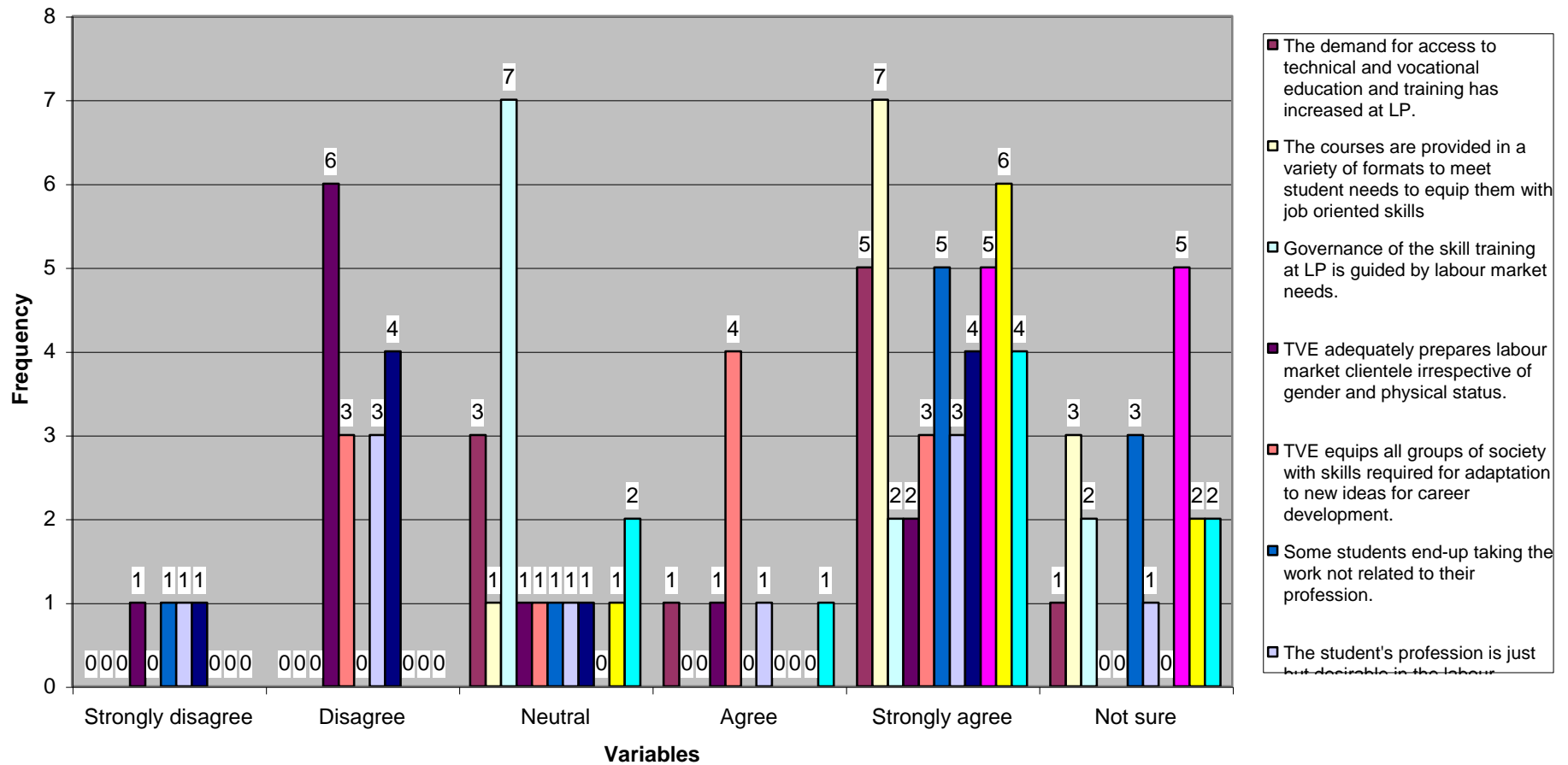


Table 4.11.1.18 Lerotholi Polytechnic Administrator Sample Population Responses on Classroom Experience at the Lerotholi Polytechnic with regard to Academia

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
The courses have been structured in the manner that establishes a broad base for articulation within education system.	0	0.5	0.5	1	1.8	0.4	0	1.2	1.2	1	1.3	0.1	8	4.9	2.0	1	1.2	0.03	11
The courses have been structured in the manner that students are provided with knowledge and skills development.	0	0.4	0.4	1	1.5	0.2	1	1.0	0.0	2	1.1	0.7	4	4.0	0.0	1	1.0	0.0	9
The courses give the students the opportunity to develop competency in the use of language, computation and critical thinking.	0	0.4	0.4	3	1.6	1.2	1	1.1	0.01	1	1.2	0.03	4	4.5	0.1	1	1.1	0.01	10
A sufficient number of sub-courses are provided to meet the demands of students.	0	0.5	0.5	1	1.8	0.4	3	1.2	2.7	0.0	1.3	1.3	5	4.9	0.002	2	1.2	0.5	11
The courses are offered in a manner which students are assured the opportunity to complete the entire	0	0.5	0.5	0.0	1.8	1.8	3	1.2	2.7	3	1.3	2.2	4	4.9	0.2	1	1.2	0.03	11

programme.																				
Information is presented clearly, opinions are separated from facts and proven conclusions that could equip skills for the future.	0	0.5	0.5	0.0	1.8	1.8	1	1.2	0.03	1	1.3	0.1	5	4.9	0.002	4	1.2	6.5	11	
There are adequate and up-to-date machinery and equipment for workshop practical.	0	0.5	0.5	0.0	1.8	1.8	1	1.2	0.03	2	1.3	0.4	6	4.9	0.3	2	1.2	0.5	11	
Information resources adequately meet student's needs and requirements.	1	0.5	0.5	7	1.8	15.0	1	1.2	0.03	0	1.3	1.3	1	4.9	3.1	1	1.2	0.03	11	
Instructional resources, machinery and equipment adequately meet student needs and requirements	1	0.5	0.5	3	1.8	0.8	1	1.2	0.03	3	1.3	2.2	3	4.9	0.7	0	1.2	1.2	11	
The classroom facilities are used adequately and they meet training demands for the world of work.	2	0.5	4.5	0.0	1.8	1.8	1	1.2	0.03	1	1.3	0.1	7	4.9	0.9	0	1.2	1.2	11	
The student's training is poorly facilitated.	1	0.4	0.9	3	1.5	1.5	0	1.0	1.0	2	1.1	0.7	5	4.0	0.3	0	1.0	1.0	9	
Total	5			19			13			14			52			13			116	

The calculated chi square (χ^2) = 71.494

Expected critical value chi square (χ^2) required for rejection of null hypothesis tabled (cf. Appendix F):

$$\begin{array}{r|l} df = 50 & 0.05 \\ \hline & 67.505 \\ \chi^2 = 71.494 & \end{array}$$

If the test had substantiated the rejection of the null hypothesis because the calculated chi square (χ^2) value had been greater than the required chi square (χ^2) critical value to reject the null hypothesis. Therefore, according to Lerotholi polytechnic administrator sample population; then there had been a significant relationship between technical and vocational education classroom experience and the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district through the skills acquired in classroom.

The research hypotheses 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

4.12 INDUSTRIAL ATTACHMENT

The Lerotholi Polytechnic sample population was requested to indicate their views with regard to industrial attachment (experiential learning). Industrial attachment could give the trainees hands on experience and new work related skills otherwise which they could hardly get in the classroom and or workshop. Their responses had been noted below.

Table 4.12.1.1 Lerotholi Polytechnic Students Responses on Industrial attachment of Lerotholi Polytechnic students

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
Industrial attachment equipped me with eye-opening activities and acquainted me with relevant skills.	2	4.5	4	9.1	1	2.3	17	38.6	15	34.1	5	11.4
Industrial attachment has been conducted in a helpful manner.	2	4.7	4	9.3	7	16.3	21	48.8	5	11.6	4	9.3
The industry I was attachment to assists in training and course development at LP.	0	.0	5	11.4	6	13.6	14	31.8	5	11.4	14	31.8
Industrial attachment was conducted purely well and I feel I became empowered to execute my potentials at my work-place	1	2.3	3	6.8	5	11.4	17	38.6	7	15.9	11	25.0

Figure 4.12.1 Lerotholi Polytechnic Students Responses on Industrial attachment of Lerotholi Polytechnic students

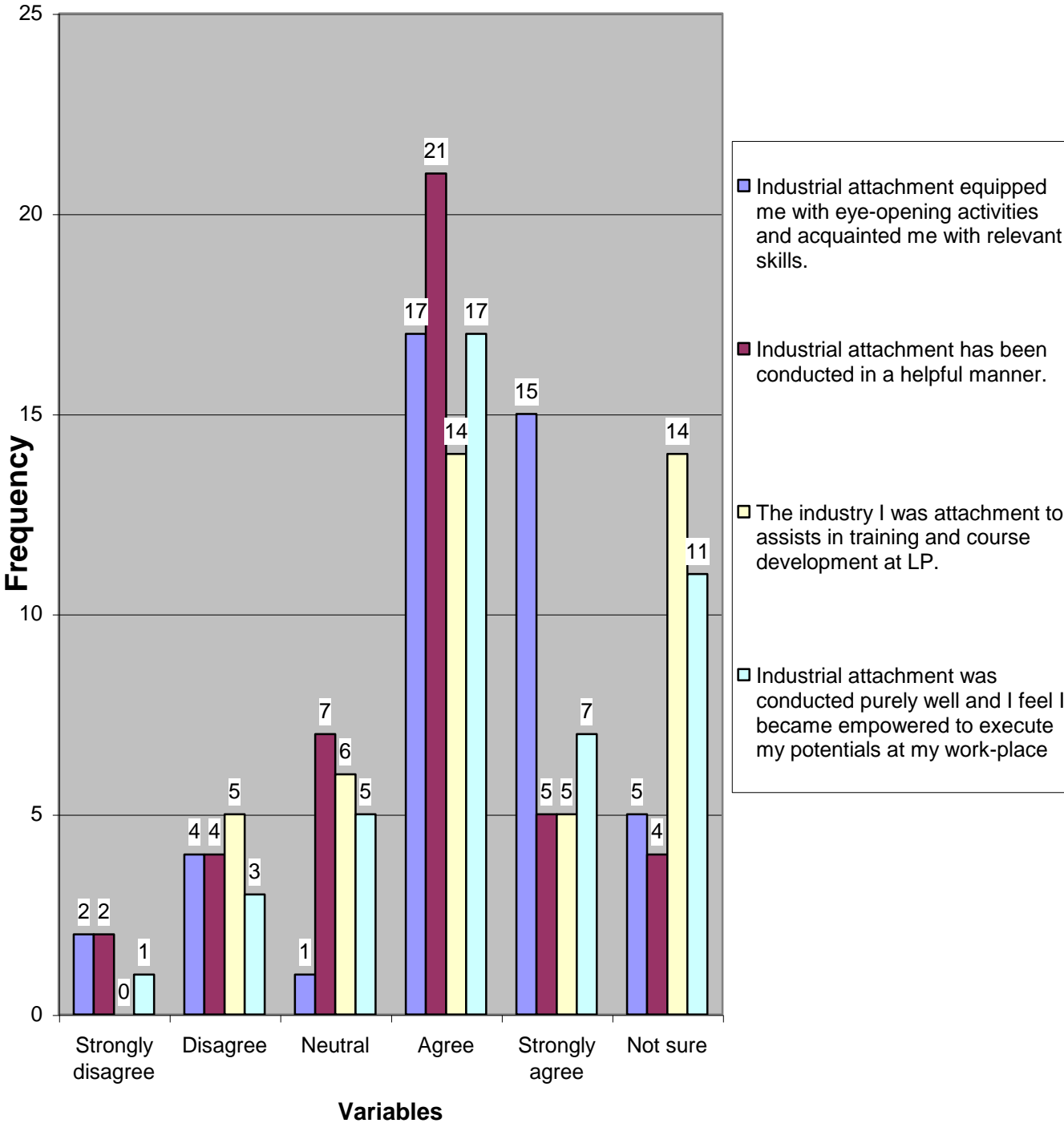


Table 4.12.1.2 Lerotholi Polytechnic Students Responses on Industrial attachment of Lerotholi Polytechnic students (chi square computation)

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
Industrial attachment equipped me with eye-opening activities and acquainted me with relevant skills.	2	1.3	0.4	4	4.0	0	1	4.8	3.0	17	17.4	0	15	8.1	5.9	5	8.6	1.5	44
Industrial attachment has been conducted in a helpful manner.	2	1.2	0.5	4	3.9	0	7	4.7	1.1	21	17.0	0.9	5	7.9	1.1	4	8.4	2.3	43
The industry I was attachment to assists in training and course development at LP.	0	1.3	1.3	5	4.0	0.3	6	4.8	0.3	14	17.4	0.7	5	8.1	1.2	14	8.6	3.3	44
Industrial attachment was conducted purely well and I feel I became empowered to execute my potentials at my work-place	1	1.3	0.1	3	4.0	0.3	5	4.8	0	17	17.4	0.01	7	8.1	0.1	11	8.6	0.7	44
Total	5			16			19			69			32			34			175

$\chi^2 = 94.232$

Thus, the calculated $\chi^2 = 94.232$.

If the calculated chi square $\chi^2 = 94.232$ was greater than $\chi^2 = 34.996$; chi square from the table in Appendix F at degree of difference **df** = 15 for probability error $p = 0.05$. $\chi^2 = 34.996$ had been the chi square goodness-of-fit and beyond it null hypothesis had been rejected.

Then the test indicated that Lerotholi Polytechnic sample student population responded that there was a significant relationship between industrial attachment and significant programmes of the Lerotholi Polytechnic learning and training for the world of work.

The research hypotheses 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

Table 4.12.1.3 Lerotholi Polytechnic Lecturers Responses on Industrial attachment of Lerotholi Polytechnic students

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
The courses have been structured in the manner that establishes a broad base for articulation within education system.	0	0.0	1	9.1	0	0.0	1	9.1	8	72.7	1	9.1
The courses have been structured in the manner that students are provided with knowledge and skills development.	0	0.0	1	11.1	1	11.1	2	22.2	4	44.4	1	11.1
The courses give the students the opportunity to develop competency in the use of language, computation and critical thinking.	0	0.0	3	30.0	1	10.0	1	10.0	4	40.0	1	10.0
A sufficient number of sub-courses are provided to meet the demands of students.	0	0.0	1	9.1	3	27.3	0	.0	5	45.5	2	18.2
The courses are offered in a manner which students are assured the opportunity to complete the entire programme.	0	0.0	0	0.0	3	27.3	3	27.3	4	36.4	1	9.1
Information is presented clearly, opinions are separated form facts and proven conclusions that could equip skills for the future.	0	0.0	0	0.0	1	9.1	1	9.1	5	45.5	4	36.4
There are adequate and up-to-date machinery and equipment for workshop practical.	0	0.0	0	0.0	1	9.1	2	18.2	6	54.5	2	18.2
Information resources adequately meet student 's needs and requirements.	1	9.1	7	63.6	1	9.1	0	0.0	1	9.1	1	9.1
Instructional resources, machinery and equipment adequately meet student needs and requirements	1	9.1	3	27.3	1	9.1	3	27.3	3	27.3	0	0.0
The classroom facilities are used adequately and they meet training demands for the world of work.	2	18.2	0	0.0	1	9.1	1	9.1	7	63.6	0	0.0

The student's training is poorly facilitated.	1	9.1	3	27.3	0	0.0	2	18.2	5	45.5	0	0.0
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Figure 4.12.2 Lerotholi Polytechnic Lecturers Responses on Industrial attachment of Lerotholi Polytechnic students

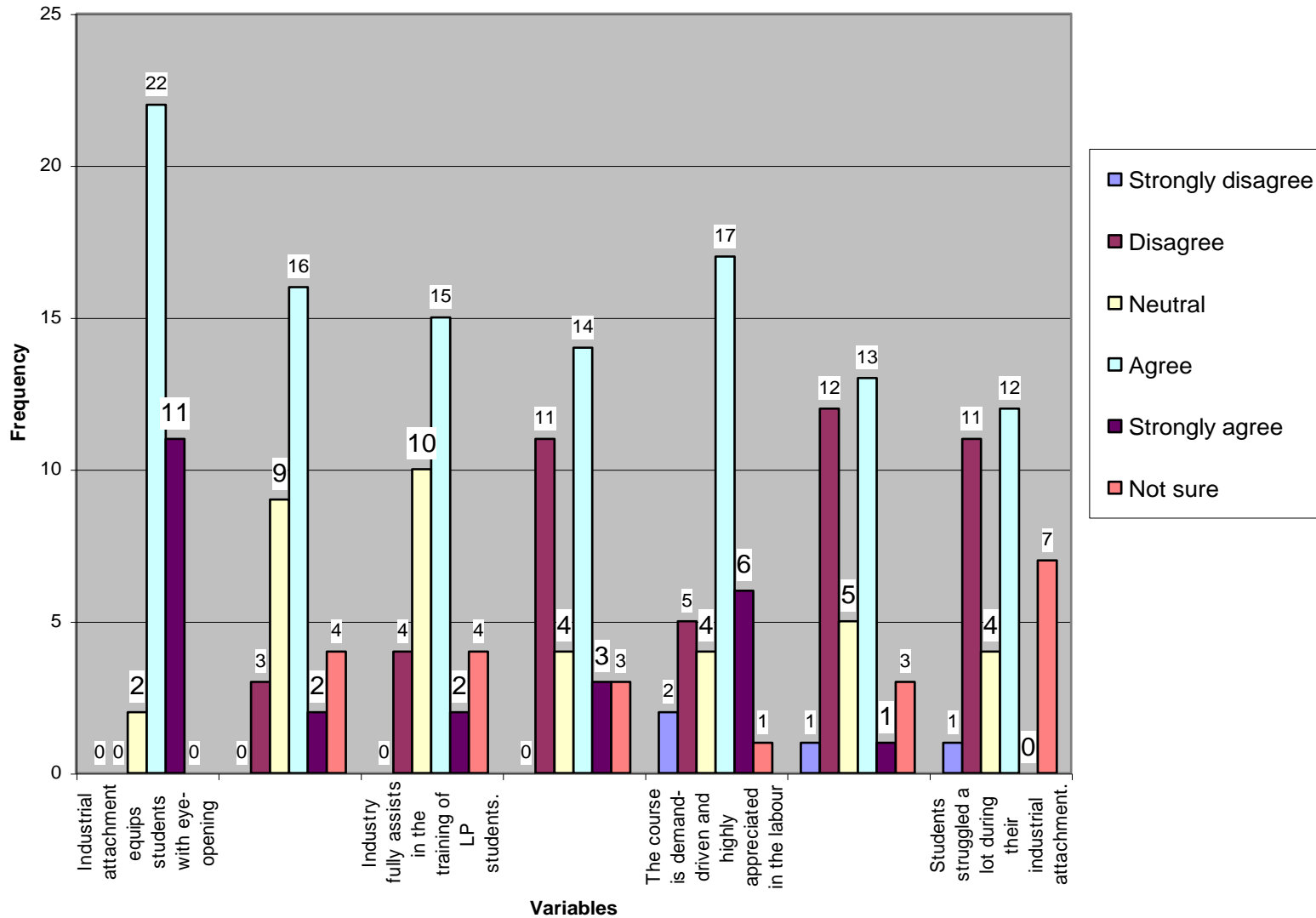


Table 4.11.4 Lerotholi Polytechnic Lecturers Responses on Industrial attachment of Lerotholi Polytechnic students (chi square computation)

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
Industrial attachment equips students with eye-opening activities and supports them with relevant skills for their job.	0	0.6	0.6	0	6.6	0.6	2	5.5	2.2	22	15.6	2.6	11	3.6	15.2	0	3.2	3.2	35
Industrial attachment is conducted in a vibrantly helpful manner.	0	0.6	0.6	3	6.4	1.8	9	5.3	2.6	16	15.2	0.04	2	3.5	0.6	4	3.1	0.3	34
Industry fully assists in the training of LP students.	0	0.6	0.6	4	6.6	1.0	10	5.5	3.4	15	15.6	0.02	2	3.6	0.7	4	3.2	0.2	35
The student's profession is just but desirable in the labour market.	0	0.6	0.6	11	6.6	2.9	4	5.5	0.4	14	15.6	0.2	3	3.6	0.1	3	3.2	0.01	35
The course is demand-driven and highly appreciated in the labour market.	2	0.6	3.3	5	6.6	0.4	4	5.5	0.4	17	15.6	0.1	6	3.6	1.6	1	3.2	1.5	35

The industrial attachment is poorly facilitated and resourced.	1	0.6	0.3	12	6.6	4.4	5	5.5	0.1	13	15.6	0.4	1	3.6	1.9	3	3.2	0.01	35
Students struggled a lot during their industrial attachment.	1	0.6	0.3	11	6.6	2.9	4	5.5	0.4	12	15.6	0.8	0	3.6	3.6	7	3.2	4.5	35
Totals	4			46			38			109			25			22			244

$$\chi^2 = 60.08$$

The degree of freedom **df** had been $(R - 1) (C - 1) = (7 - 1) (6 - 1) = 6 \times 5 = 30$

The probability error was 0.05 and the level of significance was

$$\begin{array}{r|l} \mathbf{df} = 30 & 0.05 \\ & \hline & 43.773 \\ \chi^2 = 60.08 & \end{array}$$

If the critical value for rejecting the null hypothesis had been 43.773 at degree of freedom 30 with the probability error of 0.05 appeared to be less than the value for the test chi square $\chi^2 = 60.08$. Therefore the null hypothesis had been rejected. Then the Lerotholi Polytechnic Lecturer sample population had attested that there existed no relevant significant relationship between industrial attachment and courses provided by the Lerotholi Polytechnic for the preparation of labour market workforce. This had acknowledged the reluctance intensity the labour market had with regard to assistance in training in the Lerotholi Polytechnic programmes.

The research hypotheses 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

Table 4.12.1.5 Lerotholi Polytechnic Administrators Responses on Industrial attachment of Lerotholi Polytechnic students

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Not sure	
	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent	Count	Per cent
The courses have been structured in the manner that establishes a broad base for articulation within education system.	0	0.0	1	9.1	0	.0	1	9.1	8	72.7	1	9.1
The courses have been structured in the manner that students are provided with knowledge and skills development.	0	0.0	1	11.1	1	11.1	2	22.2	4	44.4	1	11.1
The courses give the students the opportunity to develop competency in the use of language, computation and critical thinking.	0	0.0	3	30.0	1	10.0	1	10.0	4	40.0	1	10.0
A sufficient number of sub-courses are provided to meet the demands of students.	0	0.0	1	9.1	3	27.3	0	0.0	5	45.5	2	18.2
The courses are offered in a manner which students are assured the opportunity to complete the entire programme.	0	0.0	0	0.0	3	27.3	3	27.3	4	36.4	1	9.1
Information is presented clearly, opinions are separated form facts and proven conclusions that could equip skills for the future.	0	0.0	0	0.0	1	9.1	1	9.1	5	45.5	4	36.4
There are adequate and up-to-date machinery and equipment for workshop practical.	0	0.0	0	0.0	1	9.1	2	18.2	6	54.5	2	18.2
Information resources adequately meet student 's needs and requirements.	1	9.1	7	63.6	1	9.1	0	0.0	1	9.1	1	9.1
Instructional resources, machinery and equipment adequately meet student needs and requirements	1	9.1	3	27.3	1	9.1	3	27.3	3	27.3	0	0.0
The classroom facilities are used adequately and they meet training	2	18.2	0	0.0	1	9.1	1	9.1	7	63.6	0	0.0

demands for the world of work.												
The student's training is poorly facilitated.	1	9.1	3	27.3	0	0.0	2	18.2	5	45.5	0	0.0

Figure 4.12.3 Lerotholi Polytechnic Administrators Responses on Industrial attachment of Lerotholi Polytechnic students

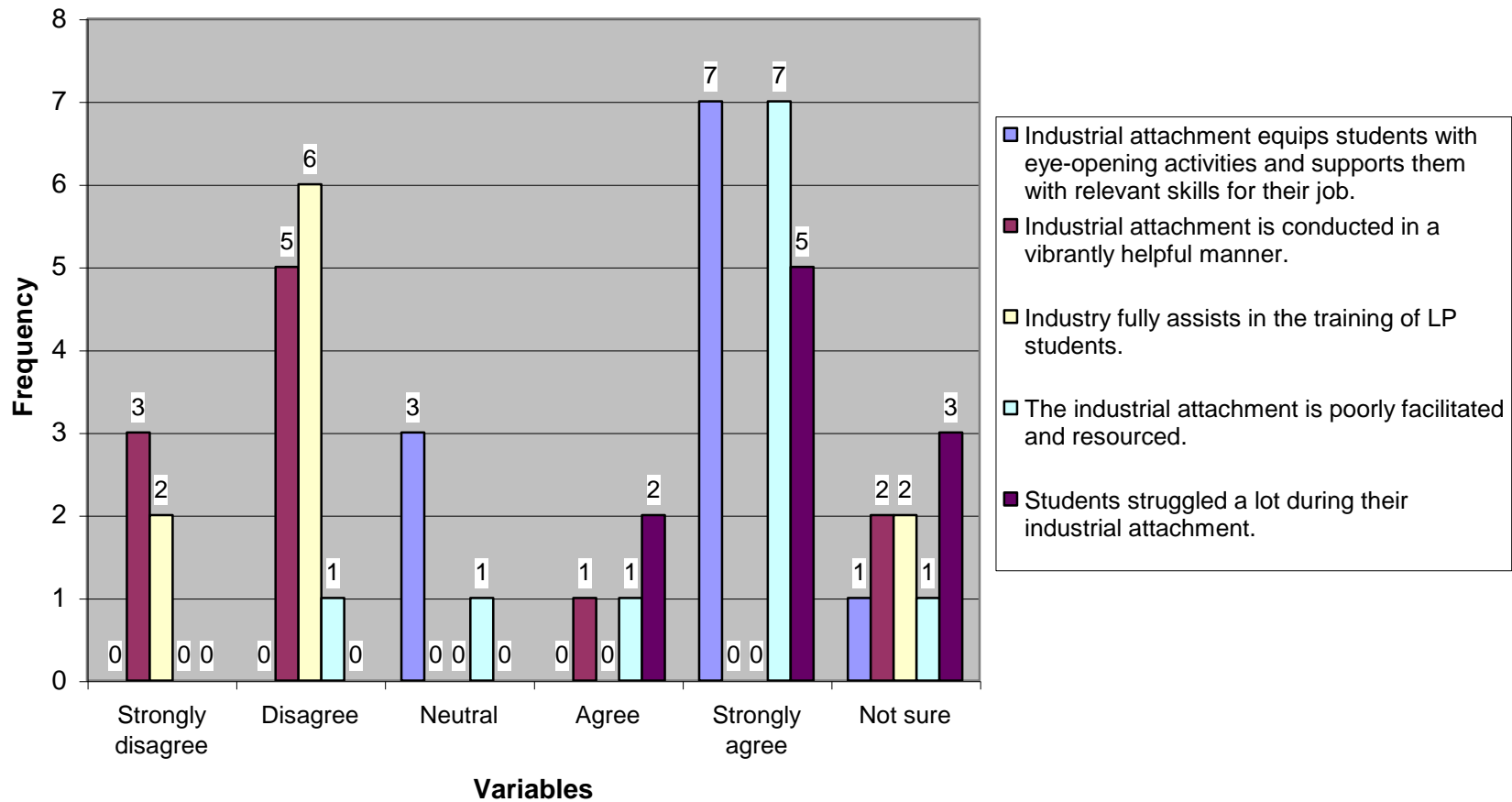


Table 4.12.1.6 Lerotholi Polytechnic Administrators Responses on Industrial attachment of Lerotholi Polytechnic students (chi square computation)

	Strongly disagree			Disagree			Neutral			Agree			Strongly agree			Not sure			Totals
	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	f_o	f_e	χ^2	
Industrial attachment equips students with eye-opening activities and supports them with relevant skills for their job.	0	1.0	1.0	0	2.5	2.5	3	0.8	6.1	0	0.8	0.8	7	3.9	2.5	1	1.9	0.4	11
Industrial attachment is conducted in a vibrantly helpful manner.	3	1.0	4	5	2.5	2.5	0	0.8	0.8	1	0.8	0.1	0	3.9	3.9	2	1.9	0.01	11
Industry fully assists in the training of LP students.	2	0.9	1.3	6	0.9	28.9	0	0.8	0.8	0	0.8	0.8	0	3.6	3.6	2	1.7	0.1	10
The industrial attachment is poorly facilitated and resourced.	0	1.0	1.0	1	2.5	0.9	1	0.8	0.1	1	0.8	0.1	7	3.9	2.5	1	1.9	0.4	11
Students struggled a lot during their industrial attachment.	0	0.9	0.9	0	0.9	0.9	0	0.8	0.8	2	0.8	1.8	5	3.6	0.5	3	1.7	1.0	10
Totals	5			12			4			4			19			9			53

The degree of freedom **df** had been $(R - 1) (C - 1) = (5 - 1) (6 - 1) = 4 \times 5 = 20$.

The probability error was 0.05 and the level of significance was:

$$\begin{array}{r|l} \mathbf{df} = 20 & 0.05 \\ \hline & 31.410 \\ \chi^2 = 71.01 & \end{array}$$

The goodness-of-fit test portrayed that the level of significance was 31.410 at 0.05 level and the degree of freedom 20 had been less than the calculated chi square that equalled to 71.01.

If the required chi square would be less than the test chi square, then the null hypothesis would be rejected. If the null hypothesis had been rejected, then the alternative hypothesis would be accepted.

Those who disagreed (Strongly disagree and disagree) were 17; those who were uncertain (neutral and not sure) were 13 and those who agreed (strongly agree and agree) were 23.

If the majority agreed with the statement, then the alternative hypothesis remained true.

Then it could be concluded that the Lerotholi Polytechnic Administrative sample population indicated that there existed significant relevance between the Lerotholi Polytechnic technical and vocational education and the impact on the socio-economic development of Lesotho with special reference to Maseru district.

The research hypotheses 2 (H_1) and 3 (H_1) had been tested (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9.

4.13 OPEN-ENDED RESPONSES ON RELEVANCE AND QUALITY OF LEROTHOLI POLYTECHNIC TECHNICAL AND VOCATIONAL EDUCATION

With regard to weaknesses in “relevance of the Lerotholi Polytechnic technical and vocational education towards socio-economic development” and “quality of technical and vocational education at Lerotholi Polytechnic with respect to demands”, student sample population had indicated that there should be adequate, up-dated equipment and materials and qualified lecturers so that they would be equipped with labour market required skills and they should also be financially assisted to begin entrepreneurship activities.

In as far as strengths were considered, there had been none identified by the Lerotholi Polytechnic students; except the prevailing problems that they had been encountering; such as lack of equipment, incompetence of some of the lecturers and supply-driven training.

Lerotholi Polytechnic student sample population suggested that there should be articulation arrangements in place so that they might advance to higher level within the education system

The Lerotholi Polytechnic student sample population had taken on board the test to research hypotheses 2 (H_1) and 3 (H_1) (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9. Their responses had been in line with ‘the training challenge; demand driven training’ (International Labour Organisation – Southern African Multidisciplinary Advisory Team, 1997:5) (cf.2.2.16); (Alfthan and Sparreboom, 1997:10) and (Resolve Group, 2003:1-2) (cf.2.4.8).

The Lerotholi Polytechnic graduate sample population pointed out that the weaknesses were relative to “Relevance of the Lerotholi Polytechnic Programmes towards socio-economic development” and “Quality of technical and vocational education at Lerotholi Polytechnic with respect to demands” were in recognition of ‘instructors who lacked competencies and even failed to present information clearly together with the job orientated skills’, lack of equipment and materials; industry’s reluctance in supporting training at Lerotholi Polytechnic; and qualifications needed improvement.

The Lerotholi Polytechnic graduate sample population suggested that competent lecturers should be employed; better infrastructure and machinery should be in place; all Lerotholi Polytechnic programmes should have industrial attachment and embark on improving training structures while subscribing on the test to research hypotheses 2 (H_1) and 3 (H_1) (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9. Their responses had been in line with ‘the training challenge; demand driven training’ (International Labour Organisation – Southern African Multidisciplinary

Advisory Team, 1997:5) (cf.2.2.16); (Alfthan and Sparreboom, 1997:10) and (Resolve Group, 2003:1-2) (cf.2.4.8).

In glimpse, the Lerotholi Polytechnic lecturer sample population responses with regard to open-ended questions on “Relevance of the Lerotholi Polytechnic Programmes towards socio-economic development” and “Quality of technical and vocational education at Lerotholi Polytechnic with respect to demands” pinned out the lack of adequate infrastructure and resources; no legal framework for guiding training; there was reluctance of industry to support; and minimal sensitisation.

The Lerotholi Polytechnic lecturer sample population acknowledged good training for the students.

They suggested that curriculum development should be catered for and their responses had been in line with ‘the training challenge; demand driven training’ (International Labour Organisation – Southern African Multidisciplinary Advisory Team, 1997:5) (cf.2.2.16); (Alfthan and Sparreboom, 1997:10) and (Resolve Group, 2003:1-2) (cf.2.4.8).

The Lerotholi Polytechnic graduate sample population also recommended like the students sample population and pointed out similarly that the weaknesses relative to “Relevance of the Lerotholi Polytechnic Programmes towards socio-economic development” and “Quality of technical and vocational education at Lerotholi Polytechnic with respect to demands” were in reckon of ‘instructors who lacked competencies even failed to present information clearly together with the job orientated skills’, lack of equipment and materials; industry’s reluctance in supporting training at Lerotholi Polytechnic; and qualifications needed improvement.

The Lerotholi Polytechnic student sample population pointed out that the weaknesses relative to “Learning and training strategies in the Lerotholi Polytechnic Programmes towards socio-economic development” were in solicit to ‘instructors lacked competencies even failed to present information clearly together with the job orientated skills’, lack of equipment and materials; industry’s reluctance in supporting training at Lerotholi Polytechnic; and qualifications needed improvement.

The Lerotholi Polytechnic student sample population suggested that competent lecturers should be employed; better infrastructure and machinery should be in place; all Lerotholi Polytechnic programmes should have industrial attachment and embarked on improving training structures while subscribing on board the test to research hypotheses 2 (H_1) and 3 (H_1) (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9. Their responses had been in line with ‘the training challenge; demand driven training’ (International Labour Organisation – Southern African Multidisciplinary

Advisory Team, 1997:5) (cf.2.2.16); (Alfthan and Sparreboom, 1997:10) and (Resolve Group, 2003:1-2) (cf.2.4.8).

The Lerotholi Polytechnic graduate sample population pointed out that the weaknesses relative to 'Training and learning strategies' were in reckon of 'instructors lacked competencies even failed to present information clearly together with the job orientated skills', lack of equipment and materials; industry's reluctance in supporting training at Lerotholi Polytechnic; and qualifications needed improvement.

The Lerotholi Polytechnic graduate sample population suggested that competent lecturers should be employed; better infrastructure and machinery should be in place; all Lerotholi Polytechnic programmes should have industrial attachment and embarked on improving training structures while subscribing on board the test to research hypotheses 2 (H_1) and 3 (H_1) (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9. Their responses had been in line with 'the training challenge; demand driven training' (International Labour Organisation – Southern African Multidisciplinary Advisory Team, 1997:5) (cf.2.2.16); (Alfthan and Sparreboom, 1997:10) and (Resolve Group, 2003:1-2) (cf.2.4.8).

The Lerotholi Polytechnic lecturer sample population suggested that competent lecturers should be employed; better infrastructure and machinery should be in place; all Lerotholi Polytechnic programmes should have industrial attachment and embarked on improving training structures while subscribing on board the test to research hypotheses 2 (H_1) and 3 (H_1) (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9. Their responses had been in line with 'the training challenge; demand driven training' (International Labour Organisation – Southern African Multidisciplinary Advisory Team, 1997:5) (cf.2.2.16); (Alfthan and Sparreboom, 1997:10) and (Resolve Group, 2003:1-2) (cf.2.4.8).

The Lerotholi Polytechnic lecturer sample population pointed out that the weaknesses relative to "Learning and training strategies in the Lerotholi Polytechnic Programmes towards socio-economic development" were in solicit to 'instructors lacked competencies even failed to present information clearly together with the job orientated skills', lack of equipment and materials; industry's reluctance in supporting training at Lerotholi Polytechnic; and qualifications needed improvement.

The strengths depicted had been that there had been a career guidance for the trainees and they suggested that better infrastructure, equipment and materials should be in place; entrepreneurship should be encouraged; there should be in-service training; and patenting should be operationalised.

The Lerotholi Polytechnic graduate sample population suggested that competent lecturers should be employed; better infrastructure and machinery should be in place; all Lerotholi Polytechnic programmes should have industrial attachment and embarked on improving training structures while subscribing on board the test to research hypotheses 2 (H_1) and 3 (H_1) (cf. 3.5.5) while answering the research questions 3.5.6.6 to 3.5.6.9. Their responses had been in line with 'the training challenge; demand driven training' (International Labour Organisation – Southern African Multidisciplinary Advisory Team, 1997:5) (cf.2.2.16); (Alfthan and Sparreboom, 1997:10) and (Resolve Group, 2003:1-2) (cf.2.4.8).

4.14 LIMITATION OF THE STUDY

Circumstances beyond the immediate control of the study led to methodological difficulties. Nevertheless, it had been quite clear that the investigation of the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district needed to be conducted as a horizontal study. Research into the validity of Lerotholi Polytechnic programmes towards socio-economic development as the major audit criterion would greatly be needed.

Whereas it had been possible in this research study to refer to major researches that illustrated the effectiveness of technical and vocational education towards the labour market, it had also been possible that the ample research evidence in support of the effectiveness of technical and vocational education towards socio-economic development needed to be compiled by the economist whereby the appropriate procedures and technical language be utilised rather than be perceived only in an educational perspective.

4.15 CONCLUSION

The purpose of this study was to investigate the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

The research premises were confined of the Lerotholi Polytechnic programmes with regard to access, relevance, quality and training and learning strategies coherent to management issues such as planning, controlling and coordination.

The Technical and Vocational Education and Training Department of the Lesotho Ministry of Education and Training and Lerotholi Polytechnic sample population had assisted the researcher with data as stipulated.

The findings could be classified into these *main* categories. The first was to increase access to technical and vocational education at Lerotholi Polytechnic by improving on the infrastructure, equipment and machinery and hiring qualified staff and, subsequently, to enhance the competence and efficient operation of the technical and vocational education and training system at the Lerotholi Polytechnic. The second was to improve the curricula and influence policy so that it would be acceptable to all relevant stakeholders, thus contributing to the improvement of economic growth and employment in the country.

Taking the demographic profile of TVE students and graduates, the respondents indicated that males and females differed quantitatively; males tended to dominate in technology and construction courses, while females preferred commercial, textile and domestic fields. The low levels of intake into some courses provided by the various departments were found to be responsible for poor quality of education and lack of capacity to meet employment needs.

The respondents indicated that Lerotholi Polytechnic lacked adequate competent qualified staff. The departments were equipped with too many unqualified instructors and or lecturers and, consequently, the Lerotholi Polytechnic was of low standard. There was need for a full-time training course for instructors without appropriate pedagogical grounding.

According to the respondents, the male graduates made a higher quantity of the employed while the female graduates made a lesser currently employed population. Most of the Diploma holders and Certificate holders had been employed and a lesser number had been self-employed. Employers were generally satisfied with employees' literacy and numeracy skills, basic technical training, and the balance between practical and theoretical training, although more practical experience was still necessary. Employers were of the opinion that graduate employees lacked supervisory skills, but possessed adaptability capacity. On the basis of the relevance of their training, graduates were above average in problem solving and about average in construction and technology. Employers emphasize the importance of the National *Craft* Curriculum (NCC) in unifying and raising standards of Craft Certificate training and they stressed the need for improvement on the trade-testing scheme

The respondents also indicated that there was a need to review the existing TVE legislation and training policy documents and to amend where necessary. The TVE Board and TVD were found to be weak in their function-oriented organizational structure. Clear policy guidelines for apprenticeship contracts with employers were essential in order to harmonise the relationship between the TVE institutions and employers. There was need to co-ordinate admission procedures in Lerotholi Polytechnic. TVD staff members needed to undertake training needs assessment to review and reform

the TVE curriculum. There was a strong need to co-ordinate admission procedures to address the low levels of intake at Lerotholi Polytechnic.

Chapter five being the last chapter dealt with findings, conclusions and recommendations.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, DEDUCTIONS, FINDINGS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter had been aimed at presenting the findings, conclusions and recommendations based on the results of an empirical study as reported in chapter four in the epistemic imperative. The results had been illustrated with regard to the impact of technical and vocational education coherent to access, relevance, quality and learning /training strategies pertaining to the Lerotholi Polytechnic (LP) educational parameters and management premises with regard to planning, control and organisation.

5.2 SUMMARY TO THE FOUR FIRST CHAPTERS

5.2.1 Summary to Chapter One

This chapter had been an introductory chapter outlining the research premises and activities to be purposefully engaged in the epistemic imperative of the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district. The research premises were upon the Lerotholi Polytechnic curricula structure with regard to delivery whereby access, quality, relevance and training strategies were encompassed and management issues pertaining to planning, controlling and coordination retained by the Lesotho Ministry of Education and Training Department of Technical and vocational Education and Training.

The research problem had been established; background to the problem; the importance and the purpose of the study; questions to be answered and the objective of the study to be investigated. Rationale of theoretical framework had been illustrated. Delineation of the research problem taken on board; statement of hypotheses and the research questions were outlined. Definition of operational terms was established. Scope and delineation of the study; narrowing its focus and limitations were displayed. Methodology as the procedural undertaking in the holistic framework to the study was substantiated and the outline of the remainder of the dissertation acknowledged. At the end the summary and the conclusion to the chapter were articulated.

5.2.2 Summary to Chapter Two

This chapter focussed on the literature survey; conceptualising studies of technical and vocational education on the impact on the socio-economic development at international, regional and local perspectives based on independent variables and dependant variables such as *management* based

on planning, controlling and coordination; and **delivery** based on access, relevance, quality and training-learning strategies in technical and vocational education.

Background of technical and vocational education towards the impact on the socio-economic development had been illustrated; the role of technical and vocational education put on board.

Rationale to literature review with respect to three types of technical and vocational education had been articulated. The impact of technical and vocational education on the socio-economic development had been discussed with relevance to the literature review whereby major trends, issues and their implications pertaining to socio-economic developments had been argued.

Technical and Vocational Education and Training Department of the Lesotho Ministry of Education and Training was the main focus with regard to the legal framework.

The development of qualification framework for Lesotho, access to tertiary technical and vocational education, quality in technical and vocational education; relevance and training-learning strategies in technical and vocational education with regard to delivery were discussed.

The management aspects pertaining to planning, control and coordination with regard to delivery in order to substantiate socio-economic development were further discussed.

At the end the conclusion to the chapter was given.

5.2.3 Summary to Chapter Three

The chapter conceptualised the research procedures, design, methods and instruments in order to advocate the approach parameters within the study holistic framework.

Procedural elements of intervention indicating the research methodology description, research design, pilot study, and selection of study's sample population, instruments; tests, measures and questionnaires had been indicated.

Data collection and recording, data processing and analysis had been conceptualised. At the end of the chapter the conclusion was set out.

5.2.4 Summary to Chapter Four

The chapter had dealt with data reporting, analysis and evaluation.

With regard to qualitative paradigm; there had been document analysis and interview schedule analysis.

In the interview schedule, data had been reported in the factual information stipulating and furnishing evidence for the research hypotheses and the research questions from the problem statement.

For the qualitative paradigm, a nonparametric contingency table data presentation had been established for test of significance appropriate when data would be in the form of frequency counts or per centages and proportions that could be converted to frequency had been established in the goodness-of-fit chi square whereby appropriate headings were articulated to correspond to each of the research hypotheses and the research questions considered for the factual information and operationalised for hypotheses testing (Gay and Airasian, 2003:278) and (Burns, 2000:213)

Below every contingency data table there had been calculations for the goodness-of-fit chi square, discussions and interpretation that lied together in relation to theory, review of literature and rationale.

5.3 FINDINGS

For the impact of technical and vocational education and training on the socio-economic development of Lesotho with special reference to Maseru district to be initialised there should be adequately trained manpower and training developments.

In an attempt to find out whether the study had been able to answer the questions listed in the introductory chapter one: (cf. 1.8), literature review chapter two: (cf. 2.2.28) and the research questions in the methodology chapter three: (cf.3.5.6); issues of importance had to be outlined.

This final chapter had put forward the responses to the research questions to the research study and discussed on the critical issues pertaining to the study conducted on the Lesotho Ministry of education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic through the investigation of the impact of public technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district.

There had been conclusions derived from the reviewed literature and empirical study conducted on the impact of technical and vocational education on the socio-economic development with special reference to Maseru district.

Suggestions and recommendations that could be employed to strengthen technical and vocational education and training system in Lerotholi Polytechnic had been articulated and highlighted. Some of the salient issues that were not examined in the study but would be valuable had been suggested for further research.

5.3.1 Discussions of finding in relation to the research questions

Methodology and data triangulation had been substantiated (cf.3.3.3) and composed of case study, evaluative research and survey study (cf. 1.14.2). Findings had been taken as a fact with regard to research aim (cf. 1.9) and objective (cf. 1.10) for the explanation, description and explanation (cf. 1.8 and 1.14.2).

Below had been illustrated the research questions and the findings to test the research hypotheses.

5.3.1.1 Research question 3.5.6.1

‘What characterized the enrolment of the Lerotholi Polytechnic trainees?’

The Lerotholi Polytechnic Calendar indicated the entry requirements for the enrolment of the Lerotholi Polytechnic students (cf. 2.4.10.4). Candidates should possess some credits and passes from the Cambridge Overseas School Certificate at the secondary/high school level and this had been without any gender biasness. Both the Lerotholi Polytechnic sample population had indicated that in order to be enrolled at the institution candidates should possess good secondary/high school results (cf.1.13.3 and 4.2.1 – 4.). Interview outcome had been that most of the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training interviewed population had also indicated that the enrolment to Lerotholi Polytechnic had been characterised by the secondary/high school results; even though they had indicated that such results had always been poor. The good performance in the interview was also considered (cf.2.4.10.4). The research hypothesis 1 (H_1) (3.5.5) had been tested and stayed to be true.

5.3.1.2 Research question 3.5.6.2

For what programme is Lerotholi Polytechnic candidates registered to acquire their profession or trade?

The Lerotholi Polytechnic calendar indicated the programme courses that the students underwent and also the Lerotholi Polytechnic sample population indicated their specialization course for both certificates and diplomas.

5.3.1.3 Research question 3.5.6.3 and 3.4.6.4

With reference to equity, how were the groups of the community represented in various courses offered at Lerotholi Polytechnic?

Did gender disparity exist within the programmes offered at Lerotholi Polytechnic?

Lerotholi Polytechnic courses had been characterised by both male and female youth members of the community; the disabled and the adults were very few (cf. 2.2.24, 2.4.3, 2.6) and (cf. 4.2.1.1.3 and 4.8.2.1). Gender biasness had been prevailing whereby most of the administrators, lecturers, graduates, students had been males and the courses were chosen with regard to personal attitudes whereby females chose those course that had been less masculine courses. The issue had been realised by the Government of Lesotho and according to the Lesotho ministry of Education and Training Department of Technical and Vocational Education and Training interviewed respondents there had been put in place the specific quota with regard to female students to be admitted to the Lerotholi Polytechnic. The disabled had not been catered for.

Both females and males would contribute towards socio-economic development. They had to be equipped with essential skills.

5.3.1.4 *Research question 3.5.6.5*

Is there any financial support that trainees got in order to pursue their studies at the Lerotholi Polytechnic? And how were their studies affected by this financial support?

There existed governmental run financial support to Lerotholi Polytechnic candidates, which had been in line with the literature survey (cf. 2.2.27.2, 2.9.8 and 2.9.9) that most of the students got loan bursary to cater for their studies, which they had to refund thereafter.

Funds should be sought for upgrading the National Craft Certificate courses as well as for the instructors' training programmes. More funding was necessary for technical assistance in technical and vocation education institutions 'The Evaluation of Technical and Vocational Education and Training Sector, (Round Table Conference's Sectorial Paper) Maseru, Lesotho, (Lebakae, 1997).

The researcher had been with the observation that the loan bursary had never been timely and that affected the studies of the students. For some, their families catered for them.

Industry had not been contributing towards the training of the students.

According to UNESCO CD ROM (2003: *IIEP research and studies programme- The development of human resources: New trends in technical and vocational education - Training Policies for the end of the Century – by Claudio de Moura Castro*) "All parties concerned may agree that a given training is important and productive. Yet, there may be disagreement on who will pay the bill. Should the enterprise pay, since they are the ones who benefit more directly from the enhanced productivity? Should the trainees themselves pay, given that this training is ultimately something that belongs to

them and will bring them tangible benefits? Should the government pay, since it is in the interest of the society at large?

According to UNESCO CD ROM arguments ought to be substantiated on who should pay for the Lerotholi Polytechnic students.

5.3.1.5 *Research questions 3.5.6.6, 3.5.6.7, 3.5.6.8 and 3.5.6.9*

The questions were mainly on the impact of the Lerotholi Polytechnic technical and vocational education of the socio-economic development of Lesotho with special reference to Maseru district. They had been illustrated below and respectfully.

What were those changes in tertiary public technical and vocational education that must be addressed by technical and vocational education and training policy of the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic to ensure the genuine access to technical and vocational education and implementation of lifelong learning, lifelong career development and lifelong employment for the world of work?

How could tertiary public technical and vocational education at Lerotholi Polytechnic contribute to the removal of disparities of economic returns of the world of work with regard to relevance?

How is quality assurance manipulated at the Lerotholi Polytechnic to sustain the impact on the socio-economic development?

What effective teaching/learning strategies needed to be supported, or developed and implemented in tertiary public technical and vocational education management (planning, control and coordination) within the Technical and Vocational Education and Training Department of the Lesotho Ministry of Education and Training and the Lerotholi Polytechnic to increase technical and vocational education's contribution towards the efficiency of the world of work to establish the impact on the socio-economic development?

With regard to Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic sample population learning and training at the Lerotholi Polytechnic had been certainly significant as an indicator of effectiveness of the impact of technical and vocational education on the socio-economic development of Lesotho with special reference to Maseru district. But, until the advent of appropriate and improved measurement procedures and research techniques designed for maximum reliability and validity of technical and vocational education and training, there would be dependence on other means of assessing effectiveness of the Lerotholi Polytechnic technical and vocational education.

The Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training and the Lerotholi Polytechnic sample population acknowledged that there were numbers of unresolved problems of design or procedures regarding the impact on the socio-economic development of Lesotho with special reference to Maseru district.

The sample population responses acknowledgement of this fact arose from their experiences, attitudes and opinions and the prevailing situation pertinent in various research documents on technical and vocational education and training in Lesotho.

5.4 RECOMMENDATIONS

This study had put forward the impact of technical and vocational on the socio-economic development of Lesotho with special reference to Maseru district. The Technical and Vocational Education and Training Department of the Lesotho Ministry of Education and Training and the Lerotholi Polytechnic would have to revisit curricula make Lerotholi Polytechnic programmes beneficial to the socio-economic of Lesotho, following the policy guidelines if TVE were to contribute significantly towards socio-economic development.

5.4.1 Access to Technical and vocational Education in Lerotholi Polytechnic

Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD) should take charge the commitment of ensuring that learning needs of all young and adults at Lerotholi Polytechnic are met through equitable access to appropriate learning and life skills programmes. And such programmes should be essential to the labour market requirements.

TVD's milestone should be efforts to strengthen technical and vocational education as a whole, and to enhance training facilities for the Lerotholi Polytechnic trainees.

5.4.1.1 Gender issues

Rapid socio-economic development had been requiring greater participation of both men and women in economic activities alike with specific reference to Maseru district. In many countries the adoption of legislative measures had helped to remove discrimination in employment and education (UNESCO CD ROM, 2003: Promotion of the Equal Access of Girls and Women to Technical and Vocational Education - Studies No. 7). In respect to the Lerotholi Polytechnic technical and vocational education, it had been worth noting that although legal steps had been taken to ensure equal access of girls and women to such education (TVD respondent during the interview) and (Government of Lesotho Ministry of Education and Training, 2005:70); these measures were not frequently put into practice. This implied that Lesotho with respect to the Lerotholi Polytechnic required special measures in order to

ensure the genuine equality of opportunity for both males and females. Gender disparity should be abolished in the Lerotholi Polytechnic programmes.

5.4.2 Quality

Instructors at Lerotholi Polytechnic should require continuous upgrading of training skills. The quality of technical and vocational education and training system should inextricably linked to the quality of lecturers. Action plan highlighting the different activities, which could be organised, to support and strengthen the lecturers, should be focused on and be developed.

Technical infrastructures and connectivity of technical and vocational education and training to enhance learning capacities for the use of open and distance learning should be provided.

5.4.2.1 Curriculum issues

The curriculum and methodology of essential subject areas, which provided the foundation for the Lerotholi Polytechnic technical and vocational education, should be responsive demand-driven, geared towards the local labour market needs and should also be more attractive and interesting.

Science and mathematics should be made more "alive" and taught in relation to the interest of students' daily lives and the real world of work. Girls should be provided with additional/special study sessions as needed to enhance their understanding of specific science and mathematics lessons and in male dominated areas. Utilisation of information and communication technologies (ICTs) for communication and tutoring in the delivery of technical and vocational education should be supported and utilised.

5.4.2.2 Vocational education subject

There should be quality assurance and audit mechanism legal framework in place at Lerotholi Polytechnic to enhance the plausibility of the programmes.

The vocational aspects in general sensitising training at the Lerotholi Polytechnic, and restructuring curricular activities to recognize the vocational implication of basic subjects should promote technical and vocational education. Visits to various industries and exposure to relevant activities would make the discussion (of these vocational aspects) in the classroom real. Industry should afford the Lerotholi Polytechnic students the assistance required.

5.4.2.3 Lecturers as the role models

Lerotholi Polytechnic lecturers should be informed of and sensitised to gender issues at various stages of training (pre-service and in-service) to shape their attitude and commitment to gender balanced behaviour, as well as to demonstrate wealthy and healthy dignity in work. The teacher must be a role model and should be able to show competence to teach in a gender-inclusive way eradicating entry barriers. If gender sensitivity would be removed, then entry barriers would be removed. Then, there would be high enrolment and more personnel would be engaged in technical and vocational education of which would result by direct impact on the socio-economic development.

5.4.3 Relevance

Strong relationship between success in finding gainful employment and the Lerotholi Polytechnic programmes should be promoted through the qualifications framework.

The Government of Lesotho (GOL) should expedite the approval of the National Policy legal framework on technical and vocational education in Lesotho and be operational in order to emphasise relevance of technical and vocational education programmes at Lerotholi Polytechnic.

Objectives or activities including overall goal, results and activities should be defined to time-scale, standard and cost effectiveness. Objective verifiable indicators showing progress or achievement should be denoted. Means of verification of progress or achievement including database and vouchers providing expenditures should be in place with regard to relevance and quality assurance mechanism. Important assumptions concerning external factors affecting progress should be established in capacity building of technical and vocational education relative to the impact on the socio-economic development of Lesotho.

5.4.3.1 Technical and Vocational Education and Training as Preparation for an Occupational Field - Gender Segregation in the Choice of Fields of Study

Gender neutrality must be practiced in the choice of fields of study to prevent gender segregation and entry barriers. It should be achieved by improving the teaching of the subjects traditionally taken by girls and encouraging girls and women to enrol in those male dominated programmes with regard to abolishing entry and institutional barriers.

Learning and training in the Lerotholi Polytechnic for those subjects traditionally taken by girls in technical and vocational education should be enhanced by updating the content and facilities; by bringing in a technological orientation such as information and technology (computers) and the use of other modern technology. This would not only attract girls but boys as well. Improving the learning environment for girls also would contribute to better learning competencies that increased chances of employment for both genders.

Offering a wider choice of courses should enhance the participation of girls and women in new and male dominated courses. The provision of suitable financial and non-monetary incentives, including success stories of women role models in those new and male dominated occupations/careers would be helpful measures. Additionally, linking these new courses to market demand would make them more attractive to both genders.

5.4.3.2 Educational and Vocational Guidance and Counselling

A more pro-effective structure of the Lerotholi Polytechnic technical and vocational educational and guidance and counselling services in leaving schools responsive to the issue of access to technical and vocational education had to be instituted to promote equal access of all genders to technical and vocational education with entry, institutional, exit and the systemic barriers in mind.

The appropriate training and sensitisation of guidance staff and counsellors themselves to the gender issue would be a critical factor in the effective promotion of girls and women's access to the Lerotholi Polytechnic technical and vocational education. Likewise, parents (specially dominative males) and employers must also be aware of the implication of gender balance and neutrality in technical and vocational education with regard to the Lerotholi Polytechnic and employment; advantages must be taken to motivate both genders for technical competence deployment for the benefit on the impact of the socio-economic development.

Guidance and counselling literature should have feminine gender bias depicting reversal of gender roles. These materials would have to be carefully and attractively designed for motivational purposes, to include a variety of information on new and male dominated areas so that females would feel esteemed to partake with the Lerotholi Polytechnic curricula.

Girls' self-esteem had been the result of their overall experience (UNESCO CD ROM, 2003: *Promotion of the Equal Access of Girls and Women to Technical and Vocational Education* - Studies No. 7). To enhance their self-esteem, they needed to be exposed to effective teaching methods as well as types of activities, both traditionally masculine and feminine where they would likely succeed. Success built

self-confidence. Experiences where cooperation and teamwork with the opposite sex would be developed, contributed also to the value of gender partnership and such should be promoted at Lerotholi Polytechnic.

The change of attitude of parents and society as a whole towards vocational education must be effected in a concerted effort through a variety of strategies like open houses, special promotional events; print and non-print media; open-fora, projects that would be both gender responsive and socially responsible; and the involvement of the community in school affairs that would be vocational and technological orientated should be staged by the Lerotholi Polytechnic in liaison with the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training whereby important guests should be the labour market representatives.

5.4.4 Learning and training strategies

Learning and training structures should be linked with, individual, institutional mission and vision and market needs. The trainees should be able to sell their newly acquired skills in the labour market either in the form of product or services. Emphases should be made on society and economy precedence.

Training should be comprehensive, linked and integrated with relevance and quality assurance framework. Programmes should be aimed at the current and future development of individuals, small entrepreneurs and the underprivileged and be equipped with transferable skills and core competencies. Accreditation within the Lerotholi polytechnic system should be harmonised to promote equity in skills training and in consideration of society and economy needs.

A closer relationship should be established between technical and vocational education skills for the labour and income. Skills training should depend on the acquisition of basic analytic skills and competencies throughout technical and vocational education in Lesotho.

5.4.4.1 Training/learning Process

Training and learning processes and materials would have to be gender-neutral. However, recognition of individual differences in styles of learning rather than being gender explicit must be observed to make learning effective.

There should be a common standard for evaluation across the curricula. To ensure gender neutrality, men and women must be involved in the formulation of standards and merits. Entry barriers should be dealt with.

Course titles should be renamed where appropriate (e.g. dressmaking to textile technology, decoration to industrial design, etc.) to make the course more attractive. Learning resources must be so designed and packages to afford gender neutrality and a more technological orientation in order to overcome entry and institutional barriers.

5.4.4.2 Affirmative Actions

Within the context of the socio-economic and educational culture, separate girls schools of technical and vocational education had existed in Lerotholi Polytechnic. Thus this issue should be treated as a successful affirmative action measures. However, there should be cautious of the danger of gender segregation that might arise.

Special facilities and funding schemes for women who would be returning to work from home/maternity and child care leave should be available and supported by the government. Childcare services at the workplace should be provided. Flexible learning systems like distance learning through the use of modules and short-term training would ensure skill upgrading and further education.

Special support schemes would likewise be strongly suggested to assist both genders who are handicapped and deprived (minorities, refugees, rural, tribal, etc.) to develop their skills and capabilities to build their eroded self-esteem and, enable them to join the mainstream of social and economic activities. The quota system for females and disabled had not been generally favoured. Funding schemes for these groups should be increased to support their training and re-skilling.

Students should be involved in outreach project experiences as far as practicable. It will develop leadership skills and teamwork as boys and girls work together. Lerotholi Polytechnic courses should be targeted to the needs of the labour market and the society at large.

5.4.4.3 Linkage with the World of Work

The provision of technical and vocational education should always be aligned to the world of work. Entrepreneurial skills should be built into courses and special training for all genders to assist them in putting up small-scale business should be provided as needed. There should be quality assurance indicators in place for the Lerotholi Polytechnic curricula.

Post-graduation technical and funding assistance should be provided to encourage entrepreneurial endeavour especially for marginalized groups. Case studies on successful female entrepreneurs should be documented and made available to inspire girls and women to do likewise. After all, if from 1905 when the institution was started; male had been dominative and there still existed such a less magnified impact on the socio-economic development; a chance should be given to another gender for balance on the contribution towards economic and societal development.

5.4.4.4 *Technical and Vocational Education as Continuing Education*

To sustain economic and social confidence of both genders, providing special seminars, workshops and skills training continuously could enhance their capability for gainful employment. These measures would enable them to update their knowledge and ally their competencies with the advancing requirements of the labour and employment sector.

Technical and vocational education institutions as well as employment agencies should provide flexible learning strategies which would meet the training needs of both men and women in a changing technological, economic and social environment. This would include women who would be: returning to work after child care leave and or those who had been accidentally handicapped, working in part time and casual jobs, working in unskilled and semi-skilled capacities in those male dominated occupations, and in isolated and rural areas.

Prior learning schemes should be recognised and adopted appropriately to instil value to all genders' skills that would have been developed through work and life experiences.

5.4.4.5 *Employment and Social Environment*

Technical and vocational education institutions should form strategic alliances with industries and mutually commit to gender sensitisation projects for their instantaneous and surrounding community. The clear benefit of implementing equal opportunity practices at the workplace to the overall development of people and organisations should be stressed. Such cooperative activities would indirectly strengthen the image and resources of both Lerotholi Polytechnic and industries. Eventually, employers would develop commitment to implement equal opportunity practices in the distribution of company incentives, which consequently influence women workers' self-esteem.

Actions should be taken to direct the consequence of the socialization process to reverse gender segregated attitudes and extend interest in technology and non-traditional careers of girls and women.

This gender neutral and technological orientation should be cultivated in girls as early as possible at home and at pre-school level. Childcare centres should be furnished with technology and the girls stimulated to approach technology in a creative and playful way. Girls and women's self-esteem, satisfactory and frequent exposure to science and technology-oriented materials and experiences would eventually develop their interest in the area.

Existing legal framework instruments such as Act 1984 and TVET Policy, and rational strategies should be reviewed and closely monitored for effective and consistent implementation to promote and ensure equal access of all groups of the society to technical and vocational education

Government officials such as the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD); Lerotholi Polytechnic Administrators, support and academic staff; employers and personnel hiring officers in industries and employees must be sensitised to gender related laws and issues as well as to current and emerging development thrusts which would affect women's status and activities at the employment place.

Recognizing that Research and Development (R&D) activities provided the fundamental base for development initiatives, Lerotholi Polytechnic should monitor, update and ensure the availability of accurate gender related data. The same should be encouraged in employment organizations and the Lesotho Ministry of Education and Training Department of Technical and Vocational Education and Training (TVD).

It had been well accepted that women and the disabled could contribute equal value to economic and social development (UNESCO CD ROM, 2003: *Promotion of the Equal Access of Girls and Women to Technical and Vocational Education - Studies No. 7*). It had also been established beyond question that technical and vocational education would play a vital role in achieving social and economic equality for women and the disabled. Issues pertaining to their developments and achievements should be promoted at all costs.

While the battle for the equality of opportunities in technical and vocational education and workforce participation required a long-term commitment, all efforts should be made to eliminate prejudices and biases detrimental to holistic development of all groups of the society. Women and the disabled should not merely be adjusted to the existing structures and societal patterns; rather the structures and systems must change to properly accommodate them.

The empowerment of women and the handicapped being the goal for all interventions, which in turn would lead to equality of status in society, should be expatiated. The strategies ought to be formulated

for establishing and operating structures and systems as the cutting edge to fulfil the mission of ensuring dignity of women and the disabled, participation and equality, not only of access but of chance to success. In this respect, it would be felt that greater thrusts would be needed for all groups of the society such as of girls and women; of specially disadvantaged group; of socially deprived, disabled, refugees, rural immigrants, minorities, and indigenous women. Only the realization of the significance of synergy and complementarities between men and women would drive the nation along the desired course of action.

The male-cantered values and the dominative power structures must be crumbled to give way to balanced society, which the technical and vocational education system and the workplace had been very important variable components in the socio-economic development of Lesotho with special reference to Maseru district.

5.5 SUGGESTION FOR FURTHER RESEARCH

The respondents indicated weakness in Lesotho's technical and vocational education. The following issues emerged and suggested for further research:

- ❑ Equity in Lesotho's technical and vocational education had been illusory;
- ❑ Responsive legal framework that would guide technical and vocational education in Lesotho.
- ❑ Women's place in male dominated technical and vocational education specialities in Lesotho;
- ❑ Exploration of vocational guidance and counselling for Lesotho work force;
- ❑ Technical and vocational education pedagogy in Lesotho with regard to sustainable development;
- ❑ Affirmative action principles/activities to expedite the inclusion of marginalized groups in technical and vocational education in Lesotho;
- ❑ Linkages of Lesotho technical and vocational education and the labour market with regard to society's involvement; and
- ❑ Employment and social environment with regard to the contribution of TVE and new technologies in Lesotho.

With regard to researcher's opinion, topics on women and entrepreneurship, marketing and finance of education in Lesotho and sustainable development in Lesotho had not been extensively researched.

Situational analysis of Lesotho's technical and vocational education with regard to the impact of policy systems also needed to be explored.

More studies would enable the government to maximise the collection, broaden the revenue base and channel the fund in the right places, which ultimately would improve the socio-economic development status of Lesotho.

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APPENDIX A

INTERVIEW SCHEDULE

LESOTHO MINISTRY OF EDUCATION AND TRAINING: - DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

I assure you the complete confidentiality of your individual survey responses, which will only be used for academic purposes in my studies.

1. What criteria are used in selection/admissions for Lerotholi Polytechnic trainees?

2. What is the degree of the enrolment of trainees in the technical in Lerotholi Polytechnic institutions?

3. How is an access (enrolment) to Lerotholi Polytechnic supported to ensure the participation of all groups of the society (gender and disabled) for economic and social development?

4. What are the changes in the labour market that must be addressed by Lerotholi Polytechnic technical and vocational education to ensure the genuine implementation of lifelong learning, lifelong career development and lifelong employment?

Lifelong learning

Lifelong career development

Lifelong employment

How can tertiary technical and vocational education at the Technical institutions co-operate with the labour market to ensure the relevance, and employability of human resources in economic production?

5. How has tertiary technical and vocational education at the Technical institutions structured to encourage the assumption of responsibility by participants (trainees to be employees and employers) for the world of work?

What are those initiatives that your institution has put in place to make tertiary technical and vocational education at Lerotholi Polytechnic accepted to enforce access, quality, relevance and training/learning strategies relative to socio-economic development?

Access?

Relevance

Quality?

6. What appropriate skills in Lerotholi Polytechnic TVET that must be acquired for the needs of the labour market?

7. What teaching/learning strategies that need to be supported or developed in the Technical institutions to increase its contribution to the efficiency of the labour market and to the fair and just distribution of the wealth generated by the labour market?

8. What is the legislation mechanism that has been developed by your Ministry to support the universal availability and effectiveness of tertiary technical and vocational education at the Lerotholi Polytechnic?

9. What policy has been developed by your Ministry to support the universal availability and effectiveness of tertiary technical and vocational education at the Technical institutions?

10. How can education for the world of work at the Lerotholi Polytechnic contribute to the removing of the disparities of economic return from employment in formal and informal sectors - stemming from factors as sex discrimination, exploitation of the disadvantaged, the internationalising of work in the restructuring of economy?

11. How does tertiary technical and vocational education at the Lerotholi Polytechnic contribute significantly to the social effectiveness, social responsibility, personal actualisation and the empowerment of people within the arena of work?

12. What are those hindrances/constraints that you institution encounter and endure during the joint activities with Lerotholi Polytechnic which are obstructive to tertiary technical and vocational education and disallow both your institutions in meeting the required criteria?

13. Which are those salient issues pertaining to development within tertiary technical and vocational education at the Technical institutions that are relevant and effective to societal and economic development that you would like us to share – that the asked questions in this interview did not address in terms of access, relevance, quality and training strategies?

Access?

Relevance?

Quality?

Training/learning strategies

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY.

APPENDIX B

LEROTHOLI POLYTECHNIC ADMINISTRATOR SURVEY

I am a student at the Central University of Technology – Free State in Masters in Technical Education. I am conducting a research on “**The Impact of Technical and Vocational Education on the Lesotho’s Socio-economic Development with special reference to Maseru District**”. Please fill the enclosed questionnaire as honestly as possible, of which your contributions will not only assist me in completion of my studies but will as well form basis of significant improvements to the governance and delivery of Technical and Vocational Education (TVE) in the Lesotho Ministry of Education and Training (MOET) the Department of Technical and Vocational Education and Training (TVD) and the Lerotholi Polytechnic (LP). I assure complete confidentiality of your individual survey responses. Your cooperation is highly appreciated, you will also get the results if you so wish. Thank you once again for helping in making TVE be responsive in the job market.

CYPRIAN MAFATA TSIAME (*Lecturer at the Lesotho College of Education; Faculty of Science – Technology Studies Department and a student in Masters in Technical Education – Central University of Technology – Free State.*)

Email: cypriantsiame@yahoo.co.uk

Part A: Access to Technical and Vocational Education (TVE) in Lerotholi Polytechnic (LP)

Instructions: Mark the circle that fully describes the situation. For an example; . To correct fill up the the wrong alternative then mark the required one .

Q1 Gender

- Female Male

Q2 Which of the following lead to the enrollment of students at LP? (Mark all that apply)

- Results of secondary/high school
 Bridging course
 Athletic achievements (sports)
 An in-service training

Q3 How are the following groups of society represented in LP courses? (You may mark more than one)

- Females more less none
Males more less none
Disabled more less none
Youth more less none
Adults more less none

Q4 Is there any financial support that your students get to pursue their studies at LP?

- Yes No

Q5 What sources of financial assistance do they get to pursue their studies? (Mark all that apply)

- Student loan sponsor/employer
 Grant Scholarship/bursary
 Spouse Training levy
 Parents Own earnings

Q6 Please rate the financial status of their assistance (Mark all that apply).

- They are never handicapped financially
 Some have to wait for sometime and their studies get somehow affected
 Some used to be out-resourced and their studies get handicapped partially
 Because of financial hiccups some’s term of study used to be prolonged

Q7 What type of students do LP cater for? (Mark all that apply)

- Full-time
 Part-time
 Foundation course
 Student exchange programme

Q8 The demand for access to technical and vocational education and training has increased in LP.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q9 TVD Policy allows further studies in TVE trainees at LP.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q10 May you commend as briefly as possible on the **Access** (enrollment) of your trainees to LP courses.

Weakness: _____

Strengths: _____

Suggestions/recommendations for improvements: _____

Q11 What are those mechanisms that have been put in place to insure adequate **access** (enrollment) of all groups of the society?

Part B: Relevance of Technical and Vocational Education (TVE) at Lerotholi Polytechnic (LP) towards socio-economic development.

Q12 The courses have been structured in the manner that establishes a broad base for articulation within the educational system.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q13 The courses have been structured in the manner that students are provided with knowledge and skills development related to job market requirements.

- Strongly disagree Neutral
 Disagree Agree

- Not sure Strongly agree

Q14 The courses give students the opportunity to develop competency in the use of language, computation (numeric) and critical thinking.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q15 The Courses are provided in a variety of formats to meet student needs (i.e. short term, evening, weekend classes) to equip them with job-oriented skills.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q16 A sufficient number of sub-courses are provided to meet the demands of students.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q17 The courses are offered in a manner in which students are assured the opportunity to complete the entire programme.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q18 Information is presented clearly; opinions are separated from facts and proven conclusions that could equip skills for the future.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q19 Governance of the skill training at LP is guided by labour market needs.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q20 Industrial attachment (experiential learning) equips students with eye-opening activities and supports them with relevant skills for their prospective job.

- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree

Q21 May you commend as briefly as possible on **Relevance** of your **course** and the demand of the labour market

Weakness:-----

Strengths:-----

Suggestions/recommendations for improvements:-----

Q22 What are those fundamental essentials in the labour market that needed to be addressed through TVE?

Part C: Quality of Technical and Vocational Education (TVE) at Lerotholi Polytechnic (LP) with respect to demands.

Q23 TVE adequately prepares labour market clientele irrespective of gender and physical status.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q24 TVE equips all groups of society with skills required for adaptation to new ideas for career development.

- Strongly disagree Neutral
- Disagree Agree
- Not sure Strongly agree

Q25 There are adequate and up-to-date machinery and equipment for workshop practicals.

- Strongly disagree Neutral
- Disagree Agree
- Not sure Strongly agree

Q26 Industrial attachment (experiential learning) is conducted in a vibrantly helpful manner

- Strongly disagree Neutral
- Disagree Agree
- Not sure Strongly agree

Q27 Industry fully assists in the training of LP students (e.g. in industrial attachment and curriculum development).

- Strongly disagree Neutral
- Disagree Agree

Not sure Strongly agree
Q28 May you commend as briefly as possible on **Quality** of your **course** at LP in skills production.

Weakness:-----

Strengths:-----

Suggestions/recommendations for improvements:-----

----- Q29
What appropriate skills needed to be acquired to cope with the challenges presented by the evolving labour market requirements?

Part D: Training/learning Strategies engaged at LP to substantiate Technical and Vocational Education's Impact on Socio-economic Development .

Q30 Information resources (i.e. library holdings, internet access) adequately meet students' needs and demands.

- Strongly disagree Neutral
- Disagree Agree
- Not sure Strongly agree

Q31 Instructional resources, machinery and equipment (i.e. computers, workshop machinery and equipment, T.V. & monitors, slides, maps, science materials etc.) adequately meet students' needs and demands.

- Strongly disagree Neutral
- Disagree Agree
- Not sure Strongly agree

Q32 The classroom facilities (including shop, business training, student laboratories etc.) are used adequately and they meet training demands for the world of work.

- Strongly disagree Neutral
- Disagree Agree
- Not sure Strongly agree

Q33 Please rate the skills and competence attained by your students versus their employment demands.

Their training is poorly facilitated

- Strongly disagree Neutral
- Disagree Agree

- Not sure Strongly agree
 Q34 Some students end-up taking the work not related to their profession
- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree
 Q35 Their profession is just but desirable in the labour market
- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree
 Q36 The course is demand-driven and highly appreciated in the labour market
- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree
 Q37 The industrial attachment (experiential learning) is poorly facilitated and resourced
- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree
 Q38 Students struggled a lot during their industrial attachment
- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree
 Q39 The appropriateness and forward planning of the course with regard to employment possibilities are the basic principles that guide the course .
- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree
 Q40 Knowledge and skills improvement increase an economy's output of goods and services for social economic development.
- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree
 Q41 The trends of globalisation of trade, labour market and changing technologies imply the need to update continually the knowledge and skills for the workforce.
- Strongly disagree Neutral

- Disagree Agree
 Not sure Strongly agree
 Q42 Training at LP adequately meets the labour market demands.
- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree
 Q43 There exists an overall customer satisfaction with TVE that LP offers.
- Strongly disagree Neutral
 Disagree Agree
 Not sure Strongly agree
 Q44 May you commend as briefly as possible on **Training/learning Strategies** in your course at LP towards socio-economic development.

Weakness:_____

Strengths:_____

Suggestions/recommendations for improvements:_____

- Q45 What effective and relevant learning/teaching strategies needed to be developed in TVE to adequately meet the labour market requirements?

- Q46 May you elaborate as briefly as possible about the governance (management) and supply (delivery) of technical and vocational education at Lerotholi Polytechnic - please share with me some of those issues that may evoke the impact on the socio-economic development that this questionnaire did not address.(You may use an extra page or the reverse of this page).

THANK YOU FOR YOUR COOPERATION

APPENDIX C

LEROTHOLI POLYTECHNIC LECTURER SURVEY

I am a student at the Central University of Technology – Free State in Masters in Technical Education. I am conducting a research on “**The Impact of Technical and Vocational Education on the Lesotho’s Socio-economic Development with special reference to Maseru District**”. Please fill the enclosed questionnaire as honestly as possible, of which your contributions will not only assist me in completion of my studies but will as well form basis of significant improvements to the governance and delivery of Technical and Vocational Education (TVE) in the Lesotho Ministry of Education and Training (MOET) the Department of Technical and Vocational Education and Training (TVD) and the Lerotholi Polytechnic (LP). I assure complete confidentiality of your individual survey responses. Your cooperation is highly appreciated, you will also get the results if you so wish. Thank you once again for helping in making TVE be responsive in the job market.

CYPRIAN MAFATA TSIAME (*Lecturer at the Lesotho College of Education; Faculty of Science – Technology Studies Department and a student in Masters in Technical Education – Central University of Technology – Free State.*)

Email: cypriantsiame@yahoo.co.uk

Part A: Access to Technical and Vocational Education (TVE) in Lerotholi Polytechnic (LP)

Instructions: Mark the circle that fully describes the situation. For an example; . To correct fill up the wrong alternative then mark the required one .

Q1 Gender

Female

Male

Electrical and Electronic Engineering

Electric Installation

Q2 Which of the following lead to the enrollment of students at LP? (Mark all that apply)

Results of secondary/high school

Bridging course

Athletic achievements (sports)

An in-service training

Fitting and Machining

Marketing and Salesmanship

Mechanical Engineering

Panel Beating and Spray Painting

Plumbing and sheet Metalwork

Secretarial Studies

Q3 In which of the following do you give instruction?

Auto-Electrics

Automotive

Bricklaying

Building Technology

Business Studies

Carpentry and Joinery

Civil Engineering

Computer Systems Engineering

Construction Engineering and Architecture

Dressmaking

Tailoring

Welding

Q4 How are the following groups of society represented in your course? (You may mark more than one)

Females more less none

Males more less none

Disabled more less none

Youth more less none

Adults more less none

Q5 With reference to gender disparity, how are the following represented in your course?

- More female
- More males
- There existed an equal distribution

Q6 Is there any financial support that your students get to pursue their studies at LP?

- Yes
- No

Q7 What sources of financial assistance do they get to pursue their studies? (Mark all that apply)

- Student loan
- Grant
- Spouse
- Parents
- sponsor/employer
- Scholarship/bursary
- Training levy
- Own earnings

Q8 Please rate the financial status of their assistance (Mark all that apply).

- They are never handicapped financially
- Some have to wait for sometime and their studies get somehow affected
- Some used to be out-resourced and their studies get handicapped partially
- Because of financial hiccups some's term of study used to be prolonged

Q9 In which of the following do you instruct? (Mark all that apply).

- Full-time
- Part-time
- Foundation course
- Student exchange programme

Q10 The demand for access to technical and vocational education and training has increased.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q11 May you commend as briefly as possible on the **Access** (enrollment) of your trainees to your **course** at LP.

Weakness: _____

Strengths: _____

Suggestions/recommendations for improvements: _____

Part B: Relevance of Technical and Vocational Education (TVE) at Lerotholi Polytechnic (LP) towards socio-economic development.

Please indicate the relevance of education and training that you impart at LP.

Q12 The course had been structured in the manner that establishes a broad base for articulation within the educational system.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q13 The course had been structured in the manner that students are provided with knowledge and skills development that substantiates impact in the economy.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q14 The course gives my students the opportunity to develop competency in the use of language, computation (numeric) and critical thinking.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q15 The Course is provided in a variety of formats to meet student needs (i.e. short term, evening, weekend classes) to equip them with job-oriented skills.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q16 A sufficient number of sub-courses are provided to meet the demands of students.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q17 The course is offered in a manner in which students are assured the opportunity to complete the entire programme.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q18 Information is presented clearly; opinions are separated from facts and proven conclusions that could equip skills for the future.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q19 The skill training at LP gives students a sense of belonging to the community and strongly motivated to take part in socio-economic development issues.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q20 Industrial attachment (experiential learning) equips students with eye-opening activities and supports them with relevant skills for their prospective job.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q21 May you commend as briefly as possible on **Relevance** of your **course** and the demand of the labour market

Weakness:_____

Strengths:_____

Suggestions/recommendations for improvements:_____

Part C: Quality of Technical and Vocational Education (TVE) at Lerotholi Polytechnic (LP) with respect to demands.

Please rate the quality of TVE offered and acquired at LP.

Q22 I am competent enough in my specialization that I manage to assist my students to succeed academically.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q23 Instruction offered in my course is excellent and offered a variety of development issues.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q24 There are adequate and up-to-date machinery and equipment for workshop practicals.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q25 Industrial attachment (experiential learning) is conducted in a vibrantly helpful manner

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q26 Industry fully assists in the training of LP students (e.g. in industrial attachment and curriculum development).

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q27 May you commend as briefly as possible on **Quality** of your **course** at LP in skills production.

Weakness:_____

Strengths:_____

Suggestions/recommendations for improvements:_____

Part D: Training/learning Strategies engaged at LP to substantiate Technical and Vocational Education's Impact on Socio-economic Development .

Please rate the Training/learning Strategies of TVE at LP.

Q28 Information resources (i.e. library holdings, internet access) adequately meet students' needs and demands.

- Strongly disagree Neutral
 - Disagree Not sure
 - Agree Strongly agree
- Q29 Instructional resources, machinery and equipment (i.e. computers, workshop machinery and equipment, T.V. & monitors, slides, maps, science materials etc.) adequately meet students' needs and demands.
- Strongly disagree Neutral
 - Disagree Not sure
 - Agree Strongly agree

- Q30 The classroom facilities (including shop, business training, student laboratories etc.) are used adequately and they meet training demands for the world of work.
- Strongly disagree Neutral
 - Disagree Not sure
 - Agree Strongly agree
- Q31 Please rate the skills and competence attained by your students versus their employment demands.

- Their training is poorly facilitated
- Strongly disagree Neutral
 - Disagree Not sure
 - Agree Strongly agree

- Q32 Some students end-up taking the work not related to their profession
- Strongly disagree Neutral
 - Disagree Not sure
 - Agree Strongly agree

- Q33 Their profession is just but desirable in the labour market
- Strongly disagree Neutral
 - Disagree Not sure
 - Agree Strongly agree

- Q34 The course is demand-driven and highly appreciated in the labour market
- Strongly disagree Neutral
 - Disagree Not sure
 - Agree Strongly agree

- Q35 How is the industrial attachment (experiential learning) conducted?

- Poorly facilitated and resourced
- Strongly disagree Neutral
 - Disagree Not sure
 - Agree Strongly agree

- Q36 Students struggled a lot during their industrial attachment
- Strongly disagree Neutral
 - Disagree Not sure
 - Agree Strongly agree

- Q37 The appropriateness and forward planning of the course with regard to employment possibilities are the basic principles that guide the course .

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

- Q38 Knowledge and skills improvement increase an economy's output of goods and services for social economic development.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

- Q39 The trends of globalisation of trade, labour market and changing technologies imply the need to update continually the knowledge and skills for the workforce.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

- Q40 May you commend as briefly as possible on **Training/learning Strategies** in your **course** at LP towards socio-economic development.

Weakness:_____

Strengths:_____

Suggestions/recommendations for improvements:

- Q41 May you elaborate as briefly as possible about the governance (management) and supply (delivery) of technical and vocational education at Lerotholi Polytechnic, please share with me some of those issues that may evoke the impact on the socio-economic development that this questionnaire did not address.(You may use an extra page or the reverse of this page).

THANK YOU FOR YOUR COOPERATION

APPENDIX D

LEROTHOLI POLYTECHNIC GRADUATE SURVEY

I am a student at the Central University of Technology – Free State in Masters in Technical Education. I am conducting a research on “**The Impact of Technical and Vocational Education on the Lesotho’s Socio-economic Development with special reference to Maseru District**”. Please fill the enclosed questionnaire as honestly as possible, of which your contributions will not only assist me in completion of my studies but will as well form basis of significant improvements to the governance and delivery of Technical and Vocational Education (TVE) in the Lesotho Ministry of Education and Training (MOET) the Department of Technical and Vocational Education and Training (TVD) and the Lerotholi Polytechnic (LP). I assure complete confidentiality of your individual survey responses. Your cooperation is highly appreciated, you will also get the results if you so wish. Thank you once again for helping in making TVE be responsive in the job market.

CYPRIAN MAFATA TSIAME (*Lecturer at the Lesotho College of Education; Faculty of Science – Technology Studies Department and a student in Masters in Technical Education – Central University of Technology – Free State.*)

Email: cypriantsiame@yahoo.co.uk

Part A: Access to Technical and Vocational Education (TVE) in Lerotholi Polytechnic (LP)

Instructions: Mark the circle that fully describes the situation. For an example; . To correct fill up the wrongly marked alternative then mark ~~t~~required one.

Q1 Gender

Female Male

Q2 What made happen your enrolment at LP?

- Good results of secondary/high school
- Sat for a bridging course (Trade test)
- Athletic achievements (sports)
- Enrolled for an in-service training

Q3 For what programme did you register to acquire your profession or trade?

- Auto-Electrics
- Automotive
- Bricklaying
- Building Technology
- Business Studies
- Carpentry and Joinery
- Civil Engineering
- Computer Systems Engineering
- Construction Engineering and Architecture
- Dressmaking

Electrical and Electronic Engineering

Electric Installation

Fitting and Machining

Marketing and Salesmanship

Mechanical Engineering

Panel Beating and Spray Painting

Plumbing and sheet Metalwork

Secretarial Studies

Tailoring

Welding

Q4 How was/were the following group(s) of society represented in your course? (You may mark more than one)

Females more less none

Males more less none

Disabled more less none

Youth more less none

Adults more less none

Q5 With reference to gender disparity, how were the following represented in your course?

- More female
- More males
- There existed an equal distribution

Q6 Was there any financial support that you got in order to pursue your studies at LP?

- Yes
- No

Q7 What sources of financial assistance did you get to pursue your studies at LP? (Mark all that apply)

- Student loan
- Grant
- Spouse
- Parents
- sponsor/employer
- Scholarship/bursary
- Training levy
- Own earnings

Q8 Please rate the financial status of your assistance.

- I was never handicapped financially
- I had to wait for sometime and my studies got somehow affected
- I used to be out-resourced and my studies got handicapped partially
- Because of financial hiccups term of my study was prolonged

Q9 Do you have to refund the financial assistance?

- Yes
- No

Q10 What was your student status?

- Full-time
- Part-time
- Foundation course
- Student exchange programme

Q11 May you commend as briefly as possible on **Enrollment (access)** to your **course** at LP.

Weakness:_____

Strengths:_____

Suggestions/recommendations for improvements:_____

Part B: Relevance of Technical and Vocational Education (TVE) at Lerotholi Polytechnic (LP) towards socio-economic development.

Please indicate the relevance of education and training that you acquired at LP.

Q12 Teaching at LP provided me with learning and skills development that substantiates impact in economy.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q13 My course gave students the opportunity to develop competency in the use of language, computation (numeric) and critical thinking.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q14 The Course was provided in a variety of formats to meet student needs (i.e. short term, evening, weekend classes) to equip them with job-oriented skills.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q15 A sufficient number of sub-courses were provided to meet the demands of students.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q16 The course was offered in a manner in which students were assured the opportunity to complete the entire programme.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q17 Instructors presented information clearly; opinions were separated from facts and proven conclusions that could equip skills for the future.

- Strongly disagree
- Disagree
- Agree
- Neutral
- Not sure
- Strongly agree

Q18 My skill training at LP has given me a sense of belonging to the community and feel strongly motivated to take part in socio-economic development issues.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q19 My industrial attachment (experiential learning) equipped me with eye-opening activities and supported me with relevant skills for my present job.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree
- There was no industrial attachment

Q20 May you commend as briefly as possible on **Relevance** of your **course** and the demand of your work.

Weakness:_____

Strengths:_____

Suggestions/recommendations for improvements:

Part C: Quality of Technical and Vocational Education (TVE) at Lerotholi Polytechnic (LP) with respect to demands.

Please rate the quality of TVE offered and you acquired at LP.

Q21 My instructors were effective and efficient; they made a strong effort to assist me to succeed academically.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q22 Instruction offered in my course was excellent and offered a variety of development issues.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q23 There were adequate and up-to-date machinery and equipment for workshop practicals.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q24 Industrial attachment (experiential learning) was conducted in a helpful manner

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree
- There was no industrial attachment

Q25 My industry assists in the training of LP students (e.g. in industrial attachment).

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q26 May you commend as briefly as possible on **Quality** of your **course** at LP in skills production.

Weakness:_____

Strengths:_____

Suggestions/recommendations for improvements:

Part D: Training/learning Strategies engaged at Lerotholi Polytechnic (LP) to substantiate Technical and Vocational Education (TVE)'s Impact on Socio-economic Development .

Please rate the Training/learning Strategies of TVE at LP.

Q27 Information resources (i.e. library holdings, internet access) adequately meet student needs and demands.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q28 Usage of instructional resources, machinery and equipment (i.e. computers, workshop machinery and equipment, T.V. & monitors, slides, maps, science materials etc.) adequately met my needs and demands.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q29 The classroom facilities (including shop, business training, and student laboratories) were used adequately during the training session and were sufficiently meeting my training and demands for the labour market.

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Please rate your skills and competence attained at LP versus your current employment demands. (Mark all that apply).

Q30 My training was very well facilitated

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q31 I struggled to find appropriate job

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q32 My profession is related to my work

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q33 My profession is just desirable

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q34 My course is demand-driven

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

How was your industrial attachment (experiential learning) conducted? (*If it was there mark the appropriate circles, if it was not there mark the last part of the question*)

Q35 Well facilitated and resourced

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q36 Tried but not good enough

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q37 Just desirable

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q38 Not related to my studies and current job

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

Q39 I struggled a lot during my industrial attachment

- Strongly disagree Neutral
- Disagree Not sure
- Agree Strongly agree

There was no industrial attachment

Q40 May you commend as briefly as possible on **Training/learning Strategies** in your **course's** contributions towards labour market demands (impact on the socio-economic development).

Weakness:_____

Strengths:_____

Suggestions/recommendations for improvements:

Q41 Please share with me some of those issues that may meet the labour market demands (evoke the impact on the socio-economic development) that this questionnaire did not address. (You may use an extra page or the reverse of this sheet).

THANK YOU FOR YOUR COOPERATION

APPENDIX E

EROTHOLI POLYTECHNIC STUDENT SURVEY

I am a student at the Central University of Technology – Free State in Masters in Technical Education. I am conducting a research on “**The Impact of Technical and Vocational Education on the Lesotho’s Socio-economic Development with special reference to Maseru District**”. Please fill the enclosed questionnaire as honestly as possible, of which your contributions will not only assist me in completion of my studies but will as well form basis of significant improvements to the governance and delivery of Technical and Vocational Education (TVE) in the Lesotho Ministry of Education and Training (MOET) the Department of Technical and Vocational Education and Training (TVD) and the Lerotholi Polytechnic (LP). I assure complete confidentiality of your individual survey responses. Your cooperation is highly appreciated, you will also get the results if you so wish. Thank you once again for helping in making TVE be responsive in the job market.

CYPRIAN MAFATA TSIAME (*Lecturer at the Lesotho College of Education; Faculty of Science – Technology Studies Department and a student in Masters in Technical Education – Central University of Technology – Free State.*)

Email: cypriantsiame@yahoo.co.uk

Part A: Access to Technical and Vocational Education (TVE) in Lerotholi Polytechnic (LP)

Instructions: Mark the circle that fully describes the situation. For an example; To correct fill up the wrongly marked alternative , then mark the required one

Q1 Gender

- Female Male

Q2 What made happen your enrolment at LP?

- Good results of secondary/high school
 Sat for a bridging course (Trade test)
 Athletic achievements assisted me (sports)
 My employment contributed (my employer and institutional relations)

Q3 In what programme are you registered?

- Auto-Electrics
 Automotive
 Bricklaying
 Building Technology
 Business Studies
 Carpentry and Joinery
 Civil Engineering
 Computer Systems Engineering
 Construction Engineering and Architecture
 Dressmaking

- Electrical and Electronic Engineering

- Electric Installation

- Fitting and Machining

- Marketing and Salesmanship

- Mechanical Engineering

- Panel Beating and Spray Painting

- Plumbing and sheet Metalwork

- Secretarial Studies

- Tailoring

- Welding

Q4 How is/are the following group(s) of society represented in your course? (You may mark more than one)

Female more less none

Males more less none

Disabled more less none

Youth more less none

Adults more less none

Q5 With reference to gender disparity, how are the following represented in your course?

- More females
- More males
- Females equal to males

Q6 Throughout traditional issues and gender disparity, which of the following are more preferred in your programme? (You may mark more than one)

- Female than males
- Males than females
- Able than disabled
- Youth than adults
- Adults than youth

Q7 Is there any financial support that you are getting?

- Yes
- No

Q8 What source of financial assistance are you getting? (Mark all that apply)

- Student loan
- Employer/sponsor
- Grant
- Scholarship/bursary
- Spouse
- Training levy
- Parents
- Own earnings

Q9 Please rate the financial status of your assistance.

- I am never handicapped financially
- I used to wait for sometime and my studies got somehow affected
- I used to be out-resourced and my studies got handicapped partially
- Because of financial hiccups term of my study has been prolonged

Q10 Do you have to refund the financial assistance to refurbish those who would pursue their studies after you at LP?

- Yes
- No

Q11 May you commend as briefly as possible on Enrollment (**Access**) to LP specifically in your course.

Weakness: _____

Strengths: _____

Suggestions/recommendations for improvements:

Part B: Relevance of Technical and Vocational Education (TVE) at Lerotholi Polytechnic (LP) towards socio-economic development.

Please indicate the relevance of education and training that you are acquiring at LP.

Q12 There is support to students' skills training and development that substantiates impact in economy.

- Strongly disagree
- Disagree
- Neutral
- Not sure
- Agree
- Strongly agree

Q13 The course gives students the opportunity to develop competency in the use of language, computation (numeric) and critical thinking.

- Strongly disagree
- Disagree
- Neutral
- Not sure
- Agree
- Strongly agree

Q14 Course is provided in a variety of formats to meet students' needs (i.e. short term, evening, weekend classes) to equip them with those job-oriented skills.

- Strongly disagree
- Disagree
- Neutral
- Not sure
- Agree
- Strongly agree

Q15 A sufficient number of sub-courses are provided to meet the demands of students.

- Strongly disagree
- Disagree
- Neutral
- Not sure
- Agree
- Strongly agree

Q16 The course is offered in a manner in which students are assured the opportunity to complete the entire programme.

- Strongly disagree
- Disagree
- Neutral
- Not sure
- Agree
- Strongly agree

Q17 Instructors present information clearly, opinions are clearly separated from facts

and proven conclusions that could equip with skills for future development

- Strongly disagree Not sure
- Disagree Agree
- Neutral Strongly agree

Q18 The educational environment at LP has given me a sense of belonging to the community and feel strongly motivated to take part in socio-economic issues

- Strongly disagree Not sure
- Disagree Agree
- Neutral Strongly agree

Q19 Industrial attachment (experiential learning) equipped me with eye-opening activities and acquainted me with relevant skills

- Strongly disagree Not sure
- Disagree Agree
- Neutral Strongly agree
- There has been no industrial attachment

Q20 May you commend as briefly as possible on **Relevance** of your **Course** towards labour market

Weakness: _____

Strengths: _____

Suggestions/recommendations for improvements: _____

Part C: Quality of Technical and Vocational Education (TVE) at Lerotholi

Polytechnic (LP) with respect to demands.

Q21 Instructors have effective and efficient competence and make a strong effort to assist students to succeed academically

- Strongly disagree Not sure
- Disagree Agree
- Neutral Strongly agree

Q22 Instruction offered in my course is excellent and offers a variety of development issues

- Strongly disagree Not sure
- Disagree Agree
- Neutral Strongly agree

Q23 There are adequate and up-to-date machinery and equipment for workshop practicals

- Strongly disagree Not sure
- Disagree Agree
- Neutral Strongly agree

Q24 Industrial attachment (experiential learning) has been conducted in a helpful manner

- Strongly disagree Not sure
- Disagree Agree
- Neutral Strongly agree

Q25 The industry I was attachment to assists in training and course developments at LP

- Strongly disagree Not sure
- Disagree Agree
- Neutral Strongly agree

Q26 May you commend as briefly as possible on **Quality** of **Course** for the labour market

Weakness: _____

Strengths: _____

Suggestions/recommendations for improvements: _____

Part D: Training/learning Strategies engaged at Lerotholi Polytechnic

APPENDIX F

TABLE 15.1 *Distribution of chi square*

df	0.1	0.05	0.02	0.01	0.001
1	2.706	3.841	5.412	6.635	10.827
2	4.605	5.991	7.824	9.210	13.815
3	6.251	7.815	9.837	11.345	16.266
4	7.779	9.488	11.668	13.277	18.467
5	9.236	11.070	13.388	15.086	20.515
6	10.645	12.592	15.033	16.812	22.457
7	12.071	14.067	16.622	18.475	24.322
8	13.362	15.507	18.168	20.090	26.125
9	14.684	16.919	19.679	21.666	27.877
10	15.987	18.307	21.161	23.209	29.588
11	17.251	19.675	22.618	24.725	31.264
12	18.549	21.026	24.054	26.217	32.909
13	19.812	22.362	25.472	27.688	34.528
14	21.064	23.685	26.873	29.141	36.123
15	22.307	24.996	28.259	30.578	37.697
16	23.542	26.296	29.633	32.000	39.252
17	24.769	27.587	30.995	33.409	40.790
18	25.989	28.869	32.346	34.805	42.312
19	27.204	30.144	33.687	36.191	43.820
20	28.412	31.410	35.020	37.566	45.315
21	29.615	32.671	36.343	38.932	46.797
22	30.813	33.924	37.659	40.289	48.268
23	32.007	35.172	38.968	41.638	49.728
24	33.196	36.415	40.270	42.980	51.179
25	34.382	37.652	41.566	44.314	52.620
26	35.563	38.885	42.856	45.642	54.052
27	36.741	40.113	44.140	46.963	55.476
28	37.916	41.337	45.419	48.278	56.893
29	39.087	42.557	46.693	49.588	58.302
30	40.256	43.773	47.692	50.892	59.703

Source: Table IV, Fisher & Yates, *Statistical Tables for Biological, Agricultural and Medical Research*, 6th edn, 1974, Addison Wesley Longman, London.

Source: Burns (2000: 216).

APPENDIX G

Lesotho Ministry of Education and Training Organisational Structure

Acronyms

CEO	Chief Education Officer
ECOL	Examination Council of Lesotho
FPE	Free Primary Education
IDM	Institute for Development Management
IEMS	Institute of Extra-Mural Studies
IECCD	Integrated Early Childhood Care and Development
IT	Information Technology
LCE	Lesotho College of Education
LDTTC	Lesotho Distance Teaching Centre
LP	Lerotholi Polytechnic
NCDC	National Curriculum Development Centre
NFE	Non-formal Education
PSCU	Project Support and Coordination Unit
SSU	School Supply Unit
SSRFU	School Self-Reliance and Feeding Unit
TSC	Teaching Service Commission
TSD	Teaching Service Department
TTI	Thaba -Tseka Technical Institute
TVD	Department of Technical and Vocational Education and Training
TVET	Technical and Vocational Education and Training
TVT	Technical and Vocational Training

Lesotho Ministry of Education and Training Organisational Structure

