THE TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING AS THE BASIS FOR SOCIETAL DEVELOPMENT: THE COMPARATIVE STUDY OF THE REPUBLIC OF SOUTH AFRICA AND LESOTHO

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DECLARATION

I, Motsamai Joseph Mosebekoa, declare that this statement is all by my effort and some information from other scholars as complement is well-acknowledged, and that it is for the first time this thesis within both South Africa and Lesotho's context is submitted into the Central University of Technology (for doctoral degree in education) and never into any university, Non-Governmental Organisation or government departments.

Signature : _____

Date : _____

DEDICATION

This thesis is dedicated vehemently to that segment of the South Africans and Basotho youth with patriotic emotion to contribute to national economic growth, being successful or not in doing so, by investigating profoundly encountered impediments limiting full exploitation of resources or resulting into no production at all and establishing strategies to tackle such challenges to ensure that economic growth is achievable. These, in particular, are the post-secondary Technical and Vocational Education and Training certificates, diplomas and different degrees holders. With these levels of education, South African and Lesotho governments understand that they (graduates) would play a major part in economic growth by creating job opportunities and broadening tax base.

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SUMMARY

In the global context, education has been the panacea for societal development. Because of the challenge of General Academic Education (GAE) that its products face unemployment, the other perspective of education, Technical and Vocational Education and Training (TVET), has gained momentum for it has the potential to contribute significantly in development. This study establishes therefore the extent to which tertiary TVET career awareness and curricula quality and control are effective in the contexts of the Republic of South Africa (RSA) and Lesotho.

RSA and Lesotho are neighbours with a unique feature where RSA completely surrounds Lesotho. They have similar structures of governance under one type of government, democracy. They also have reciprocal relationship where Lesotho exports water to RSA for royalties and RSA earns money through granting Basotho chance to further studies and by admitting patients for quaternary health services. Modern education background in both countries was introduced by Whites and with time was controlled by their governments after independence to better their nations.

The study has been premised on theoretical and conceptual frameworks. Theoretical framework has emphasized that promotion of skills is important for production and innovation leading to economy based generally on knowledge. The conceptual framework covers understanding of main concepts in the study. It has clearly shown how they apply in the context of the study.

Literature investigation has covered two issues. In the first, it explored framework of TVET with background of TVET in the global context. It also revealed justification of TVET with regard to societal development looking mostly in the economic aspect. Understanding TVET with education cycles has thereafter been shown to highlight TVET trend within the hierarchy. It further explored TVET models in Europe, followed by management of TVET as well as general curricula. Then, in the general context the researcher, through literature, discussed ways in which TVET institutions can conduct career awareness, curricula aspects and ways by which graduates can be assisted without any empirical investigation. Also, TVET has been explored in African context looking first in the African Union (AU) perspective and second Southern African

Development Community (SADC) to show policy framework. In the second, it revealed empirical literature in the context of Africa on the issues of career awareness conduct by TVET institutions, their quality assurance and control of curricula and their initiatives taken to assist graduates engage in self-employment.

The research design involves a mixed method research which combines both qualitative and quantitative approaches. It has specifically adopted QUANTITATIVE-qualitative research, that is, quantitative part dominates the whole exercise of data collection while qualitative part validates findings of the former. The survey was administered through questionnaires and interviews at Lerotholi Polytechnic and Motheo TVET College. Its population is comprised of lecturers, students and marketing officers. It has had a total sample of 102 respondents: Lerotholi Polytechnic comprised 33 students, 13 lecturers and 1marketing officer while Motheo TVET College 38 students, 16 lecturers and 1 marketing officer. Both questionnaires and interviews were guided by purposive sampling technique to lecturers and completing students in electrical and water engineering.

On the basis of methodology, the study has found that the Lerotholi Polytechnic and Motheo TVET College conduct career awareness, but it focuses on prospective secondary schools' students, not their completing students. The study has also found that the two institutions offer education and training in curricula that are responsive to the national development goals. They accept new members on condition that they meet standardized requirements and have planned with Central University of Technology and National University of Lesotho to engage their personnel for professional development. It is only in the case of Motheo TVET College where curriculum transformation occurs while at Lerotholi Polytechnic is unmemorable. The study has further found a concern of inadequacy in infrastructure, equipment, instructional technology and they compromise quality of education. While Lerotholi Polytechnic offers enterprise and entrepreneurial education in water and environmental engineering, Motheo TVET College does not in all engineering programmes and this denies students opportunity to begin their own businesses. After graduation, the institutions do not engage in assisting their graduates to commence economic activities for livelihoods purposes.

Improving the institutions, it is recommended that first Lerotholi Polytechnic establishes a clearly articulated framework by departments and approved by institutional management on transformation of curriculum while Motheo TVET College integrates entrepreneurial education to promote self-employment by graduates. Secondly, the institutions, under the auspices of governments and private sector, should improve infrastructural developments and at the same time recruit more lecturers. Also, equipment and instructional technology should be improved for quality education and training. Thirdly and lastly, Lerotholi Polytechnic and Motheo TVET College should formulate policy by which they strategize ways of adopting business incubation and acceleration for graduates.

ABBRIVIATIONS

AU	African Union
CBT	Competency-Based Training
cert.	certificate
CHE	Council on Higher Education
CHE-Lesotho	Council on Higher Education-Lesotho
CHE-RSA	Council on Higher Education-Republic of South Africa
deg.	degree
dip.	Diploma
EE	Electrical Engineering
EFA	Education for All
GAE	General Academic Education
HCT	Human Capital Theory
ILO	International Labour Organisation
KBE	Knowledge-Based Economy
NQF	National Qualifications Framework
NSC	National Senior Certificate
OBE	Outcome-Based Education
OEDC	Organisation for European Development and Corporation
RDP	Restructuring Development Plan
RSA	Republic of South Africa
SADC	Southern African Development Community
SPSS	Statistical Package for Social Sciences
TVD	Department of Technical and Vocational Training
TVET	Technical and Vocational Education and Training
TVTAB	Technical Vocational Training Advisory Board
UN	United Nations
UNESCO	United Nations Educational Scientific and Cultural Organisation
USA	United States of America
WEE	Water Environmental Engineering

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INTRODUCTION

1.1 INTRODUCTION

In the global context, education is an essential means influencing human behaviour for societal development. Normally, this influence happens through social, economic, political and technological dimensions. Education through technological innovation forms the mainstay of development. This materialises when the different sub-sectors of education are well-managed and yield high productivity. The personnel within sub-sectors have to be characterised by high rate of functionality and interconnectivity. The closely related perspective of education in this regard is Technical and Vocational Education and Training (TVET) that in particular ameliorates wealth in the first instance and living standards in the second (Anane 2013: 117) *(see sub-section 2.3.6*). These benefits usually accrue from a capitalist perspective that advocates governments' engagement in private sector promotion with inherent resource utilisation efficiency and effectiveness attributes. This educational perspective has been of paramount importance since the agrarian economy epoch, the industrial revolution and the contemporarily digital/information age.

TVET at higher education has more potential in the generation and growth of knowledge through researches conducted. At the same level, formal modern education inception has had institutions skewed to General Academic Education (GAE). This implies need of more TVET institutions for skills acquisition and developing communities henceforth. The prosperity of TVET in development relies on the awareness of skills. It further relies on the link between curricula and development and how training institutions assist graduates in wholly reaching skills purpose. This study establishes the extent of tertiary TVET institutions awareness and quality assurance and control and productivity of their curricula for improving the South Africans and Basotho.

This introductory chapter to the whole study consists of ten sections. The first section is an introduction to the entire introduction chapter whilst the second gives the context of this research. The third section presents a comparison of the education background of the Republic of South Africa (RSA) and that of Lesotho. The fourth section presents the problem statement

whilst the fifth shows research questions. Finally, the sixth; seventh; eighth; ninth and tenth sections present: the aim and objectives of the study; significance of the study; limitations and delimitations of the study and; the general organisation of the study, respectively.

1.2 CONTEXT OF RESEARCH

This section presents description of study areas: the RSA and Lesotho. The two Southern African countries are neighbours with a unique feature in the African context where the RSA completely surrounds the landlocked Lesotho (Ferguson cited in Mosebekoa 2013:01). However, RSA has direct and much contact with the sea and all Lesotho's overseas imports land at her international seaports. In terms of altitude, Lesotho is higher than the RSA with the highest point in Southern Africa, Thabana-ntlenyane (3 483m). This has resulted in Lesotho having a much colder climate. In terms of territory magnitude, the RSA (1.221 million km^2) is much more than Lesotho (33, 355km^2). The large land usually implies more wealth than the small one as it stands a chance to have more resources.

In order for governance to occur properly, countries have segments. Similarly, these countries have those segments even though they are labelled differently. Those of Lesotho are called districts and are ten while in of that case the RSA, they are called provinces and are nine in all. Both nations have adopted have adopted for a democratic form of governance following oppressive regimes in nature. The structure of government in the RSA has three (central, provincial, local) layers, but in Lesotho's governance structures there are only two of them: central and local layers. Within the provinces, the structure of governance is such that only the provincial and local levels exist while in Lesotho's districts, the structure of governance entails the district administrative system and the local governance system. Good governance is important for having an improved education for a brighter nation's future.

In any country, the populace is the most important resource type. With the close glance to the RSA and Lesotho, it is found that the former has the highest population of 53 million (Statistics South Africa 2013) while that of Lesotho is the lowest at 1.9 million (Government of the Kingdom of Lesotho 2013:11). The South Africans are in categories of Whites, Blacks, Indians and Coloureds and have therefore formed a rainbow nation, speaking Xhosa, Zulu, English,

Sesotho, Setswana and others. In Lesotho, almost all Basotho are Blacks speaking officially Sesotho and English, although there are other languages not officially recognised. The populace of the two countries have close relationships of marriage ties and permanent migration especially from Lesotho.

Great, reciprocated ties further exist between the two countries for development. Economically, Lesotho has for a long time been a labour reserve of the RSA whose citizens sold their labour in both the mining and industrial sectors. Commencing in the late 1800, the mining industry reached a peak (127 000 Basotho men) in 1990 and then followed a downward trend to 42 726 (in 2010) (Turner 2001:78; Workshop on strengthening collection and use of international data for development 2014). Basotho have been earning remittances for their own household improvement. Secondly, Lesotho also has pegged its loti to the RSA rand and easily buys goods and services in the RSA. Furthermore, Lesotho earns royalties from the RSA in exchange of water (Southern African Resource Centre 2013:02). Lastly, Under African Growth Opportunity Act, Lesotho produces clothes absorbed in the RSA markets and this sustains employment in Lesotho industries (Southern African Resource Centre 2013:03). Within the social perspective, most especially in the health sector, patients requiring quaternary health care services in Lesotho, on transfer, go to the RSA. Additionally, the RSA with advanced education programmes in science and technology at different qualifications levels allows the incoming of Basotho to further their studies. The location and resources of the two countries enforce them to work interdependently for development wherever possible.

1.3 BACKGROUND OF EDUCATION IN THE RSA AND LESOTHO

Education in both the RSA and Lesotho has existed from the time they had the first inhabitants to the present moment. Generally, literature argues that the first inhabitants were the San often named Bushmen in Southern Africa about half a million years ago (Rehman 2008:02). Obviously, the Sotho-speaking people were in both countries are successors. They explored the environment to earn a living by means of education. Concerning education that was practised then and the one found in the present, there is a great gap being identified in terms of technology advancement. Since the Bushmen era to the present digitalised era, education is found also to have existed in to different forms: traditional education and modern education, respectively.

Although modern education is said to have succeeded traditional education in the RSA during Bantu education, the apartheid rule then had different education standards. High-class education was meant for the Whites while Bantu education formed on unsound principles for Africans only, with ancillary to political doctrine of apartheid (Msila 2007:148; Rehman 2008:02). The identifiable difference within Whites' modern education in the past and present has a basis on the degree of quality which is spearheaded by technological advancement. In Lesotho, education since the advent of the missionaries has existed in the two previously stated forms to all the Basotho.

Traditional education is understood to be education for the Blacks while modern education is that of the Whites who have been introducing new forms of technology ever since the inception of these education forms in concept. The latter form of education, in the two countries, as is the case in the African context, was experience after being inaugurated by missionaries (Misla 2007:147). In the context of the RSA, the Blacks engaged very much in practical learning which hindered the opportunity to learn theory from the first grade to grade 4. This was disallowed because it promoted raising arguments against the Whites (Rehman 2008:04). Only children from households with privileged positions could attend White schools (Rakometsi 2008:44). Above all, modern education institutions were minimal and stringently giving admissions to Whites whilst Bantu education was fully constrained by infrastructural and personnel repercussions. Rakometsi (2008:406) argues, in support of this, that the RSA in 1991 census indicates under the apartheid system quarter of the Blacks had no understanding at all. Consequently, hundreds of such people were illiterate and semi-illiterate and, therefore, they were lacking self-control and potential to contribute to the economy. In contrast, in Lesotho's context, discrimination regarding schooling was (and still is) impracticable since all its citizenry, Basotho, are Black.

In the context of the RSA, segregation lessened when its government gained democratic rule (1994) where policies of education for all were first formulated (Rakometsi 2008:406). Government scholarship, which was a great instrument in segregation by its accessibility mostly to Whites, has had a downturn to them, due to equity, and sprawled out to the Blacks (Rakometsi 2008:406). Overall, schooling is currently an opened activity to entire citizenry of RSA and

Lesotho. Both countries, though to different degrees, have institutionalised educational organisations (schools) at secondary and tertiary levels attempting to enhance development in all aspects. The secondary schools, forming transition to tertiary, are generally academic in curriculum nature. However, it is essential for students to have the foundation of TVET at this level for tertiary level. Along this, TVET remains important for students who are not able to proceed to higher education.

1.4 PROBLEM STATEMENT

TVET has been essential for the time that is not rememberable to the present and this needs overemphasize it has remained the backbone of development within societies. This has occurred even in the period when the world decided to ignore TVET because of criticisms emanating from the World Bank. With time, the merits of this perspective were realized and, as a result, it has been revived. However, many parts of the world regarded as poor, which include the RSA and Lesotho, are characterized by lack of specialized skills gained from Electrical and Engineering (EE) and Water and Environmental Engineering programmes (WEE) for their economy in spite of the fact that they have the remarkable time offering them (Council on Higher Education in Lesotho 2013:12; Figg 2017:24). This raises the question of just what it is that has constrained the RSA and Lesotho from satisfying national development requirements. It is generally acknowledged that these engineering programmes success is determined by a framework comprising its awareness (schools-made enrolling for certain skills) and relevance of curricula (how well it fits in and addresses the national policy influenced by infrastructure, finance, human resources and political assets) to possible achievements (food security, financial security, poverty alleviation, living standard, sustainable development) all through employment by a society. The general question, therefore, is to what extent have these factors acted to facilitate or constrain the potential of skills from the programmes in mention above to enhance employment within South Africans and Basotho societies.

1.5 RESEARCH QUESTIONS

The study follows these specific research questions:

- What measures of career awareness have TVET institutions in employed to secondary schools on EE and WEE?

- What is the difference of EE and WEE in TVET institutions with regard to societal development?
- How relevant are EE and WEE curricula to societal development?
- What strategies have TVET institutions employed in support of EE and WEE graduates to start enterprises and how can they be improved?

1.6 AIM AND OBJECTIVES OF THE STUDY

1.6.1 Aim:

The main aim of the study is to establish the basis by and the extent to which TVET institutions promote their EE and WEE curricular awareness and quality assurance and control of their curricula for societal development.

1.6.2 Specific objectives

The objectives of this study are:

- To distinguish measures of TVET institutions EE and WEE curricula awareness to secondary schools;
- To compare the purpose of practical education in EE and WEE as a basis of societal development;
- To examine EE and WEE curricula relevance to societal development;
- To explore initiatives by TVET institutions in supporting EE and WEE graduates to establish enterprises and make recommendations on employability and enterprising.

1.7 HYPOTHESES

This study has the following hypothetical statements regarding RSA and Lesotho:

- TVET institutions seem not to engage in promoting awareness of their programmes to their prospective students.
- TVET is not well conducted for societal development.
- TVET institutions appear not assist graduates to produce significantly thereby supporting societal development.

1.8 SIGNIFICANCE OF THE STUDY

The study remains mostly resourceful in different areas of interest: academia, the researcher, South Africans and their governments. Based on the problem statement, the study generates knowledge on improving the following:

- It adds weight to measures that TVET institutions can further add in making secondary schools graduates, in both academic and vocational institutions, aware of EE and WEE they can pursue based on their personal potentiality and that of programmes' employability. This changes the tendency of tertiary applicants with no vision of the requirements of labour market or what they themselves can bring into production space by innovation for development. By so doing, the academia successfully meets national goals.

- It gives feedback to the academia on the curricula to distinguish areas with limitations that compromise their quality. Recommendations to such gaps definitely better the quality of curricula.

- It alerts TVET institutions in tandem with government on the latent opportunity through joint venture system to work thereby promoting immediate graduates' employment.

- It generates knowledge that forms the basis for further research.

1.9 DELIMITATIONS AND LIMITATIONS OF THE STUDY

The concept delimitation is used interchangeably with the concept scope which means the size of the study. Researchers are tasked to set the size of their study in relation to those it will consult and the specific areas it will focus on for information (Rakotsoana 2012:13). This choice is wisely carried out to ensure that the study remains with the weight of coverage it deserves to sufficiently respond to the research questions. This framework has applied in this study context and the groups of respondents found most relevant are the lecturers, students and marketing officers of the two institutions. The institutions offering TVET with EE in the case of the RSA, at the higher education cycle, are more than sixty while in that case of Lesotho only one offers WEE. Concerning, the specific areas with TVET, it considers career awareness execution, the

purpose for which TVET is offered, the standards promoting curricula relevance to be of quality and the strategies that institutions offering TVET engage in for assisting their graduates.

The limitations are the challenges that the study has encountered. Researchers also indicate how they have reacted against the challenges to avoid compromise of the study. In the context of this study, the challenges that the study came across and how they were resolved appear below:

- The researcher received grant towards the completion of field work. The researcher had to spend his own money for which was not budgeted, also borrowed money.
- The researcher went to the field towards the end of the semester. The delay of the response to the introduction letter pushed him to administer the data collection instruments during examinations at the Lerotholi Polytechnic. Some students had already closed. Some of the remaining students were in a hurry to go home. The researcher searched for the examination time-table and identified the prospective respondents – third-year WEE students. Then, the researcher came to the writing classroom towards the end of the period of writing where he waited to administer questionnaires as the students came out of the classroom. Then, the questionnaires were immediately collected. In another case, the researcher (using interview) had to phone the students to get more information. The student even confirmed the information by phone photographs.

1.10 ORGANISATION OF THE STUDY

The study comprises 10 chapters. Chapter 1, in which this section appears, is introductory to the entire study. Chapter 2 presents theoretical and conceptual frameworks to the study whilst chapter 3 reflects on the conceptualisation framework of TVET. Chapter 4 highlights empirical evidence literature while chapter 5 presents TVET profile in the RSA and Lesotho. Chapter 6 presents methodology of the study. Chapter 7 presents quantitative research findings while chapter 8 gives qualitative findings of the study. Chapter 9 discusses research findings and chapter 10 summarises the study.

CHAPTER TWO

THEORETICAL AND CONCEPTUAL FRAMEWORK OF THE STUDY

2.1 INTRODUCTION

This chapter has four major sections, with the first being an introduction to its entirety. The second section is solely on theories (theoretical framework) forming the base of the study. A theory is a system of ideas or beliefs proven about how to achieve desired outputs as well as outcomes (Leedy and Ormord 2010 cited in Rakotsoana 2012:19). Further to this, theory may explain a situation in research context, with tentative nature. In principle, theories, as by nature, generate understanding of phenomena (qualitative research design) whilst sometimes the researchers deploy them to test phenomena. Within qualitative studies, theories act as guidelines achieving phenomenal explanations for which studies have established (Rakotsoana 2012:21). Whether to write or leave out a theory in the qualitative study depends on the desire of the researcher, meaning that, it has a possibility of exclusion, as it bears no damage to a study. The third section consists of conceptual framework of the study. This section is set out to critically prohibit confusion arising from multi-faceted concepts. Since a concept may have several meanings causing confusion when the researcher has not shown a specific meaning applicable in the study context, this part is set out to critically prohibit such setback. Where just one definition is given in the study, it is apparent that the researcher has applied it. Furthermore, understanding the use of concepts acts as a guideline or mapping in a research hence adoption in this study. The last fourth section is chapter summary.

2.2 THEORETICAL FRAMEWORK TO THE STUDY

The theoretical framework is premised on the two theories: human capital theory and knowledge-based economy, respectively. The human capital theory is highly associated with the other theory by forming its base, and all of which connect to TVET for socio-economic development. The connection is clearly appearing in the discussion below.

2.2.1 Human Capital Theory

Human Capital Theory (HCT) intertwines with education, in particular, TVET to fully exploit economic resources for societal development. HCT is the value of knowledge and talent embodied in people as human resource to establish organisations (Santos-Rodrigues 2010:55). Within the organisations, it is represented as the know-how, capacities, knowledge, talent, competence, attitude, intellectual agility and creativity. Machlup (1982) and Sumra and Katabaro (2014:01) unfold that this theory had been generated by economists (Thedore Schultz, Gary Becker and Johnson) in the second half of the twentieth century. Concerning the origin of HCT, Anderson (cited in Human Resource Development Council of South Africa 2014:12) explains that it stems from industrial revolution and the philosophy of productivism. This implies that *The Wealth of Nations* by Adam Smith discusses among the factors of production labour in the context that it requires training to achieve enterprise goals.

Schools are a base of knowledge and skills. Since they are indispensable to life, schools' curricula are supposed to be of great relevance and authenticity to societies. This reflects in improved human resources who pioneer various products and services with an effect of easing human lives. The results of these have enabled the world to be torn into parts, that of the economically-advanced nations and that showing the poor nations. Education acts through TVET perspective to achieve the former part. This acts through influencing the establishment of industrial sector. The continued exploration of TVET further guarantees the economically-advanced nations or countries more wealth through scientific and technological advancement. This calls for education improvement in the developing countries to mitigate the gap forming classifications. If they show no commitment to reducing the gap, it widens.

In spite of this theory's importance, criticisms were raised against it. For example, it is reported to have focused only on capabilities for industrial production (Human Resource Development Council of South Africa 2014:12). This contributes to imbalanced development as other aspects are excluded. In response to this, Human Resources Development Council of South Africa (2012:12) articulates that today the theory has expanded its scope as it deals with issues of poverty alleviation and social welfare promotion.

2.2.2 Knowledge-Based Economy

KBE is a contemporary theory commencing in the second millennium, building on HCT. It is known also as information age, knowledge economy or knowledge-driven economy. Krstic and Stanisic (2013:152) define this theory as the economy (value of production and distribution) with excessive use of knowledge and information. According to Nguyen and Ly's (2014:108), this theory denotes an economy where the role of knowledge (compared to that of natural resources and other production factors) has been outstandingly important. Alike HCT, KBE has widely contributed to economically-advanced countries' wealth while the developing countries are characteristically being passive recipients of hand-outs. This occurs to the economically-advanced countries because of exploring intensely in KBE. Although KBE is a new concept, it has traits traceable from such epochs as agrarian economy and industrial revolution.

KBE, in the same way as HCT, stresses high investment in knowledge (and skills) acquisition in order to promote employment of highly skilled labour in high-technology investments and industries. Lucci and Harrrison (2011:01) provide industrialised nations' evidence that their knowledge-based industries have been the highest employers and recovered, as a result, economy downsized by recessions. These economic institutions are easily established by only TVET in its logical processes. This implies that to explore the environment more and to quickly better the economy of the poor countries, they ought to exert more effort in generation of relevant, competitive information. This also has an effect like HCT of lessening the gap of development among the economically-advanced and developing countries.

New knowledge according to KBE is not only important for new entrants in the labour market, but also for practical economic activities. In this respect, it deals with the problems of obsolescence that occurs when re-generative knowledge in nature. This, however, is avoided by further re-invest in work-force skills endowed that upgrade the models while at the sametime innovate others for market. This particularly culminates in new products with a great opportunity of competitive advantage in the market. This opportunity is explored mostly by higher education graduates for experience gained from research and development-related programmes (Lucci and Harrison 2011:01).

These theories are traceable in the two countries forming the basis of the study. During, segregation, the Black South Africans undertook education with strong base for what this study calls TVET. At the same time, there was GAE against which they were denied as it has other issues related to research to cover TVET improvement. In Lesotho's context, TVET was advanced missionaries for all Basotho. Later, Lesotho transformed its education addressing academic and technical matters. It is within this theoretical context that the study establishes the extent to which Basotho children exiting secondary schools are alerted about TVET potential, TVET curricula are quality and Basotho TVET graduates are helped for starting economic entities by their former training institutions.

2.3 CONCEPTUAL FRAMEWORK OF LITERATURE TO THE STUDY

The conceptual framework has several components. These include modern education, societal development and curricula's quality assurance and control analytical framework as well as TVET. All of these section's components appear in the above order below.

2.3.1 DYNAMICS IN EDUCATION

The study adopts the definition of education as a methodological process by which children as well as adults acquire knowledge, experience, skills and sound attitude (Parankilmalil 2012). Again, according to Aigbepue (cited in Serumu 2015:73), education is a process that makes individuals acceptable in a society whilst Okebukola (cited again in Serumu 2015:73) sees it as updating one's knowledge and making oneself a resourceful community member. These definitions appear to complement the first one leading to more generic understanding of education for this study.

Education is a process that affects all the people. In terms of its lifespan, it is as old as Man. The concept education emerged from the Latin words, educare and educatum with the former meaning to bring out and the later describing the act of teaching and training (Parakimalil 2012; Amaele *et al.* 2013:214). Furthermore, education concept happens ideally in the broad and narrow senses. In the former, education is undertaken continuously from infancy to elderly stage, but at different degrees. It occurs through information coming from anywhere and whoever, organised or not. In this sense, all forms of education (formal, non-formal and informal) take

place. In the narrow sense, it means teaching/training and learning only occurring in the modern institutions: formal schools. Although, relevant literature in this study reflects marginally on non-formal and informal learning, the field work is entirely on formal education.

Following the definition of education are the systems of education which also form base of the study. Education has a legacy of different systems in which it occurred among the societies (Daksa 2013:11; Mosweunyane 2013:50). By far, literature reveals mainly two: traditional and modern systems. Only the latter has more relationship with research field. This follows the reason that it keeps up with the societal changes. The content that is found out-dated, within it, is being phased out. In a different perception, it has shown merits to the societies by influencing essential changes. The content of the latter is beginning to infiltrate into primary institutions or home-based education system with parents as the most experienced teachers. The issue of globalisation has turned the latter in to the world education.

Modern education system is flourishing as the nations keep widening their coverage for accessibility to their whole populace. For this prosperous continuity of de-africanisation and europianisation of Africans, credit is given to colonialism and colonisation as well as globalisation as benchmarks (Mosweunyane 2013:50). This strengthens the study's argument that TVET has been established formally long ago which then allows the researcher to understand why there are still poverty cases in the RSA and Lesotho yet they have underwent TVET for centuries.

Modern education management is well guided by documentary framework. The documents highly relevant are Education Act, Code of Conduct and Education Policy. All the documents are legal as they are formed through legitimacy. Acts are protective to TVET institutions against detrimental factors. They even explain human rights in education. Education policy describes and explains what education is supposed to achieve in relation to development as per country. It covers administrative principles as having vision, mission, values and responsibilities according to each department linking what schools do to national development (Melnic and Botez 2014:114). This documentary framework is essential in the study's case in that it enables the researcher a chance to understand as to how TVET institutions alert their prospective entrants on

their curricula; why they are established; how relevant are their curricula and how they assist their graduates.

Modern education institutions are categorised into three main groups. Worldwide, the institutions are classified into the kind of education they offer. Those that offer education with great emphasis of intellect are GAE. They are characterised by understanding theories on social behaviour and generating knowledge. Some institutions are decided vocational based on their content. They are oriented to practice in nature (Mulengeki, Lukindo, Ogondiek and Mgogo (2013:100). However, it has some links with GAE as GAE forms its basis. The principle behind this relationship is that theory informs practice. In order that institutions can be decided vocational, it means they have only or dominantly practical programmes. There are also other institutions that are collectively providing both categories above and adopt a group label, comprehensive institutions. Some researchers decide to call these traditional institutions. This description assists the study to identify the TVET institutions from others for generating information.

Within any group of modern institution, the students are taught in specific areas related to qualifications that are in pursuit. In technical terms, Barrow (cited in Rasheed 2010:10) and Hussain, Dogor, Azeen and Shakoor (2011:263) conceptualise this as curriculum. They further describe that it has a framework comprising objectives, subject matter, pedagogical perspectives and evaluation (*see sub-section 2.3.4.2*). Mulengeki *et al.* (2013:02) clarify that the concept originated from the Latin word *curere,* meaning to run a course or race. However, they argue that literature indicates different meanings of curriculum and so far until they conducted a study, there was never even a single meaning upon which scholars agreed. For instance, Tyler 1949 defines it as all planned learning directed to the students by schools while Doll 1978 denotes it as all experiences acquired through schools whereas others look at curriculum based on the elements of which it is constituted. They say that Taylor 1978 views curriculum as integrating content, teaching methods and purpose while Posner 1995 defines it as content or objectives for which learning institutions hold learners accountable. A critical look to the fore mention definitions shows that they are important, but none of them has a comprehensive nature for full description. Following the general view from these meanings, one can tell that curriculum is the

mechanism of achieving the national goals for development and that without it schools cannot run (Mulengeki *et al*. 2013:03). In order to meet the goals of a society, curriculum wisely has to converge with them. Curriculum design is a daunting exercise with requirement of accuracy and full commitment by stakeholders. This promptly happens for societal development, through identification of a problem and thoroughly researching on it to produce situational analysis for which resolution occurs. On this basis policymakers draw strategies to curb the situation hence development. At times, innovative models have been in place and curriculum is designed for their incorporation in teaching-learning environment.

On completion of the curriculum certification occurs. This means assessing the students on their competencies in the programmes in which they trained and awarding certificates to those who score at least on average. The purpose is to indicate the proficiency of graduates in the field of study so that they can be employed. Guided by this purpose, the study is able to establish the skills available in both the RSA and Lesotho related to the growth of the economy. The kinds of certificates that are offered by cycles of education are shown in section 3.4 paragraph 3.The tertiary cycle of education has the highest value of certificates. Only certificates, by far, formally approve the skills and knowledge that people have gained and can be trusted to perform for societal change.

2.3.2 SOCIETAL DEVELOPMENT

Social development is a concept that its morphology is ascribed to combining two words (social, development) with literal meanings. These collectively, according to Victory (2011:15), mean a good change of behaviour of the people and the condition within which they live. The changes of behaviour are influenced by the conditions in which the people live. Some of the most preferred conditions are security forms, good governance, health care and industrialisation with some preferred rates along (economic growth, technology levels). Employment is a catalyst between these indices and social development. The base of the indices is education (Victory 2011:17). In their operation, there is a serious need of a high degree of productivity to eventually secure social development. This description assists the study to generate information on what TVET targets in the RSA and Lesotho.

Modern education plays a critical role in social development which requires stressing. This is by promoting the abilities of all members of the societies to contribute in their development (Shoko, Chikomo and Chisita (2015:01). All initiatives engaged into end in what within the economics field is known as employability. Yorke (in Lowen 2011:05) denotes employability as personal characteristics, forms of experience, skills acquired with the purpose producing, the ability to understand and solve problems which enable one to be recruited. Vocational grouping of education is the most relevant to promotion of employability, as by its nature. Brewer (2013:07) states that programmes that relate to employability promotion arise from economics, physical [and social] sciences, commercial studies, [mathematics and law] with the characteristic, training for particular trades. This contributes to the framework enabling the study to establish reasons for conducting TVET in the RSA and Lesotho.

In defining the concept employment, Maigida, Saba and Namkere (2013:30) and Makhubela and Nyapfungwe (2015:02) say that it is an engagement in any legal economic activity to generate income and produce services and/or goods for one's own and/or others' use. According to Asian Development Bank (2013:01), (using the definition by International Labour Organisation 2002-2003) employment is a situation in which a person works for payment, profit, without pay, in particular, in household enterprise or is found not at work on temporary basis, but having the job. These definitions apply in the context of the study in a complementary approach. Employment is among the indices of development in this section mentioned in the first paragraph. The second definition of employment indicates clearly that development has forms. These are wage-employment: where employable people are engaged in others' economic activity for a gain and self-employment: which is where a particular person develops a business idea and finally turns it into an opportunity they exploit for personal gain (Essel *et al.* (2014:28). This understanding forms part of the framework assisting the study to find what type of employment do TVET graduates engage in for societal development (in the RSA and Lesotho).

Employment is important in societal development in a number of ways. Initially, employment is the means of accessing resources to content human needs (Global Business School Network 2013:01). This applies in the case of those who employ others for pay and those who earn salaries or wages. Those with proprietorship get goods directly from their production means

and/or buy them from other owners' organisations. In that case of the self-employed people, they depend on purchasing from the organisations they serve and others producing different products. Secondly, employment acts as a remedy against the scourge of unemployment worldwide. When people are unemployed, they often lead lives below poverty line (one United States of American's dollar per day) and do not meet daily basic needs at all, or in proper proportions. To curb unemployment rate that ILO in 2013 estimated at 200 million people worldwide, Global Business School Network (2013:01) advocates for investing in human resources. As a result, Human Resource Development Council of South Africa (2014:17) explains that vocational education has indeed made a positive change in the environment inhabited by the people. Thirdly, employment forms the basis of trade, earns foreign exchange and advances contributions by private sector into the revenue pool by taxation (Makhubela and Nyapfungwe 2015:291; Weber in Angosu 2014: 01; Essel *et al.* 2014:28; Feldman, Hadjimichael, Kemeny and Lanahan 2014: 01; Roschelle, Bakia, Toyama and Patton 2011:06). This information assists the study to establish the specific ways in which employment contributes to social development.

2.3.3 ANALYTICAL FRAMEWORK OF FACTORS ENHANCING TERTIARY MODERN EDUCATION CONTRIBUTIONS TO SOCIETAL DEVELOPMENT OUTCOMES

The intent to accrue societal development by tertiary modern education gains support from the positive side of the major factors: career awareness and relevance (of the standards) of curriculum development. Integral to these is the support by education institutions to graduates to enhance their productivity with financial resources. In the case of lacking success, the causes and impact are investigated in the same factors constrained by their negative side. This framework forms the basis by which the study critically looks at the same factors in the case of TVET in the RSA and Lesotho in relation to the extent by and to which they contribute to societal development.

2.3.3.1 Career awareness

Ministry of Education (2016) denotes career awareness as giving knowledge, skills and values with the purpose of promoting the making of informed decisions about education programmes and work. In a much similar meaning, Watts and Fretwell (cited in Loan and Van 2015:136)

define career awareness as a service of empowerment to a person on education and choosing careers as well as careers management. They further apply guidance and orientation as concepts that are used in replacement of awareness. Both meanings apply in the case of the study: one extending what another one has said. Career awareness is important to the students in the sense that they choose programmes that match their abilities. This has the ability to reduce dropouts. This further is of benefit to the nation by reducing loss of money paid to students dropping out because of mismatch of their abilities with programmes. This happens where students are not aware of suitable programmes to them and just choose randomly as compromise. The instructional institutions also gain an advantage in having only the students with potential and all be successfully assisted. This assists the study to find how TVET institutions alert secondary students on their programmes for informed decisions and set if they gain all advantages of career awareness.

2.3.3.2 Curriculum Design

Modern education fulfils its role of developing societies by means of curriculum. Curriculum establishment occurs after a problem to be solved through education has been identified and it is justified that it will successfully be solved by use of a particular set of syllabi or courses. They contribute differently in the upbringing of the students and give different skills to initially take care of themselves, others and the environment and secondly to engage in production. Since the syllabi are different in nature, this dictates inviting specialised people in each of them. Each also covers relevant people from different development organisation: governmental, private and non-governmental (Westbrook, Durran, Brown, Orr, Pryor, Boddy and Salvi 2013:14). Curricula designers are tasked to consider issues that prevail in the local context largely, and how to some moderate extent they apply in the international context.

2.3.3.3 Elements of Curriculum

Curriculum is organised into four elements. They are objectives, content, methods and evaluation. They appear in a logical form which generally guides instructions.

(a) Aim, goals and objectives

The first element is setting the objectives of the curriculum. An objective in the case of education field is the behaviour that the lecturers expect to see from the students as they instruct them. In other words, it is the reflection of behaviour engineered by what is taught to the students. Mulengeki *et al.* (2012:06), characterise learning objectives in two ways. One, they are outcomes that are measurable (there is expected behaviour to be seen and judged in terms of the degree it has occurred by the lecturers). Two, they are more specific about the learning behaviour than goals and aims. The achievement of learning objectives by the schools indicates that they are on the verge of reaching social development while failing to achieve such objectives implies in effective use of learning exercises. The lecturers in all cases they realise objectives failure; they are expected to re-train related students. According to Mulengeki *et al*. (2013:06) curriculum objective function as:

a) guide to decision-making process on what to cover, what content to select and which learning experiences to stress;
b) scope and limits for what is to be taught and learnt;
c) selection of areas of knowledge in various discipline and
d) guide for achievements' evaluation.

This information assists the study, as part of study's framework, to understand the outcomes of TVET education in the RSA and Lesotho.

(b) Content

Content is the second element of curriculum. Content is the totality of facts, concepts, generalisations, principles, theories or any other issues in a syllabus intended for students' learning in schools (Mulengeki *et al.* 2013). In other words, this is all each subject contains and delivers to the students who deserve it and it is worth knowing for the fact that leads to employable and innovative.

During development of content, there are some measures to consider with the purpose to ensure that the content contains them or seeks to achieve (Mulengeki *et al*. 2013:19; Hussain *et al*. 2011:264). The first is self-explanatory. This indicates that content has to be expressed in such a manner that the students can understand it, as far as possible, on their own. Such content is

characterised by easy language in which it is expressed. It is further expressed in an interesting manner. There are as many teaching/learning aids as possible for attracting attention. The second is significance: this means that content should contribute to the expectations of curriculum. These are well-guided by such administrative principles as the vision and mission statements as well as the values. They connect curriculum to the national expectations since curriculum is established centrally to respond to national issues. Any part of content which is deemed not relevant to the national issues is removed. The third is utility: this denotes that content should have the value of applicability in the present moment and in future. Content forms foundation of education – a basic human need for social development. This relationship is expected to continue in future from generation to generation following that content is utilised throughout one's life. The fourth is learnability: this is about ensuring that content which is covered in the syllabi can be learnt. It is learnable when it corresponds with mental development of the students. This suggests that content has to be developed with mental development taken into consideration. If it happens, for any reason, that content is beyond the scope of understanding of the students; it is not at all learnable. In fact, there is no behaviour observed as a result of their attempted learning. The fifth is feasibility: this says that content should be covered within the given timeframe. To achieve this, curriculum developers are obliged to design curriculum content possibly enough for duration of course. Such curriculum is finished in/on time and as it is also manageable thereby forming good foundation for subsequent cycle(s). There are also resources known as aids given in plenty to facilitate feasibility. Shortage of resources often has a negative impact as it delays progress in learning which automatically extends it over the allocated time. Some lecturers extend teaching time as a means of assuring syllabi completion within the allocated time. The measures inform the study to establish if they have been considered by TVET institutions in the RSA and Lesotho to achieve their goals.

The principles of organising developed content follow. According to Mulengeki *et al*. (2013: 20), the first is balance. This means the content should have sufficiently wide coverage and moderate depth meeting trades' requirements. These attributes are noticeable as the students graduate from one cycle of education to another. At the lower cycle, basic education, the beginning students learn concepts while those who are about to complete it have developed features enabling them to engage in production. In the secondary cycle, they are more productive while in the last cycle,

tertiary, they are most productive and able to think critically in finding the best ways to solve societal issues. The second is articulation and this means content within cycles should be building from one to another in bottom-up direction. Relevance of curriculum starts at the lowest learning and teaching cycle, the rest of subsequent cycles extend. This harmony establishes a sound education system in a country allowing inclusion and growth of citizenry with different features for societal development advancement. The third is integration and this is horizontal connections of content amongst syllabi within the same cycle. Apparently, none of the disciplines offered is self-sufficient; therefore, aspects of one form the basis for a concept in another or the other one completes it. In learning, the students ought to be observant enough to notice such links for better understanding. The fourth and last is continuity, meaning to apply acquired knowledge, skills and attitudes day-in day-out. It is within this form of organisation that skills significance accrues in relation to societal development. All in all, a well-organised content is never significant to local and international education. This organisation enables the study to draw a link between secondary schools and tertiary TVET institutions with much focus of pre-requisite knowledge and curriculum awareness.

Content appears in different forms to the students. In the first instance, content is originally presented to the students by seeing the objects, by being present at the events and by having exposure to forms of life experience. Owing to changing technology, the students no longer have to travel much to places where objects, events and experiences to learn about are found. They are seen in their originality through the means of telecommunication (videos and heard vocally by radios). These assist them to learn by themselves. In other cases, they gain assistance from the lecturers depending on the level of their complexity to be understood by self-teaching. In the second instance, the students learn through representations in writing, drawing and pictures (of objects, events and experiences). This follows that some content-based objects, events and experiences are out of reach. The written content has dominated others for so long appearing in such hardcopies as books (text-books, prescribed books, exercise books, note books, workbooks), journals, magazines and catalogues. The drawn and pictorial content appear in the same books above and charts as well. The two usually emphasise what has been written about in the books. In that case of practical education, both drawing and pictures form the core of learning, but since they are not self-explanatory they require that ability from writing or

interpretation from the lecturers. The forms of representation are used well when they supplement one another as any on its own may be difficult to relate to reality. These can be owned by the institutions and students. This enables the study find out how resources for education are owned (in that cases of the RSA and Lesotho, relatively).

(c) Teaching and learning models

The third element of curriculum is about the models (ways) by which content is delivered to the students to acquire and to develop skills and knowledge. Since there are different models applying well in certain content delivery, and badly in others, it remains a sensitive role for the lecturers to find out specifically, and prior to teaching, which model suits the content to deliver. This means where a proper model has been employed, with other elements discussed above constant, the students achieve the set behavioural objectives.

According to Mulengeki et al. (2013:45 there are three major models for teaching and learning. The first model is Bruner's discovery-learning model. This model is meant to enable the students generate knowledge and skills on their own, or with little, assistance by their lecturers. New knowledge acquired is constructed on the prerequisite knowledge. The lecturers are tasked to finding out about the pre-requisite knowledge, they introduce the students to the new lesson experience to explore and allow the students to study on their own. To successfully perform this, the students are given a plenty of resources, complementing and supplementing one another to make sense out of the explored experience. Students work on individual basis or collectively as may be required by their lecturers. As information is being internalised, knowledge and skills is developed (Westbrook *et al.* 2013:10). Such knowledge is mostly unforgettable and further strengthens capacity of innovativeness and problematic solving.

However, this model is criticised by research: it is does not suitably apply at lower cycles of education since the students there have not matured mentally to engage in that form of learning. Again, it suits gifted students even at higher education. This implies a need for serious involvement of the lecturers in assisting students wherever this is on demand.

The second model is Ausubel's presentation which emphasises actual teaching of the students. In contrast to Bruner's model, this model encourages the lecturers to interact intensively with the students for learning. The lecturers initially establish pre-requisite knowledge of the students and this normally forms basis for planned-lesson experiences. In which case the students do not show such knowledge, the lecturers are entitled to re-teaching the students for the purpose of establishing base for the planned lesson experience. This shows that knowledge is build: content to be taught is always based on the knowledge of the student. Even in that case of a new topic, there is always what can be related to the knowledge of the students to open such topic. Should the lecturers identify a gap in the content, they fill it and embark on delivering as it is planned. This saves time and resources from being wasting.

The third and last model is Gagne's instructional model. This model, similarly to Ausubel's model, recommends the lecturers to engage intensely in teaching processes. Conversely, Gagne's model is much strategic and quite straightforward (Mulengeki *et al*. 2013:16). In this model, teaching and learning work within a framework of nine steps process known as the events of instruction. They further illustrate these as gaining attention, informing learners about objectives, stimulating recall of prior learning, presentation of stimulus, providing guidance, eliciting performance, providing feedback, assessing performance and enhancing retention and transfer.

Alongside teaching and learning models is the teaching methodology of Competency-Based Training, particularly with experimentation aspect. This methodology sometimes appears as Competency-Based Education, Competency-Based Learning or do it yourself (Ansah and Ernest 2013:177). In accordance with Anane (2013:119), this methodology is carried out based on industry standards to ensure producing only graduates with labour market requirements for societal development. Achieving this, it encompasses the following attributes: knowledge, skills, values and personality. Furthermore, it is worth executing since it moves education's focus from what academics believe students should know to what students perceive or intend to deal with in varying and perplexing situations. This methodology therefore combats producing graduates with demand-driven skills to industrial sector avoiding unemployment by irrelevant skills. The models of teaching and learning inform the study to assess what the TVET institutions in the RSA and Lesotho have employed logically to achieve their goals.

(d) Monitoring and Evaluation

The fourth element of the curriculum is generally known as evaluation. Evaluation and monitoring practices assess the extent to which content has been implemented and learned successfully by the lecturers and students. Since the first day content is delivered to the last day of the institutional calendar, the lecturers are entitled to test the students in terms of progression towards behavioural objectives. The means by which testing is performed are chosen based on a few reasons. In the first, they should correspond with the level of thinking and understanding of the students. In order words, they should not be below or beyond the range of understanding of a particular age. Secondly, the students should have undergone content related to testing before. Thirdly, tests should yield the correct responses. Fourthly, it should yield on average, if not exactly, the same responses. Testing which is meant for progression is called monitoring (Mulengeki *et al*. 2013:16). That which the lecturers administer to decide on students parsing to the next class is evaluation (Westbrook *et al*. 2013:04). This information assists the study to find out what TVET institutions employ to test students.

2.3.3.4 Financial and Physical Capitals for Curriculum

Within modern schools, financial capital involves money. Availability of this capital for education is important as education cannot take place without it. It capacitates education institutions to meet all other resources required for institutional operations. The main reliable sources of financial capital for modern education are the parents, cost recovery (students' fees), national and private bursaries and self-sponsorship (part-time student-workers) (Woldetsadik 2012:61). In the developing countries, the outstanding source is national bursaries by national budget as the governments are entitled to widen and promote accessibility of education the whole citizenry. In some economically-advanced countries, education is free public good at all cycles.

With financial capital, modern schools manage establishing physical capital/infrastructure, a pertinent aspect in their entire operations. Infrastructure is broadly encompassing systems of communication means, electricity, water supply and sewage control and roads (including their transport) and buildings, as well as their facilities, in which operations transpire. These, on the one hand, facilitate teaching-learning relationship thereby securing high quality of education.

Buildings, for instance, create a conducive environment for teaching and learning: they allow use of facilities by the students to conduct experiments and the lecturers to perform both managerial and administrative duties. On the other hand, infrastructure is a major part of curriculum mostly in practical modern education schools. On the basis of training, more forms of infrastructure are invented while those that are already in existence are innovated. In general, infrastructure – technology aspect – is the pioneer of societal development in all respects and, thus, nations are inclined to adopting and simultaneously advancing it. On the basis of this information, the study is guided to find infrastructure that exist in the teaching/learning institutions to respond to its research questions.

2.3.3.5 Lecturers of Curriculum

Instructional activities work best under guidance of a qualified lecturer. Owing to low literacy rate and level of skilled/knowledgeable labour-force, modern educational institutions in the developing countries experienced recruiting unqualified lecturers until recently. Apparently, graduates from such institutions have undergone low employability and productivity, not fulfilling societal development. It is massively in today's context that institutions combat employing unqualified teachers. It is obligatory to modern education institutions to recruit mostly qualified lecturers since the programmes they deliver are highly technical and beyond understanding of non-professionals or who could be under-employed. Under the prevalence of this context, graduates in various trades of interest normally are proficient and prospective in societal development generation. This understanding guides the study into assessing the qualifications levels of both lecturers and students to address the study's aim.

2.3.3.6 Curriculum Transformation/Innovation

Curriculum changes with time to fully respond to the changes that are affecting the societies. Curriculum changes are technically referred to as curriculum innovation (Mulengeki 2013). Also, they are called curriculum development or transformation. Some of the changes are, in fact, created to purposely change the societies for the better. Tertiary cycle was explained as such cycle responsible for informing better societal changes through research (*see section 2.3 paragraph 8*). After such changes in nature have been secured they are adopted among societies through the means of education (Shoko *et al.* 2015:04). This implies that education of such

societies is bound to change in order that it accommodates new changes for as long as they remain pivotal. As new changes are adopted and learnt, there are that become invaluable and, as a result, they are eliminated from the curriculum. Some of the changes are enforced by the natural factors affecting human life. Recently, the world is experiencing harsh climatic changes with direct effects to the people. These have pushed studying how these can be predicted and how best people adapt as there is no promised reversal change any time soon. In the process of curriculum innovation many people are involved (*see sub-section 2.3.1 paragraph 3*).

2.3.4 QUALITY ASSURANCE AND QUALITY CONTROL

Within curriculum, education institutions have incorporated the practices of quality assurance and quality control. These practices are enforced by the councils established to guide tertiary institutions in promoting quality of their curriculum. This follows the discovery that curriculum of such institutions had been found with poor quality. Quality means achieving the purpose for which something is created (Certo 2008:35). This is achieved on the basis that there are factors that suitably facilitate education towards its purpose which in this study's case is broadly promoting social development. These factors (or standards) in their operations initiate what is known as quality assurance. Also, the limiting measures on what to do at a particular time in a particular educational issue and looking into how it is supposed to be done with the purpose of avoiding it from losing track by, for example, misinformation or misdirection are all termed as quality control. These practices mean that education provided under their guidance achieves its intent. These enable the study to find out how quality assurance and quality control are practised and the impact that they have in the selected institutions in respect of societal development.

To ease measuring and guiding the practices of quality assurance and quality control, Singla and Gupta (n.d) have developed a relevant model, Integrated Curriculum Evaluation Model. The model is organised into three stages.

Stage one - objectives evaluation

This ascertains whether objectives are:

- worth achieving

- feasible and achievable
- well defined with due regard to goals and aims of institution
- demand-driven and as per needs and requirements of the employers society and individuals
- achieved

Stage two – system evaluation

This finds out about the following:

Inputs

- learners' interest, attitude, entry qualification, behaviour, intellectual competence and abilities
- availability of competent qualified and trained faculty and staff
- availability of appropriate physical, human, informational/instructional and financial resources
- access to curriculum document with the learners, teachers, examiners, administrators and other stakeholders
- availability of library and easy access to internet

Process

- extent of coverage of syllabus
- integration of theory and practice
- involvement of learners in teaching-learning environment
- appropriateness and utilisation of resources
- types of learning experiences provided to learners
- appropriateness of students' evaluation system

Environment

- dynamic and visionary leadership
- clean and healthy working environment

Output

- academic performance and personality development of the students
- extent of employability of the students as per qualification and status
- extent to which the employer is satisfied with performance of students

Stage three – esoteric evaluation

This, going beyond curricular activities, establishes information on the following:

- efforts in improving employability
- up-dating faculty and staff
- research and development efforts made
- promoting self-study and innovation in teaching-learning strategies
- partnership with industry
- continuous updating of curriculum

This model assists the study in the framework that it follows for logical purpose.

2.3.6 TVET

This study is explained in chapter one to be based on TVET. TVET is a new concept in the field of education that expresses practical education beside GAE. Since there had been no concept agreed upon worldwide in expressing practical education, the United Nations (UN) towards the end of the twentieth century decided to form a concept to be applied in expressing this education in that context. Practical education prior to the formation of TVET concept was expressed in different concepts in different geographic settings. Such concepts are as follows: apprenticeship training, industrial arts, technical education, technical/vocational education, occupational education, vocational education and training, career and technical education and so on (Maclean *et al.* 2013:05; Maclean and Lai 2013 cited in Agrawal 2013:01). In spite of the coming of TVET, some countries have adhered to the use of their own geographic concepts (European continent with vocational education and training, USA with career and technical education) (Fawcett *et al*. 2014:02). The morphology of TVET indicates that it was formed through consideration of other concepts since there are many that it reflects their components. The same

relationship has been realized to have happened on the meanings as they sound similar to one another.

TVET is defined in much the same ways, but in different senses. In the broad sense is the UN, which according to (Fawcett, Ecsaw and Allison 2014:02), defines TVET as 'educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practice, skills and knowledge relating to an occupation in various sectors of economic and social life'. Also, in the same sense, Mokhothu (2015:09), seeing it as technical education, says it means that education feature which has scientific and practical skills and knowledge undertaken with the purpose for actively engaging in production. In the narrow sense, it is the definition that TVET is education meant to promote and strengthen skills acquisition with the intent to prepare individuals for productivity (Maigida *et al.* 2013:03). Also, TVET is defined as training the people for gainful employment (Nasir 2012:01; Maclean, Jagannathan and Sarvi 2013:06). While all of the meanings are relevant to the study, it adopts that of the UN as it represents them all in its broadest sense. Defining TVET enables the study to draw distinction between the two education perspectives so that data is collected only from the relevant institutions in the RSA and Lesotho cases.

TVET is the education perspective that is offered in all education cycles though some people confine it to drop-outs at the primary and secondary levels of modern education (*see section 3.5*). This follows the misunderstanding that it is education for dropouts. At the tertiary cycle, even before one is being exposed to the nature of curriculum, the names of some institutions say it all. In that case labelling of the education institutions is featured by any of the following: technical schools/colleges, community colleges, institute of technology, university of technology, polytechnic university, technikon or technical university, it is a TVET oriented institution (*see section 3.5*). Some institution offer curricula that generally comprise TVET and GAE programmes. They are classified as comprehensive institutions (University of Lesotho, University of Botswana). The means by which these can be identified is by view of their programmes. Even if programmes are academic, there are some basic elements of TVET and vice-versa. What decides whether the programmes and their courses are TVET or GAE are the elements of one education perspective dominating those of the other perspective.

In the case of the areas of the study (RSA and Lesotho) the people (ordinary, educated, technicians) understand TVET to mean courses that are short-term given in large magnitude and particularly preparing trainees for work. This understanding is believed to have emanated from the observation that the students who dropped out from GAE are referred to it as a compromise. The element that makes TVET difficult to separate from the tertiary level is that there is much paper-work involved in describing processes, which is never the case in that context of "Development/Skills Training Centre". All engineering programmes, commercially-based and related programmes (business, tourism), agriculture and nursing are classified as TVET curriculum. In assisting to detect TVET, the attributes of content described as TVET appear in the degree content making it TVET in nature. Some confusion also arises in conceptualising TVET as an institute or institution. Correctly, TVET is a curriculum, only TVET College is an institution offering TVET qualification.

Although the researcher has tried to draw distinction between TVET and TVET School, there is still a great work remaining to fully eliminate contextualised misconception. Policymakers are supposed therefore to clearly define in their documentation these two. Also, they significantly ought to disseminate such information so that it reaches the people and finally rectifies the misconception. The general information given on TVET, by far, enables the researcher to show the link on how education, TVET, improves the societies. On the basis of this, the questions are asked where there is week societal development while institutions are established, which is what the study aims at and later gives responsive information about.

2.4 CHAPTER SUMMARY

Modern education as supported by theories and concepts remains greatly significant in promoting societal development for all sections of the people in any nation. Concerning changes in education for improvement, it is quite important ensuring that the students at lower cycles are aware of and access them. Prospective institutions ensure the best-designed curriculum for securing societal development. To this, and as much as possible, relevant capitals is made available to facilitate implementation of modernized education with prosperity. Also, the curriculum incorporates quality in the respect of assurance and control to ensure that education

achieves for what it is intended. TVET is the most relevant perspective of education in achieving development of a society as it solely produces productive labour-force in that understanding.

CHAPTER THREE
FRAMEWORK OF TVET

3.1 INTRODUCTION

In this chapter appears analysis of TVET framework in connection with societal development. To secure this, it initially commences by establishing the background of TVET in the global context, focusing on its origin and vocationalisation. Secondly, it presents the justification of TVET within the second millennium era. Thirdly, it explains the structure of TVET. Fourthly, it describes the models of TVET in Europe. Fifthly, it discusses how TVET is managed and further describes its curriculum with respect to societal development. Sixthly, it contextualises TVET in Africa while seventhly; it reveals TVET conduct in Southern Africa. Eighthly, it presents the analytical framework of TVET literature whilst ninthly it presents chapter summary.

3.2 BACKGROUND OF TVET WITHIN INTERNATIONAL CONTEXT

In the whole world, the experiences of TVET are not recent since they have existed for many centuries ago and gained popularity. There are some attributes that mark the time when Man developed abilities through TVET by which the environment has been exploited to fully respond to human needs (Daksa 2013:11). The abilities developed in the course of such epochs as the stone and iron age. Also, the experiences of TVET are traceable and reflect how TVET performed during the agrarian economy. This was followed later by a paradigm shift, changing from living by means of agriculture to industrial production in England towards the end of the nineteen century effecting in what economists termed industrial revolution. These changes came as a result of improvement in the skills and knowledge guided by innovation (Daksa 2013:11; Tikly 2013:05). By the time industrial revolution was born, GAE was already learnt in England and clearly defined. The TVET (involving artisanship, apprenticeship) aspect of education, in England, was at first meant for children who hardly proceeded to tertiary cycle of learning (Daksa 2013:05). This supports that the idea of considering TVET as a compromise originates from the students failing to gain admission into the tertiary level. This even suggests that there were even more mouths to feed as the dropouts clearly became dependants the first day they left education institutions. With time, England realising that not all its citizenry have that potential to wholly succeed in GAE, it configured their understanding on TVET . Even during time it was

advocated for children, the whole world benefited from TVET. Consequently, it was introduced in all education cycles in England. In the tertiary cycle, institutions (TVET colleges, technikons, technical institutions) that only has the ability to produce TVET associated skills were established. The central purpose behind this initiative was to supply industries with skilful labour to achieve massive production. Since other European countries and the USA adopted massive production, this postulates that they as well committed to setting up educational institutions to promote self-reliance in labour supply. Since categorising education is the initiative by the English, it is inferable that referring to practical education as vocational evolved is the English creation.

In the case of Africa, TVET experiences are identified to have happened in the pre-colonial era. McWilliam and Kwamena-Poh (cited in Essel *et al.* 2014:28) explain that in Ghana the locals engaged in informal education, which by characteristics reflects TVET, to acquire skills for production. Since then, TVET was still in traditional form and contributed around 90 percent of all skills training. Ghanian human resource base was made by such skilful individuals as inventors, designers and technocrats, fashioning and producing societal needs, feared, revered and hailed in the society. Prior to the introduction of modern education, TVET was the main perspective of teaching and learning. This is proven by content which is identified to have been of TVET as well as the means used in its impartation, relative to the understanding about TVET today.

3.2.1 Vocationalisation of TVET in Secondary and Higher Education Cycles

Since the advent of modern education, governments in the developing countries had explicitly streamlined and planned TVET. This had been by institutionalising centres to offer it. Because the developing countries adopted TVET, it is conclusive that they have experienced, irrespective of the extent, its contributions to societal development. TVET offered always had links to GAE. TVET at some point is argued to be the output or practice of knowledge acquired in GAE (*see TVET definition in sub-section 2.3.6*). In other words, it denotes that creativity, problem-solving skills and analytical skills acquired led to the survival of the projects for societal development. This brings to conclusion that GAE provides the basis by which TVET develops and ultimately

explains the processes within it to produce, for example, a competitive labour-force and sound means of production.

Ever since the inception of the concept of TVET until the last quarter of the twentieth century, GAE had more recognition over TVET. In all the nations, the two perspectives occurred in separate institutions. It was just in the 1970s when co-existence of the two came into view at secondary cycles first and extending later to higher education (Maclean and Pavlova 2013:43). They further argue that it was at the same time when TVET became integral to the education system. This follows the realisation that together they are competent in promoting and strengthening social inclusion for the underprivileged against long standing exclusion. Again, it has been in place to minimise educational gaps' intensity as well as avoiding social fragmentations (Lauglo cited in Maclean and Pavlova 2013:43). This initiative in diversifying first secondary education is probably meant to attain a high enrolment rate than it was the case with GAE. This normally would happen as education catered for all students with talents accruing from different instructional domains. In support of this, Meclean and Pavlova (2013:45) provide evidence that the Organisation for European Cooperation and Development (OECD) countries experienced 10 percent increase of their upper secondary education because of TVET integration. Further to this, it included the poor use of the case of Indonesia that 21 percent of students from the lower class income quartile enrolled much significantly than in GAE with 13 percent. These achievements guarantee an increase of a proficient labour-force into which the nations bank their potential for societal development. In contrast, such perspectives at higher learning institutions emerged from opposing sides: GAE emphasised the promotion of scientific knowledge while TVET argued for the provision of training for specific occupations. This has caused the use of different approaches starting in the developed nations, for example, Germany has provided tertiary education with a high degree of TVET aspects while the United Kingdom has maintained the same degree of GAE and TVET in the same cycle. At the same time, there was a wide range of extremely specialized short-term programmes offering TVET qualifications. Integrating TVET to the education system in the topmost cycles clearly marked its consideration as a panacea to poverty.

3.2.2 TVET Experiences in Asia and African Contexts

Arguing that TVET has the potential to promote societal development by means of industrialisation had been a global issue until its demise in the 1990s. While many nations experienced infrastructural developments and delivery system challenges with poor performance, others had heightening societal development. It is on the basis of this in Asia that many marvellously gained recognition as being part of 35 nations regarded economically advanced. It is of interest as to how they successfully went through and attained the name of Asian Tigers. In just highlighting the process using Singapore, Yussuff and Soyemi (2012:75) point out that its government initially shifted the TVET policy. According to Law (cited in Tikly 2013:07), the TVET policy was aligned with economic development, a similar case in other Asian tigers, thereby becoming responsive to rapid changes of economic policy. After gaining independence, a vocational institute and an industrial training board were formed specifically to meet manpower-planning needs in an industrialising society. In the 1970s, the government shifted to the attraction of Multi-National Corporations using Joint Government Training Centres and 'science parks' fostering knowledge exchange and innovation. In 1979, the government further engaged in serious economic restructuring by introducing higher value added, high technology and more-capital intensive industries (petrochemicals, biotechnology, information technology and manufacturing services). Simultaneously, the restructuring of TVET was done addressing capital-intensive industries' needs. For low-skilled citizens, a Continuing Education and Training system came into existence thereby upgrading their skills. In 1991, the government found out that the basic education then was slightly effective and determined to implement a strategy of a minimum of ten years general education learning as a remarkable pre-requisite of knowledge to those interested in pursuit of TVET at upper cycles. Alongside this, the government for intermediary cycle embarked on the Institute of Technical Education to lay the base for transition to a knowledge-intensive economy during the 2000s in new growth sectors (Biomedical Sciences, Info-Communications, Creativity Technology, Integrated Resorts and High-Value Engineering). Based on the Institute of Technical Education, it was possible to initiate the restructuring processes of the system of vocational institutes into effective regional colleges that earned the name of "the shining jewel in the education space".

Realising that the public had negative attitude towards TVET, the government altered the circumstance believing that in its prevalence there hardly would be an accomplishment of prosperity (Yussuff and Soyemi 2012:75; Tinkly 2013:09). This was by introducing an institution that made compulsion of TVET at secondary level and by dishing out Top of the Trade Television Competitions and Apprenticeship of the Year awards to capture the interest of the youth. Furthermore, in time the government realised the significance of involving industries' by defining precisely the skills competencies, standards and values within curriculum development and eventually formed an integral body in the education landscape. Attitude, according to Tikly (2013:09), never at first emanated from Singapore's citizens, but from the colonial rulers, which had biasness by favouring GAE over TVET.

Even though, Singapore is doing well economically, criticism has been raised at its curricula that it utilises rote learning and the negativity related to is its denial of trainees to think critically. This ability capacitates degree in creativity and innovation. As an approach to curb this concern, the government guaranteed to revise learning methods and encourage explorations by the trainees.

In the African context, the case of Ghana is analysed to show how TVET had performed with respect to societal development as it was believed to have such a potential. Ghana had the legacy of colonial education from Britain that ceased ruling it in 1957; a duration of eight years of independence ahead of Singapore. As has been the case in many colonies that colonists never underpinned TVET, Ghana had been no exemption in this regard. Nonetheless, its own government did not address the perception since then until the present. Despite this, Ghana has committed itself to transforming the education system even before gaining independence to correspond with locally contextualised needs. In 1961, the Ghanaian government put in place an Education Act with which it enforced free education at the then primary cycle that in 1970 suited well in the education system similarly to other West African nations. However, the late 1970s and early 1980s carried with them a decline in the economic sphere ceasing funds to the education system that subsequently nearly demised. In response to this dilemma, the government brought in place economic recovery through an education programme with diversified secondary education which included TVET. As in other nations, Ghana's reform of education in 1987

resulted in three cycles: respectively, basic, secondary and tertiary (polytechnics, universities and professional training institutions such as Teacher Training Colleges).

In the very context of Ghana, TVET has not gone without criticism. According to Tikly (2013:11), TVET had historic impediments of resource deficiency including among others, poor infrastructure and unqualified teachers. Over TVET, Ghanaians preferred GAE due to the reason that it is of high standard whereas TVET is the opposite. Concerning the qualifications of trainees from the lower secondary education, the universities however did not often recognise them. They subsequently refused to enrol trainees furthering their studies. Also, the curriculum development ignored important educational stakeholders: teachers, learning and teaching institutions as well as parents. Inviting parents could have been a best approach of convincing them of the vitality of TVET and further ask them to influence their households and communities. The skills acquired were unfortunately irrelevant to the market, and the government had no interest in promoting the informal sector and micro-enterprises being where many Ghanaians not employed in the formal institutions resorted. These postulate a total failure of TVET in accomplishing development goals for which it is set and this situation has thus aroused the strategy to upgrade TVET. Perhaps today Ghana should be half way to full TVET development and achieving its outcomes.

3.2.3 General Ideas against TVET in Promoting Economic Growth

Although TVET in the development era had been in the forefront as a means for economic growth, international institutions, governments and individuals reached a stage of criticism against it. The first critic was Foster (in 1965) with what was called ‘vocational school fallacy’ on TVET in Ghana. It questioned the link between vocationalisation of education and needs of the labour market (Krishnan and Shaorshadze 2013:07). In this perspective, it was specifically shown that GAE relative to TVET had myriad job opportunities. Thus, the notion that TVET is a source of societal development was declared invalid. Furthermore, Foster had argued that this education was irrelevant for it focused on the impediments that their resolutions were allegiances of economic and political structures, not the education sector (Tikly 2013:05). However, these were not convincing enough hence their reference as fallacy.

The second critic was by far the World Bank economists based on their TVET study findings. The initial finding was that TVET was cost-excessive and eroded financial resources; in return, TVET had low societal development, though. The costly element is observable in the automotive and other trades trained for heavily through workshops; however, in the case of accounting and tourism the costs are quite affordable (Tinkly 2013:06). The second finding was that TVET institutions offered programmes with low quality (Tinkly 2013:06) implying yielding poor productivity and production. Besides, the standard of education resulted in a mismatch of skills in the labour market and the industrial sector. It thus postulates the failure of employment seekers since no work suits them. This situation suggests that TVET institutions ought to deliver skills which were approved by serious influence on the social development for the perspectives of the employers. Based on all these negatives, the World Bank dried out overall financial assistances on TVET. TVET then received low attention from developing countries' governments. This implies that diagnosing other ways in which education can produce and maintain societal development. Alongside these failures however were a very few exceptional cases of success which elites preserved for their children (Aring 2011:03). Whether TVET died forever is to be revealed as literature unfolds.

3.3 JUSTIFICATION OF TVET IN THE SECOND MILLENIUM WITH SOCIETAL DEVELOPMENT

The second millennium marks the moment of bouncing back of TVET onto the world agenda, mostly in developing countries (Tripney and Hombrasdos 2013:02; Lanthaler 2013). The belief is that TVET has to undergo transformations to resist challenges and achieve its potential in societal development. This pattern of making reforms occurred in Europe and Eurasia two decades back (Fawcett *et al*. 2014:01) and TVET is now doing well. Looking into the context suggests that quality of TVET necessarily has to improve for it capacitates meeting the best standards with regards to achieving societal development. All in all, reforms properly thought and carried out promise better outcomes for the developing world.

Not all students in basic education level and secondary schools complete their courses because a certain proportion fails and drops out. Also, there are those referred to as lockouts at secondary schools, and together with dropouts, require special training for the future in which TVET is

endowed (Lamb 2014:01). The benefit of this is noticeable when viewing TVET further as a way of balancing education in reaching entire nations. Concerning the most intelligent students in science and mathematics related courses as well as commercial studies, they need more special programmes, not GAE related. The high magnitude of experts' requirements with innovative skills is commanded mostly by higher TVET in the world at large. Even such students' wishes are sometimes related to such TVET when fully conscientised about it. This postulates a need for the institutionalisation of advanced TVET institutions in the second millennium geared for societal development. Overall, TVET institutions in all forms are crucial as they render skills enabling different characters to earn societal development without necessarily reaching tertiary level.

Against the advantage of equity based on talents, it is arguable that TVET for dropouts has attracted a negative perception that it is a compromise for incapable students in GAE. Even though the practice from which this perception accrues is true particularly at secondary cycle and below, influential TVET stakeholders have an assignment to change it (Bortei-Doku *et al.* 2011:06). The perception is sufficient to promote and maintain stigmatisation initiated by colonial practises. The prejudice and prestige move along TVET to secondary cycle. However, any furtherance of study in TVET is immune to them as by far not much has been done at this level. Interest in technological studies is one way by which students enrol in TVET institutions hoping to earn more societal development on their completion.

Again, TVET further promotes human resource development through employability and meeting labour market needs (Omolo 2013:03; Ansah and Ernest 2013:174). In the industries, only skilled labour is absorbed and its different levels of qualifications are deterministic in earnings, unless market imperfections occur. It is apparent that the levels differ in terms of productivity and each level's name dictates the degree of productivity. It is also likely that other TVET graduates would engage in self-employment, alternatively (Hailu 2012:14). In most developing nations, TVET is extremely on demand by governments since individuals with it potentially create jobs or possess skills needed by labour market. In the former, labourers meet their needs and dependents' for ameliorating living standard (Nelson 2013:24). Where a certain amount of salary is worth charging tax, a government entitled body executes it. Labourers, on the other

side, make savings for future use in financial institutions. In the latter, governments are highly dependent on investments of natives and foreigners by way of tax to boost revenue done purposefully for financing developments. Every nation desperately needs skilled labour as is the only one capable of producing.

It is factual that TVET is a pinnacle for production in any country for societal development purposes, and trading (Williams 1977; Chung 1989; Lawton and Gordon 1996; Mavhunga cited in Justin and Debra 2013:03; Lanthaler 2013; Maigida *et al.* 2013:304; Ansah and Ernest 2013: 172). Within the context of extractive industries, the machinery/tools deployed are outputs of TVET as well as the skills. As is known, the raw materials need processing and manufacture semi-finished and finished goods for production and consumption and all these materialise under the auspices of TVET. Upon finishing goods, producers experience an opportunity to connect with the market by way of trading aspect, selling. The market demand force (on goods not produced or in short supply) is the primary stimulus of domestic and international trade. In this occasion, TVET manifests its significance, as is its backbone in the form of a facilitator. Had it not been for trade, meeting needs for one would be impossible, especially that donations acting as relief are not always available. With this in place, TVET in general has to gain advocacy and much stronger than ever before.

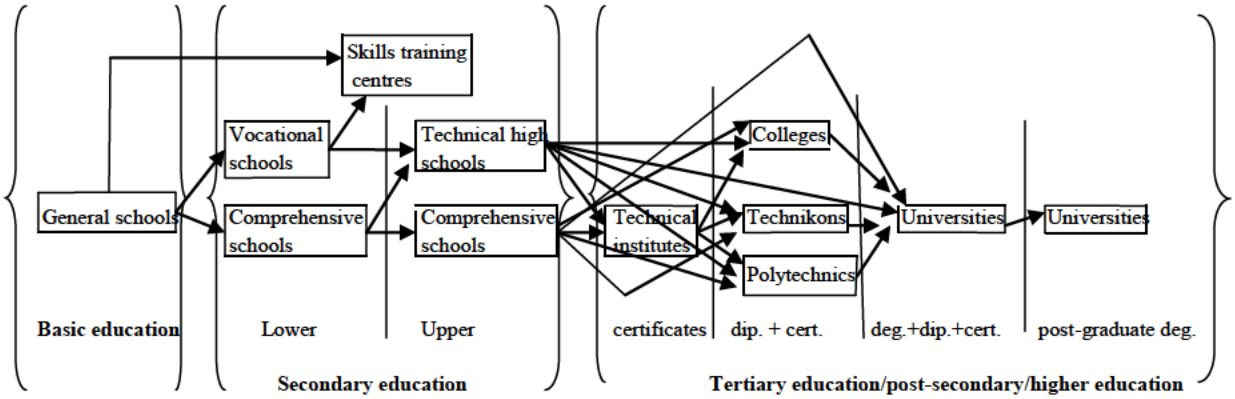
Through science – research and development – TVET is competent in making innovations spearheading the world's interconnectedness (globalisation) and simultaneously making it the most comfortable space for human survival. The Australian Government Department of Industry (2014:07), in its *Industry Innovation and Competitiveness Agenda*, supports this by showing that in order to compete globally, it is highly imperative to place enterprises' economic incentives, big and/or small, for growth. The most advisable approach has been furnishing enterprises with science, technology, engineering and/or mathematics technocrats. These stand a chance in the globalised economy of having innovative skills networks to begin being and remaining competitive in domestic markets and the expertise to identify global market opportunities. Ansah and Ernest (2013:172) add that often achieving these measures ends in stimulating a nation's societal development. TVET's human resources engage in advancing old models and initiating new ones to ease life and raise wealth. Furthermore, in the economic perspective, new products

reduce focus on the same, old products, which often culminate in market saturation, enhancing production sustainability. With this evidence put forth none of the nations can affirm continuity in withdrawing from TVET engagement. If ever this occurs, it will just be in word, never practical.

3.4 STRUCTURE OF TVET

TVET fits well within a modern education structure described in chapter 2. Figure 3.1 clearly presents TVET structure.

Figure 3.1: structure of TVET



Abbreviations

cert. = certificate

dip. = diploma

deg. = degree

post graduate degrees = honour's, master's and doctorate degrees

Modern education of which TVET is part, generally in the past had just three cycles above which however today have increased to four. The omitted cycle is the first one, Early Childhood Curriculum Development since it is of less importance to this study. Basic education, the former primary education, with duration of seven consecutive years, renders education with both perspectives. This cycle is simply an introduction and transition into the secondary cycle with the potential of productive students. As for dropouts as well as lockouts in basic education, it is advisable that they attend skills training centres enhancing their productivity.

Students with a high intelligence quotient graduate from basic education and proceed into secondary. Depending on their wish and influence by interest groups, they select institutions, some attending vocational schools and others comprehensive schools. These fall within the lower dimension of secondary education. Vocational schools concentrate mainly on vocational training for world of work and fundamental understanding of basis for upper secondary in technical courses. Comprehensive schools characteristically offer both GAE and TVET curricula. In the same way with vocational schools, they establish a foundation for upper secondary in technical and comprehensive schools. Completing secondary education stages successfully is a licence into tertiary education based on curriculum learned before.

TVET has three dimensions: technical institutes, colleges/polytechnics/technikons and universities, respectively. The technical institutes are the lower dimension, which offer only certificates while colleges offer certificates and diplomas and universities offer both plus degrees. University degrees are in strata; there are ordinary, honour's, master's and doctorate degrees. TVET specialises in highest training of students for the world of work and promoting societal development. All in all, the highest institutional training is available in universities. It is possible that students from upper secondary can qualify for direct enrolment in universities without going through technical institutes and colleges. General performance of students is a deterministic factor in this situation, that is, those with outstanding performance enter directly while those in opposition do not. Only slow students attend universities after a completion of a trend of enrolling first in institutes or polytechnics. On completion of this cycles training, graduates can work as teachers (secondary and tertiary), industrial workers or entrepreneurs (Ezenwafor 2015:03).

3.5 CONTEXTUALISED MODELS OF TVET IN EUROPE

Context-based models of TVET used in Europe to achieve societal development are three in number. The first is liberal market economy, and in this respect, TVET is under the full jurisdiction of the market (Fawcett *et al.* 2014:03). Simply put, enterprises are invested with power to describe relevantly, the knowledge and skills considered as of necessity in the market, that is, those on demand. It is within this context that enterprises are committed directly to upgrade the productivity of their personnel. This is marvellous in that only relevant knowledge

and skills are acquired rather than in a situation where government offers skills not in consultation with enterprises. They secure this by re-training labour at tertiary TVET (Fawcett *et al.* 2014:03) based on the products sold thereby maximising profits. Governments tolerate this with the understanding that enterprises prospectively improve and sustain societal development by new products. Relative to old ones, they have more advantage, a competitive advantage, thereby eradicating obsolescence. Overall, the model is beneficial to governments by mitigating public expenditure, but increasing opportunity of extending coverage projects (social safety nets) impossible to execute from the private sector's perspective. Nevertheless, private TVET institutions' interest in profit making is hard to ignore especially when the tuition fee is unaffordable to the poor thereby denying them their right to learning.

The second model – practised in France, Italy, Sweden and Finland – is a state-regulated bureaucratic model. This usually dictates that the TVET system is fully under sway of governments (Fawcett *et al.* 2014:04). Governments, oriented in this model, exercise their jurisdiction first and most importantly by identifying desired outcomes (societal development). Operationalising this, they formulate policy to manifest procedure of TVET institutions in proposition. Subsequently, they set legislation as against possible mismanagement, embezzlement, extortion and theft by outsiders. On completion of TVET institutions' construction and supply of facilities, curriculum execution comes into play entirely complying with citizenry's societal development. Relatively, this model has advantages over others: charges are low for underprivileged and it tolerates both less and partially skilled. Because of these, large proportions of the populace attend training and flourish in societal development. Although the nature of TVET curriculum is mostly practical, in the case of governments managed TVET institutions especially in the developing nations/low-income countries, curriculum in, consideration of magnitude is significantly theoretical. This incident has a negative impact as it denies trainees their entitlement to exposure on practical programmes for experience acquisition. Having gained merely some abstract understanding of professions has had high chances of irrelevant skills in the world of work. Generally, governments have to involve some aspects of liberal market economy to avoid limitations associated with its model.

The last model occurring in Germany, Austria, Switzerland, Denmark and Norway is a dual system. The word dual dictates that the model is a combination of its predecessors in this discussion hence private-public partnership (Fawcett *et al.* 2014:05; Woldetsadik and Lumadi 2015:74). The employment of this model has been significant mostly to affluent nations. Its meritocracy lies with aptitudes in supplementing and complementing limitations in one model by another one's strengths. For example, governments' service institutions characteristically perform poorly and suffer from corruption and mismanagement, and in abolition of these; they outsource services. Proficient individuals not only charge low costs enhancing savings, but also produce high quality goods with resource efficiency for high societal development levels. Within the African context, the country that has adopted this model is Ethiopia (Krishnan and Shaorshadze 2013:07). In spite of benefits borne by the model, it encounters the conviction that it allows companies to prioritise their needs. Nonetheless, the model compared to others stands more chance to perform better in societal development.

3.6 TVET MANAGEMENT AND CURRICULA

In order for TVET to achieve its defined goals in the global context, it is well guided by councils tasked with its improvement. The councils or agencies align higher education institutions with national development goals and further ensure that they are fulfilled. The already existing institutions beef up their standards to those by councils and those in proposition are ensured to meet all minimum requirements. Besides relevance of graduates produced, they limit manipulation of an education system by private sectors and waste of national resources. These are so powerful that in their capacity they influence the governments in relation to higher education.

3.6.1 Higher Education Councils on TVET

Among the diverse types of TVET curricula, it is apparent that councils as by its level of focus in education deals with formal type of TVET curricula. The function of councils is to ensure that all TVET institutions meet the minimum requirements of teaching-learning institution set. The instructional-learning institutions first view national development goals to which they align their mission, vision and values. It initially looks into content given that it is at least on average for higher learning. Secondly, it examines availability of material in delivery and learning as well of

content learning. Thirdly, it scrutinises infrastructural developments within which instructional-learning processes are to operate. Fourthly, it considers critically lecturers in terms of qualifications as well as their numbers avoiding great shortages. Fifthly, it examines the admission requirements with a minimum for corresponding to average students. Seventhly and lastly, it ensures vertical and horizontal harmony within higher education cycles.

3.6.2 TVET National Qualifications Framework (NQF)

It remains the allegiance of council to advise the ministry on the post-secondary education sector to design and present NQF to related parties. In the view of Institute of Applied Manpower Research Planning Commission (2012:01), the framework sets principles and guidelines for a nationally recognised qualification system. Initially, the framework acts as a mechanism importantly guiding potential entrants in the subsequent cycles particularly on courses wished to be pursued (Shoko *et al.* 2015:06). To this end, it depicts courses (and their credits) through which students attain particular profession/qualifications in a cycle. Secondly, the framework also shows how well one cycle's courses in different teaching-learning institutions link harmoniously with others in the vertical and horizontal order (South African Qualifications Authority 2015). This is important for new TVET institutions entrants as well as graduates in that case where they have an interest in advancing their studies. Thirdly and lastly, it is further in note that it acts as a translation device upon which qualifications become more comprehensible to employers, educational institutions and learners.

Qualification level and cycle are decisive, on normal situation, to the value of a certificate within TVET. It is within the basic education cycle where dire training for knowledge and skills acquisition occurs. Often those undertaking this suppose to drastically contribute to development by projects. Successful completion of this cycle leads to conferment of certificates which acts as a bridge to secondary and tertiary education and training. Within TVET, NQF shows clearly and shortly, the requirements for entrants from certificates all the way to a series of degrees. Inclusively, it further bears the duration of training courses methodically in relation to full or part-time context. Certificates usually take a year on a full-time basis and two on a part-time basis. Diplomas take three years on a full-time basis and four years on a part-time basis. An ordinary degree takes four years on a full-time basis. In this hierarchical order, training courses

are undoubtedly accredited thereby ensuring that each institution contributes considerably and differently but to one scenario, societal development. It can then be concluded from an international point of view that this NQF indicates harmony among domestic and foreign curricula for those ambitious in advancing knowledge and skills.

3.6.3 TVET Curricula

The curricula that council approves within TVET institutions usually fall within these fields: engineering, accountancy, nursing, medicine, architecture, agriculture, home economics, tourism, cosmetology, business education, entrepreneurial education, managerial services and manufacturing. Engineering is application of knowledge from different fields to invent, design, build and maintain and advance both material and non-material necessities (structure, machines, tools, systems, processes, components, solutions and organizations). Its more specialized areas include chemical engineering, civil engineering, electrical engineering (electronics, electricity) and mechanical engineering. Accountancy is about analysis and interpretation of financial information in an institution. Its fields are auditing, accounting of finance, management accounting, accounting of tax and cost accounting. Nursing refers to taking good care of in-patients and further imparting preventative information and operationalising curative measures regarding certain pandemics in health institutes, families and communities. Medicine is about studying ways to diagnose illness cause and impact and drugs treat and control where possible. It involves medical microbiology, clinical virology, clinical epidemiology, genetic epidemiology and biomedical engineering. Architecture is the field of planning, designing, constructing buildings (malls, shops, houses) and any other physical structure (roads, dams and bridges). Agriculture denotes producing domesticated livestock and plants (crops), within these branches agronomy, animal husbandry, horticulture, forestry and so on. Home economics is about economics and management of family and community. Tourism is industry on travelling and set of attractions, accommodation facilities and performed activities all meant for business, learning and pleasure. Cosmetology is the field of study for beauty treatment. Business education is the study of processes, control and activities engaged in the making, running and financial reporting of businesses. Entrepreneurial education: this is making potential business makers aware of generating ideas and skills to implement them, promoting business mindset and actual bringing together of factors responsible for starting the business. Managerial services are services that

direct an organisation to its defined goals. Manufacturing is about processing of raw materials with which goods are made producing others or services. TVET institutions are tasked with improving and sustaining their curricula to keep responding to societal development.

3.6.4 TVET and Secondary Schools/Education

Since TVET institutions with time transform their curricula and adopt any new courses, as the need may be, they are held therefore responsible for making those with potential in them aware of such. In some cases this initiative is an advantage to some who may not have heard about the institution at all. Deska (2013:13), who calls this vocational guidance, adds that this is important for students unable to choose appropriate causes for future. By means of this, in collaboration with counselling, students are capacitated in assessing and appreciating their potential as well as tendency in career development and self-actualisation. Information rendered includes the following:

- occupation nature, working conditions and advancement potentials
- duration, costs and entrance requirements of programmes
- requirements for an occupation
- careers opportunities location: locally, in adjacent area, nationwide, internationally and conditions of employment (permanently or temporarily)

This is binding to be performed by TVET institutions since they generate knowledge and skills implying that programmes emerge culminating in phasing out of the old ones. How this happens depends on the resources that TVET institutions possess. Cheaply, a visually/tape recorded presentation may be played on audio and/or visual media instruments since any has wide coverage. Alternatively, TVET institutions may pay visits to schools in a particular region for that purpose. Alongside, secondary schools visit TVET institutions learning on courses offered as well as admission requirements. On the basis of these initiatives, Watts (2013:242) affirms students thoughtfully and righteously apply for courses in which they have a potential thereby avoiding a mismatch of skills with the labour market.

3.6.5 TVET Curricula Quality Assurance and Quality Control for Societal Development

Within formal TVET curricula, elements of curricula described in chapter one never are exceptional. TVET incorporates them to address national policy (fulfilling societal requirements), and this is by forming and aligning TVET purpose, goals, objectives and outcomes with policy content. These components act as a map for and to what TVET is to achieve as per the needs of an individual in a society. In other words, national policy gives the mandate to TVET. Then the TVET system operationalises it into changing society positively. Classroom setting does this by lessons guided through instructional objectives (Primrose and Alexander 2013:58). Without properly formulated aims, curriculum therefore becomes irrelevant to societal development especially that each society has unique features to be considered.

Concerning the second element, TVET institutions, guided by objectives, determine content (Primrose and Alexander 2013:59) which earned them accreditation to deliver to the young generation. TVET content encompasses knowledge and skills in areas that students have undertaken or are to undertake for establishing their competencies in generating societal development. The areas usually are presented as disciplines/subjects. Further to this, areas are detailed in syllabi that each discipline has. The text-books from which information is taken are prepared based on syllabi for each discipline. Content's nature is problem solving to students environment enabling them to construct knowledge and skills. In terms of expression, TVET content is clear to lecturers and students (that they can learn without lecturers/with their little assistance) with exercises to practice for better understanding. Furthermore, the content clearly manifests materials (mathematical instruments/calculators) for enhancing that purpose by exercises and shown by measurable behaviour (Primrose and Alexander 2013:59). Lastly, within content context per discipline, both lecturers and students notice the use of terms applied. The relevance of content by new institutions is determined through content proposal by education institutions assigned accreditation. Any content not meeting national vision or duplicating is discarded. Primrose and Alexander (2013:60-61) highlight that such content is considered irrelevant as it does not meet societal needs. Concerning approved content, related TVET institutions operate and with time they revise their content ensuring it meets the needs of the current situation.

Time is critical in teaching-learning content of TVET and the content for a particular trade has to be completed within credits allocated. The deterministic factor is being whether a course is a core or an elective (Serumu 2014:100). Since core courses are much detailed comparatively to elective, they normally have more credits if decided as semester courses or an academic year. Time factor is further of essence during the length each period takes on delivery and it is commonly 40 to 50 minutes. The implication is that 40 minutes is closest to credit hour and periods allocated equal total credit hours.

TVET content requires sources with description and explanations informing experiments. In general terms, textbooks are a source of information to both lecturers and students in teaching-learning environment (Ayomnike *et al.* 2015:23). They are a marvellous tool presenting in a logical way syllabus with levels of mental development of students as well as higher blooms taxonomy domains. For TVET, overall, the dominant domain is psychomotor underpinned by affective and cognitive. It is with these that descriptive as well as explanatory parts of curricula are identifiable. Only within psychomotor domain do experiments TVET in materialise geared towards societal development. Possession of text-books by students facilitates student-centered approach of learning and it is advocated for its meritocracy to students' proficiency. TVET further establishes libraries as sources of school owned reading materials from which all quote their assignments and research statements. Apart from text-books giving information in the form of hard copies, technological advancement has eased accessing information in soft-copies retrieved by mobile phones. Generally, it can be emphasised that documents are major referral instruments from which students harness information informing knowledge, a basis by which societal development is formed.

Delivery of TVET content about some decades ago was conducted outside classrooms due to deprivation of buildings. The developing nations were victims in this case and the implication was that teaching-learning property was not in safety. TVET institutions establish infrastructure as buildings, water and electricity as needed mostly in teaching-learning processes. Under the roof, education continues happening even in the course of adverse climatic conditions, with equipment kept in safety. Classrooms in their design are fitted in the way most suitable for tools/instruments used. Lacking classroom hinders high quality and relevance of curriculum in

that students study to a less degree. Notably, TVET students need specialised buildings for as much training as possibly they can. Deprivation of workshops, seminars and classes compromises quality and relevance of curricula as students are partially competent (Ayomnike *et al.* 2015:25). They understand more of theory than practice, which contradicts the scenario in the world of work. It may be concluded that buildings are indispensable to TVET as they are protective to human as well as other resources facilitating education and training.

The significance of financial capital at TVET institutions needs overemphasis as it runs the systems. This is by enhancing accessibility of the above facilities through gaining purchasing power. Daksa (2013:22) advocates for more budget of TVET to afford buying expensive materials, equipment and paying for maintenance. Inability to produce services and facilities is a forcible factor for buying. Furthermore, financial capital is of value in attracting personnel to TVET institutions as administrators, managers and the lecturers by competitive remuneration. Highly qualified personnel have a positive contribution to producing competitive, innovative graduates for societal development. Therefore, all TVET institutions require reliable, sustainable sources of financial capital for lifelong education and training.

The lecturers are another important factor promoting relevance of curricula. In the course of training, they are the prime contributors by means of training students. Serumu (2014:99) supports that there is great interaction between the lecturers and students. Under normal circumstances, this happens following familiarisation with the topic by the lecturers being taught and learnt. Training students effectively and efficiently relies on knowledgeable, skilful lecturers. This postulates that somewhat TVET institutions are obliged to recruiting only qualified lecturers. Even so, TVET institutions stand a chance to manage carrying suggestions as many skilled people in their programmes are available. To this end, the lecturers draw instructional objectives complying with curricula objectives and outcomes which in this study. The lecturers then link objectives with content derived from prescribed textbooks. The lecturers, as a principle, must draw lesson plans prior to class attendance and renders guidance to (teachers and their students) students regarding learning. During the continuation of the lesson the lecturer creates space accommodating interrogations by students and applies formative and summative evaluation orally. It is the lecturers who further decide on teaching-learning methods depending

on content learnt with resources available and their ability in assisting students understand most/best. Later, the lecturers allocate students some work exercising information acquired. Even in the course of curricula development, the lecturers are consulted especially in their fields. Without qualified lecturers, curricula implementation intended for preparing resourceful persons is unachievable.

The third element is strategies deployed in promoting teaching-learning experiences. According to Serumu (2014:100) curricula should show teaching and learning strategies under each theme. Despite this argument, the decision to which strategy is appropriate also depends upon the degree to which students can understand content with or without lecturers. To this end, lecturers use their discretion as well as experience to suitably opt for lesson experience strategy. Notwithstanding these, the mostly encouraged strategy is student-centered with discovery and constructivism elements. Skills acquisition is predominantly when students have conceptualised information and simultaneously conduct experiments in which this strategy is endowed. Besides training institutions experiments, they can work with enterprises to offer them in their behalf (Deksa 2013:17) hence cooperative training systems. In some countries, this is usually known as internship. Generally, student-centered strategy comprehensively commands students' needs in training and is highly effective when TVET institutions are well-equipped with materials and facilities. Without doubt TVET institutions should follow in their training routine skew to student-centered strategy with skills growth. Going against this conclusive statement mitigates relevance to societal development as graduates become incompetent in the world of work.

The last TVET institutions' curricula element is monitoring and evaluation. In the view of Serumu (2014:99), the output and outcomes of curricula which learning institutions are held responsible for have to be evaluated. As teaching progresses, lecturers keep checking students' understanding orally or by writing. Monitoring saves TVET from engaging in intensive costs for re-starting a project that its poor execution could have been realised in the early stage. The drawback to this is waste of resources earlier used and worn out, meaning they lack a re-using status. Evaluation which monitoring is still part of is said to take place at the end of a semester of an academic year. Evaluation goes through four phases: preparation, assessment, judgement and reflection. In the first phase, the lecturer decides on the objectives to test guided by instructional

objectives. Evaluation objectives have the capacity to reflect on whether outcomes have been reached or not. In the second phase is assessment, where lecturers administer their tests. These follow high and low order questions – essays, multiple-choice and so on. In the third phase is judgement, which is where lecturers have to comment on the result. This is by giving reasons and making suggestions for improvement. The fourth and last phase is reflection occurring simply by linking instructional objectives with syllabus' to identify whether they have been secured or not.

Success in completing training usually is an opportunity for graduates in securing societal development, a signal of productivity. Graduates confront a situation in which economic resource are inadequate for self-employment. Preventing this, TVET institutions arrange with investors to absorb graduates and TVET institutions in their legitimacy are in tolerance of investors' incorporation into curriculum development. To do this, Daksa (2013:13) stresses that learning institutions ought to have personnel called guidance specialists working collectively with lecturers. Apparently, graduates possess skills and knowledge that industries precisely demand boosting individuals' productivity. Any skills in opposition to these end in deprivation of employability implying irrelevance of education and training. Also, it happens that TVET institutions launch incubators, emerging in the USA (Tran 2013:15), for their own graduates dealing with graduates' lack of capital. This concept generally means assisting people through their own business ideas by public or private institutions to launch enterprises that gain independence when they reach success.

3.7 CONTEXTUALISED TVET LITERATURE IN AFRICA

Africa is no exemption from the wave of losing interest in TVET, in general, exacerbated by a World Bank report and Phillip Foster's fallacy. This marks dependence by Africans on outsiders for education matters as they do not conduct research to convince themselves on notions tabled. Perhaps, the education level then was not enabling such competencies as it was in restructuring. While Africa focused on GAE, Europe dealt with the restructuring of failed TVET as they still realised its potential, but Africa never did. Not until Superpowers advocated and influenced bouncing back of TVET in the development Agenda did Africa call for its revitalisation since 2000 (Krishnan and Shaorshadze 2013:07).

The largest international grouping, African Union (AU), gave credit to TVET since the millennium. Further to this, Africa established a vision in which TVET has been highly expected to play a critical role in its achievement. Consequently, policymakers have realised the significance of TVET to societal development (AU cited in Pongo *et al.* 2014:145; Krishnan and Shaorshadze 2013:07; COMEDEF cited in Ansah and Ernest 2013:173). Africa then has established the *Strategy to Revitalise Technical and Vocational Education and Training in Africa*. AU member states took the initiative to incorporate TVET in their second millennium Poverty Reduction Strategies Papers.

Awareness on challenges in TVET system has stimulated AU to take effort in ensuring good measures for TVET to accomplish its purpose. The AU determined a *Plan of Action for the Second Decade of Education (2006-2015)* depicting with specifications how precisely education drives continental development (Dasmani 2011:65; Shoko *et al.* 2015:06). This document has had some priority areas regarding TVET improvement. Initially, it puts more emphasis on MDG 3 (empowerment and gender equity) in distribution of TVET institutions for gender disparity alleviation in terms of enrolment. Division of labour has influenced this biasness in accessing opportunities. Against this, the AU members have rectified their customary law/practices and now even females, in equity terms, access TVET. This has a fruition of development acceleration in a nation, chiefly when women actually participate in the former forbidden areas. Secondly, singles out promoting TVET systems and programmes' quality and relevance in the locally based context aiming at creating jobs opportunities. It is also of interest that skills and knowledge should apply in the wider context promoting and strengthening competitiveness of Africa with the entire world. Quality skills highly probable earn one some societal development. Thirdly, it looked into enhancing capacity building of TVET in countries on an individual basis, their regions and the entire continent. At regional level, there should be a centre of excellence with operational, regional and national qualifications framework (to harmonise training and certification). Local production reduces production costs and sustains itself and so remains important in Africa. This mostly relates to resources locally available, but in the raw and unusable condition awaiting Africa itself to explore. Importing is essential in cases that products are not at all Africa's former commodities. The AU fourthly stresses funds sustainability to TVET. Obviously, funds crucially assist TVET institutions in quality assurance of their work

that guarantees employment opportunities creation and competitiveness in the global market. Governments, besides seeking tax revenue source, can as well ask for financial assistance from the international community. With all these in execution, Africa stands a chance to develop a vibrant economy, which by so doing would be able to drive other development aspects.

On the basis of this framework, the African Union Commission in its Department of Human Resource is paving the way to develop a new strategy to revitalize TVET under the following objectives (van Deursen 2009:07):

- *to revitalize, modernize and harmonize TVET in Africa in order to transform it into a mainstream activity for African youth development, youth employment and human capacity building in Africa;*

- *to position TVET programmes and TVET institutions in Africa as vehicles for regional cooperation and integration as well as socioeconomic development as it relates to improvements in infrastructure, technological progress, energy, trade, tourism, agriculture and good governance and*

- *to mobilize all stakeholders in a concerted effort to create synergies and share responsibilities for the renewal and harmonization of TVET policies, programmes and strategies in Africa* (Department of Human Resource Science and Technology Division of Human Resource and Youth, 2007:19).

Management/Ownership of TVET Institutions

TVET institutions have had various forms of ownership across the world: government and private sectors (Kingombe 2012:37; Ansah and Ernest 2013:175-176; Daksa 2013:17). African governments have therefore set up such institutions and given permission to individuals too to commence TVET institutions. It is apparent that government-owned TVET institutions meet almost all forms of resources deemed necessary as their obligation. In Ethiopia, for instance, they

enrol trainees without fees charges (Krishnan and Shaorshadze 2013:11). Relative to other forms of ownership, such institutions are cost-effective as the aim is never to make a profit, but promoting in all ways possible societal development. In Rwanda, the government has owned more of such institutions than any other proprietorship type at 40 percent (Maringa P and Maringa M 2013:120).

Concerning private sector ownership, TVET institutions consist of two divisions: churches and individuals, respectively. The former has a legacy in Africa, as was a mechanism of colonial rule (stated earlier). Some missionary institutions introduced then are still operating even today. The latter are those that in terms of ownership are private and aim chiefly at profit making. It follows a capitalistic economy approach and contrasts the former making it not apt for the poor as it is costly. Looking into the context of Rwanda, churches and individuals-owned institutions constitute just a proportion of 5.3 percent each (Maringa P and Maringa M 2013:13). The implication is that education notion is not of great opportunity for investment purpose.

Inter-Governmental Organisations

Under any form of proprietorship, encountering challenges is largely possible and in fact has materialised in the African context. The largest inter-governmental organisation, the UN, assists significantly to all nations holding its membership. The UN had at first focused mainly on preventing the Second War repeat and assassinations of the innocent; today, with hundred and ninety-two members, has had a myriad of educational activities covered for national development, though. According to Maclean (2011 cited in Tikly 2013:05), the UN specialised organisation, the World Bank, had the first loan given in 1963 to TVET and accounted for 40 percent of all educational loans in Sub-Saharan Africa up until early 1980s. Such assistance, as implied, has very much contributed in accessing other valuable TVET resources.

Other agencies with great commitment in improving TVET are International Labour Organisation (ILO) and UNESCO. They are said to have viewed TVET, besides TVET's definition by UNESCO (chapter 2), as an integral part of general education; a means of preparing for occupational fields and the world of work; a lifelong learning aspect; an environmentally sound suitable development tool and a poverty alleviation method (Yussuff and Soyemi

2012:71). TVET has however played a key role in UNESCO's mandate for education. UNESCO has had remarkable input to TVET by offering infrastructure, buildings, equipment learning material and sponsorship. UNESCO does these based on resources that are not available and/or scarce. In its programme, gender equity and equality issues are another area of focus essentially to promote development contributions by the vulnerable group, women, as far as it can. This has in fact increased girls' enrolment in TVET, which in the past had technical courses considered masculine.

3.8 TVET IN SOUTHERN AFRICAN REGION

This southern part of Africa has a trading bloc geared towards education improvement with collaboration with international organisations – UNESCO. The bloc is Southern African Development Community (SADC), formulated in 1980 in Lusaka for the main reason of mitigating economic dependence on the RSA. The SADC currently has fifteen member countries. Member countries have a shared vision contemporarily to build economic development characterized by improved international competitiveness, increased productivity, accelerated technological development and improvements in employment and/or employability. This bloc has further extended its coverage to education hoping that investment in it stands a chance to act as a premise of development in all aspects. It is for improving economic development which later affects societal development that TVET's adoption has been considered vital in the 2000s.

3.8.1 Strategic Framework for TVET

Promoting education and skills, the SADC had established the *Protocol on Education and Training and the Second Decade of Education for Africa Plan of Action (2006-2016).* As in the AU context, the SADC members having memberships in the AU have embedded TVET in the Poverty Reduction Strategies, National Development Plans and Vision Papers. TVET policy frameworks reside within education strategies meant for skills development in the service of promoting societal development.

Although across the region TVET has been regarded as important for the economy, assessment of its performance in general is reported to have encountered dire challenges, which forthwith

ought to be abolished (Dasmani 2011:69). Firstly, there is a limited research capacity in TVET owing to a few national research institutions' specialists characterised by scarcity of up-to-date information. It is highly likely that this syndrome results from negative perception towards TVET. Secondly, TVET appears to follow a parallel system in the range of education systems and this has culminated into a breakdown to harmonise it with GAE. This attribute hinders complementation of education parts in the learning and teaching processes. Thirdly, the region has a proof of deficiency that syllabus' lecturers have adequately vehement blend of the subject specialist knowledge, industrial experience and pedagogical skills. It is factual that lecturers' proficiencies play a very paramount role in skills acquisition for life improvement and work and in which case lecturers are unqualified and/or under-qualified, graduates unfortunately become too far below a state of competitiveness, which appears and is justified lately as engine of enterprise burgeoning. Fourthly, TVET institutions, in general, stand a chance to perform successfully when managing bodies work with loyalty and based on principles, of which many in the region have deprivation. Fifthly, the graduates have inspiration in wage-employment, not self-employment; nevertheless, there is a shrinkage of wage-employment and this circumstance entails that graduates have to think otherwise. Seventhly, the region has no accord on TVET standards and their merits ensure a high quality delivery and harmonisation among countries. Eighthly, gender disparity in TVET enrolment is still a major concern in spite of the region having inaugurated gender equity. In response to these challenges, realised prior to 2011, the SADC has thus established a programme of action detailed below.

3.8.2 Programme of Action for TVET

With this programme, the stakeholders of the SADC understand following a comprehensive view that they have well underscored priorities for the betterment of TVET. Table 3.1 below presents strategically how the SADC approaches such programme.

Table 3.1: the SADC programme of action

Priority for Action	**Major Activities**	**Expected Results**	**Performance Indicators**	**Year(s)**	**Partners**	**Budget (US$)**
Objective 1: To facilitate harmonization of TVET policies and standards in the region						
Policy and standard development	Facilitate agreement on definition, nature and scope of TVET in	Conducive policy environment to facilitate	Agreement and greater understanding	1	SADC Secretariat and	50,000

and harmonization	the region	implementation of quality TVET in the region exist	of the nature and scope of TVET		Technical Committee on TVET	
	Develop regional standards and benchmark for TVET		Minimum standards for TVET established	1-3	SADC Secretariat and Technical Committee on TVET	200,000
	Facilitate peer learning on models and taxonomies for TVET		Consensus on TVET models suitable for the region	1-5	SADC Secretariat and partners	150,000
	Advocating for the development of relevant national policies on TVET		All Member States have national TVET policies	1-5	Technical Committee and Member States	20,000
						420,000
Objective 2: To strengthen the regional knowledge base for planning, monitoring and evaluating TVET for improved policy, practice and impact.						
Capacity development for use of Monitoring Tool	Develop training programme for the use of SADC Monitoring Tool	Increased TVET knowledge base that supports policy, planning and monitoring	Number of workshops held and number of participants trained	2 5	Member States and development partners	100,000
	Facilitate updating and refinement of SADC Monitoring Tool.		Improved SADC Monitoring Tool	4	SADC Secretariat and TCTVET	50,000
	Facilitate peer-learning and regional sharing meetings on monitoring and TVET MIS,		Number of regional peer learning meetings held and number of participants	1-3	SADC Secretariat and TCTVET	200,000
Capacity building for TVET MIS	Facilitate the development of capacity building programme on TVET MIS		Number of trained participants and Improved data on TVET	3-5	SADC Secretariat and TCTVET	500,000
	Establish a regional database or knowledge management system of monitoring and evaluation reports		Information on national monitoring reports available and easily accessible	2-3	SADC Secretariat and	100,000
	Develop inventory of TVET institutions		Institutions offering TVET are known	2	SADC Secretariat	70,000
TVET Research Agenda	Develop a regional TVET research agenda		Regional research priorities established	1	SADC Secretariat	80,000
	Design a regional programme of postgraduate research		Regional programme of postgraduate research	3-5	SADC Secretariat and TCTVET	300,000

			established			
Objective 3: To strengthen capacity for TVET staff development in the SADC region						
Staff Development	Develop a regional plan of action through consultation for improving the quality of TVET staff	Availability of qualified and competent TVET lecturers and educators in the region	Regional capacity building plan developed.	1	SADC Secretariat and Technical Committee on TVET	500,000
	Facilitate the establishment of regional centre of specialization for TVET lecturers/ teachers		Regional Centres of Specialisation established	2	SADC Secretariat and Technical Committee on TVET	100,000
	Facilitate the establishment of regional exchange programme for TVET educators		Exchange of experiences and expertise facilitated in the region	3-5	SADC Secretariat and partners	300,000
	Carry out feasibility study for establishment of TVET teachers and lecturers qualifications pathways		Feasibility of TVET teachers and lecturers qualifications pathways established	5	Technical Committee and Member States	150,000
Objective 4: To strengthen capacity to develop and implement effective TVET systems in the SADC region						
Systems Development	Facilitate capacity building on various modes of TVET delivery i.e. ODL		Delivery of TVET through ODL piloted in the region	3	SADC Secretariat and Technical Committee on TVET	1,000,000
	Facilitate peer learning and exchange of experiences on different aspects of TVET systems		At least eight regional information sharing meetings held	1-3	SADC Secretariat and Technical Committee on TVET	300,000
	Facilitate inter-regional cooperation with other regions through study tours, attachments		Number of study tours and attachments facilitated	1-5	SADC Secretariat and partners	300,000
Objective 5: To strengthen the capacity of TVET institutions in the region for effective and efficient provision of relevant TVET Programmes						
Institutional development	Develop a capacity building programme for TVET for TVET providers	Institutional capacity for delivery of effective and relevant TVET programmes exists	Institutional Capacity building Programme in place	3	SADC Secretariat and Technical Committee on TVET	110,000

	Implement the capacity building programme e.g. regional twinning arrangements, study tours	in the Region	Number of participating institutions whose capacity has been developed		SADC Secretariat and Technical Committee on TVET	500,000
Coordination and resource mobilization	Coordinate resource mobilisation	Resources for implementation available	Resource mobilisation proposals developed	1-5	SADC Secretariat	20,000
			Number of donor coordination meetings	1-5		10,000
Regional Coordination and Management	Establish and convene Technical Committee on TVET	Regional structure for TVET in place	Number of meetings held	1	SADC Secretariat	120,000
	Recruit technical expertise to coordinate the Programme	Capacity to lead and manage TVET Programme in place	At least one technical expert recruited	1-5	SADC Secretariat	500,000

Generally, table 3.1 presents that the SADC has realised the imperative of dealing with TVET at all cycles of learning. This occurring at national level only is not adequate, as was accustomed to, and the SADC therefore has found it worthy to deal with it at the regional level for its potential in securing the SADC goals. The SADC initially underscores formulating appropriate policies for TVET and their great harmonisation with those of member states. Within the policies, there have been standards agreed upon similarly. Overall, these are understood to relate well with development which was impractical with former ones. Secondly, The SADC underlines conducting research on TVET for a strong knowledge base to influence better policy making, implementation and evaluation. All in all, research is the main source of knowledge for change to the better. In this case, therefore, it has applied mainly to enhance improvements on TVET policy framework regarding institutional management, facilities and instructional pedagogies. Thirdly, the programme emphasises engaging competent lecturers in TVET environment. Universities have to train fully equipped lecturers in terms of knowledge whilst TVET institutions in general are obliged to employ only qualified lecturers. For new technologies introduced, clearly, TVET institutions have to expose related lecturers to undertaking professional development. On the basis of these, combating poor instructional proceedings, part of the root cause of unproductive graduates, becomes a success. Fourthly, the

programme stresses employment, closely linked to competent lecturers, of effective delivery per lesson undertaken. Such learning is didactic in nature with integral constructive elements by students. Fifthly, the programme articulates relevance of curriculum which indeed has to address directly national development/societal development which is the gist of undertaking TVET. In conclusion, none of the points above is sufficient on its own or of priority relative to others hence a dire need to command them all for full achievement of SADC's purpose.

3.9 ANALYSIS OF CONCEPTUAL FRAMEWORK OF LITERATURE FOR THE STUDY

The long existing TVET has had positive results in Asia, USA and Europe, but alongside criticisms which however did hold for short. The 2000 years had been the duration of TVET bouncing back. Existing through sub-levels of tertiary education guided by NQF, it has been conducted by governments and other delegated bodies. Clearly the coming of TVET has to go with awareness and other factors forming or facilitating its implementation to be improved to achieve employment. Africa and the SADC have adopted TVET for skills development. Within the SADC context, literature reveals that TVET has had problems both institutional and programmatic focusing mostly at levels below tertiary. Since at tertiary cycle, it was not much of an interest, it is possible that there was, and still is, a great implicated effort to be done. If tertiary has been stable and productive it would stabilize the lower level for harmony. The SADC has then formulated a programme action of TVET. The literature then guides the study in the analysis of TVET's nature in RSA and Lesotho.

- The negativity against TVET leading to its demise and its bouncing back as well as TVET and secondary Schools/Education arouse interest on how societies are recovering from it: this sets the context for the study to find out what the RSA and Lesotho TVET institutions do to inform their prospective entrants with the purpose of promoting a positive TVET image and for what specific reasons they deliver TVET.

- The framework comprising Quality Assurance and Control for Development arouses also interest in finding out, by the study, the extent to which TVET curricula are relevant in RSA and Lesotho since their economies are characterized by lacking highly specialized skills.

- The silence of literature on how the SADC incorporates TVET institutions assisting in the establishment of enterprises enables the study to recommend strategies pioneered by such institutions knowledge-endowed and state capacity of leading innovation through working closely with innovators (graduates). Skills without support by other resources remain in dormant instead for rescuing societies, therefore; it is essential to direly support them.

3.10 CHAPTER SUMMARY

This chapter presents that TVET existed since the time Man started exploring the world. Some countries really managed to better their wealth and continue to do so today. Not very long ago, there was proof against in ability of TVET to societal development. In the same short time, proof once more emerged identifying TVET as panacea to development. Managed differently in the world context, Africa and most particularly the SADC adopted TVET revitalisation. SADC formulated a plan to guide policies on TVET in its member countries. It is believed that its members instead look at TVET in a general perspective as even at higher education it is marginal.

CHAPTER FOUR
EMPIRICAL LITERATURE WITH TVET

4.1 INTRODUCTION

This chapter presents empirical literature to the study. It initially presents awareness of TVET at societal and schools levels for its potential in development. Secondly, it presents the purpose of TVET and qualitative evidence on experiences of some states with success. Thirdly, it presents critically a discussion of factors enhancing quality assurance and quality control of TVET curricula for such purpose of societal development. Fourthly, it presents empirical suggestions improving curricula limitations for societal development. Fifthly, it outlines conceptual framework of empirical literature to the study carrying with it some evidence against or for study findings and sixthly presents chapter summary.

4.2 TVET CAREER AWARENESS ENGAGEMENT

The way a particular society perceives TVET is very much influential on children by informing whether it values GAE over it (TVET) or treats both as equals. Shortly, it appears, in controversy, that in the African context, GAE has more weight relative to TVET in superiority terms, since TVET is a compromise. According to Raimi and Akhuemonkhan (2014:135), in their study in Nigeria, Lagos, particularly in Yaba College of technology, Federal Science and technical College and federal College of Education (Technical) in Lagos, TVET suffers stereotyping from parents, students and other stakeholders that it is suitable for incapable learners in GAE. On the preceding study in 2013, they found that 53 percent respondents agree to the view whilst 40.6 percent noted it as just inferior and meant for the poor. Further to this, Okolocha (cited in Raimi and Akhuemonkhan 2014:135) outlines that Nigerians have a low regard for TVET and that trainees in its respective TVET institutions are considered less privileged or forming second class citizenry. On this evidence, it appears that part of the Nigerians consider TVET insignificant. This implies that more has to be done in sensitising Nigerians about engaging in large magnitude to benefit from the fruits it bears. The government as the supreme regulatory body ought to play a leading role in this regard. To some extent, the private sector and NGOs guided or assisted by government have to contribute for their related potential. Normally, this wide practice covers, in as much as possible; a large part of the state

thus has to be seriously taken into account. This perception is unnecessary in Nigeria and other developing countries.

Enhancing the Public on and Secondary Schools Student Enrolment in TVET Institutions

Against the scourge of negative perception of society to TVET, governments have embarked on strategies to revitalise it. In the context of the Philippines, great initiatives have been taken to promote public awareness of TVET for its development potential (high employment and productivity) (Philippine Technical Education and Skills Development Authority 2010:01). Philippine Technical Education and Skills Development Authority (2010:05) presents that the government's regulatory organ adding to effort by tertiary educational institutions has country-wide promoted TVET. Measures deployed are broadcast media (television and radio programmes) often taking roughly a duration of a year; mass media (gatherings – schools, malls, gymnasiums, fairs, skills competitions); print media (newspapers, leaflets, advertisements, magazines, streamers, banners, billboards; social media (facebook, twitter, youtube) and giving awards to graduates contributing to societal development by their own innovations. In the presentations, as far as possible, success stories are played by graduates and employees or written showing output of TVET to development. The survey conducted to measure awareness by these measures indicates that at the beginning of the year, 2009, 94 percent of the population was aware of TVET, of these 60 approved of its performance, about 10 disapproved while about 28 were undecided. At the end of the year, total awareness increased to 99 percent, 65 of it approved its performance, 7 disapproved and remained 27 undecided. The statistics show that the entire citizenry seems aware. TVET institutions therefore experienced growth in the number of students and as a resulted increased their programmes. On the basis of this, it can generally be noted that the measures have been quite a success.

In the context of Ghana, Wongnaa and Seyram (2014:13), using a quantitative approach, present graduates from Kumasi Polytechnic show interest in TVET geared by personality factors – high extraversion, for instance – family members and friends support, occupation of parents, entrepreneurship education, gender and access to finance. It may be inferred that Ghana was once a negative perceiving state against TVET, with time realising the potential and in fact transforming its education system. This is likely true since Ghana was a colony which

experienced colonialism known to have such characteristics. It further postulates that earlier than other countries Ghana got independence and possibly it was since then when it started seriously engaging in TVET making it where it is today with citizens considering it positively. The students claiming to have had a positive perspective to TVET in TVET institutions mean growing in an environment fertile for it. Also, it has being noted that students in TVET institutions consist of many students who do not favour their curricula. The problematic identifiable caused by this situation appears usually at workplaces. The graduates who do not like their work are less active and this mitigates productivity and compromise products' quality. Also, such graduates face expulsion and no promotions at workplaces.

The issue of career awareness has persistently grown in coverage on the landscape and scope in instructional-learning settings. This is not only to the prospective first year students, but also to continuing and most significantly the completing students by sensitisation on labour market matters. According to the study by Amani and Sima (2015:20), in their qualitative study, *the study of career counselling services in higher learning institutions in Tanzania,* universities have determined to exploit awareness from this broad perspective. Alongside this success, some challenges have been identifiable, viz, lowly qualified counsellors and attending students counselling in collectives whilst, as by nature, is unitary (Amani and Sami 2015:24).

In the context of China, India, Russia and Korea; more has been done to promote the image and attractiveness of TVET alongside GAE. Ratnana (2013:3-5) explains that by the time TVET bounced back to development agenda, these countries decided to open vocational universities offering degrees. This implicates that prior to this, universities had been of GAE nature suppressing TVET at lower cycles hence believing that it is mainly at lower cycles and not taught at tertiary cycle. This corresponds and proves the argument under the TVET conceptualisation that it was offered at lower cycle making people understand it only in that context not any other beyond.

4.3 PROSPECTS OF TVET IN DEVELOPMENT CONTEXT

TVET is essentially important for achieving desired outcomes within societies, to which it remains indispensable. Dienye (2011:15) raises an overall argument that the developed countries had not secured their status quo just by wishes but through well thought out and executed education with TVET attributes. Part of these, Asian Tigers, had worked on the relevance of their education systems aligning it with their needs related to science and technology (technical education). Currently they contest with predecessors, European and North American countries, in such respects. Owing to TVET, these groups have assisted the developing world in various ways: supplying it with marketable goods and services and giving donations, technical know-how and loans. Despite these, the developing world has an assignment to similarly transform its education and be productive for the social welfare of the entire citizenry.

4.4 ISSUES ON TVET CURRICULA QUALITY ASSURANCE AND QUALITY CONTROL TOWARDS SOCIETAL DEVELOPMENT

(a) Purpose

It is the great task of national authorities governing TVET to set educational goals and accredit curricula designs with the intention to respond to national hardships and achieve advancements. For example, in the case of devastated Southern Sudan, there has been need of reconstruction and development by technical and entrepreneurial capacity and human resources, achieving these has been confined to the potential of TVET hence its revitalization (Atari, Abdelnour, McKague, Wager 2010:01). In a narrowly similar way, Ismail and Mohammed (2015:74), in their study *employability skills in TVET curriculum in Nigeria Federal Universities of Technology*, argue that five Federal Technology Universities offering TVET programmes aim at stimulating employment.

Carrying out their duties well in this regard, authorities work in line with set standards. Serumu (2014:99), in a study on *challenges of implementing TVET curriculum in Nigerian Universities*, points as one of standards that curricula purpose is based on societal aspirations with largely psychomotor skills, less cognitive in nature. The reason behind being that students are being prepared for production hence need of exposure to particular experience in the course of training.

Achieving successful, responsive curricula, Primrose and Alexander (2013:09), in a study conducted in Zimbabwe on *curriculum development and implementation*, argue that curricula design activity has to incorporate the diversity of stakeholders. This results in curricula that comprehensively address needs of the society from different angles.

Achieving TVET purpose are goals and objectives guided (Serumu 2014:100). Its programmes within that context have objectives leading to goal attainment or setting platform for such objectives. The lecturers exercise content under the guidance of such objectives from which lesson experiences' objectives emerge. It is by lesson-based objectives that expected attitudes, experiences and qualities of the students are measurable and precisely expressed in extent. This warrants the lecturers reaching judgment whether to proceed or assign forthwith remedial work after classes. Without following programme-based objectives, education can hardly be effective on positive change of a society as may have high probability of irrelevance.

(b) Content

TVET institutions rely on content of their curricula for expected forms of behaviour to their students. It is from the purpose of TVET in broad and narrow senses that content of curricula emerges addressing societal needs and wants. In the case of Federal Universities of Technology (Bakar Tafawa Balewa University, Bauchi, Federal University of Technology Akure, Federal University of Technology Minna, Federal University of Technology Owerri and Modibbo Adama University of Technology Yola) in Nigeria, the content fits well within these programmes: engineering (electrical engineering (Electrical and Electronics), mechanical engineering (Automobile and Mechanical Productions), Architecture (building)), Manufacturing (woodwork) Agriculture and Business Education (2015:74). However, the graduates formed remarkable portion of the unemployed (24.6 percent) which in other countries (UK, USA, Japan Singapore) was not the case owing to lacking employability skills (communication skills, problem-solving skills and interpersonal skills) integrated to TVET curricula (Ismail and Mohammed (2015:74). Alongside TVET curricula is entrepreneurship education in preparation for the students to create jobs instead of seeking jobs (Tshikovhi and Mvula 2014:77). Lacking employability skills and training without entrepreneurial skills show no execution of need and

outcome analysis of the graduates and societies of the society ending in no planning responsive to their demands.

The content in some institutional cases has deprivation of proper planning. According to Ayonmike *et al.* (2015:27), in a study survey in Nigeria on *TVET quality assurance*, discovered malpractices. They identified that the whole nation TVET programmes has a scourge of poor planning. In the same country, Akhuemonkhan and Raimi (2014:11) conducted the study on quality of TVET curricula at the universities, polytechnics and colleges, which part of its finding is similar to that of the study above. Apparently, the consequence is the most ineffective, efficient curricula to societal needs postulating it to be revised for societal needs. Furthermore, Ayonmike *et al.* (2015:27) present the finding that the curricula outcomes, perhaps for no planning, have yielded skills not in compliance with industrial sector requirements, hence mismatch. This postulates no consultations made in curricula design with industries for demand-driven nature. In emphasis to this, Serumu (2014:102) reveals that in Nigeria there had been poor stakeholders' collaboration, TVET institutions engaging private sector in design of curricula. This likely culminates in less demand-driven market of labour by private investors for skills mismatch thereby increasing graduates' unemployment rate, the opposite of the training purpose.

The issue of planning curricula is an international concern. In Ghana, Ansah and Ernest (2013:176-177) report that curricula design and its delivery systems has for so long (decades) being taught without transformations. On the basis of this, it is a fairly made conclusion that content delivered is out-dated, especially in a day-in day-out changing world. As in the case of Nigeria, there is a possibility of skills mismatch as it is avoided only by means curricula transformation which Ghanaians' are reported to have ignored for competitive, productive labour. Concerning the main actor in TVET provision, government, it is likely that it works in favour of GAE whilst TVET is in negligence. This gains support from what Ansah and Ernest (2013:177) that TVET has been excluded from national policies with their proper potential of management to enable it reach its goals. The problems that are experienced in Ghana are identical to those met in Nigeria. From Gondwe and Walenkamp and Akyeampong's (in Ansah and Ernest 2013:177) viewpoint, graduates undertaking programmes with these shortcomings

confront low employability. When these challenges are realised, it is normal that governments react as quickly as possible to pose resolution reforms.

Even in the wider context, irrelevant curricula content planning is still a problem. In a study conducted in Pakistan by Reliance Services (2012), through the means of quantitative analysis, evidence manifests that 53 percent of respondents remarked that TVET did not meet industry expectations and 43% of them respondents felt that TVET is in alignment with the job demand in the industry while 4% of the respondents were indifferent.

Capital/financial asset

In order that the requirements of TVET institutions can be accomplished, money, money is the main resource that enables bargaining between involved parties. Government within the Pacific, identified universities in the budget and were given a lump sum grant (Horne, Ngangan, Tavil-Melachon and Brown 2015:85). They further explained that the universities have further generated income by means of schools fees. Among the resources accessed through expenditure of the capital has been recruitment of lecturers on full and part-time basis. Within the technical and business colleges, the government pay-roll covered only full-time lecturers, leaving part-time and non-academic staff paid from institutions' own funds. The budget extended covering recurrent costs/purposes in universities and colleges. In Ethiopia, Woldersadik (2012:62) explains that national budget too is a source of capital for education. Universities and colleges are able to meet some fundamental needs for their operation. For instance, according to Serumu (2014:102), but in Nigeria, TVET institutions can spend their capital to assist lecturers upgrade their skills. This positively impacts on curriculum meeting skills required by the market.

However, Woldersadik (2012:62) argues that the national budget is never adequate for all necessities. Empirically, Ladipo *et al. (*2013), Akhuemonkhan and Raimi (in Raimi and Akuemonkhan 2014:135) and Serumu (2014:102), looking into the context of Nigeria, argue that shortage of capital has compromised quality and quantity of deliverables by TVET institutions. TVET institutions experience this inadequacy for dissatisfaction by government that they consume more capital putting a burden on the budget. This implies that governments regard this

as a loss because graduates, when productive, would widen investment from which governments would recover revenue.

Instructional-learning resources

The execution of relevant TVET content requires facilitation by instructional and training resources. The resources that students need foremost intensively are text-books. They act as a source of information and foundation of knowledge generation. Possession of text-books enables TVET institutions' students to learn even by themselves as they are self-explanatory.

Apparently, the inability to satisfy such resources compromises quality of TVET. Akhuemonkhan and Raimi (2014:11) indicate that lacking text-books, with a potential of practically-oriented exercises, has revealed a wide gap by Monitoring of Learning Achievement between intended curriculum theory and practice. This indicates a shortage of skills graduates should have assimilated and accommodated for employability; otherwise, they idle. Furthermore, the revelation postulates that TVET institutions should also ensure availability of basic tools and equipment. This facilitates skills theorised in text-books. The case supporting this appears in Lekoko, Rankhumise and Ras (2012:12031) on effectiveness of entrepreneurial education in Botswana conducted by survey involving University of Botswana and Limkokwing University. They have found that teaching-learning processes lack equipping effectively students with relevant skills to experience real activities in entrepreneurship. When the students have not assimilated such skills, it is a disadvantage to those trained in technical education, but not trained in them since they would act as a rescue by way of self-employment engagement. For those with opportunity in this course ought to engage in experimentation exposure to real life situations.

In Nigeria, Ismail and Mohammed (2015:73) imply that domination of text-books usage in the curriculum and experimentation has rarely happened. Looking into the curriculum of Federal Universities of Technology, mostly electrical technology education programme, they realised that more core skills courses theory based (81 percent) while 19 percent is practically-based. This pattern encourages memorisation rote of learning which retards the gaining problem-solving skills (Damsani 2011:73).

Infrastructure

Besides text-books, TVET institutions do well with contributions of teaching-learning resources – infrastructure – enabling practicality of content. The main elements of infrastructure are road and transport, electricity, communications and water networks and buildings with facilities. Education formally occurs inside classrooms assigned in a special way for a particular course of interest. Laboratory equipment with science and technology fields involves the students in practice of theory from text-books/manuals. In the course of practice, the students further show signs of innovative skills for new models. It is mainly by practice that the students develop the acquired skills for societal development. Also, the students need workshops at learning institutional settings for the same purpose of practice. Even outside the school setting, practice occurs through placements. This mostly is associated with TVET institutions with shortage of equipment or working in collaboration with the market.

Serumu (2014:102) has found that infrastructure in Nigerian universities is too far below the standard and unhealthy, for example, TVET workshops and libraries are poorly equipped whilst classroom blocks are dilapidated. Concerning the workshops and libraries, their situation means that tools are old and few in number. Overall, this disallows the quality of education. Additionally, Ayonmike *et al.* (2015:29) has discovered and reported deprivation of suitable staff offices, consumerable goods, water supply, machines and tools and furniture. Furthermore, they have found out inadequacy of electricity supply, instructional materials and classroom blocks. In that context, teaching-learning activities apparently are poorly performed. In the case of Damsani (2011:72), classes had a problematic of not matching with supply and provision of training resources. Thus, the lecturer is unable to attract full attention of the students in the action of demonstration, dictated by CBT for effective teaching-learning processes. Damsani (2011:72) then concludes that lacking basic tools and equipment forming premise of technical skills acquisition culminates in graduates entering the labour market without experience.

(c) Training methods

TVET training methods need to comply with expected outcomes as a way of showing their effectiveness and relevance. It is normally the responsibility of trainers/lecturers to select, as guided by expected behaviour/knowledge, the most effective, easy method per programme

aspect taught. In that case, where a wrong method has applied, trainees' quality of skills is no more attainable and performance becomes poor. In the European context, in particular Germany with what is known as dual training system, training method follows primarily apprenticeship (internship) alongside schools attendance as secondary (70-30 percent) (Ratnana 2013:1). In the context of Africa, according to Amedomme and Fiagbe (2013:255) and Damsani (2011:69) as well as Serumu (2014:100), TVET lecturers deploy in their facilitation and trades pursuit the following instrumental measures: workshops, placements and attachments, all guided by demonstration in classroom setting. This relationship culminates in graduates with highly recognised efficacy for production. In the view of Lekoko *et al*. (2012:12031), industrial attachment essentiality is seen as promoting understanding of employment for a particular occupation or trade.

In addition to these is CBT. The students who splendidly manage to come across this, balanced theory and practice, usually perform more than average (Anane 2013:120). The CBT's advantage is that it is a demand-driven occurrence operating within certain parameters (occupational standards) in line with industries to secure trainees' employability on completion of programmes. Anane (2013:126) notes that CBT graduates have excellently achieved 100 percent employment – the 149 graduates have joined mostly wage employment. A small magnitude of labour force, on the other hand, has competencies enabling it to generate job opportunities/self-employment starting with Small and Medium Enterprises attesting that it is a good delivery system for TVET.

Problems too have been raised against the methods. In Asia, most particularly Indonesia, Ratnana (2013:07) shows that vocational schools and universities (TVET) have marginal time of supervising their students in attachments and alongside this the companies have grown some reluctance towards attachments for the students because they are believed to disrupt production and that faulted materials are expensive and not reused. Making matters worse, the government, schools and/or universities provided no concept on organising workplace learning to companies. In resolution to the dilemma, the education ministry innovated and established factory schools which definitely proved TVET right by adopting and implementing high technology within such fields as machinery, electrical engineering, information and so on as seen by many in the local context. In the African context, Damsani (2011:72) has revealed that many have shown little

interest in having students undergoing attachments in industries. Again Anane (2013:123) shows that students going for attachments suffer inaccessibility deadlock as industries are few. This then turns out being a forcible factor to mainly theorising institutions.

(d) Evaluation

Evaluating understanding/knowledge and skills acquisition is key in education since it is a decisive factor for certificates conferment. Lekoko *et al.* (2012:12031) note that evaluation relies on final examination and projects. This is balanced since TVET is informed by some scientific theory. However, these evaluation components are not identical in all TVET systems among nations. Damsani (2011:74) has found that technical institutes evaluate students based only on final examination. Although graduates are still employed, this deprivation of skills training exercises compromise production. The formal industry in Ghana, to this, in Damsani's study has appeared suggesting incorporation of workplace place skills for supplementation purpose thereby avoiding retraining graduates prior to employment.

The major drawback of evaluation is when it is associated with lacking validity level. It is in the discovery by Ayonmike *et al.* (2012:27) that Nigeria once had experience of meagre evaluation, that is worthless and at the same time deceptive. This implies bearing negativity in production by recruiting workers without efficacy portrayed by certificates. Even self-employment becomes a daunting and not accomplishable task by products of this nature. This is one of many ways by which TVET fails gaining respect and attractiveness. In a more shocking way, Serumu (2014:102) reveals TVET university examinations are linked with malpractices. The economy remains thus stunted for labour market peopled with invaluable certificates holders. Normalising these incidents, most recommendable trainees competencies measures are observation (watching activities as is done), product (looking at and examining an item made) and questioning and answering (asking questions answered verbally and in writing) (Anane 2013:124).

(e) Students

Education does not occur only in the presence of the students, but also in the environment influencing their attitudinal traits well. Ayonmike *et al*. (2015:28) have revealed a shocking number of issues regarding the students to their education. These initially involve the students

admitted without requisite knowledge though it is needed. Such students usually fail to cope with content especially in higher learning cycles. Secondly, the students themselves are reluctant to learn or show no learning commitment signs and this apparently leads to no attainment of societal development under the auspices of TVET curricula. Thirdly, they show signs of no reading culture which draws from the second. The students lacking this learning aspect do not explore information by themselves and thus depend on the lecturers, which is unhealthy. Fourthly, they lack self-confidence and this compromises self-teaching and exploration deemed essential in more skills acquisition. Fifthly and lastly, they attend lessons irregularly and the consequence is missing important parts of the curriculum. With all these incidences in place, the students affected hardly can make it in contributing to societal development.

(f) Lecturers

Although higher learning institutions' students are argued to have developed self-learning characteristics, it is insufficient as to some extent they may not understand some content part on their own dictating presence of an expert to it. Achieving this, the lecturers have to be competent in the fields of work. According to Damsani (2011:71), all the lecturers in the study conducted hold qualifications for TVET. Qualified lecturers assist the students in the most possible ways they can and learning processes yield education qualities expected. Even so, the lecturers at times do not add value significantly to students' learning. Ayonmike *et al.* (2015:27) have revealed cases of TVET institutions with high tendency of unqualified lecturers. Even a few qualified lecturers at times are involved in malpractices mostly related to unqualified lecturers. Initially, the lecturers have no interest in instructional activities, which are their main duties. This postulates engagement of instructional training by influence of compromise not interest. Secondly, the lecturers plan lesson experiences poorly for the students. Poor planning has a chance of missing necessary information hence inadequate skills. Thirdly, the lecturers use teaching aids poorly implying poor conceptualisation of the students. Fourthly, the lecturers have unsuccessfully kept unhealthy lecturer-student relation. Lacking rapport between these parties stems poor quality training. Fifthly and lastly, lecturers are lazy and academic assessment is conducted in poor approaches. This implies that it fails to reflect on students' performance in relation to behavioural objectives.

A few experts have been affected by brain-drain incidence. In this context, TVET institutions are bound to employ such labour while government perhaps suggests policies to retrain or attract foreign technocrats. According to Serumu (2014:102), universities have had quite a number of limitations regarding the lecturers, but only two are in discussion. Universities have experienced inadequacy of the lecturers. A few available are likely to have more loads and this normally compromises education quality. Anane (2013:125) presents statistics that some institutions have an unbearable ratio, 1:100, which under normal circumstances is supposed to be 1:16. Agreeing with the implication, Anane says excessively high proportions of students to teachers disallow deploying didactic methods. Universities also offer unattractive services through teaching. Labour market experiences incompetent massive flow of individuals rather than skilled (Amedomme and Fiagbe 2013:255 and Damsani 2011:69). Hailu (2012:57) predicts that the graduates, therefore, are likely to resort to working in the informal sector.

(g) Employment

Employment is experienced after training has thoroughly been completed. Rather than graduates move around and such for jobs they have the potential to create it on their own. Where they need assistance, TVET institutions as well should contribute: the new issue by which they can intensely contribute is by engaging in enterprise incubation. For instance, according to Lewis *et al.* (2011:21), in a study conducted at the University of Michigan, United States of America, appears a case on university-sponsored incubators by Mian (1994) instigating their performance on organizational design, client performance, funding sources, targeted technologies, strategic operational policies, services and their value-added component, and growth of client firms. Mian decided to approach these aspects from two angles, which were basing some university-sponsored incubators in the state institutions on the one hand and private institutions on the other. Overall, the study never detected a significant difference with respect to performance amongst the two angles, but extremely a positive increase on client's firm survival and growth. Employment after training is the basic indicator to assess effectiveness and impact of such a programme. Lewis *et al.* (2011:21) highlights that university-sponsored incubators have had firm's survival and growth measured by means of job opportunities created and heightened sales. In addition to such incubators, Qian, Haynes, and Riggle (2011 cited in Hoffman and Radojeovich-Kelley (2012:04) indicate that 2,007 incubators (in 2005) assisted 27,000 start-up

companies, which indeed created 100 000 jobs and added to revenue $17 billion. The same context has also been in happening at Vietnam where overall employment rate of vocational college graduates is statistically at 81 percent (Pompa 2013:13).

In Italy, companies benefited even more than employees did from employee training through increased productivity (European Centre for the Development of Vocational Training 2011:16). It is clear that this incident has added more value to high profit making. Companies that have not invested in training reported lower productivity and profitability. Furthermore, research had a positive correlation between innovation propensity and company training, while, at the same time, companies organizing internal training registered better performance in terms of return on investment.

Another organisation with assistance is business acceleration. Different from the above organisation is that business acceleration deals specifically with already existing enterprises, not the business ideas (Tran 2013:23). However, the operations of existing enterprises under business incubation are similar to those by business accelerators, except for taking equity. Not until enterprises reach prosperity do these organisations withdraw from operations. In the context of Africa, Coetzee (2015) illustrates that acceleration is in place by Think accelerator in Egypt (Beliaa, Cribpark), Nigeria (PollAfrigue), Rwanda (TorQue) and the RSA (Ekaya, Apexpeak, GraphFlow). All these acceleration related South African enterprises have achieved from several groups of investors, well over a million rand investment. Coetzee (2015) further points that, in Stellenbosch, acceleration programme exists meant for Stellenbosch University students at its infancy, including the University of the Western Cape and the University of Cape Town as well.

4.5 IMPROVING CURRICULA LIMITATIONS

The identifiable limitations within curricula can be addressed in the following framework as suggested:

- Dealing with low quality assurance and poor implementation of curricula, Akhuemonkhan and Raimi (2013:19) advise, for the former, that education ministry should, with its authority, put in place continuing measures for quality assurance in order

to standardize, monitor and control quality of training, process, instructional resources, teachers and certification. Concerning the latter, they advise the same ministry to ensure good curriculum implementation by making a surety that TVET institutions have uniform standards, training, evaluation and certification. In the case of Ghana, Ansah and Ernest (2013:177) propose inauguration of quality assurance since it has faculty of ensuring practical content of programmes and entrepreneurial training to Polytechnic trainees to set up enterprise. In the same level, and in all institutions, also there had been a proposition of commencing integrating Competency-Based Training methodology.

- Concerning curricula, which are profoundly laden with theory, Lekoko *et al.* (2012:12031) suggests a review of the pedagogical perspective to transform or shift it to hands-on acquisition of skills. This is a mode of making graduates enterprising on an account of social transformation, employability and economic growth.

- Mitigating shortage of money in TVET institutions that leads to shortage of other manufactured resources compromising skills and knowledge, Akhuemonkhan and Raimi (2013:19) recommend federal governments and other stakeholders (companies) to commit themselves seriously in funding TVIs in order to secure national aspiration. Sensitisation of companies to support TVET with corporate social responsibility initiatives has been in place in the developed nations by CISCO, NBC/Cappy Plc, Microsoft and other multinational companies.

- Reducing shortage of skills and knowledge by lecturers, Akhuemonkhan and Raimi (2013:19) advocate for investment by TVET institutions in routine capacity-building training programme for lecturers to acquaint them with best practices and methodological changes in the field. About shortage of lecturers, it is wise that TVET institutions train their lecturers through in-service programmes.

4.6 ANALYSIS OF CONCEPTUAL FRAMEWORK OF EMPIRICAL LITERATURE FOR THE STUDY

The analysis of empirical literature provides cases within which the study findings are proved or not.

- Literature empirically has metrics by which awareness of TVET has been made in some nations. This assists in guiding the study finds what exactly has been made in RSA and Lesotho (which underwent the same negative perceptions) to promote TVET after it has been revitalised by international organisations to which these countries are members, the UN and the SADC.
- Literature has further shown the purpose for TVET. Specifically, Southern Sudan, as an example, emphasises adopting for reconstruction and development and improving its human resource. This then grows the question of understanding the purpose behind TVET in within the RSA and Lesotho thus.
- Empirical literature further shows factors/determinants of quality assurance and control of TVET in its endeavour to development. This assists the study by setting the framework within which quality assurance and control in the context of the RSA and Lesotho' TVET can be analysed to identify the extent of successes and limitations then suggest strategies for (further) improvements.
- The literature has lastly highlighted in opposition with hypothetical statement that TVET institutions engage in assisting graduates in enterprising (setting-up businesses) in other parts of the world. This guides the study in finding comparatively in the RSA and Lesotho what such institutions are doing (or what can or should be done) in that regard, bearing in mind that students are mainly skills endowed and not possessive of other resources for actualisation of such skills, reducing high graduates unemployment levels and the scourge of lacking highly specialised skills economy characterisation (despite other stakeholders (government, private sector) fully functioning with roughly the same potential as TVET institutions).

4.7 CHAPTER SUMMARY

TVET in African is as good as it is in other parts of the world. TVET institutions sensitize secondary schools about their curricula purposefully to know about the programmes offered and expected outputs as well as outcomes. During curricula implementation, some challenges alongside successes are met and need dire termination. As a way of promoting employment, in USA some economic accelerators and business incubators have been established enhancing TVET graduates' enterprising.

CHAPTER FIVE

TVET PROFILE IN LESOTHO AND THE RSA

5.1 INTRODUCTION

This chapter following the background of, and an empirical literature on, TVET highlights base of the study in the RSA and Lesotho. The constituents of this chapter follow a comparative, analytical presentation of these countries, particularly the study areas. It initially presents TVET history prior to the attainment of independence in both countries which was not at the same time: Lesotho gained it 1966 while the RSA was born in (1993). This then is followed by TVET since independence to 2000. Thirdly, it presents an education structure in which TVET is located at different degrees, but with much focus on tertiary level for it is the study centre. Fourthly, the study presents an analysis of TVET ministerial management and fifthly, the institutional admissions criteria. Sixthly, the chapter presents a background of higher institutions to study. Seventhly; it presents related studies. Eighthly; it highlights the study's conceptual analysis. Ninthly; it presents chapter summary.

5.2 TVET HISTORY IN THE RSA AND LESOTHO PRIOR TO INDEPENDENCE

The time when TVET commenced in the RSA and Lesotho is as old as when they were inhabited by the San followed by the Sotho-speaking people. (Magau 2005:34). This emphasis shows that these territories are no different from the world context which in chapter three (section 3.2) is said to have had the same experience. The first inhabitants lived by means of TVET shown by its features existing even in the contemporary world. TVET, it although was in traditional formal system, it was the dominant education answerable for satisfaction of human needs (both primary and secondary). The primary traditional form of education on TVET occurred at home since the infancy stage and later was extended in secondary at initiation schools. Upon graduation at the latter education stratum, males were fully and well-equipped with duties for adulthood and ready to engage in marriage ties. It was only upon the advent of the Whites and missionaries that GAE under modern education was inaugurated. This was undertaken competitively against traditional education.

Modern education in fact had advanced TVET comparative to traditional education. Amongst these countries, modern education with TVET was initially established in the RSA by Dutch for productive slavery (Wedekind n.d, 01). Following an agrarian economy in the RSA was mining in Witwatersrand which required technical skills that were locally unavailable. In response to this, technical education and higher-level engineering and other scientific skills began in the apprenticeship system and new universities. It was during the apartheid regime that the RSA established wide education institutions, but serving Whites for racial discrimination. It was just in the 1970s when owing to neo-classical policies and deregulation of race-based education began that the Blacks accessed TVET (Wedekind n.d. 02). New institutions were built to further promote its accessibility. In contrast, in Lesotho, it was by the missionaries summoned by Moshoeshoe I in an attempt to find ways of keeping peace. They particularly improved agriculture through introducing varieties of crops and implements. In the economic history of Lesotho, agriculture is the long-standing livelihood source with the influence of TVET (Mahdi *et al.* 2012:1066). Of the places that such education affected directly include Quthing in 1862, particularly, by the Lesotho Evangelical church. It is further noted that four decades down the line, Lesotho adopted skills of interest in TVET, namely: masonry, blacksmithing and tailoring through establishing an institution serving such in Maseru district (Magau 2005:36). However, Lesotho was unable to achieve self-sufficiency and resorted to the importation of goods, therefore. Comparatively, a conclusion can be drawn that TVET in both countries as of then was undervalued because colonists appreciated its GAE and their citizenry inherited this. However, dissimilarity occurs that only in the context of the RSA with Blacks and Whites was TVET quality discriminatory in that the best of it was meant for Whites. International reports on TVET's limitations by World Bank further exacerbated this perception postulating slow transformations in living standards.

5.3 TVET TRANSFORMATIONS AFTER INDEPENDENCE TO 2000

During colonialism in the RSA and Lesotho, (somehow similar to section 2.3.1) TVET was meant to serve interests of the colonists. Upon independence attainment, the RSA and Lesotho engaged in reformations on development policies and some of which were educational in nature. It should be noted that this achievement was in a range of different years, Lesotho starting in 1966 and the RSA 1994.

Lesotho

The initial education document in Lesotho was *education policy for development* which came into effect in 1971. In particular, this had a guideline to TVET called industrial and vocational training act of 1971. Following this was an initiative in TVET general improvements. These encircled embarking on more TVET institutions by government, individuals and communities, increasing staff and up-dating the curriculum. In existing TVET institutions, dilapidated buildings faced renovation to meet standards. In spite of these changes, the government of Lesotho further realized a need in improving education and this time it engaged the public through gatherings (Magau 2005:36). This was found as the best way in which education can remain highly relevant to the Basotho. Furthermore, in executing this mechanism the government engaged foreign consultants (Magau 2005:36). This mechanism proved significant as revealed limitations of the examination system. This policy was then followed by the formulation of Lesotho Technical and Vocational Act of 1984 whose guidelines are described later.

Concerning the report by *Education Sector Survey Task Force* produced in 1982, the government decided to adopt it as the educational policy from then until in 2000 (Magau 2005:36). Part of its content that remains linking to TVET was the emphasis on the inauguration of more practical subjects (agriculture, technical subjects and home economics) on secondary education to promote quality of education. Quality education is identifiable where both wage employment and self-employment occur simultaneously for different students' learning capacities and fields of interest driven by their talents. The practical subjects also played a large role in attempting to achieve education goals with self-reliance production. However, the status was unachievable and this gains weight on Lesotho's high imports rate outstripping exports volume and value.

The early 1990s were the years in which Lesotho further realised some shortcomings in her modern education system. These included no access to basic education and lack of relevance of primary education to occupational studies (TVET). It is on the basis of this that the government initiated forming the *Education Sector Development Plan 1991/92*-1995/96. The document clearly depicts that the aim of underpinning TVET was largely to produce skilled people. It is predominantly by means of this that industrialisation which all countries aim to establish and widen intensively boost employment. Apart from unemployment being intensified by fertility, it

is further exacerbated by the plight of Basotho migrant labourers retrenched from the RSA. Thus, it is by mode of industrialisation that the employment rate improves (Education Sector Development Plan 1991/92-1995/96:47*)*. Successfully accomplishing this intent, the board tabulated some guidelines including to:

- promote TVET by bringing in new technology and widening its provision country wide;
- promote industrial training based on the guiding Act of 1984;
- to further increase a number of school practicing TVET at secondary education by way of improving vocational subjects and transforming related curriculum but at tertiary level and
- to evaluate TVET, and execution of this activity would be based on programmes guiding it, costs, relevance and effectiveness.

Also in the course of Education for All, there had been major events and actions to take into account. Of all these materialised between 1991 and 1999 including such issues as:

- position of a pre-vocational programme training officer emergence;
- vocational interns placement in electrical and automotive engineering;
- trade testing certification and relevant tests development;
- open communication channels between TVET Unit and industry and
- TVET headquarters' construction through the support of Irish Aid.

Constitution of Lesotho (1993)

Similar to education, the constitution undergoes transformation to suitably apply in the contemporary life context (Ministry of Education and Training 2004:04). Defining a constitution, Transformation Resource Centre (1998:03) simply denotes it as a legal document encompassing the greatest law in democracy and all other laws with which they comply. Within the constitutional context, education appears as one of the basic human rights and its ratification draws from the UN's conventions for improved quality of life. Regarding availability, the constitution emphasises ensuring that education in general is made available to all and shall adopt any policies with sound development. These encircle:

- secondary education, including technical and vocational education, made generally available and accessible to all by every appropriate means, and in particular, by the progressive introduction of free education;
- higher education made equally accessible to all, on the basis of capacity, by every appropriate means, and in particular, by the progressive introduction of free education.

THE RSA

At the beginning of the 1990s, discrimination against Black South Africans in education accessibility lessened, but was never completely eradicated (Mounton, Louw and Strydom 2012:1214). It is argued that along this should be the changing of the act, National Policy for *General Education and Training Affairs Act 1984* for its discriminatory bearing. This was an advantage to the RSA even in the international context as it would enable it to align with global changes. Indeed, this was amended in *National Education Policy Act 1996* and four times later until 2011 (National Education Act South Africa 1996:7). Starting from 1994 the democratic government has constantly had a perception to generally promote development for the RSA hence these legislative reforms. In the policy context, it initially produced a national development guide, *Restructuring and Development Plan (RDP).* This encircles different policies among which is the education policy. In compliance with the constitution, the policy initially strategized securing accessibility of education to all citizenry in all cycles. This education integrally ought to have such attributes as high quality, efficiency and equity. It is on the basis of these that education undoubtedly achieves societal development in a more sustainable way. Since Bantu education, apart from its indoctrination, was poorly equipped in respect of infrastructure and other resources, the policy had the responsibility to look into activities to improve these. Indeed, the policy outlined improving physical resource-based activities. In the fore it emphasised constructing classrooms with electricity and supplying it to those without it. Besides protection against adverse weather conditions for students and theft of property, classrooms had to locate technology fittingly for learning. Concerning human competencies, it had further looked into teachers' quality as well as that of programmes they offer recommending it as cute. This is with the understanding of forming the basis by which productive graduates are a potential asset for societal development. Schooling children and youth's health is out of negligence since the policy put emphasis on its promotion. This is geared

by research that education occurs on condition that students are in good health. This postulates further that the RDP by health-related ministry has in fact established health centres to attend to poor students health incidents. Financially, the policy explained that the government, as has been the case with primary education, intended to establish and facilitate loans and bursaries (national budget, partnerships, parents) for tertiary education. In actual teaching-learning environment, the policy advocated for low lecturer-students ratio and equal proportion of students to class-size. This postulates that Bantu education had many students in small classrooms. The policy further emphasised regular attendance by students to learn all content designated to fully understand a particular skill only through which they proceed to other classes. Although modern education had been known as for children, RDP abolished such an opinion and opens it for every South African. All these transformation in the mention already were never adequate for quality assurance and control in South Africa then. Thus, RDP further ordered merging governing and educational institutions where necessary, with others established for responsive education to societal development.

Subsequent to this RDP, Education Policy and Education Act (1996 section 108) **w**as transformed to education accruing from first modern education since the democratic dispensation. This has been referred to as outcome-based education. According to Msila (2007:150), outcome is generally the forthwith result attained on completion of a project demonstrating skill. In the context of education, it means fully trained students in their various disciplines measured by means of instructional objectives. Upon academic completion, students overall are obliged to have relevant skills to the world of work for societal development. It is in this context that OBE had been inaugurated implying that Bantu education was acting in opposition to this philosophy (Department of basic education RSA 2013:16). Msila (2007:149) highlights that Bantu education in nature was a tool to silence and control Black South African residents. Thus, the demise of governance underpinning this brutal education perspective has been stimulating aspects of development. It is by means of OBE that such an achievement is possible, or otherwise; the RSA would be stagnated in its disastrous colonialism side-effect. (Msila 2007:151) explains that in the RSA context OBE has been expected to change passive, rote learning to creative as well as problem solving learning. This is by thorough participation in learning. Skills essentially have the potential to enable students to perform and secure jobs.

Quickly, OBE faced the need for revision in the same year of evolution [1997] to further promote education appropriateness. This follows the guidance of the constitution that promoting unity and solidarity alongside democratization ultimately empowers human rights. It is apparent that in basic human rights, needs are egalitarian principles in a school with respect to teaching-learning processes. The egalitarian pedagogy considers lecturers important in teaching as mediators, interpreters, programmes and materials designers, leaders and administrators (Msila 2007:151). It occurs successfully when schools envisage qualified, competent lecturers, dedicated and caring lecturers. Concerning students, they should embrace values in the new education system. They strengthen confidence, independence, literacy, numeracy, multi-skills, compassion, care of environment and critical participation in a society (Msila 2007:151).

However, Mouton *et al.* (2012:1212) raised a controversy that OBE had limitations with which it was associated. Firstly, it was almost impractical and expensive, with lecturers having poor performance as a result of inadequate training. Only students with a high intelligence quotience are able to perform well by themselves. Dismay remains with slow learners when they begin relying on their teachers. Secondly and lastly, where it has been executed, it has less stressed reading, writing and arithmetic resulting in poor performance in reading and understanding at university level. Apparently, this, in the same vein with its predecessor, is a catastrophe of students described as having a poor foundation/requisite.

5.4 TVET STRUCTURE IN THE RSA AND LESOTHO

The RSA and Lesotho as former members of Britain have an education legacy with British attributes (South African education 2017). They have an education with four levels in which TVET is integrated, the hierarchical structure of education in section 3.5 (pre-primary, primary, secondary and tertiary).

In both countries exist the first level, pre-primary, and it is conducted by the private sector. The entrants normally enroll at the age of 3 and complete in their sixth year in the RSA. In Lesotho, duration is slightly different as entrants enroll at two years of age and graduate at five. Generally,

TVET at this stage does not occur as children undertake training in speaking skills. Graduating from this level grants children opportunity at primary level.

At the age of seven, in the RSA, children by and large commence attending at primary level comprising of foundation and intermediate (South African education 2017). The former starts when a child turns seven years old at reception lasting for four year to grade 3. Learning focuses on basic skills and second language. The latter commences at grade 4 taking three years dealing with languages reading/speaking, geography, history, general sciences, handicraft and mathematics. In total, the state has more than 15 000 of such institutions. With education at this level, pupils gain foundation skills for the preceding cycle. In the case of Lesotho, primary education is usually attended when a child is six years old. This lasts for seven years offering English, mathematics, science, Sesotho, religious knowledge, handicraft, home-economics, agriculture and social studies. The subjects acting as bases for TVET in both countries are sciences and handicraft. In the context of Lesotho only such subjects are home-economics and agriculture. Successful completion of this level allows one to do further studies in the secondary education.

In the same way as the primary level, the secondary level in the RSA has two sub-levels: the senior phase and the further education and training phase (South African education 2017). The former brings to an end, foundation and intermediate education technically called general education and training phase. The latter is made up of the senior secondary phase of secondary education. Coverage further widens to vocationally-oriented courses/programmes. By far, the RSA has almost 5 000 institutions as well as 5 000 intermediate and combined. In terms of ownership, they are categorized into independent and/or private amounting to 1, 400. Teacher-student ratio is widely different in these categories: independent (1:30) and private (1:17). The latter ratio has more advantage over the other; allowing more time to a student with ease of more exploration and full implementation of student centered teaching-learning techniques. It is at this stage where certificates – National Senior Certificates – are on offer. The subjects are in the following field areas:

- Agriculture
- Arts and Culture

- Business, Commerce and Management Studies and Services
- Languages, Manufacturing, Engineering and Technology
- Human and Social Sciences
- Physical, Mathematical, Computer and Life Sciences

In Lesotho, the same level of secondary exists with two sub-levels: lower secondary and upper secondary. Successful completion of the lower leads to the upper. At each level, two categories of vocational-related programmes exist: technical secondary schools and comprehensive programmes. Technical schools are around 8 in Lesotho. The comprehensive schools are around 256 countrywide offering vocational subjects in the most theoretical perspective (ministry of education and training Lesotho 2012). Vocationally related subjects generally offered are:

- science and mathematics,
- agriculture,
- woodwork,
- fashion and fabrics,
- business education and
- computer studies.

The lower secondary is undergoing transformation together with the primary level in that the government has decided them to form one level called basic education. Good performance in any category of programmes allows those who are inspired to further studies, entrance into the tertiary level.

At tertiary level/higher education, TVET is offered in specialised as well as comprehensive institutions in both countries (South African education 2017). The institutions owing to levels of qualifications are stratified and harmonious relationship exists between them. Specifically, they are comprised of TVET colleges and universities. Higher education consists of undergraduate and post-graduate programmes. The former is all about awards of training in professions from certificates, diplomas and ordinary degrees. These are offered in one institution or amongst different specialized institutions with a harmonious relationship. In the latter, only universities are involved in impartation of programmes specifically, honour's degrees, post-graduate

certificates or diploma, masters and doctorates. All degrees below masters are meant to give more knowledge and understanding to students in their fields. Certificates and diplomas are essential to the underemployed particularly by taking relevant courses. They further benefit those interested in changing courses for realization of opportunities in other fields. At masters and doctorate levels, it is the norm that students contribute to existing knowledge and skills by generating more.

The RSA has 50 TVET colleges that emerged from hundreds of technical colleges as education was transformed. Some of which are linked to universities as their institutes. In Lesotho, only one polytechnic is considered a major institution of higher learning. The matriculants who do not qualify directly for university degrees train at TVET colleges and join universities.

Concerning universities with TVET/technology, Lesotho has three: the National University of Lesotho, Limkokwing University of Creative technology and Botho University (recently institutionalised). The National University of Lesotho is exceptional in nature as it is comprehensive whist the other two are technology-based. Generally, these are the only universities in Lesotho at the present. In the context of the RSA, there are three categories of universities. Table 6.1 below presents South African universities.

Table 5.1: categories of universities in the RSA

#	**Traditional Universities**	**Universities of Technology**	**Comprehensive Universities**
1	University of Cape Town	Cape Peninsula University of Technology	University of Johannesburg
2	University of Fort Hare	Central University of Technology	Nelson Mandela Metropolitan University
3	University of Free State	Durban University of Technology	University of South Africa
4	University of Kwazulu-Natal	Mangosuthu University of Technology	University of Venda
5	University of Limpopo	University of Mpumalanga	Walter Sisulu University
6	North West University	Sol Plaatje University	University of Zululand
7	University of Pretoria	Tshwane University of Technology	
8	Rhodes University	Vaal University of Technology	
9	University of Stellenbosch		
10	University of the Western Cape		
11	University of the Witwatersrand		

Looking at this table, the RSA significantly outcompetes Lesotho in the number of categories (3) and universities (25). Owing to the size of population (around 53 million), these universities are perhaps insufficient. General academic education dominates within education in South Africa with 11 traditional academic universities and 6 comprehensive universities (having a combination of GAE and TVET). This implies having many graduates with a knowledge and understanding of concepts, than practical skills. It is likely to be connected with the idea of students not having interest in TVET. From a different viewpoint, positive conclusion may be drawn that many students do not make it into technology universities because of technophobia, hence studying general academic education. This normally develops from poor performance in mathematics and sciences. Predominantly, 9 universities offer in the same state and only two of which operate in Bloemfontein. These backed up by comprehensive universities constitutes a considerable number for technology training. It is this broad higher education coverage in the RSA compared to other Southern Africa countries that makes it an attraction centre for the education of technology.

5.5 TVET AND GOVERNMENTAL MANGEMENT IN THE RSA AND LESOTHO

5.5.1 Ministerial division

The highly powerful social group in any country is the government with the exercise of authority on all others. This means that the governments of the RSA and Lesotho have direct and full legitimate management of education and training, not just TVET for development purposes. In the RSA context, starting from 1994, education management had been under the ministry of education which however in 2009 was split into two ministries, that of basic education and that of higher education and training (South African education 2017). These operate on the basis of a policy framework set by the central government. Each of which is answerable to education within its scope country-wide, with each having a provincial department for the decentralisation purpose. It is the ministry of higher education and training that administers tertiary and adult basic education and training. The role has also extended to public and private further education and training colleges, now called TVET, for out of school youth and adults. The transformation has further effected in disjoining sector education and training authorities from labour

department and integrating it into that of higher education. Generally, higher education institutions have more of devolution in their administrative nature.

Similarly in the context of Lesotho, the ministry of education has been established dealing with education issues. Guided by *Technical and Vocational Training Act of 1984,* Magau (2005:36) indicates that Technical and Vocational Training Advisory Board (TVTAB) had been formulated. Coming into effect in 1987, this body has been obliged with carrying out roles related to TVET as well as reporting to the Director of TVT in the education and training ministry. The act further explains the structure of the organ showing, for example, that constituents should be in association with proficiency in business and industry and relevant TVET expertise. The government at secondary level manages TVET through the Department of Technical and Vocational Training (TVD) and to the small extent in colleges/polytechnic. The other part at college level falls under Council on Higher Education (Ministry of Education and Training 2004:04).

5.5.2 NQFs IN THE RSA AND LESOTHO

Management transformations have been further effected in the introduction of NQFs in both countries similar to others in the global context (section 3.7.2). By and large, NQF enlightens students with education qualifications that education ministries hierarchically offer. Further to this, it highlights potential areas of employment for particular training. Specific to courses, it notes duration and credit hours to be taken for completion. With a clear understanding of these by students, motivation develops as to which course to take guided by preferences and abilities. In the context of the RSA National Qualifications Framework Act (RSA 2008:04), the objectives of NQF are as follows:

- Creating an integrated national framework for learning achievements;
- Facilitate access to, and mobility and progression within education, training and career paths;
- Enhance the quality of education and training;
- Accelerate the redress of past unfair discrimination in education, training and employment opportunities;

- Contribute to the full personal development of each learner and the social and economic development of the nation at large.

In Lesotho, NQF has been adopted as a structure for defined qualifications offered by education institutions formally in 2005. Consistent with literature, Council on Higher Education – Lesotho (2012:13) further highlights the significance of this by showing interconnectedness between qualifications and how learners progress from one level to another. It has further solved the problem of qualifications with the same name and level by indicating if they are equivalent or not. Prior to the making of this framework, this was difficult to do. Lastly, it was difficult without the framework to tell about quality of the curriculum as well as control measures. The immediate tables 6.2a and 6.2b below show NQFs in the RSA and Lesotho.

Table 5.2a: NQF in the RSA

NQF				
Sub-framework and qualifications types		**Levels**	**Sub-frameworks and qualifications types**	
Higher Education Qualifications Sub-framework (HEQSF)	Doctoral degree Doctoral degree(professional)	10		Occupational Qualifications Sub-framework (OQSF)
	Master's degree Master's degree(professional)	9		
	Bachelor honour's degree Post-graduate diploma Bachelor's degree	8	Occupational certificate (level 8)	
	Bachelor's degree Advanced diploma	7	Occupational certificate (level 7)	
	Diploma Advanced certificate	6	Occupational certificate (level 6)	
	Higher certificate	5	Occupational certificate (level 5)	
General and Further Education and Training Qualification Sub-framework (QFETQSF)	National certificate	4	Occupational certificate (level 4)	
	Intermediate certificate	3	Occupational certificate (level 3)	
	Elementary certificate	2	Occupational certificate (level 2)	
	General certificate	1	Occupational certificate (level 1)	

Source:

Table 5.2b: NQF of Lesotho

TVET system	**NQL**				**General education system**
	10			D	Doctoral degree
	9		D	E	Master's degree
	8	C	I	G	Honour's bachelor degree
		E	P	R	Post-graduate diploma
		R	L	E	Post-graduate certificate

	7	T I F I C A T E S	O M A S	E S	Ordinary Bachelor's degree Graduate diploma Graduate certificate
	6				National diploma
National Craft Certificate Trade Test A	5				A-Levels national certificates
VET Certificate Trade Test B	4				COSC (O-Levels)
Basic Vocational Training Trade Test C	3				
Trade Test- Operatives	2				Junior Certificate
Sub-JC training	1				Primary School Leaving Certificate

Source: CHE-SA (2012:13)

In both countries, it can be generally explained that NQFs are significantly similar. Initially, they have the same number of levels (ten). NQF 1 to 4 consist of primary and secondary education in both countries. Immediately above this, that is NQF 5 starts higher education. It is at this level where TVET graduates are prepared fully for the world of work and conduct some studies to enhance creativity. The weight of a study differs with NQF, that is, it becomes more valuable in the higher levels. However, the difference appears in many areas of these NQFs. Initially, the RSA has two ministries responsible for NQF administration – higher education and general education. In contrast, Lesotho has just one ministry with TVD department (TVET) and general academic education. Secondly, the RSA offers curricula at secondary (grade 11 and 12) which is vocationally oriented. In contrast, Lesotho has a few vocationally-oriented secondary schools and many mostly theoretical. Lastly, certificates labelling is different and in level 6 and 7 certificates in terms of numbers are different: Lesotho has 3 in 7 and 1 in 7 while the RSA has two in each. Although in Lesotho, TVET is shown only within 1 and 6, it occurs at the highest levels of learning in comprehensive and technology-based universities.

In order for one to lecture at a TVET institution, the qualification obtained should at least range from Advanced Certificate in TVET to doctorate levels in the RSA while bachelors related degree to doctoral degree levels Lesotho (Higher Education Department-RSA 2013:13).

5.5.3 TVET control and ownership in the RSA and Lesotho

Governments in the RSA and Lesotho have the major responsibility of ensuring the delivery of education. This is because by right education is a public good. In their respective ministries – the ministry of higher education and training in the RSA and the ministry of education and training

in Lesotho – they collaborate with the private sector (Education System in South Africa 2012; Lesotho Review 2015; South African education 2017). This usually happens under public-private partnership. Much as the government is fully responsible for education provision, it further allows individuals to contribute through the private sector. South African education (2017) points that privately-owned higher learning institutions are of different types (4): foreign institutions, private technical and vocational institutions, colleges (offering distance learning programmes) and lifelong learning centers. This is one way by which government widens education coverage without which it would be minimal and skewed. Concerning the origin of the higher learning institutions, only in the case of Lesotho are the universities (Limkokwing University of Creative Technology, Botho University) headquartered outside is available. More universities of technology are likely to emerge formed either way above. The wide range of higher learning institutions in Lesotho's context is state-owned with a few by churches.

5.5.4 Councils on Higher Education (CHE) in the RSA and Lesotho

Successfully establishing universities was never enough for governments of the RSA and Lesotho. It has remained significant for ensuring quality assurance of education and training delivered. Thus, the governments decisively established specialised organs for such purpose. In both countries, such organs are similarly known as CHE. In Lesotho's context, CHE-Lesotho (2012:11) clarifies that this organ was formed based on the law, Higher Education Act (Act No. 1 of 2004). According to this Act, CHE-Lesotho was established to advise the minister on any aspect of higher learning. Matters related to TVET are inclusive in this expression. Also, CHE-Lesotho was set up for monitoring execution of policy for high education institutions. Furthermore, CHE-Lesotho was meant to generate and disseminate information related to achievements in higher education (TVET) as well as their accessibility to students. Concerning new institutions, CHE-Lesotho is fully responsible for their accreditation. As for the existing institutions, CHE-Lesotho is tasked with promotion of curriculum quality assurance. To this end, improved infrastructure and qualified committed personnel have been taken into account. This has to be at least higher than the exit qualification in the programme. Looking into the context of RSA, CHE-RSA was established in 1998. Similar to Lesotho, its functions are to advisably report to higher education minister on matters for transformation, accreditation and quality assurance promotion (UNESCO 2010:06; UNESCO 2012:12). The RSA government has even

passed the law additionally to matters of standards of TVET lecturers' qualification (RSA 2013). Similar to Lesotho, at least the qualification beyond the maximum qualification in the stream is acceptable. Through CHE in both countries, it is possible that education given stands a chance to address national development goals.

5.5.5 Financing TVET in the RSA and Lesotho

Higher education in general is the most costly level of education ever. In the RSA and Lesotho, governments commit themselves through state revenue to fund TVET. In the RSA, Higher Education South Africa (2014:3) shows that since 1994 the government has intensively financed education. Funding universities has been on an upward trend from R11 billion in 2006 to R26 billion in 2013. However, the government has declined subsidies and these consequently have pressurized other sources of finance (tuition fee and third stream income). Despite these, universities undergo worsening financial positions. Similarly, the government is the main financer of higher education through subvention (with TVET) (CHE-Lesotho n.d.). In addition to this, higher education institutions source income from tuition and accommodation fees. This practice started ever since the 1970s, as Lesotho government realized significance of sponsoring Basotho to access higher education. Since 1994, Lesotho sponsorship was further more granted to students who furthered studies in the RSA until the present.

5.6 ADMISSION REQUIREMENTS FOR HIGHER EDUCATION INSTITUTIONS IN THE RSA AND LESOTHO

Higher education institutions generally set standards that students applying for enrolment have to satisfy. In the RSA, admission requirements are legitimately affirmed by Higher Education Amendment Act 2008 (39 of 2008) for matriculates. Each level of institutions (institutes and universities) has its own. Starting with National Higher certificate, a prospective candidate ought to have 30% in English Language. Considering national diploma programmes, candidates should secure rating of 3 (between 40-49%) in 4 20-credit subjects and official language at home excluding Life Orientation. Further to this, in two more subjects a candidate should have obtained 30% which this time may include Life Orientation. At higher education stratum, for bachelor's degree programmes, a candidate should have achieved the least score in two subjects

supplemented with an achievement rating of at least (between 50% and 59%) in 4 subjects from the table 6.3 below comparatively.

In the context of Lesotho, Higher Education Act similarly is the main body overseeing proper admission of new entrants. However, Higher Education Act (1-3 of 2004) of it grants authority to higher education institutions to determine their entry requirements as guided by their own policies. The policies are expectantly supposed to show equity, inclusiveness and admission standards and deprivation of discrimination forms (CHE-Lesotho 2012:05). General requirements of Lerotholi Polytechnic, at least a third class pass is acceptable. The variation of grades varies as per the nature of a programme and its courses.

In the context of Motheo TVET College EE requirements are at least N3/grade 12, with mathematics and science while Lerotholi Polytechnic WEE less than 34 overall points with at least 60% science and mathematics scores. The subjects forming the base of higher education offered at secondary education are in the table 6.3 below.

Table 5.3: ***secondary subjects in the RSA and Lesotho***

Groups	**RSA**	**Lesotho**
Languages	English, Setswana, IsiXhosa, IsiZulu, Afrikaans, Sesotho, Sepedi and others	English, Sesotho, French
Sciences	Life science, physical science, agricultural studies	Physical science, natural science, agriculture
Social sciences	Geography, history, religious knowledge, economics	Geography, history, development studies, religious knowledge, economics
Mathematics	Mathematics, mathematical literacy	Mathematics
Computer studies	Engineering Graphics Design, Information Technology	Computer studies/skills
Practicals and art	Music, Agriculture	Agriculture, Fashion

	studies, Dramatic Arts, Visual Arts,	and Fabrics, Wood-Work, Home-economics
Commercial studies	Accounting, Business Studies	Accounting, business management

A certificate is often granted on condition that a student has managed to achieve a certain overall mark. This situation takes place in the RSA and Lesotho and is normally based on the satisfaction of a certain criteria. This starts with core subjects for secondary institutions accreditation. In the RSA, the core subjects leading to acquisition of National Senior Certificate (NSC) are two South African languages and one of which should be the teaching-learning language. In addition to this, all learners must take life orientation and either mathematics or mathematical literacy. To these compulsory subjects, there are three subjects that are approved by the ministry and chosen by a school. In the case of Lesotho, there are also compulsory subjects for identical educational level such as two languages (English language and Sesotho) and one of which is a medium of instruction (English language). Alongside these are science and mathematics. The ministry expects schools to offer at least seven but not more than eight subjects for a student out of which a pass/grade is determined by the best six.

Comparing the subjects offered, the RSA generally has more than Lesotho's. The RSA has different African tribes with different languages. In Lesotho, there are also African Languages but only one (Sesotho) is given priority and included in the national curriculum. Parents are in preference of English Language learning for their children to enable them to interact with the globe and to command the demand of the labour market. Furthermore, English Language is essential as secondary as well as tertiary education hardly can be completed without it. About sciences, commercial studies and mathematics, the two countries are almost on the same verge as they offer identical subjects. Some great disparity lies with practicals and arts with the exception of agriculture applying in both countries whilst others do not correspond at all. All in all, South Africa offers a wide curriculum relative to Lesotho as indicated by the table here-above.

5.7 TECHNOLOGY EDUCATION INSTITUTIONS CURRICULA IN THE RSA AND LESOTHO (LEROTHOLI POLYTECHNIC AND MOTHEO TVET COLLEGE)

Within the Kingdom of Lesotho and the RSA – in the higher education stratum – are the two technological institutions: Lerotholi Polytechnic and Motheo TVET College. By far, Lerotholi Polytechnic has a technology-based curriculum in three schools, and WEE, which this study is focused on is part of the School of Engineering and Technology while Motheo TVET College has two streams and this study is focused on EE. The table below indicates curricula in the two programmes.

Table 5.4: Curricula of WEE and EE

Lerotholi Polytechnic (WEE)	**Motheo TVET College (EE)**
Engineering mathematics, Introduction to Geographic Information System, soil mechanics, basic water engineering, research methodology, hydrology, numerical analysis, water treatment, technologies, ground water hydrology, soil waste management, hydraulics, environmental law	N3 Heavy current Electrotechnics, industrial electronics, mathematics, engineering science
	N3 Light current Industrial electronics, digital electronics, communication-electronics, mathematics
Engineering mathematics1, engineering science, biology, meteorology, communication skills, use of computers, engineering mathematics 2, water chemistry, ecology, engineering surveying1, engineering geology, trade practice in plumbing	N4 heavy current Electrotechnics, industrial electronics, mathematics, engineering science
	N4 light current Industrial electronics, digital electronics, communication-electronics, mathematics
	N5 heavy current Electrotechnics, industrial electronics, mathematics, strengths of materials and structures or power machines

	N5 light current Electrotechnics, Industrial electronics, mathematics, strengths of materials and structures or power machines
Hydro-software development, entrepreneurship skills, irrigation, project management, irrigation engineering, project management, integrated environmental management, reticulation design and water management, research project	N6 heavy current Electrotechnics, industrial electronics, mathematics, strengths of materials and structures or power machines
	N6 light current Industrial electronics, digital electronics, communication-electronics, mathematics

Both Lerotholi Polytechnic and Motheo TVET College have different systems to run their programmes in general. The general training takes 3 years for the highest qualification (diploma) in these institutions and just below these are certificates. Lerotholi Polytechnic has three academic years into which courses are divided shown in the table above and in each year, there is a semester, thus two semesters in an academic year and 6 for the whole term. In the case of Motheo TVET College, the programmes run in what are called trimesters for six consecutive levels: N1, N2, N3, N4, N5 and N6 as well as an 18 months internship.

Completing these programmes gives graduates an opportunity in technical related fields. The possible careers in Motheo TVET College EE are engineering assistant, technician and foreman and workshop manager. In the case of Lerotholi Polytechnic the careers are engineer, assistant engineer, technician and workshop manager.

5.8 LITERATURE ON PREVIOUS RESEARCHES

Research has occurred in the RSA on TVET in general and a few studies regarding their findings have been highlighted herein. In 2007, Akoojee completed a doctor of philosophy thesis on private TVET and national development: the South African reality at University of Witwatersrand. This has set out specifically to establish by examination, the extent to which

private TVET responds to national development. In terms of education level, the thesis focussed on Further Education and Training. In addition to it, the researcher in this study context contributes by revealing the connectedness between secondary schools and tertiary TVET institutions through career guidance. Also, the researcher has interestingly disclosed the extent of preparedness of tertiary TVET institutions for attracted students to improve livelihoods in the societal context. Again, Needham and Papier (2011:13), in a study on vocational education in RSA, have found that policy emphasizes potentialities of TVET whilst on the ground it is different. Furthermore, secondary schools' students are of different opinions regarding TVET understanding, that is, there are some who understand it and many who do not. This drawback is the result of deprivation of proper guidance and implies that higher education institutions are not committed in assisting. This study, therefore, has sought establishing reasons behind drawbacks, if it continues to happen, or find the extent to which the opposite incidence has succeeded. Concerning interest in TVET, it can generally be concluded that it is a compromise or a bridge to higher education for failing to acquire direct entry. The studies cited by Needham and Papier are silent on TVET at university levels, which this study sets out to reveal with regard to its quality assurance and control.

Little literature exists on TVET studies in Lesotho implying low interest amongst scholars in TVET. A similar study was by Dar El Saldem (1993:17) that focused on Technical Education and Labour Market in Eastern and Southern African countries. It subjectively focused on examining technical labour market to determine efficiency of training programmes in terms of student output and quality; exploring problems leading to creation of jobs and to find suggestions on the way forward. The general measurement/data collection technique deployed was questionnaire to population comprising TVET institutions, employers, graduates and supervisors/trainers. In the context of Lesotho, the study indicates that there were 31 graduates to 51 jobs. Another finding was that there would be excess of demand over supply in panel beaters, spray painters, mechanics and tailors/textile workers in the near future. In general, there would be 157 jobs seeking graduates. Looking at the mining and construction sectors, there would be an excess demand of some 38 graduates. In conclusion, graduates did have employment opportunities since over 90 per cent obtained jobs on graduation, which today the opposite is true. Of importance about their qualifications was that they matched very well with job

opportunities. This to industrial production plays a pivotal role for high quality goods, which would remain not achievable when industries settled for less relevant skills or completely irrelevant trades. Furthermore, this has the implication that TVET institutions collaborated with labour market on skills required.

In the present, unlike in the early 1990s in Lesotho, a problem of unemployment has affected TVET products and this poses an initiative to understand the phenomenon. Along this plight is low volume of products by Basotho's enterprises that ultimately have attracted a massive flow of goods and services from abroad. It is wise to understand this in the same methodological form as unemployment.

5.9 CONCEPTUAL FRAMEWORK ANALYSIS OF THE RSA AND LESOTHO LITERATURE OF ANALYSIS FOR THE STUDY

Literature confirms that the RSA and Lesotho have had TVET for so long although their economies are having skills shortages. Their governments have made legal frameworks for protection of education rights and education policy incorporating TVET. The governments are the chief financiers of TVET and have further established NQF for harmony. TVET institutions are fully aware of career awareness with benefit to them, learners and the states in general. Furthermore, they have curricula with which to meet national development goals, which include among others employment. This literature forms a conceptual framework of analysis guiding the study:

- The implementation of career awareness in the institution Motheo TVET College and Lerotholi Polytechnic assists the study to find the extent to which it has been important to them and the learners.

- The legal and policy frameworks further assist the study to establish the purpose of TVET in these teaching-learning institutions.

- The curricula formulated in all the institutions assists the study to establish quality assurance and control (that is finding how fit these are for producing skills for employment creation). Other supportive services and infrastructure are also considered in

the same perspective. It is only when skills enhance employment that they would be qualified to have achieved the purpose or being of good quality.

- The indication that TVET leads to the development of the society through employment creation assists the study quest with regard to how the four institutions understudy intend to assist their graduates for which they have such potential. The TVET institutions and others of the same kind have a responsibility to ensure that their graduates reach every part of the broad goals of development being only when they are considered to have reached quality assurance. Skills acquisition is a continuous process and keeps happening even in the implementation of others hence providing close relationship of education providers and skills implementers for immediate attendance when a problem regarding the sustenance of production emerges.

5.10 CHAPTER SUMMARY

TVET in the RSA and Lesotho, as was the case in chapter three, started long ago even before the inception of its name. The inhabitants of the territories experienced this education dimension. In both countries, the education structure has different labels but equally has the four main levels. Even the NQFs are identical and equivalent. Although the government is the supreme body in TVET practices, in Lesotho at tertiary level, public and private institutions receive government sponsorship and subvention. In the South African context, such institutions are only public and so receive assistance as Lesotho's. Lerotholi Polytechnic and Motheo TVET College offer TVET in a wide choice of careers for the South Africans and Basotho. Studies have been undertaken on TVET in both countries, but do not stress what education institutions quality assurance of courses. Also, they neither portray executions ensuring full graduates' engagement in production. How they ensure that their graduates are engaged in production is not clear as no measures are clearly articulated.

CHAPTER SIX

` RESEARCH METHODOLOGY

6.1 INTRODUCTION

This chapter articulates the execution of the main sections of methodology that the study has followed. Initially, it generally gives what the chapter is all about (an introduction). Secondly, it conceptualises the term methodology in the study context. Thirdly, it describes the geographical settings of the study. Fourthly, it analyses research design of the study. Fifthly, it explains the ethics of research applied the study applied. Fifthly and lastly, it presents chapter summary.

6.2 METHODOLOGY CONCEPTUALISATION

Kothari (2004:01), Singh (2006:01) and Higher Education Commission (2012:41) define research as a scientific and systematic approach of learning about behaviour, objects and events whilst Creswell (2012:03) defines it as a series of steps involved in data collection and analysis to understand an issue. All of these definitions have a common element being to search for information on an issue of interest and thus are applicable in this study context. The rationale behind research is to explain why things happen, predict people's behaviour, make good changes in their lives and invent science and technology. In order words, research is imperative in the sense that it acts as a source of knowledge in all walks of education and development. Creswell (2012:03) strengthens this in his argument for the importance of research submitting that it adds knowledge, improves practice and informs policy. Based on these, societies in the current globalisation epoch have to conduct a myriad of researches to prosperously unite the world in equitable and equal ways and furthermore alleviate poverty, boost the economy and reduce societal disparities. It is observable that research in all fields of knowledge is applicable and in the context of education is expressed as educational research.

Carrying out this successfully, researchers often describe their methodology: a strategy, indicating in a clear way procedures and techniques embraced in securing research purpose (Kothari 2004:08; Wahyuni 2012:71). Similar to this is the view by McGregor and Murnane (2010:420) that methodology is generally a set of systematic constituents or work plan of each research on approaching its intent. In this regard, researchers are fully attentive in choosing the

suitable procedures and techniques based on the kind of information for which they want to search. This implies the failure of research when these are not considered well.

6.3 STUDY AREAS

Since this study is internationally comparative, the areas involved are Motheo and Maseru districts. Motheo district is a former district in the Free State province of the RSA, which today is Mangaung Metropolitan Municipality. Although parts of this former district (Naledi and Mantsopa municipality) fall within other newly segmented districts, the researcher has decided to treat them within the study for widened coverage and there focuses within border lines of the former Motheo district. The Mangaung Metropolitan Municipality and former Motheo district appear in figure 1 below combining maps. The labelled map shows Mangaung Metropolitan Municipality while the other map has the red-coloured portion showing Motheo district.

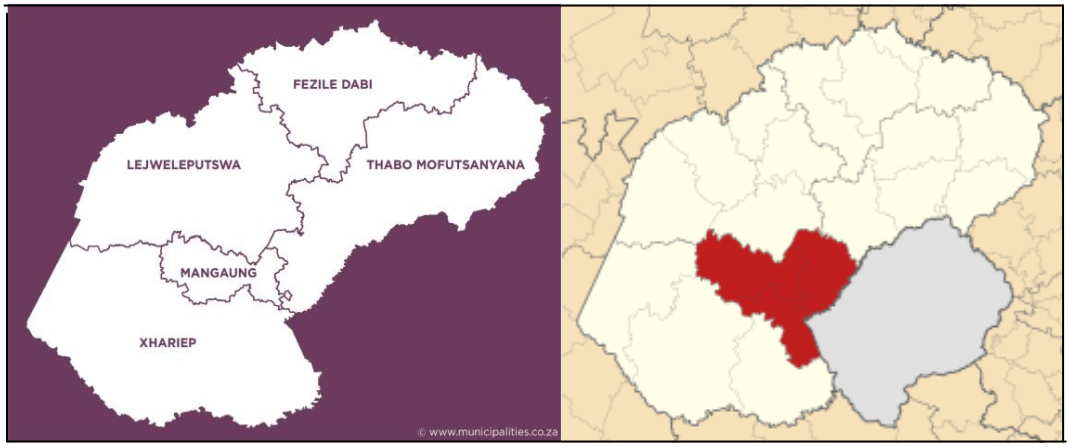


Figure 1: shows two maps Mangaung Metropolitan Municipality and Motheo district (red-coloured)

Figure 2: shows Maseru district in Lesotho

Maseru district is the capital town of Lesotho. In terms of size and population, it is the largest with 4, 279 km^2 and has about a quarter of total population (estimated in chapter six). The district is well-endowed with resources unlike others and for that fact; it has become a referral district. Figure 2 (above) shows the map of Lesotho with Maseru district clearly depicted in red.

6.4 RESEARCH DESIGN

According to Ntaote (2011:23), Rakotsoana (2012:47) and Phoolo (2013:34), research design is a methodical framework that almost all studies normally undertake showing exact ways of accomplishing their purposes. Design of research is of essence in that it plans and structures the study in a way that it maximises research findings' internal validity and validity which are highly recommendable. Inevitable research design elements in this study owing to scientific nature are mixed method research design, population and sample as well as sampling, instruments/data collection methods and recording techniques and data analysis.

6.4.1 Mixed Method Research Design

This study employs mixed method research design to widely and deeply elicit information on career awareness for secondary schools by TVET and its curriculum's quality assurance and quality control. Djan (2014:101) shows that mixed method research designs are in two classes sequential and simultaneous. In the sequential mixed method, qualitative research design can follow quantitative research design dominating, or vice versa. In the case of simultaneous mixed method research design, qualitative elements and those that are quantitative occur at the same time. In the simultaneous mixed method research design that the researcher has decided to utilise in this study, the quantitative dominates.

The quantitative research design, due to its nature, has enabled the use of numbers in the study (Shank in Mosebekoa 2013:05). Quantitative research design is an inquiry into a social problem measured with numbers and analysed with statistical procedures (Kelly 2011:29; Joubish, Khurran, Ahmed, Fatima and Haider 2011:2084; Bhattacherjee 2012:34). The statistics has capacitated the generalisation of findings since this research design has covered a considerably large population in two countries. Moreover, statistics have formed the basis for qualitative data because the questions mostly appeared in a descriptive nature on which explanations accrued. Without quantitative research design aspects, data would be without evidence. This research design has had predetermined objectives enabling replication of results to measure magnitude of TVET's curricula quality assurance and quality control and influence on the secondary education of students.

Qualitative research design is of importance in providing reasons for measures of TVET's curriculum quality assurance and control and career awareness to secondary schools. Qualitative approach is a form of systematic empirical inquiry into meaning (Shank in Mosebekoa 2013:05) whilst Bhattacherjee (2012:34) defines it as eliciting data from subjects' viewpoint. Subjectivity is important since it shows dynamism in reasons behind a phenomenon that quantitative research design ignores. Qualitative part has furthermore granted opportunity to the researcher of making prompts and probes when necessary, a difficulty in quantitative research. Generally, it is this design which enables the researcher to understand behaviour of interest in its own setting without comparison to other places. The understanding is that different factors may be causal to the same behaviour hence finding the exact one and applying relevant measures.

Although qualitative research design has numerous types, the researcher has decisively adopted **phenomenology**. This seeks to generate knowledge from respondents' viewpoint on the purpose of the study (Rakotsoana 2012:41; Djan 2014:102). Since phenomenon is crucial for understanding human experience, it has assisted in finding TVET's students experiences in relation to their expectation from secondary education to reach their ambitions (Rakotsoana 2012:42). Although this research design is subjective, the researcher has had allegiance to present chiefly and ethical information from respondents' perspectives (Trumbull and Watson in Djan 2014:102). This normally minimises the possibility of data lacking validity and reliability. By and large, mutual use of mixed method research design has assisted the researcher to abolish limitations by one research design for balanced findings.

6.4.2 Population

This study's population is within TVET in the districts – Motheo and Maseru – respectively. Population is broadly known as a number of people, objects or events on which a study is undertaken (McMillan 1996:86; Schofield 2008:11; Mulengeki *et al.* 2013: 162; Babbie 2014:120). In this study, population is human since the study seeks an understanding of human experiences. Without population, this study, and others, would have been impossible indicating that population is the mainstay of all researches. Population often has two classifications: universal and accessed (McMillan 1996:86). Universal population is about the entire population related to the theme in some way (McMillan 1996:86) and in this study it consists of TVET

institutions. Since not all stakeholders in universal population are important in the study's context, it sets out for only the most relevant – accessed population or unit of analysis – TVET's students and lecturers and grade twelve students and teachers. Lastly, the study further encompasses some graduates' experiences regarding productivity and production thereby qualitatively establishing societal development status.

6.4.2.1 Sample

The study has taken a sample, representation, of schools in the districts. Within Motheo, major TVET covers Central University of Technology (CUT), University of Free State, Vista University, Qualitas Career Academy and Motheo TVET College (*see section 2.3.6; section 3.5 section 5.3 table 5.1).* The researcher intends to conduct the study in no more than one, Motheo TVET College, which is predominantly technical. In particular, the researcher consults 1 communication and marketing officer, 16 lecturers and 38 N5 students in Engineering (Electrical Engineering programmes) (*see section 7.4 table 7.3a*). In the case of Maseru, TVET covers the National University of Lesotho (NUL), Limkokwing University of Creative Technology, Botho University, Lerotholi Polytechnic, Lesotho Agricultural College, Lesotho College of Education and National Health Training College. Within this sampling framework, the researcher has chosen one as well: Lerotholi Polytechnic in Engineering and Technology (Water and Environmental Engineering programmes). Similar to Motheo TVET College, the researcher has followed almost the same pattern in grouping respondents in Maseru: 1 communication and marketing officer known as team member, 13 lecturers and 33 completing students (*see section 7.4 table 7.3a*). Explanations exist why researchers sample population and so do the one in this study context. Initially, this study is not a census and secondly, resources are scarce to cover universal population. Thirdly and lastly, in quantitative dominant studies, data is repetitive in nature; hence no need to pursue studying the universal population while there is valid and reliable data at hand (Babbie 2014:119; Bhattacherjee 2012:66; Mulengeki *et al.* 2013:162). Continuity in covering such population with the same data attributes culminates in resource waste. However, the sample remains a remedy to this without compromising data attributes. On the basis of these, researchers normally determine drawing a sample as it yields the same results with a universal population utilisation when carefully operated.

6.4.2.2 Sampling

In identifying respondents, this study has dominantly used the probabilistic sampling technique. The researcher has applied random sampling technique among the engineering programmes students groups. Within the same programme, the lecturers were then consulted following the random sampling technique. According to Palinkas, Horwitz, Green, Wisdom, Duan and Haagwood *(*2012:02) and Creswell (2012:206), being guided to the respondents that the researcher deems necessary, but not familiar with, is important in ensuring that the study collects only valid, reliable data. When data lack these attributes, their studies are not valued and respected.

6.4.3 Data Collection Methods and Techniques

This study has applied both mixed aspects of research design in data collection attempting to reduce as much as possible limitations of one research design by the other. For example, whilst quantitative research design data collection methods study TVET influence on secondary schools on a shallow, wider perspective, qualitative do so on a deeper understanding thereby generating thick-explanatory data. It is on the basis of these that the researcher has made a sound, thick generalisation.

6.4.3.1 Quantitative Data Collection method and technique

The quantitative data collection method in this study is survey. Survey is about conducting a study on a very large population using the instruments or techniques – questionnaires and interviews. In this case, the questionnaires target covering a large population so that generalisation on the behaviour can be made. But since there is always a need for having detailed information in order to understand the behaviour better, some interviews are therefore employed. In this sub-section (quantitative), only questionnaires analysis appears regarding their formation and administration whilst interviews much detailed within procedure for qualitative data collection.

The researcher has followed within a scale of data, ordinal/ ratings enabling to detect the extent to which secondary schools acknowledge the influence by TVET for societal development by curricula's relevance. The researcher has attained a degree of responses using rating scales,

Likert scale, developed by Rensis Likert (1932) (Ary, Jacobs, Sorensen, Razeveid 2010: 209). This among quantitative ways of eliciting data is advisable on the ground that it covers differing degrees of opinions impossible in dichotomous and multiple-choice type questions. According to Cohen, Manion and Morrison (2007:345), the widest series of Likert scale includes such five options as 1=strongly disagree (SD), 2=disagree (D), 3=Undecided (UD), 4=agree (A) and 5=strongly disagree (SA). This has been adopted by the study in its questionnaires.

In this survey, the researcher has formulated closed-ended questions to test the hypothetical statements. Although such questions are difficult to construct, the researcher has found them easy to analyse (Ary *et al*. 2010:392). In the course of questionnaires construction, the researcher has fully ensured several fundamental attributes. Initially, the researcher has drawn operationalising questions from the specific questions to eventually achieve the study focus. Secondly, the researcher has made it a point that the questions are precise and concise while lastly, not leading and threatening (Cohen *et al*. 2007:263).

Ensuring data validity, the researcher drew operationalising respondents' questions from research questions as well as objectives. The researcher took full responsibility that questions address all aspects of the objectives to fully explore the study purpose (Kumar 2011:169). Sample further promotes validity of data through its representativeness thus enabling generalizability: internal and external validity. The researcher finally incorporated construct validity from which a degree of commitment in alerting secondary schools by TVET and curricula's relevance for societal development has been established. Concerning data reliability, the researcher established its aspects based on different groups of respondents in the same unit of analysis (Kumar 2011:171). Since having the same attributes, the researcher found generally the same results from such groups.

In administering the questionnaires, the researcher planned that he would present them and collect them the same day to avoid delay and failure to get back all of which. Also, he planned to meet the lecturers to take them to their classes to collect data. However, it happened differently at Motheo TVET College. The campus manager was observant enough to see a problem of delay and asked one lecturer to take the questionnaires administer them to his class which was to be in

in the evening that with the same class of N5 students. The researcher then set the date for collection. On the set date, the questionnaires were ready for collection. At Lerotholi Polytechnic, the students were undertaking examinations and many came for writing and at their own scheduled time for revision. The researcher, as a resort, decided to check the time-table and came on the day they write. Waiting near the door, he was holding questionnaires. As they came out, he called them, introduced the study and gave a questionnaire. All questionnaires were answered and received back. In the case of the lecturers, in both institutions, they were visited in their offices until 13 of them were met. This happened in the same manner at Lerotholi Polytechnic. All the 10 lecturers filled the questionnaires in the presence of the researcher.

6.4.3.2 Qualitative Data Collection Method and Technique

After the administration of the questionnaires, the researcher embarked on the next stage of data collection that is through interviews to validate or source more information. The researcher identified the prospective respondents and these were three lecturers, three students and one marketing officer in each of the two institutions. The process of validation is explained by (Bhattacherjee 2012:92) in another context as triangulation. It is indicated to have the same essence as the above which is proving the findings generated with the use of questionnaires. It is only qualitative methods that have the capacity to generate explanatory data and it has been for the need of such data in this study that interviews were applied to all lecturers, students and marketing officers. The researcher's alertness in balanced argument has remarkably assisted him find it worthy to yield some data from respondents' experiences catering for special cases not covered by questions. In which case clarity was essential by whichever party involved, prompting or probing instantly occurred (Trumbull and Watson in Djan 2014:102).

Prior to conducting interviews, the researcher prepared interview schedule with three mixed interview designs: fixed-alternative, open format questions and scales (Cohen *et al*. 2007:376), without any dominating, reducing study's validity compromise lying in their shortcomings. This initiative thus has culminated in generally what is a semi-structured interview. The fixed-alternative aspect is identifiable in gender and qualifications related data. Semi-structured questioning, with some variables, appears in eliciting data concerning explanation on TVET ways of sensitising secondary schools and relevance of their curriculum preparing productive

graduates in societal development. It is within this questioning that scale questions' nature (showing phenomenal degree), but without options, appears. With all these elements integrated, the researcher undoubtedly stands a chance to elicit thoroughly valid and reliable data. The researcher furthermore decides to apply direct and indirect questions (Cohen *et al.* 2007). The former is significant in attaining data on sex, qualifications and less sensitive data on experiences, attitude and opinion. The latter is of importance, in opposition, where information based on respondents' experience is sensitive.

In this study, fill in responses on sex and qualification data occur from direct questions. The semi-structured questioning interview technique, as with other questioning techniques, dictates the mode of response. Then tabular-like responses follow measures enhancing secondary schools' students in tertiary participation and relevance of TVET curricula and the last part of many questions has open-ended part to which respondents give reasons from their subjective point of view (Cohen *et al.* 2007:378).

Administering interviews, the researcher, at Motheo TVET College met first the marketing officer at the headquarters of Motheo TVET College on career awareness and infrastructural issues of the institution. Thereafter, the researcher went to Motheo TVET College campus at Hill's view where he met lecturers and students. The lecturers were visited in their offices. The students were found outside classes. The first N5 students met guided the researcher to others. Interviewing was performed with the short while as the interviews were just 6 in all. In the case of Lerotholi Polytechnic, one student was known and found met coming for study. It was this student who guided the researcher to find others (her colleagues). The researcher, then, happened to meet team-member while looking for any hub lecturer. In the case of other lecturers, the researcher was directed to their offices. To any respondent the researcher as bound ethically by research had to introduce himself thoroughly and precisely and requested permission in yielding data (Creswell 2012:206). In addition to this, the researcher alerted the respondents of their significant contributions regarding motivational presentations and curriculum relevance of tertiary TVET towards youth societal development. Asking questions, the researcher started from the top to the bottom of the interview schedule. Both interviews and questionnaires of the

lecturers made the researcher to spend some days in each institution. This resulted from appointments that were made with some.

Even in qualitative data collection method, the researcher thought of and implemented validity and reliability with the effect of scholarly respect. Validating data, the researcher considered first the study's specific objectives and research questions and matched them with field questions logically – face validity (Kumar 2011: 167). Forthwith, the researcher asked a range of field questions to elicit data to fulfill study focus - content validity (Kumar 2011:167). On the basis of data generated, it is the interest of the researcher clearly to indicate degree in variables indicating levels of measures for interest and curricula relevance to societal development generation in TVET – construct validity (Kumar 2011: 167) – for progress seek. Concerning reliability, the researcher has banked his trust in triangulating units of analysis testing consistency. The questions asked had variables in nature allowing testing reliability (Kumar 2011:168).

6.4.4 Data Recording Techniques

The study concerning quantitative data generation has employed spaces in the questionnaires for answering. In this regard, the respondents have had full responsibility to write answers and in the correct way. In the case of interviews, the researcher has utilized note-taking for its merits over electronic means, such as recording only relevant data and saving time in the course of transcripts analysis. This has been chosen from a range of recording techniques: two electronic means: audiotape recorder and one manual, note taking (Cohen *et al.* 2007:365; Driscoll 2011:165). The researcher's high aptitude in interpersonal and communication skills proves significant in eliciting data verbally as well as their presentation in writing. Note-taking however has influence of subjectivity or bias, which possibly affects negatively results' validity, and to reduce this, the researcher writes responses as they are reflecting objectivity part of true research.

6.4.5 Data Analyses

The whole data gathered in this study were analysed with the electronic devices (Statistical Package for Social Sciences), a computer and calculator. Data analysis is familiarizing oneself with data, reducing, organizing, breaking and synthesizing them and forming codes and themes, searching for patterns as well as contrasts and creating blocks (Bazeley and Jackson 2013:04).

This activity occurs for giving meaning to the data the researcher has collected and collated (Singh 2006:224; Driscoll 2011:17). The researcher engages initially in coding followed by tallying thereby turning data numerically (Ary *et al.* 2010:123). This informs descriptive statistical analysis with combination of univariate and bivariate analyses. In cases of bar charts and histograms tables (sometimes), the researcher ensures using intervals, however; the characteristics on tertiary TVET-related issues are unequal in terms of frequency. It is at this stage the researcher employs ratio and ordinal scales to form patterns and contrasts in processed data (Ary *et al.* 2010:123).

Regarding qualitative data, the researcher in their analyses had employed mostly quantitative analysis techniques as well. After finishing collecting data from a unit of analysis, the researcher analysed them. The reason is that the researcher still remembers the responses and that time consumption, which is high in opposite approach, is minimised.

The study commenced by editing despite the fact that this materialises in most cases in quantitative research design. This plays a major role by cleaning and rectifying data. On normal basis, it happens prior to actual analyses of data particular when the researcher is right from the field and remembers responses quite well (Kumar 2011:246).

Subsequent to editing data, preparing for analyses, is data familiarisation. This is by means of re-reading occurring to the data at hand for analysis. Also, it is happens following completing data collection to a unit of analysis. Familiarisation has essentially formed basis for data organisation and coding process.

Coding had occurred forthwith following data familiarity. This had been by breaking data into pieces and applying nominal scale to responses. Codes then developed themes, that is, the researcher never had imposed codes; nevertheless, they originated from primary data (Kumar 2011:248; Walliman 2011:134), hence thematic analysis. Thereafter, the act of tallying materialised and formed frequencies which capacitated the drawing of internal validity. Coding qualitative data predominantly depends upon eliciting them through semi-structured interviews within which exists some variables with commonality enhancing data reliability. Simultaneously,

partial questions' openness likewise had promoted validity by gathering flexibly relevant data as respondents have not every single response similar to others' owing to lacking homogeneity in some instances (Walliman 2011:134).

By comparing corresponding units of analysis amongst the districts of study, using qualitative and quantitative data, the researcher has indeed formed blocks. Each of which has a general description as well as explanation as an introduction to its findings in statistical forms. Thereafter, the statistical presentation of data comes into play based on nominal scale through coding.

6.5 ETHICAL CONSIDERATIONS

This study is scientific in nature and it has therefore applied research ethics. They assist in promoting validity and reliability of the study (Kumar 2011:217; Bhattacherjee 2012:137). The study has applied the following ethics:

In all the institutions visited, the researcher consulted gatekeepers for direction to institutional authority. As the names of gatekeepers dictate, they control movement into and out of the campuses. This enables order of movement and protection in the institutions. (Higher Education Commission 2012:55: Cohen *et al.* 2007:53; Creswell 2012: 211).

When the researcher met all respondents, he introduced himself and the thesis' purpose and explained their vital role in imparting the information understandably and willingly which to him as the former benefits in prosperously accomplishing requirements of the course currently in pursuit (Kumar 2011:220; Bhattacherjee (2012:137). Respondents, through the researcher, thus have been fully aware that they are at liberty to abscond in the course of interviews, mostly when they are not delighted with proceedings. In the latter, it is a remedy to respondents themselves by eliminating obstacles to establishing prospective enterprises and growth of the already existing.

Emphatically, respondents, from the researcher, received assurance in verbatim that data are solely for the purpose the study pursued, not any other use (Singh 2006:220; Koshy in Higher

Education Commission 2012:56). If this does not happen, it may provoke withholding information for fear of manipulation and this compromises the quality of the study.

It had also been in the best interest of the researcher to sensitise respondents that the study does not intend to include their names as some of which my feel uncomfortable. Instead, he had declared he would rather make use of numbers and symbols (letters) (Singh 2006:220; Koshy in Higher Education Commission 2012:56). This promotes more freedom on the side of the respondents and real they utter genuinely their opinions, experiences and observations.

The researcher never guaranteed respondents any form of reward, but articulates probable impact of the study for the entire nation they form its part (Bhattacherjee 2012:142; Teessite University 2015; Koshy in Higher Education Commission 2012:56). An acknowledgeable promise, in securing this, has been to produce an article to institutions as requested by them (post-secondary educational institutions, some private enterprises) and some individuals.

The researcher before going to the field, planned that he would request the lecturers at their offices time to allow him administer his questionnaires and interviews at the end of the lessons. Concerning the data from the lecturers, the researcher planned to ask them if they can attend them immediately or later on appointment basis. When the researcher arrived in their offices, he asked the lecturers if they could give immediate attendance to his data instrument or whether they can address them by appointments. This was made to reduce as far as possible interventions in instructions and their preparations and carrying of other duties by the lecturers.

6.6 CHAPTER SUMMARY

The study has followed mixed-research approach in Motheo and Maseru Districts using questionnaires and interviews. The data were recorded in audio-recorder and by note-taking and later analysed using Statistical Package for Social Sciences. Almost all ethics were operationalised in Lerotholi Polytechnic and Motheo TVET College for internal validity.

CHAPTER: SEVEN

QUANTITATIVE ANALYSIS OF THE LECTURERS AND STUDENTS' RESPONSES

7.1 INTRODUCTION

This chapter analyses the quantitative findings of the study. It initially describes the institutional framework for TVET in the RSA and Lesotho cases in relation to development. Secondly, it describes the perspectives of the marketing officers on TVET. Thirdly, it reveals the characteristics of the study's respondents. Fourthly, it presents research findings on the lecturers and students views. Fifthly, it highlights summary of the chapter.

7.2 INSTITUTIONAL FRAMEWORK FOR TVET IN THE RSA AND LESOTHO

The positive perception of TVET of being significant by responsive outcomes to the socio-economic development drawbacks stimulates the two states, viz, the RSA and Lesotho to keep enhancing its establishment in their entirety as far as possible. Achieving this, education policy frameworks virtually act as guiding statements. By far, their governments have established TVET institutions themselves and simultaneously have devolved such allegiance to the private sector to further contribute in widening accessibility of education levels. The RSA government, as shown by literature, has established 50 TVET colleges following upgrading Technikons into universities of technology and Further Education and Training colleges into institutions of higher training. Motheo TVET College is an exemplary of Further Education and Training College promoted. In Lesotho's context, the government has set up Leribe technical Institute while many others are under proprietorship of churches and private sector. In addition to locally owned are foreign educational institutions such as like Limkokwing University of Creative Technology into which Basotho enrol to acquire innovative skills.

The upgrading has been made by governments following set standards for higher education. The standards are not important for local education context only, but also for international purposes. Ensuring that the standards are met are CHEs in respective countries. These are by affirmation that institutions met emphasis on availability of resources including infrastructure, lecturers, content, resources (teaching-learning) and examinations. Despite this, the problem of lacking skills persists in economy situational analysis; hence, this study sets out to establish the extent to

which factors responsible for curricula (and the curricula themselves) to achieve livelihoods are in scrutiny hereunder. There is a clear understanding (by the researcher) that this exercise worth improving certainty of TVET quality.

7.3 MARKETING OFFICERS' PERSPECTIVE

The study has covered marketing officers' views, and documents for approval, regarding how they alert the nations on their curricula. This follows the realization that lack of respect for TVET has in the same way affected the two countries as others in the global context. Thus, these are the main respondents to the question on awareness of curricula of the institutions understudy. Table 7.1 shows characteristics of marketing and communication units or teams responsible.

Table 7.1: Marketing respondents' characteristics

Institutions	Gender		Total	Qualification
	Male	Female		
Lerotholi Polytechnic	0	1	1	PhD
Motheo TVET College	1	0	1	BA
	1	1	2	

Table 7.1 shows that all institutions (100%) have realized the significance of marketing and as a result have established relevant structures for marketing. In the case of Motheo TVET College, this activity is available for the whole academic years. In the case of Lerotholi Polytechnic, marketing is performed by a team of lecturers and it is not always on marketing duties as they are assigned instructional duties. The means by which marketing or career awareness is conducted are presented in the table 7.2.

Table 7.2: Marketing entities responses

Institution	Electronic devices			Gatherings			Materials
	Radio	Website	Social media	Visiting	Invited	Exhibition	
Motheo TVET College	Leseli Fm	https://www.Motheotvet.ac.za	@officialmotheo Tvet College (facebook)	Secondary schools	Secondary Schools	Attended with CUT	Flyers & prospectus
Lerotholi Polytechnic		https://www.Lmpa.org.Ls	@fokothy (facebook)	Secondary schools	Secondary schools	Organised by CHE	Flyers & prospectus
	50%	100%	100%	100%	100%	100%	100%

Table 7.2 presents three categories of means such as materials, electronics and gatherings by which career awareness is made in the institutions under study. The purpose behind is to make the institutions known to the societal members so that they enrol to acquire skills with which they respond to their needs. It is only through career awareness that the prospective students can make informed decisions. The two categories such as electronics and gatherings have three sub-divisions into which they occur while that of materials has just one division. The two institutions under gathering category employ all the three sub-divisions (100% - visiting, being invited and engaging in exhibitions) while in the case of electronics (radio, website, social media) Motheo TVET College employs all of them (100%), but Lerotholi Polytechnic utilises only two-thirds (website, social media).

7.4 CHARACTERISTICS OF THE STUDY'S RESPONDENTS

Table 7.3a: Study's population and qualifications

Institutions	**Respondents**	**Sex**		**Total**		**Qualifications**
		Male	**Females**			
MotheoTVET College	Marketing officer	1	0	1	17	Master of Arts
	Lecturers	13	3	16		Degrees, Postgraduate Certificate in Education (PGCE)
	Students	21	17	38		N4
Lerotholi Polytechnic	Marketing officer	0	1	1	14	Doctor of Philosophy (PhD)
	Lecturers	10	3	13		Master of Science (MSc), Master of Arts (MA), degrees
	Students	23	10	33		Cambridge Overseas School Certificate (COSC)
Total		**68**	**34**		**102**	
		102		**102**		

Table 7.3a shows that the study consulted a total of 102 respondents to gather information to achieve its aim. In terms of gender, the study had dominance of the males over the females at 2:1. This dominance has been identifiable within all the groups of the respondents. The fact that there are females in these programmes indicates transformation in the perception of some programmes as being no more gender-based but open to any South African or a Mosotho with matching abilities. The proportion of the students in the two institutions has never been the same;

the total of Motheo TVET College respondents is 55 while the remainder out of 102 is the representation of Lerotholi Polytechnic – 47.

Of all the respondents (102) have qualifications on which many were recruited as the lecturers (PhD, MCs, MA, PGCE and degrees) and many were accepted as students (COSC, N5). The institution with the highest qualified worker related to the programmes is Lerotholi with the team member (instructing the commercial hub-entrepreneurial education) holding a Ph.D. In the case of the lecturers, it is Lerotholi Polytechnic with a Ph.D. and some masters and some degrees. Since the respondents differ in age, table 7.3b and 7.3b show the differences in it among the students and the lecturers, respectively.

Table 7.3b: Students' respondents' characteristics

	Age groups	**Lerotholi Polytechnic**			**Motheo TVET College**		
		Gender		**Total**	**Gender**		**Total**
		Male	**Females**		**Male**	**Female**	
Race (black)	<20	-	-	-	2	1	**3**
	21-25	16	7	23	15	14	**29**
	26-30	6	2	8	4	2	**6**
	31>	1	1	2	-	-	**-**
Total		**23**	**10**	**33**	**21**	**17**	**38**

Table 7.3a shows that both institutions admit boys (44) and girls (27) in engineering programmes. This shows achievement in the fight against gender-based programmes. Again, the table shows that all students absorbed in these programmes are Blacks, but this does not deny other races in these programmes. In almost all the age groups, boys are more than girls despite the fact that the programmes are never gender-biased. In the following age groups 21-25, 26-30 and 31 and above of Lerotholi Polytechnic, there numbers are (2.3:1), (3:1) and (1:1), respectively. In the age groups 20 and below, 21-25 and 26-30 in Motheo TVET College, the numbers are (2:1), (1.07:1) and (2:1), respectively. These imply that in the near future there would be equal girls to boys in these programmes and possibly more over time.

7.3c: Characteristics of Lesotho Polytechnic and Motheo TVET College Lecturers

	Age groups	Lerotholi Polytechnic			Motheo TVET College		
		Gender		Total	Gender		Total
		Male	Females		Male	Female	
Race (black)	<30	-	-	-	-	-	-
	31-35	-	-	-	-	-	-
	36-40	3	-	3	4	1	**5**
	41-45	4	2	6	6	1	**7**
	46-50	2	1	3	2	1	**3**
	51>	1	-	1	1	-	**1**
Total		**10**	**3**	**13**	**13**	**3**	**16**

Table 7.3b shows that in the two programmes male lecturers (21-72%) exceed women lecturers (7-24%). This pattern appears the same in each institution in the chosen programme. Motheo TVET College has 4:1 whilst Lerotholi Polytechnic is slightly lower at 3:1. In both institutions, the age group 41-45 appears bigger than others with 7 (44%) respondents at Motheo TVET College and 6 (49%) respondents at Lerotholi Polytechnic. Following this, it is a descending pattern in number of lecturers in 46-50 and 51 and above at the rate of 23% (3 respondents) and 8% (1 respondent) at Lerotholi polytechnic, respectively. The same age-groups in the case of Motheo TVET College decrease at the rate of 19% (3 respondents) and 6% (1 respondent). This postulates that the programmes are new as there are no many old lecturers working within them.

Programmes of Respondents

Generally, the productivity of TVET is important in all fields that are forming basis for the economy. The programmes that are related are engineering and commercial studies as well as economics. Table 7.4 shows programmes of respondents of the students to acquire some skills for economic development.

Table 7.4: Engineering programmes' respondents

Institutions	*Faculty*	*Programmes*	*Students*	*#*	*Lecturers*	*#*	*Total*
Motheo TVET College (N5)	ENGINEERING	Electrical Engineering	35q+3i	38	13q +3i	16	**54**
Lerotholi Polytechnic (third year)		Water & Environmental Engineering	30q+3i	33	10+3i	13	**46**
Total				**71**		**29**	**100**

q=questionnaires; i=interviews; #=numbers of respondents

Table 7.4 shows that the study is based comparatively on engineering programmes most particularly EE at Motheo TVET College and WEE at Lerotholi Polytechnic. The table approves that the researcher made use of questionnaires and interviews in conducting information from the field by stating their exact numbers to each category of the main respondents. It shows that 35 and 30 questionnaires collected information from Motheo TVET College N5 and Lerotholi Polytechnic third-years students, respectively. Further, they were given to the lecturers in the same institutions, Motheo TVET College has had the greater number of 13 respondents which is by just three higher than of Lerotholi Polytechnic (10 respondents). Also, the table shows that the researcher employed interviews across the two institutions using the same respondents. Unlike in the case of questionnaires, the researcher consulted the same number (3) for all respondents. While the students add up to the total of 71, and are being the greatest, the lecturers are only 11.8 times 2.45 in all. All in all, respondents who are well endowed with programme information are 100.

7.5 RESEARCH FINDINGS ON THE LECTURERS AND STUDENTS' VIEWS

The SPSS in analysing the data from the lecturers and students calculated the total of responses per question, per option of the Likert Scale (*see section 6.4.3.1*). Some scores such as agree and strongly agree are added and converted into one score agree and similarly disagree and strongly disagree are combined into disagree score, manually. The undecided scores remain the same. This reduces the Likert scale to three options for each table to ease comparative analyses among

the groups of lecturers and students. Then, the researcher compared the same scores among the lecturers and the students in the two institutions.

7.5.1 Career Awareness

To enrol in higher education institutions, there is a need of awareness of curricula by potential entrants to make decisions in order to avoid choosing courses that do not match their abilities. The awareness involves other matters as highlighting requirements for admission and the purposes for which the courses are offered in relation to national development. With all these information, prospective entrants apply with certainty that they meet requirements of courses of their interest, they qualify for the courses and they are aware of the purposes for which they are offered and how well they will contribute through it to their societies after graduation. Tables 7.5a and 7.5b show analysis of lecturers and students' responses, respectively, to the statement that 'your institution conducts career awareness'.

Table 7.5a: Lecturers' responses on career awareness

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	2	20.0	**Valid**	1	2	15.4
	2	7	70.0		2	3	23.1
	3	1	10.0		3	2	15.4
	4	-	-		4	5	38.5
	5	-	-		5	1	7.7
Total		10	100	**Total**		13	100

Table 7.5b: Students' responses on career awareness

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	7	23.3	**Valid**	1	5	14.3
	2	7	23.3		2	4	11.4
	3	4	13.3		3	3	8.6
	4	4	13.3		4	10	28.8
	5	8	26.3		5	13	37.1
Total		30	100	**Total**		35	100.0

Table 7.5a shows that 14 (64.24%) of the lecturers agree to the statement as per Likert scale. Six (23.1%) of the remaining 9 lecturers disagree to it while last insignificantly 3 lecturers (12.7%) are undecided. Although the highest category of the lecturers agrees among the two institutions, there is great disparity between them. Lerotholi Polytechnic has 70% (7 respondents) while Motheo TVET College is slightly above half of Lerotholi Polytechnic (38.5%-5 responses). This indicates that the lecturers have realised career awareness activities though to different levels. May be in the case of Lerotholi Polytechnic they have been carried out for a longer period of time. But, in that case of Motheo TVET College, this can be inferred as new practice that many lecturers have not seen or exists only on paper.

Table 7.5b shows that slightly above a half of students 52.75% (35) disagree to the statement as per Likert scale. There are also students at the rate of 36.15% (23) indicating that they are aware of career awareness taking place in their institutions while a few students at 10.95% (7 respondents) have declared themselves undecided. The low rate of respondents indicating that career awareness is exercised implies that many students have not seen these institutions conducting it although it is there. This raises the question how, when and where do they conduct it.

Based on the agreeing categories, as per Likert scale, of the lecturers at 64.24% and students at 36.15, the researcher concludes that the two institutions practise career awareness. But, it is not a well-known activity as many do not know about it and have not experienced it. May be, it is just a new practice.

7.5.2 Purpose of TVET

7.5.2.1 National Development Goals

In a nation, the controlling body, government, has to initially set goals related to change for the better that all institutions are tasked to work towards achieving them. Each institution in its full capacity has a role to play for such change. This implies that if all diverse institutions fully take their responsibilities; undoubtedly, there would be the achievement of the expected change, not just in the nation, but across it. Tables 7.6a and 7.6b below present lecturers and students'

responses to the statement that 'your institution addresses the national development goals' through its curriculum.

Table 7.6a: lecturers' responses on institutions in relation to national development goals

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	2	20.0	**Valid**	1	3	23.1
	2	7	70.0		2	5	38.5
	3	1	10.0		3	2	15.4
	4	-	-		4	2	15.4
	5	-	-		5	1	7.7
Total		10	100	**Total**		13	100

Table 7.6b: students' responses on institutions in relation to national development goals

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	13	43.3	**Valid**	1	10	28.6
	2	8	26.7		2	14	40.0
	3	3	10.0		3	6	17.1
	4	2	6.7		4	3	8.6
	5	4	13.3		5	2	5.7
Total		30	100	**Total**		35	100

Table 7.6a shows that the majority of responses of the lecturers 17(75.8%) agrees to the statement that the institutions (through WEE and EE) address national development goals (as per Likert scale). It is only the two average categories, one with 3(12.7%) remains undecided and the other with 3(11.25%) disagrees. The total category agreeing average (75.8%) indicates that both institutions in the view of the lecturers offer WEE and EE addressing national development goals; otherwise, they would be irrelevant for anything not within the framework.

In the context of table 7.6b, it is shown that the majority of responses of students 45(69.3%) agree to the statement that courses with WEE and EE are offered towards achieving national development goals (as per Likert scale). Then, 9(17.15%) responses stand against these while slightly above these are those for the students showing no awareness 11(13.55%). Both institutions have had the majority of the students' responses in the agree category ranging from

68.6% (24 responses) at Motheo TVET College and 70% (21 responses) at Lerotholi Polytechnic. These generally mean that students' responses agree to the statement.

On the basis of the responses of the lecturers at 75.8% (17) and students at 69.3% (45) in both institutions with the agree category, it is conclusive that the institutions consider national development goals in their daily operations. This may be as a result of influence from the international organisations to which they are members.

7.5.2.2 Programme Necessity/Demand

In addressing the national development goals, there are WEE and EE related companies already operating and they need related engineers. This apparently means that in their growth, they desperately need engineers directly from TVET institutions and where possibly they come to the institutions to order for them. In relation to this framework, tables 7.7a and 7.7b below show the patterns of lecturers and students' responses to the statement that 'institutional programme is on demand', that is, by companies or communities (though quantity not specified).

Table 7.7a: Lecturers' responses on demand of WEE and EE

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	2	20.0	**Valid**	1	6	46.2
	2	6	60.0		2	3	23.1
	3	2	20.0		3	3	23.1
	4	-	-		4	1	7.7
	5	-	-		5	-	-
Total		10	100	**Total**		13	100

Table 7.7b: Students' responses on demand of WEE and EE

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	8	26.7	**Valid**	1	9	25.7
	2	10	33.3		2	15	42.9
	3	5	16.7		3	5	14.3
	4	3	10.0		4	2	5.7
	5	4	13.3		5	4	11.4
Total		30	100	**Total**		35	100

Table 7.7a shows that the majority of responses of the lecturers 17 (74.65%) agree to the statement (according to Likert scale). The remaining part of responses is shared among those who are undecided at 16.44% (5) and those who disagree at 3.85% (1). The total average of the agree category indicates (as viewed by lecturers) that the students are produced to work in some related companies to their skills.

In the case of table 7.7b, students' responses indicate that many of them at 42(64.3%) agree to the statement (as per Likert scale). There are also those who disagree at the rate of 20.2% (13 responses) and those who fall in neither side at 15.5% (with 10 responses). Although there are some students slightly more than one-third disagreeing and undecided (35.7%-23), it is decided on the basis of majority that the institutions produce particular graduates having realised the opportunities.

Both lecturers and students in both institutions have the highest agree average responses levels (74.65%, 64.3%) that students are produced on demand (by companies, or communities). Otherwise, the students have to set their own businesses to employ themselves.

7.5.2.3 Qualification and Requirements-Based Enrolment

The delivery and learning processes are tactical and thus require some minimum standards set to carefully be performed and achieved. This implies that standards have proven the ability to perform a particular task/activity. Table 7.8a and 7.8b indicate the lecturers and students' responses to two statements: one that 'you are a qualified lecturer' and two 'you qualified for the programme (students)'.

Table 7.8a: lecturers' responses on qualifications

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	8	80.0	**Valid**	1	9	69.2
	2	2	20.0		2	2	15.4
	3	-	-		3	-	-
	4	-	-		4	2	15.4
	5	-	-		5	-	-
Total		10	100	**Total**		13	100

Table 7.8b: students' responses on admission based on requirements

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	22	73.3	**Valid**	1	27	77.1
	2	8	26.7		2	5	14.3
	3	-	-		3	2	5.7
	4	-	-		4	1	2.9
	5	-	-		5	-	-
Total		30	100	**Total**		35	100

Table 7.8a shows that almost all responses of the lecturers 92.3% (21) agree to the statement that they are employed on condition that they have required qualifications (as per Likert scale).

Table 7.8b shows through the agree category that the students are admitted only if they meet requirements (as per Likert scale). This, for the two institutions, is confirmed by average responses at 62(95.7% (62). The students' average agreeing indicates that all the students have met minimum requirements for the programmes (WEE and EE).

The lecturers and students' responses average scores 92.3% and 95.7% agree to the statement that they have met requirement set to be members of the two communities: Motheo TVET College and Lerotholi Polytechnic. These imply that the lecturers have the potential to perform their duties while the students in the same way can cope with their studies.

7.5.3 CURRICULA ASPECTS

7.5.3.1 Curricula Stakeholders

Curricula require contributions by the stakeholders to promote their relevance to national goals. Table 7.9a and 7.9b shows the lecturers and students' responses to the statement that 'your institution engages external stakeholders in curriculum development'.

Table 7.9a: Lecturers' responses on external stakeholders' participation in curriculum development

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	1	10.0	**Valid**	1	2	15.4
	2	4	40.0		2	4	30.8
	3	2	20.0		3	4	30.8
	4	1	10.0		4	2	15.4
	5	2	20.0		5	1	7.7
Total		10	100	**Total**		13	100

Table 7.9b: Students' responses on external stakeholders' participation in curriculum development

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	2	6.7	**Valid**	1	3	8.8
	2	8	26.7		2	11	31.4
	3	17	56.7		3	11	31.4
	4	3	10.0		4	7	20.0
	5	-	-		5	3	8.8
Total		30	100	**Total**		35	100

Table 7.9a shows that slightly less than half of responses of the lecturers 11(47.7%) agree to the statement (as per Likert scale). Slightly above half, that is, 53.3% (of 12 responses) is made up of disagree and undecided categories. These share almost all the remaining proportion into halves and disagree category is at 26.55% (6) while undecided is at 25.4% (6). The highest category in terms of average grouping is agree in which Lerotholi Polytechnic has the value of responses at 50% (5) slightly above the average while Motheo TVET College (6) 6.4 times 1.18% below total category's average. These indicate that the lecturers in both institutions support that the statement that external stakeholders contribute in the curriculum.

Table 7.9a shows that less than half of the students' responses 28 (44.05%) are undecided with regard to the statement, while slightly more than 24 (one-third respondents plus 3.15 times1.11%) agree and insignificantly 13(19.4%) disagree. The highest category average undecided indicates that many students are not aware of external stakeholders, except for a few.

The lecturers 47.7% (11) agree to the statement that external curricula stakeholders take part in both institutions in the course of curricula development. This is supported by 36.8% (24 of responses) of the students in both institutions who appear to be aware of this incidence while the rest constituted disagree and undecided categories.

7.5.3.2 Transforming Curricula

Curricula are never static. They keep changing to conform to the world changes. This enables a chance of offering programmes that are up-to-date. Tables 7.10a and 7.10b show the lecturers and students' responses guided by this framework to the statement that 'your institutions transforms curriculum on regularly bases'.

Table 7.10a: Lecturers response on curriculum development' regularity

LECTURERES							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	1	10.0	**Valid**	1	2	15.5
	2	6	60.0		2	4	30.8
	3	1	10.0		3	4	30.8
	4	-	-		4	2	15.4
	5	2	20.0		5	1	7.7
Total		10	100	**Total**		13	100

Table 7.10b: Students responses on curriculum development regularity

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	-	-	**Valid**	1	4	11.4
	2	7	23.3		2	9	25.7
	3	9	30.0		3	8	22.9
	4	8	26.7		4	9	25.7
	5	6	20.0		5	5	14.3
Total		30	100	**Total**		35	100

Table 7.10a shows the pattern that more than half of lecturers' responses 13(58.15%) agree to the statement, while other options are equal (21.9% undecided, 21.55% disagree) (as per Likert scale). In the highest category response average, Lerotholi Polytechnic has the value at 70% (7 of

respondents) while Motheo TVET College 46.3% (6 of responses). These indicate that the institutions transform their curricula regularly.

Table 7.10b shows that less than half of the students' responses 20(43.7%) disagree to the statement, while about one-third 28(30.2%) agree and 17(26.45%) are undecided (as per Likert scale). As the disagreeing category is above the agreeing category, the pattern tells that the students are not aware of curricula transformation as to whether it is regular or not.

While the lecturers (58.15% – 13) in both institutions answer that curricula transformation occurs on regular bases, the students (43.7% – 20) see otherwise. That is, they show no awareness of that incidence. This may be that the interval takes longer than terms duration, for example, within ten years is three terms. It is highly likely that this is not known to the students. However, as this takes place, the lecturers show that it improves programmes of both institutions.

7.5.3.3 Professional Development

Within the societies, there are changes adopted from other societies deemed as of necessity and those arising from the same societies, similarly identified important. Again, other changes arise from the problems from within the same or across societies. Consequently, these scenarios turn to be part of the curricula and the lecturers have to be enlightened about them, either in their personal capacity or that of the institutions. Generally, all education and training institutions are not immune to these changes, thus they have to engage in professional development. Tables 7.11a and 7.11b show the lecturers and students' responses to the statement that 'your institution engages in professional development' by so doing they addressing the above framework.

Table 7.11a: Lecturers' responses on professional development by their institution

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	1	10.0	**Valid**	1	5	38.5
	2	5	50.0		2	5	38.5
	3	2	20.0		3	3	23.1
	4	2	20.0		4	-	-
	5	-	-		5	-	-
Total		10	100	**Total**		13	100

Table 7.11b: Students' responses on lecturers' professional development by their institution

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	7	23.3	**Valid**	1	6	17.1
	2	9	30.0		2	10	28.6
	3	8	26.7		3	3	8.6
	4	6	20.0		4	9	25.7
	5	-	-		5	7	20.0
Total		30	100	**Total**		35	100

Table 7.11a shows that the majority of responses of the lecturers 16(68.5%) agree to the statement with slightly below fifth 5(21.55%) remaining undecided and half of that 2(10%) totally disagreeing (as per Likert scale). Motheo TVET College has the highest agree score at 77% (10) while Lerotholi Polytechnic is with the lowest agree score at 60% (6). This shows that the institutions engage themselves in professional development of their lecturers.

Table 7.11b shows that slightly less than half of the students' responses 32(49.5%) agree to the statement, while 11(32.85%) disagree and 22 (17.65%) are undecided (following Likert scale). Within the highest category agree in group average, Lerotholi Polytechnic has had 53.3% (18) and Motheo TVET College has about half 45.7% (16). This shows that the WEE and EE students are aware of the initiatives institutions have prepared to promote their lecturers' professional development.

The lecturers and students with these agree category average scores 68.5% and 49.5% in both institutions are consistent with the issue that the institutions have engaged in promoting professional development. This implies that the quality of training within WEE and EE would increase following such development.

7.5.3.4 Infrastructure

Formal training and education occurs within properly designed and established infrastructural developments. They protect the facilities from harsh climatic conditions and at the same time provide an appropriate atmosphere for certain activities since the buildings, for example, are designed in the best possible ways for such activities. Tables 7.12a and 7.12b show the lecturers

and students' responses to the statement that addresses this framework 'your institution has enough buildings, water and power'.

Table 7.12a: Lecturers' responses on institutional infrastructure

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	-	-	**Valid**	1	1	7.7
	2	3	30.0		2	1	7.7
	3	1	10.0		3	1	7.7
	4	2	20.0		4	7	53.8
	5	4	40.0		5	3	23.1

Table 7.12b: Students' responses on infrastructure

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	2	6.7	**Valid**	1	10	28.6
	2	5	16.7		2	13	37.1
	3	5	16.7		3	1	2.9
	4	10	33.3		4	4	11.4
	5	8	26.7		5	7	20.0
Total		30	100	**Total**		35	100

Table 7.12a shows that majority of responses of the lecturers at 68.45% (16) disagree to the statement (following Likert scale). Despite this, there are lecturers who see infrastructure as enough at the response level of 22.7% (5). Quite differently, there are a few lecturers (2-8.85%) who declare themselves undecided. Within the category with the highest average scores – disagree – Motheo TVET College has 76.9% (10) and Lerotholi Polytechnic 60.0% (6). This generally indicates that the lecturers have identified that infrastructure is insufficient for WEE and EE students.

Table 7.12b shows that less than half of responses of the students in both institutions at 45.7% (29) disagree to the statement (through Likert scale). The average score of the agree category is equal at 44.55% (30 responses). Within the 29 (45.7%) responses, Motheo TVET College has the

total agree category at 65.7% (23) – 1.43 times category's total average and that of Lerotholi Polytechnic is at less than half (52.5%) of the category' total average. This shows that most students of Motheo TVET College have no concern on their infrastructure while in the context of Lerotholi Polytechnic is major concern. In the case of Motheo TVET College, the number of the students satisfied with infrastructure is more than twice the concerned group. May be, they are satisfied because they have found all students seated in a class although some are too small hence their argument that there are no infrastructural challenges.

The lecturers in both institutions have shown the problem of infrastructure average at 68.45% while that of the students is at 45.7%. Although in the case of the students in both institutions, there is difference with the majority that is Motheo TVET College has the agreeing category larger than the disagreeing and undecided, it has been decided that Motheo TVET College on the basis of lecturers' responses and those of the students disagreeing there are infrastructural challenges in their institution.

7.5.3.5 Equipment

In addition to infrastructure, machines are resourceful as the sources of supportive services to learning and they are generally considered learning centric. When the equipment is not available or enough this affects training as it sometimes gives information to students. In other times, they are the means by which the students learn. Tables 7.13a and 7.13b present analytical responses of the lecturers and students to the statement that 'your institution has enough equipment'.

Table 7.13a: Lecturers' responses on equipment

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	1	10.0	**Valid**	1	1	7.7
	2	2	20.0		2	2	15.4
	3	-	-		3	1	7.7
	4	4	40.0		4	5	38.5
	5	3	30.0		5	4	30.8
Total		10	100	**Total**		13	100

Table 7.13b: Students' responses on equipment

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	1	3.3	**Valid**	1	2	5.7
	2	5	16.7		2	4	11.4
	3	1	3.3		3	8	22.9
	4	11	36.7		4	3	8.6
	5	12	40.0		5	18	51.4
Total		30	100	**Total**		35	100

Table 7.13a shows that majority of responses of the lecturers 16(69.65%) disagree to the statement while just a quarter of them 6(26.55%) agree to it (by Likert scale). When looking at the average scores of the disagree category per institution, it is identifiable that Lerotholi Polytechnic and Motheo TVET College have almost the same responses level: the former has 70% (of 7 responses) and the latter has 68.5% (of 9 responses). The lecturers in the two institutions experience insufficient equipment to instruct the students.

Table 7.13b shows that majority of the students' responses at (68.35%) by 44 respondents disagree to the statement, while 18.55% (12 of respondents) agree and 13.1% (of 9 respondents) undecided (through the use of Likert scale). Overall, the highest categories in both institutions are within the disagreeing category: Lerotholi Polytechnic has 76.7% (of 23 respondents) while Motheo TVET College has 60% (of 21 respondents). These indicate that the institutions have shortage of equipment for students training.

The lecturers and students in both institutions indicate shortage of equipment at the same averages of 69.65% (16) and 68.35% (44). This implies compromise of training in these institutions. This further implies that the students at the field would get stuck as they would not have some ideas on some equipment in use. Where organisations they are attached to are not having such equipment, it means they would graduate without exposure to such and then would be a problem at work mitigating production levels.

7.5.3.6 Institutions' Instructional-Learning Resources

Besides equipment, there are other instructional-learning resources (books, electronic devices). Tables 7.14a and 7.14b highlight the lecturers and students' responses to the statement that 'your institution has enough instructional-learning resources'.

Table 7.14a: Lecturers responses to institutions' instructional-learning resources

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	-	-	**Valid**	1	5	38.5
	2	5	50.0		2	3	23.1
	3	2	20.0		3	-	-
	4	1	10.0		4	4	30.8
	5	2	20.0		5	1	7.7
Total		10	100	**Total**		13	100

Table 7.14b: Students' responses on institutions' instructional-learning resources

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	1	3.3	**Valid**	1	6	17.1
	2	5	16.7		2	10	28.6
	3	6	20.0		3	3	8.6
	4	9	30.0		4	9	25.7
	5	9	30.0		5	7	20.0
Total		30	100	**Total**		35	100

Table 7.14a shows according to the lecturers that the agree category average score for both institutions is at 55.8% (13 responses) while that which disagrees is at 7(35.25%) and that which is undecided is at 2(10%) (by Likert scale). The two institutions have their individual agree category at least at half of responses level: Motheo TVET College has its score at 61.6% (16 respondents) while Lerotholi Polytechnic has score at 50% (for 5 respondents). The agree category average score for the two institutions indicates that the lecturers have materials for instruction and this is supported by individual agree category.

Table 7.14b shows the pattern that half of the students' responses 34 (52.9%) disagree to the statement, while 22(32.9%) agree and just insignificant 9(4.3%) are undecided (with the means

of Likert scale). Generally, this pattern indicates that the findings never correspond with the statement. This inferentially is caused by increasing number of students enrolled especially when the institutions do not purchase the items at the equivalent rate to enrolment.

The lecturers in both institutions (55.8%) have the materials for instruction given by the institutions. In some cases however there are great shortages. In the case of students generally materials are in short supply (as about half of them disagree (52.9)). These have the potential to compromise education innovation and education quality.

7.5.3.7 Lecturers' Instructional Load

The quantity of classes and lessons (credit hours) is significant in quality delivery and allowing research execution for academic improvement. That the lecturers should have manageable loads (enabling space of time for consultation) ought to be taken into account by heads of department by employing where there is overload part-time lecturers. The failure to take initiative while loads are not manageable has effect in compromising quality. Table 7.15a and 7.15b indicate lecturers and students' responses patterns to the statement that 'instructional loads are manageable'.

Table 7.15a: Lecturers' responses on their instructional loads

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	1	10.0	**Valid**	1	3	23.1
	2	7	70.0		2	6	46.2
	3	-	-		3	-	-
	4	-	-		4	1	7.7
	5	2	20.0		5	3	23.1
Total		10	100	**Total**		13	100

Table 7.15b: Students' responses on their lecturers' instructional loads

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	5	16.7	**Valid**	1	6	17.1
	2	10	33.3		2	9	25.7
	3	4	13.3		3	9	25.7
	4	7	23.3		4	6	17.1
	5	4	13.3		5	5	14.1
Total		30	100	**Total**		35	100

Table 7.15a shows that the majority of the responses of the lecturers (17-74.65%) agree to the statement while a quarter of the total respondents disagree (through Likert scale). This pattern shows that generally the lessons are well-spread and that the students are accepted based on quotes.

Table 7.15b shows the pattern that 30 (46.4%) responses (below half of respondents) agree to the statement and more than slightly one-third 22(33.8%) of respondents disagree (by Likert scale). This pattern generally agrees with the statement that the lecturers' loads are manageable. In some cases, there are big classes that may compromise the quality of education and this arouses a need of quick response (46.6% of Lerotholi Polytechnic and 31.2% of Motheo TVET College).

The lecturers at 74.65% of response level and that of the students at 46.4% have shown both institutions having lecturers' manageable loads. It is only in some cases of large classes those taking many students for many courses that are much bigger leading to compromise of education quality.

7.5.3.8 Class Size

Class size is important in offering high quality instructional services, allowing the lecturers to work closely with the students especially during demonstrations and projects. Such opportunity enhances better understanding of the students which is mostly achievable by guidance. However, the large class-size is a drawback as it becomes unaffordable by reducing each chance of each student to have sufficient guidance to complement possessed understanding so that they achieve the expected output. Table 7.16a and 7.16b show the lecturers and students' responses to the statement 'your class size is manageable' lying within the framework.

Table 7.16a: Lecturers' responses to their class-size

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	2	20.0	**Valid**	1	3	23.1
	2	5	50.0		2	2	15.4
	3	-	-		3	2	15.4
	4	1	10.0		4	3	23.1
	5	2	20.0		5	3	23.1
Total		10	100	**Total**		13	100

Table 7.16b: Students' responses to their class-size

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	4	13.3	**Valid**	1	6	17.1
	2	12	40.0		2	8	22.4
	3	2	6.7		3	4	11.4
	4	7	23.3		4	6	17.1
	5	5	16.7		5	11	31.4
Total		30	100	**Total**		35	100

Table 7.16a shows that more than half of respondents of the lecturers 12 (54.25%) agree to the statement which is followed by those who disagree (9-38.1%) (following Likert scale). Within the highest agree category average, Lerotholi Polytechnic has 7(70.0%), but Motheo TVET College has 5(38.5%). This shows that mostly Lerotholi Polytechnics has small classes based on quotes given, although sometimes they are exceeded, while in the case of Motheo TVET College classes are large with few cases of small classes.

Table 7.16b shows that less than half students' responses 30 (46.4%) agree to the statement while those more than a quarter are within disagree category 29(44.3%). Within the agree category average score of institutions, Lerotholi Polytechnic has the highest value at 53.3% – 12 along with disagree category at 40.0% and Motheo TVET College has the lowest at 39.5% – 14 along with disagree category at 48.5%. These show that the two institutions undergo some challenges associated with class-size.

Amongst the responses from the two tables, it is visualised and understood that a great difference occurs between the two institutions that of one institution consistent from lecturers to students. That is Lerotholi Polytechnic has both lecturers and students (70.0%, 53.3%) agreeing significantly to the statement despite some dissimilarities and Motheo TVET College with lecturers and students showing larger classes by disagreeing (38.5%, 39.5%).

7.5.3.9 Lecturer-Student Relationship

The two parties – lecturer and student – need a mutually shared and conducive atmosphere for producing an effective learning of quality skills and knowledge. This consists of many factors promoting a good relationship. These enable the two parties to exercise freely and fully their potential in delivering and learning which are driving towards quality training in the short and long terms. Any trait that opposes the factors has a negative effect by denying a good relationship. Table 7.17a and 7.17b show the lecturers and students' responses to the statement that 'good relationship exists amongst student-lecturers'.

Table7.17a: Lecturers' responses on their relationship with students

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	5	50.0	**Valid**	1	8	61.5
	2	5	50.0		2	5	38.5
	3	-	-		3	-	-
	4	-	-		4	-	-
	5	-	-		5	-	-
Total		10	100	**Total**		13	100

Table 7.17b: Students' responses on their relationship with lecturers

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	5	16.7	**Valid**	1	10	28.6
	2	9	30.0		2	8	22.9
	3	6	20.0		3	12	34.3
	4	6	20.0		4	4	11.4
	5	4	13.3		5	1	2.9
Total		30	100	**Total**		35	100

Table 7.17a shows that all the lecturers' respondents 23(100%) have chosen agree option. This implies that the lecturers are fully aware of creating a suitable learning climate for parties engaged as a whole exploiting potentiality on either side to the utmost levels.

Table 7.17b shows that about half of the students' responses 32(49.1%) agree to the statement while the remaining half is shared among the other categories, with the undecided scoring at 27.15% (18) while the disagree scoring at 23.8% (15). Generally, the relationship is fair and can improve.

The lecturers and students (WEE and EE) in both institutions agree (at 100%, 49.1%) to the statement that there exists good relationship amongst themselves in class.

7.5.3.10 Students Attendance

Attending classes is a good initiative for the students as it allows them to have some chance to contact the lecturers for instructions and clarity. Although the students stand a chance to learn on their own, it is well-known that it is in class and during the time allocated for a particular experience (subject matter) that many of them learn better. This says the students have to take full responsibility in this regard and never miss classes as all of them are significantly important in their knowledge base and skills development. Apparently high levels of absenteeism are the most causative factor in high failure rate of students. Tables 7.18a and 7.18b show the lecturers and students' responses to the statement that 'you attend classes well' in relative terms to the framework.

Table 7.18a: Lecturers' responses on the attendance of students

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	8	80.0	**Valid**	1	6	46.2
	2	2	20.0		2	4	30.8
	3	-	-		3	2	15.4
	4	-	-		4	1	7.7
	5	-	-		5	-	-
Total		10	100	**Total**		13	100

Table 7.18b: Students' responses on their attendance

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	15	50.0	**Valid**	1	17	48.6
	2	9	30.0		2	12	34.3
	3	3	13.3		3	2	5.7
	4	2	6.7		4	4	11.4
	5	1	3.3		5	-	-
Total		30	100	**Total**		35	100

Table 7.18a shows generally that the majority of the lecturers' responses 20(88.6%) agree to the statement based on Likert scale. On the experience of the lecturers their students are attending classes in a satisfactory manner. Perhaps, it is because they are motivated or there are some harsh actions taken against poor attendance.

Table 7.18b shows the pattern that the majority of students' respondents 53(81.5%) in the two institutions agree to the statement, while insignificantly 7(10.7%) disagree and 5(9.5%) are undecided using Likert scale. This confirms the statement that the students attend well, that is, they access almost all content covered in class under the auspices of the lecturers.

The lecturers and students in both institutions have on average shown high students attendance: 88.6% and 81.5%. This possibly shows some high level of maturity and responsibility by the students to their learning.

7.5.3.11 Students' Learning Materials

In addition to the highly recommended regular attendance of the students by the institutions, there should be instructional-learning resources owned by the institutions and those owned by the students themselves. Those owned by the students are much more important in the sense that they enable the students to learn at any time they feel interested. Table 7.19a and 7.19b show the lecturers and students' responses to the statement that 'students have learning materials'.

Table 7.19a: Lecturers' responses on students owned learning materials

LECTURERS							
Lerotholi Polytechnic				Motheo TVET College			
	Score	Frequency	%		Score	Frequency	%
Valid	1	-	-	Valid	1	2	15.4
	2	5	50.0		2	5	38.5
	3	2	20.0		3	5	38.5
	4	1	10.0		4	-	-
	5	2	20.0		5	1	7.7
Total		10	100	Total		13	100

Table 7.19b: Students' responses on their own learning materials

STUDENTS							
Lerotholi Polytechnic				Motheo TVET College			
	Score	Frequency	%		Score	Frequency	%
Valid	1	5	16.7	Valid	1	6	17.1
	2	13	43.3		2	10	28.6
	3	2	6.7		3	3	8.6
	4	7	23.3		4	9	25.7
	5	3	10.0		5	7	20.0
Total		30	100	Total		35	100

Table 7.19a shows the pattern slightly above half of the responses 12(51.95%) agree to the statement while 7(29.25%) are undecided and 4(18.85%) disagree through application of Likert scale. This pattern indicates that the students have materials (pens, pencils, exercise books, mathematical set, geographic set, scientific calculator, text-books) for doing work.

Table 7.19b shows the pattern that slightly more than a half of the students' responses 34(52.85%) agree to the statement, while 5(10.95%) are undecided and 26 (39.5%) disagree (with Likert scale). Lerotholi Polytechnic has the highest responses within the agreeing category at 18(56.6%) while Motheo TVET College has the lowest at 16(45.7%). According to the students, not all the students have all learning resources.

On average, the lecturers (12-51.95%) in both institutions indicate that the students have personal material for learning. The students in almost the same percentage (52.85%-34) indicate that they partly have their own learning materials. This implies a great challenge to accessing

some information that the students are supposed to acquire while in actual fact they lack its sources. This raises a question as to how they cope with the situation.

7.5.3.12 Constructivist Instructional Strategies

When the environment of instruction and learning meets the requirements of the lecturers and students; the instruction actually occurs and it remains the responsibility of the lecturers to choose the pertinent constructivist approach and methods. Scholars recommend that the effectiveness is in any means that enhances more participation of the students to assimilate lesson experiences. Moreover, it has to promote innovation skills of the students which are initiated by knowledge-based economy for the fact that they increase the level of employment. So, without the use of constructive method in instructional and learning activities, graduates become unproductive. Table 7.20a and 7.20b show the lecturers and students' responses concerning the statement that 'constructivist learning approach (with emphasis on participatory dimensions) is or are employed in classes'.

Table 7.20a: Lecturers' responses on constructivist strategies

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	3	30.0	**Valid**	1	5	38.5
	2	7	70.0		2	5	38.5
	3	-	-		3	2	15.4
	4	-	-		4	-	-
	5	-	-		5	1	7.7
Total		10	100	**Total**		13	100

Table 7.20b: Students' responses on the constructivist strategies in classroom setting

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	11	36.7	**Valid**	1	20	57.1
	2	12	40.0		2	10	28.6
	3	4	13.3		3	3	8.6
	4	2	6.7		4	2	5.7
	5	1	3.3		5	-	-
Total		30	100	**Total**		35	100

Table 7.20a shows that the majority of the responses of the lecturers 20 (88.5%) agree to the statement, with all other categories being insignificant using Likert scale. The table shows that the lecturers endeavour in the best possible ways to deliver to the students to promote independence and productivity.

According to Table 7.20b, the majority of the students' responses 53(81.5%) agree to the statement (by Likert scale). The students indicate that they are taught in such a way that they participate in the lessons.

Both lecturers and students in the same institutions (88.5 %, 81.5%) generally show that lessons are skewed to students in the sense that they allow them largely to participate to promote better more understanding of content. This implies that the lecturers introduce the lessons and then assign students some work.

7.5.3.13 Classroom Assessment

It is important that assessment occurs along with delivery as a measure to reflect on the levels of understanding of the students in relation to what is being or has been taught over time. It has to occur on a high modal basis perhaps even in different ways possible. The positive finding on the assessment indicates that the class can then progress to the next content levels on students' generating and building knowledge and acquiring skills. If not, it dictates remedial work by which the students are assured to have understood, ultimately. Table 7.21a and 7.21b show the lecturers and students' responses to the statement that 'lecturers assess students on regular bases'.

Table 7.21a: Lecturers' responses on classroom assessment

LECTUERES							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	4	40.0	**Valid**	1	6	46.2
	2	6	60.0		2	7	53.8
	3	-	-		3	-	-
	4	-	-		4	-	-
	5	-	-		5	-	-

Total	10	100	**Total**	13	100

Table7:21b: Students' responses on classroom assessment

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	10	33.3	**Valid**	1	6	17.1
	2	10	33.3		2	8	22.9
	3	2	6.7		3	10	28.6
	4	7	23.3		4	6	17.1
	5	1	3.3		5	5	14.1
Total		30	100	**Total**		35	100

Table 7.21a shows that all lecturers responses 23 (100%) agree to the statement (with Likert scale). This means as indicated from lecturers that they ensure that they differently assess their students at classroom settings.

Table 7.21b shows the pattern that in both institutions about half of the students' responses 34(53.3%) agree to the statement and about one-third of responses 19(28.9%) disagree (by means of Likert scale). In the agree category average score, Lerotholi Polytechnic individually is the highest at 66.6% (20) and Motheo TVET College is the lowest at 40%(14). The students are generally assessed on regular basis.

The responses of the lecturers 100% (23) and those of students 53.3% (34) in both institutions show that WEE and EE students are assessed from time to time. This is probably to find if the students are following so that remedial work is given.

7.5.3.14 Consultation and Students' Academic Needs

In education and training, always there are differences in the rate at which the students understand subject matter, some are fast and others are slow. The lecturers from professional view-point have to accommodate the two categories, as well as those on average, this is to ensure that all students benefit and progress. Assistance of the students extends out to allocation of time for consultation following class activities. Table 7.22a and 7.22b show the level of the lecturers and students' responses in patterns to the statement that that 'lecturers have time to address students academic needs'.

Table 7.22a: Lecturers' responses on assistance by lecturers outside class

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	2	20.0	**Valid**	1	6	46.2
	2	7	70.0		2	4	30.8
	3	-	-		3	-	-
	4	1	10.0		4	1	7.7
	5	-	-		5	2	15.4
Total		10	100	**Total**		13	100

Table 7.22b: Students' responses on lecturers' assistance level outside class

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	4	13.3	**Valid**	1	4	11.4
	2	9	30.0		2	11	31.4
	3	4	13.3		3	6	17.1
	4	7	23.3		4	6	17.1
	5	6	20.0		5	8	22.9
Total		30	100	**Total**		35	100

Table 2.22a shows the pattern that in both institutions the majority of the lecturers' responses 19(83.5%) agree to the statement while 4 (16.55%) disagree (based on Likert scale). This is possibly because of some comprehension that other students are slow-learners naturally and that allocated time sometimes disallows any necessary remedial work.

Table 2.22b indicates that the lecturers' responses are two-fifth equal among the agree category 28 (43.05%) and disagree category 27 (41.65) (as worked out through Likert scale). However, many students are not content about consultations. This is shown by the students in both students at the average score of 42.35%. This may arise from the students not being fine with consultation schedules.

The lecturers 19 (83.5%) generally appear with the view that they assist their students in many ways possible that they share with only 28 students (43.05%). This indicates that students have problems with what their lecturers call regular opportunity to consultations.

7.5.3.15 Students' Commitment in Learning

The experience of the students taking the responsibility that they understand is an appreciable one and often remains a pinnacle of their learning success. Alongside this are the lecturers who portray their commitment. The indicative, observable behaviour proving commitment of the students is that first shown by consultations described above and that second at personal level (reading) as well as collective (group discussions). On the basis of these, the students undoubtedly perform well in their academic work, and this is the general approval of their commitment. This means that in the case of ineffectiveness of the first and the second, the approval is unattainable. Table 7.23a and 7.23b show the students and lecturers' responses on their status relative to the statement that 'students show commitment in learning'.

Table 7.23a: Lecturers' responses regarding commitment of students in learning

LECTURERS							
Lerotholi polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	1	10.0	**Valid**	1	2	15.4
	2	5	50.0		2	8	61.5
	3	3	30.0		3	1	7.7
	4	1	10.0		4	1	7.7
	5	-	-		5	1	7.7
Total		10	100	**Total**		13	100

Table 7.23b: Students' response on commitment of their learning

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	14	46.7	**Valid**	1	12	34.3
	2	14	46.7		2	11	31.4
	3	2	6.7		3	7	20.0
	4	-	-		4	4	11.4
	5	-	-		5	1	2.9
Total		30	100	**Total**		35	100

Table 7.23a indicates that the majority of responses by the lecturers 16 (68.45%) agree to the statement (through Likert scale). Motheo TVET College has the highest agree score of 10 responses (76.9% plus 7.5 times 1.12 above total agree group average) while Lerotholi

Polytechnic has the lowest agree score at 60% (1.15 times 7.82 below total agree group average). The lecturers generally show that their students portray commitment to their academic work.

Table 2.23b also shows that the majority of the responses of the students 51(79.55%) agree to the statement (using Likert scale). On individual basis, Lerotholi Polytechnic has the highest response level at 93.4% minus 1.17 times total group average while the response level of Motheo TVET College is the lowest at 65.7% (23). These show that generally the students are committed in their learning.

The lecturers and students 68.45% (16) and 79.55% (51) from both institutions generally show that WEE and EE students at higher levels (N5 and third year) show commitment in their learning. These are only achievable by the students who are serious with their studies.

7.5.3.16 Workplace/internship

A great relationship exists between theory and practice in the academic world. This usually is known as theory informs practice. This in other words says that the students have to be involved in theory first and later engage in practice of what they learnt as theory. It is mostly on the attainment of practice it can be said that the students are both competent and employable. This implies that all TVET institutions should see this (practice) as a need and ultimately expose their students to it by means of some internship. Table 7.24a and 7.24b show responses on the statement that 'lecturers expose students sufficiently to workplace experience'.

Table 7.24a: Lecturers' responses on exposure of students at workplace

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	3	30.0	**Valid**	1	8	61.5
	2	4	40.0		2	5	38.5
	3	3	30.0		3	-	-
	4	-	-		4	-	-
	5	-	-		5	-	-
Total		10	100	**Total**		13	100

Table 7.24b: Students' responses on their exposure in workplace for experience

STUDENTS							
Lerotholi Polytechnic				Motheo TVET College			
	Score	Frequency	%		Score	Frequency	%
Valid	1	9	30.0	Valid	1	2	5.7
	2	8	26.7		2	18	51.4
	3	3	10.0		3	5	14.3
	4	7	23.3		4	7	20.0
	5	3	10.0		5	3	8.6
Total		30	100	Total		35	100

Table 7.24a indicates that the majority of responses of the lecturers 20(85%) agree to the statement (through Likert scale). The lecturers in both institutions are satisfied with the time given for internship.

Table 7.24b shows that above half of responses of the students 37(56.9%) agree to the statement. This generally shows that the institutions expose students to real life experiences sufficiently although there are some with dissatisfaction (10(33.3%) and 10(28.6%) –1.16:1) (with the use of Likert scale).

The lecturers 85% (20) have expressed in both institutions their satisfaction on the exposure of the students to the world of work. This is highly likely to bring theory into practice thereby enabling experience gain to some extent with which graduates can establish their economic entities. Similarly, students at 56.9% (37) have shown the internship is sufficient except for some individuals.

7.5.3.17 Research Projects

Alongside internships is another form of practice in what is known academically as research project. In this case, the students aside or along with subject matter carry out research on the issue of interest. Research by nature generates information addressing observable problematic in the society. On the basis of research findings, recommendations follow on what can be done to overcome them. Within the academic context, the benefits are generation of knowledge that would further apply in the societal context, perhaps; in the form of resolution to challenge and earning for some marks. Since researcher becomes an expert on the issues learnt, they can be

employed on such issues. Table 7.25a and 7.25b show responses of lecturers and students to the statement that 'projects innovated earn students marks' fixed within this framework.

Table 7.25a: Lecturers' responses on research projects

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	2	20.0	**Valid**	1	1	7.7
	2	5	50.0		2	-	-
	3	1	10.0		3	3	23.1
	4	1	10.0		4	5	38.5
	5	1	10.0		5	4	30.8
Total		10	100	**Total**		13	100

Table 2.25b: Students' responses on research projects

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	9	30.0	**Valid**	1	4	11.4
	2	14	46.7		2	6	17.1
	3	2	6.7		3	10	28.6
	4	4	13.3		4	8	22.9
	5	1	3.3		5	7	20.0
Total		30	100	**Total**		35	100

Table 7.25a shows that the pattern of the lecturers' responses at 11(44.65%) disagree to the statement, while 8(38.65%) agree and 4(16.55%) belong to neither side (by use of Likert scale). Lerotholi Polytechnic has the highest responses score average in the agree category at 7(70% – roughly more than twice the total group average) than Motheo TVET College with the lowest at 1(7.7%) – 19.7 times the group average). This shows that no projects are carried by EE students at Motheo TVET College while at Lerotholi Polytechnic WEE students take some. The largest number of those against the disagree category at Motheo TVET 12(92.4%) confirms this conclusion while Lerotholi Polytechnic it is Visa-versa.

Table 7.25b shows that slightly above half of the students' responses 52.6% (33) agree to the statement while slightly less than one-third 20(29.75%) totally disagree (applying Likert scale). Lerotholi Polytechnic has had the highest scores in agree category at 21(76.7%) while Motheo

TVET College 10(28.5%). This indicates that Lerotholi Polytechnic WEE students conduct research project which is not the case in Motheo TVET College.

The issue of research project amongst the two programmes takes place mainly in WEE at 70.0% (7) – lecturers and 76.7% (23), earning students some marks, implying that it is a course. Within EE, there is no such a course as research, thus the students have no research skills (proven by 72% of responses who disagree and are undecided), even testing on research.

7.5.3.18 Interest and Readiness Indices for Production

Even before or during research project, in the course of acquisition of knowledge and skills, the students with aspirations in the technical courses often show by discussions, on what they can produce or where they want to be employed or are ready to be employed. In the case of the former, they manifest ways of executing the ideas which can further be enhanced by consultations for guidance of their execution. Concluding that one wants achieving a particular target becomes readiness as there is confidence towards it while in training. In the latter, they indicate such industries known for absorption of graduates in their programmes. On the basis of this framework, table 7.26a and 7.26b show responses of the lecturers and students to the statement that 'students show signs of interest in productivity and readiness to engage in production'.

Table 7.26a: Lecturers' responses on signs of interest and readiness in production

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	-	-	**Valid**	1	6	46.2
	2	5	50.0		2	6	46.2
	3	2	20.0		3	-	-
	4	1	10.0		4	1	7.7
	5	2	20.0		5	-	-
Total		10	100	**Total**		13	100

Table 2.26b: Students' responses on their signs of interest and readiness in production

STUDENTS							
Lerotholi Polytechnic				Motheo TVET College			
	Score	Frequency	%		Score	Frequency	%
Valid	1	10	33.3	Valid	1	5	14.3
	2	6	20.0		2	13	37.1
	3	11	36.7		3	7	20.0
	4	3	10.0		4	7	20.0
	5	-	-		5	3	8.6
Total		30	100	Total		35	100

Table 7.26a shows that the majority of the lecturers' responses at 71.2% (17) are on the agree category, while 4(18.85%) disagree and 2(10.0%) remain undecided (through Likert scale). This shows that the lecturers agree that students have signs of readiness to engage in productivity.

Table 7.26b, through use of Likert scale, shows the pattern that at the average 52.35% (34), students responses agree to the statement, while 18(28.35%) remains undecided and 13(19.3%) disagree. Lerotholi Polytechnic students' responses agreeing are at 16(53.3%) while Motheo TVET College 18(51.4%) and this shows consistency with the statement that the students have signs of interest and readiness for production.

Both lecturers and students in the respective institutions (71.2%, 52.35%) indicate that the students have identifiable signs of interest and readiness to engage in production. The lecturers have definitely identified these at classroom level as well as the students and as they discussed while on campus.

7.5.3.19 Innovation Capacity

With all instructional strategies engaged, it is expected that the students develop innovation capacity rather than reproductive capacity to fit well in the OBE context. This is because producing graduates to produce the same knowledge and skills that with time reaches obsolescence. Avoiding this, TVET institutions promote measures of high innovation capacity. Guided by this framework, tables 7.27a and 7.27b show responses of the lecturers and students to the statement that 'students are creative'.

Table 7.27a: Lecturers' responses on innovation of students

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	-	-	**Valid**	1	2	15.4
	2	2	20.0		2	2	15.4
	3	3	30.0		3	6	46.2
	4	4	40.0		4	2	15.4
	5	1	10.0		5	1	7.7
Total		10	100	**Total**		13	100

Table 7.27b: Students' responses on their innovation capacity

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	11	36.7	**Valid**	1	8	22.9
	2	12	40.0		2	11	31.4
	3	5	16.7		3	8	22.9
	4	2	6.7		4	6	17.1
	5	-	-		5	2	5.7
Total		30	100	**Total**		35	100

Through Likert scale, table 2.27a first shows the pattern that 9(38.1%) of the lecturers' responses are undecided while 6(25.4%) agree and 8(36.55%) disagree. That average of some lecturers showing students innovative is not even one quarter (25.4%) is below the largest average the pattern by minus 25.4% plus 12.7 times 1.5. The higher average of the undecided shows that more students have no innovation competencies, but a few, hence generalisation that they are not innovative.

Table 2.27b shows the pattern that many students' responses 42(65.5%) are consistent with the statement, while undecided 13 (19.8%) and disagreeing 10 (14.75%) (as per Likert scale). This pattern clearly shows that college students are creative which is consistent to the statement.

The lecturers (38.1% undecided, 36.55% disagree) in both institutions point that the students are not innovative and this arises from performance of the students. However, the students indicate that they are innovative. The findings by the students are not true, disapproved by their lecturers. Motheo TVET College and Lerotholi Polytechnic only offer WEE and EE theoretically on

campuses which does not give chance to exercise innovation as possibly some parts discussed are not even known to the students.

7.5.3.20 Entrepreneurial Skills

Alongside innovation, there is need of some more skills acquisition, this time from entrepreneurial perspective. This indicates that acquiring engineering skills is never adequate since the jobs targeted may not be attained, and this suggests that graduates should have acquired entrepreneurial skills. This perspective by its nature forms and promotes a very strong base for industrialisation and absorption of more skilled personnel and this increases the economy through broad tax collection base spearheaded by high expenditure and resources consumption rates. This, in other words, is understood to be broadening of investment for a related nation. Following this framework, tables 7.28a and 7.28b show responses of the lecturers and students to the statement that 'students acquire entrepreneurial skills' for their nature in the economic landscape.

Table 7.28a: Lecturers' responses on entrepreneurship skills

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	-	-	**Valid**	1	-	-
	2	6	60.0		2	2	15.4
	3	2	20.0		3	4	30.8
	4	1	10.0		4	4	30.8
	5	1	10.0		5	3	23.1
Total		10	100	**Total**		13	100

Table 7.28b: Students' response to entrepreneurship skills

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	8	26.7	**Valid**	1	5	14.3
	2	13	43.3		2	5	14.3
	3	5	16.7		3	8	22.9
	4	3	10.0		4	7	20.0
	5	1	3.3		5	10	28.6
Total		30	100	**Total**		35	100

Table 2.28a shows the pattern that in both institutions the lecturers' responses more than one-third respondents 8(37.7%) agree to the statement, while 9(36.95%) disagree and 6(25.4%) are undecided. Lerotholi Polytechnic lecturers' has the highest agreeing responses average at 6(60.0% - 1.59 times the total group average) while Motheo TVET College has the lowest at 2(15.4% - less than half (42%) of the categories' total average). This shows existence of entrepreneurial skills course in Lerotholi Polytechnic only. 11(83.1%) responses outcompeting agreeing responses confirm absolutely no skills at Motheo TVET College integrated to EE.

Table 2.28b shows the pattern that in both institutions about half of the lecturers' responses 31(49.3%) are agree to the statement, while more than one-third 21(30.95%) disagree and 13(19.3%) are undecided. Lerotholi Polytechnic has the highest score in the agree category 21(70%) while Motheo TVET College has the lowest agree category 10(28.6% - less than 58% of the total category average). This shows that only Lerotholi Polytechnic has entrepreneurial skills offered.

Both groups of respondents at Lerotholi Polytechnic show that the students acquire entrepreneurial skills which imply that a course is given with average score of the lecturers at 70.0% (21) and the students at 49.1% (31) while at Motheo TVET College the course is not shown by the lecturers disagreeing and undecided at 84.7% (11) and the students responding at 71.5% (20). These patterns imply lacking course for the skills at Motheo TVET College.

7.5.3.21 Business Ideas

Industrialisation is premised on the ideas copied elsewhere or generated by students' innovative abilities and being carried out after graduation; alternatively, such ideas are generated subsequent to graduation. Thus, it appears that the competency of generating such skills lies with TVET institutions, and the students have to be thoroughly tested on them. To them, application of entrepreneurial skills is significant by turning them profitable for high quality lives. On the basis of this framework, tables 7.29a and 7.29b show the lecturers and students' responses to the statement that students 'graduate (having) with business ideas' thereby standing chance to improve private sector, the engine of economic growth in whichever, or whatever, state.

Table 7.29a: Lecturers' responses on business ideas

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	2	20.0	**Valid**	1	-	-
	2	3	30.0		2	1	7.7
	3	4	40.0		3	5	38.5
	4	-	-		4	4	30.8
	5	1	10.0		5	3	23.1
Total		10	100.0	**Total**		13	100.0

Table 7.29b: Students' responses on business ideas

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	10	33.3	**Valid**	1	4	8.6
	2	7	23.3		2	5	14.3
	3	8	26.7		3	13	37.1
	4	5	16.7		4	7	20.0
	5	-	-		5	7	20.0
Total		30	100			35	100

Table 2.29a shows the pattern that in both institutions more than one-third 9 (39.3%) lecturers are undecided to the statement, while 8 (31.95%) disagree and 7 (28.9%) agree (through Likert scale). In both institutions, it appears that Lerotholi Polytechnic has the students with business ideas as shown by half of responses by the lecturers (50%-5) while Motheo TVET College has the highest score showing that the students have no business ideas at (53.9% - 7). This implies that Lerotholi Polytechnic lecturers are significantly aware that their WEE students through a course based on creating business ideas which is not offered in Motheo.

Table 2.29b shows the pattern that in both institutions that more than one-third of students' responses 26(39.75%) agree to the statement, while 21(31.9%) are undecided and 19(28.4%) disagree (as per Likert scale). Comparing the two institutions, students at Lerotholi Polytechnic agree at average score at 56.6 % (17) that the students graduate with business ideas which many students in the case of Motheo TVET College deny that it does not happen by 40% as the largest

category score. This again implies that in Lerotholi Polytechnic the students are taught in relation to business making while in the case of Motheo TVET College there is none.

The two table have consistency on the issue that Lerotholi Polytechnic students have business ideas as shown by both agree category of the lecturers (50%-7) and students (56.6%-17) while at Motheo TVET College students do not have such ideas as shown by disagree category of the lecturers (53.9%-7) and their students (40%-14).

7.5.3.22 Examinations

The last form of assessment is examination which is considered deterministic in progression of the students for its value. Thus, it has to be valid ensuring that labour market comprises predominantly productive labour-force. The opposite means low and poor production thereby compromising employment growth rate by some employees producing far below average employee. Apparently, this means it retards production growth hence high unnecessary opportunity costs encounter. To retrieve on the status of examinations, table 7.30a and 7.30b shows responses' patterns to the statement that 'examinations are worth doing as are valid and credible'.

Table 7.30a: Lecturers' responses on validity of examinations

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	5	50.0	**Valid**	1	4	30.8
	2	3	30.0		2	8	61.5
	3	2	20.0		3	1	7.7
	4	-	-		4	-	-
	5	-	-		5	-	-
Total		10	100	**Total**		13	100

Table 7.30b: Students' responses on validity of examinations

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	10	33.3	**Valid**	1	11	31.4
	2	10	33.3		2	8	22.9

	3	4	13.3		3	9	25.7
	4	4	13.3		4	4	11.4
	5	2	6.7		5	3	8.6
Total		30	100	**Total**		35	100

Table 7.30a show the pattern that in both institutions the lecturers' responses 20(86%) agree to the statement and that 3(13.85%) are undecided (according to Likert scale). This generally means that the lecturers have witnessed the WEE and EE examinations prepared by the department of higher education and training for Motheo TVET College and themselves at Lerotholi Polytechnic.

Table 7.30b shows the pattern that in both institutions many students at 60.45% (39) agree to the statement (based on Likert scale). This is followed by average of disagree category and undecided category: 13-20% and insignificantly 13-19.5%, respectively. This pattern of responses indicates that great relationship exists between examinations and curricula.

The responses in Lerotholi Polytechnic and Motheo TVET College of the lecturers (86%-20) and students (60.45% - 39) indicate that the examinations generally are valid, that is, to say they test the faculties of the students influenced by curricula. Thus, the students who have passed have successfully met the requirements of the curricula in relation to promoting employability of graduates.

7.5.4 OPERATIONALISING SKILLS FOR SOCIO-ECONOMIC DEVELOPMENT

7.5.4.1 Educational Institutions and Enterprising

Higher learning institutions have so much explored in some parts of the world that they determine engaging in actual enterprising purposefully to assist their graduates. This follows the realisation that graduates, with like of or forced by lacking jobs to establish their own businesses, mostly have intellectually the resources – skills – and not any other to execute their business doctrine. This suggests being supported by endowed bodies – TVET institutions themselves, financially and expertly. In respect to this framework, tables 7.31a and 7.31b show lecturers and students' responses to the statement that (their) 'training institutions assist graduates setting businesses/enterprising'.

Table 7.31a: Lecturers' responses on TVET and enterprising

LEECTURERS							
Lerotholi Polytechnic				Motheo TVET College			
	Score	Frequency	%		Score	Frequency	%
Valid	1	-	-	Valid	1	-	-
	2	1	10.0		2	5	38.5
	3	4	40.0		3	3	23.1
	4	1	10.0		4	3	23.1
	5	4	40.0		5	2	15.4
Total		10	100	Total		13	100

Table 7.31b: Students' responses on TVET institutions assisting graduates

STUDENTS							
Lerotholi Polytechnic				Motheo TVET College			
	Score	Frequency	%		Score	Frequency	%
Valid	1	1	3.3	Valid	1	1	2.9
	2	2	6.7		2	3	8.6
	3	5	16.7		3	14	40.0
	4	8	26.7		4	6	17.1
	5	14	46.7		5	11	31.4
Total		30	100	Total		35	100

Table 7.31a shows the pattern that in both institutions less than a half of lecturers' responses 10 (44.25%) disagree to the statement while 7(31.55%) are undecided and 6(24.25%) agree (as indicated by Likert scale). The agreeing lecturers to the statement at Lerotholi Polytechnic are 5% while those at Motheo TVET College are 19% (being the most insignificant figures of initiatives). So, it can be generally deduced that they marginally assist graduates or do not.

Table 7.31b shows the pattern that many students' responses in both institutions at an average 60.95% (39) disagree to the statement, while 19 (28.35%) are undecided and insignificantly 7(10.55%) agree (through Likert scale). This indicates that Lerotholi Polytechnic and Motheo TVET College never assist graduates.

The Lerotholi Polytechnic and Motheo TVET College lecturers (44.25%-10) and students (60.95% 39) generally have the same knowledge that their institutions restrict their assistance mainly in training of students and not bother themselves with their graduates' start-ups. This tells

that only the students with business ideas and who are from wealthy households or are able to borrow some capital stand chance to establish businesses.

7.5.4.2 Private and Public Sector Enterprising Assistance

The other institutions with faculty to assist graduates to fully engage in exploitation of resources (man-made, natural) for societal development are governments and private sector (individuals and/or companies). They can assist in the same way as education and training institutions. Table 7.32a and 732b show lecturers and students' responses to the statement that 'public and private sectors assist student graduates enterprising'.

Table 7.32a: Lecturers' responses public and private sector enterprising assistance

LECTURERS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	-	-	**Valid**	1	2	15.4
	2	2	20.0		2	3	23.1
	3	4	40.0		3	3	23.1
	4	1	10.0		4	1	7.7
	5	3	30.0		5	4	30.8
Total		10	100	**Total**		13	100

Table 7.32b: Students' responses on public and private assistance on TVET graduates

STUDENTS							
Lerotholi Polytechnic				**Motheo TVET College**			
	Score	**Frequency**	**%**		**Score**	**Frequency**	**%**
Valid	1	5	16.7	**Valid**	1	5	14.3
	2	11	36.7		2	10	28.6
	3	10	33.3		3	10	28.6
	4	4	13.3		4	5	14.3
	5	-	-		5	5	14.3
Total		30	100	**Total**		35	100

Table 7.32a shows the pattern that both institutions have lecturers' responses 9(39.25%) disagreeing to the statement, 7(31%) undecided and 7(29.25 %) agree (by means of Likert scale). This shows that the rate at which assistance is given to graduates 29.25 is insignificant and likely not to make a major impact as the majority of graduates remain unemployed.

Table 7.32b shows the pattern that the students' responses disagree at the rate of 53.7% (31) (half responses) to the statement, in Lerotholi Polytechnic, agree to the statement which in the case of Motheo TVET College is 1.22 times 8.03 below Lerotholi Polytechnic's, and Lerotholi Polytechnic further with 33.3% undecided while Motheo TVET College is 4.05% below and further has 28.6% disagreeing responses which is 7.15% times 2.15 higher than the Lerotholi Polytechnic disagreeing responses value.

The responses patterns of Lerotholi Polytechnic and Motheo TVET College lecturers (39.25% -9) and students (53.7% -31) are the same indicating that their institutions do not assist the students in establishing businesses. This makes the students who do not get wage employment invaluable members of the societies in economic terms as they do not engage in employment, the main purpose behind their training with other development measures following.

7.6 HYPOTHETICAL TESTING

The study is guided by three hypotheses. The first hypothesis is 'TVET institutions seen not engaging in promoting their programmes awareness to secondary students'. The finding on the awareness rejects this: Lerotholi Polytechnic and Motheo TVET College have units to deal with awareness issues. The second hypothesis is that TVET is not well conducted for societal development and the findings reject this statement: the purpose of TVET is to address national goals, lecturers and students are qualified, content is relevant to national goals, practicals are conducted and examinations are valid. The third and last hypothesis is 'TVET institutions appear not assisting graduates to create employment and the findings approve this: TVET institutions commit themselves only to delivery of content and not anything beyond graduation. Also, the government and private sectors are not ready to assist in graduates' enterprising.

7.7 CHAPTER SUMMARY

Lerotholi Polytechnic and Motheo TVET College are established with purpose of training experts in technical fields and conduct some career awareness to secondary students. In training processes, they encounter some challenges. After training, not all their graduates engage in industrial production.

CHAPTER EIGHT

QUALITATIVE ANALYSIS AND PRESENTATION OF WEE AND EE CASES

8.1 INTRODUCTION

This chapter analyses qualitative findings of the study. It has four sections: the first section is conceptual framework guiding lecturers and students cases. The second section is on qualitative research findings followed by the third employment levels. The last section focuses on chapter summary.

8.2 CONCEPTUAL FRAMEWORK OF ANALYSIS OF LECTURERS AND STUDENTS CASES

This section presents qualitative data analysis of the students and lecturers from Lerotholi Polytechnic and Motheo TVET College on the fields: WEE and EE. The analysis follows the conceptual framework based on the objectives and it comprises the following issues:

- The idea that higher education institutions offer free awareness services. This arouses interest to the study on how the students and lecturers understand career awareness in relation to WEE and EE.
- The purpose of TVET which forms the basis on which the study relatively sets out to seek qualitative understanding of the students and lecturers on importance of WEE and EE.
- The idea that TVET quality is achievable when resources (physical factors, human behavioural factors, content, pedagogical strategies) are suitable. This arouses interest of the study to establish relevance of these deterministic resources to WEE and EE for their purposes.
- The idea that graduates are entitled to employment. This arises the interest of the study to establish the extent to which WEE and EE graduates are being self-employed through incubation of their ideas.

8.3 RESEARCH FINDINGS ON WEE AND EE

The findings of the cases follow this pattern comprising: career awareness understanding in meaning, curricula components with regard to achieving quality and perceptions on employment levels.

8.3.1 Career Awareness

Realising that secondary school students are mostly not fully aware of the programmes at tertiary, colleges often take it as their responsibility that, with whatever possible means, they meet them on full awareness. A question was asked on what the importance of career awareness is to both lecturers and students. In analyzing the broad information generated on the career aware from the viewpoint of students such a theme as career awareness emerged.

Theme1: Importance of Career Awareness

LECTURERS	
LEROTHOLI POLYTECHNIC	**Motheo TVET College**
To market the institution in terms of its curriculum to prospective students.	To introduce the new courses to the prospective students and other people to those who do not know about them.
To make the nation know about the institutional courses.	To make the nation aware of the courses that are offered
To market the programmes	To advertise the programmes of the institution to high schools.
STUDENTS	
LEROTHOLI POLYTECHNIC	**Motheo TVET College**
It informs us about the requirements of the course.	It informs students on what is needed for a specific course.
It markets the institution.	It tells about programmes of the college.
It alerts secondary students of college courses.	It gives information on the programmes.

The theme indicates that career awareness is important in both institutions. All these responses have a common sense of making people aware on career. It commences with knowing the programmes corresponding with the careers and their entry requirements. It is also clear that it is constrained to new candidates in the colleges.

8.3.2 Curricula Aspects of WEE and EE

Stakeholders of Curricula Transformation of WEE and EE

Curricula conform to the needs of the people which are changing from time to time because of technology. Because education is about such changes to the society, this means it too has to change; otherwise, it will be invaluable. A question has been asked on who then becomes part of human resource in the context of the study improving WEE and EE. During analysis of the gathered data, this theme – stakeholders of WEE and EE – emerged.

Theme 2: Stakeholders of WEE and EE

LECTURES	
Lerotholi Polytechnic	**Motheo TVET College**
CHE-Lesotho, companies, students	CHE-RSA, companies, students
CHE-Lesotho, companies, students	CHE-RSA, companies, small-medium enterprises
CHE-Lesotho guides, however as the department those we invited wanted being paid and the exercise failed.	CHE-RSA, companies, students,
STUDENTS	
Lerotholi Polytechnic	**Motheo TVET College**
CHE – Lesotho	CHE RSA, Companies, small businesses
CHE – Lesotho	CHE- RSA, companies, small businesses
CHE – Lesotho	CHE RSA, companies, small businesses

The theme shows that the two institutions engage stakeholders. The lecturers have mentioned similarly the three groups of organisations: CHE – Lesotho and RSA, companies/businesses and students and small-medium enterprises. However, in the school of enterprise and management which is a hub, transformation failed because of stakeholders who required payment. About the students, they are generally aware of stakeholders in curriculum transformation, and in both institutions, have identified CHEs, while exceptionally Motheo TVET College students in particular have further added companies and small businesses.

Professional Development in Lerotholi Polytechnic and Motheo TVET College

It should have been generalised that not only WEE and EE curricula have to change, but also the materials and human resources. This understanding has led to the thinking of who has actually been assigned the responsibility, in the context of WEE and EE professional development. A question was, in fact, asked who specifically is given this task and out of the responses given emerged the theme – professional development of Lerotholi Polytechnic and Motheo TVET College.

Theme 3: Professional development

LECTURERS	
Lerotholi Polytechnic	**Motheo TVET College**
The institution is preparing to take lecturers to NUL. All along it had been by lecturers.	Institution is to take responsibility by arranging with CUT.
Institution is preparing to take responsibility.	Institution has organised a course to take soon with CUT.
Institution has prepared to take some responsibility on professional growth.	Institution has agreed with CUT on a course to training them (lecturers in general).
STUDENTS	
Lerotholi Polytechnic	**Motheo TVET College**
I think it is the institution.	Institution is responsible.
The institution and lecturers are responsible.	Institution organises training.
The lecturers perhaps organises that for themselves.	Institution is organising training.

The theme indicates that the institutions have planned to engage in professional development of the lecturers. As said by the lecturers, they have recently arranged with higher learning institutions NUL and CUT for such purpose. Concerning the students, only in the case of Motheo TVET College they have shown awareness that the institution has planned to contribute to professional development of its lecturers while in Lerotholi they were not sure, saying they think it happens.

Then, the study further established the understanding on the purpose of WEE and EE as viewed by the lecturers and students. Within the range of answers given, the purpose of WEE and EE emerged as a theme.

Theme 4: Purpose of WEE and EE

LECTURERS	
Lerotholi Polytechnic	**Motheo TVET College**
To generally solve high levels of employment.	To support the economy through industrial growth.
To train increasing levels of self employed Basotho.	To widen job opportunities.
To stimulate employment creation and economic growth.	To promote production thereby increasing economy.
STUDENTS	
Lerotholi Polytechnic	**Motheo TVET College**
To be employed as water engineer.	To be employed as electrician.
To be employed and earn a living.	To be employed in electrical company.
To encourage promotion of job opportunities	To be employed in the private companies.

The theme indicates in both institutions engineering programmes – WEE and EE are considered important. The responses of the lecturers in both institutions have a wide relationship in the sense that they fall within the same development economic aspect with the following indicators: employment and economic growth. The understanding of the two groups (students) is that the students would get jobs forthwith after graduation.

Following such understanding are the elements of curricula of WEE and EE in relation to how they promote competencies of the students to participate in delivery of specialised services in the context of the economy of the RSA and Lesotho as currently is characterised by their deprivation. These institutions have been existing for some time so it has to be clearly articulated as to whether the lack of skills is caused by low intake not matching volumetric demand of the market or whether the labour market has specialised skills, but not relevant to the demands of companies or simply whether they are not regenerative or reached obsolescence. A general question as to what are the challenges of WEE and EE was asked and its responses were

classified into the following: physical challenges, human behavioural factors, student self-owned materials, content relevance with employability, pedagogic strategies.

Theme 5: Physical / infrastructural challenges

LECTURERS	
Lerotholi Polytechnic	**Motheo TVET College**
Shortage of well equipped infrastructure	Shortage of well equip infrastructure
Shortage of equipment and classroom	Shortage of equipment for practicals
Shortage of classrooms and small-small seized, students learning outside. (library occupying 237 students librarian – schools roll 2,000>)	Small-sided classes ranging from 30 to 59 students per lecturer and library (occupying 100 students-library worker)
STUDENTS	
Lerotholi Polytechnic	**Motheo TVET College**
Not having laboratory	Electrical workshop not accessible to N5 and N6
Small class room making students learn standing at the door and library	Small library, not accommodating students during examination
Small classrooms with shortage of chairs	Toilets not clean

The theme presents challenges to infrastructure. The common problems are that it does not meet standards such as space and having enough facilities. These have negativity on the learning of the students. In the library, there is scarce space to study for examination. Motheo TVET College has carrying capacity of 100 occupants while Lerotholi Polytechnic has chairs for only 237 occupants. In Lerotholi Polytechnic, classrooms are small and often with no chairs taken by other classes which means that the students learn standing, seating on the desks and standing at the door, even outside for a major business course. In another programme which has hub course, lecturers-student ratio was supposed to be 1:75 at the most, which is still big, but it was found at 1:<120. In the case of Motheo TVET College, the problem of small-sized classroom and that of scarcity of chairs are rarely experienced. In the case of WEE, they are usually not overcrowded in science-related courses as many students have phobia towards them. The class exceeds quote for one reason being re-registration of those who quitted in the previous years. Motheo TVET College has a workshop though it is closed while Lerotholi Polytechnic does not have even a laboratory for practicals.

In addition to the infrastructure is equipment by the institutions. This is part of resources enhancing teaching-learning processes, but in this context owned by the institutions themselves. The theme equipment has emerged in the data gathering on the devices that the institutions make use of enhancing learning.

Theme 6: equipment and facilities for WEE and EE

LECTURERS	
Lerotholi Polytechnic	**Motheo TVET College**
Computers, no facilities	No computers for students
Computers (grouped students), no facilities, practicals	No computer laboratory for upper levels
Computers (by grouped students), no facilities and on campus practicals	No computer laboratory for N4 and above
STUDENTS	
Lerotholi Polytechnic	**Motheo TVET College**
Computers in library, no facilities for practicals	No computers for lower levels
Computer laboratory, no facilities for practice	No computers for lower levels not N5, N6
Computers in library and laboratory, no practical facilities	No computers for N5

According to the theme 6, the lecturers and students in Lerotholi Polytechnic have reported that the institution has computer laboratory (with roughly the maximum of seventy) in which the students attend in groups ensuring accessibility. However, there are no other facilities on campus enhancing practicals of theoretical lessons. Contrarily, the lecturers and students at Motheo TVET College affirm no computers for the students at higher levels (N5, N6) at the time of their studies; only proposition was made for computers to access knowledge, not as course-based.

The ways in which the students conduct themselves in the institutions draw attention. The questions asked around the human behaviour shown in relation to training have aroused the theme, factors of human behaviour.

Theme 7: Human Behavioural factors

	Lerotholi Polytechnic (lecturers)			
	Behaviour		***Judgement***	
		Chances	***Good***	***Bad***
1	Students class attendance	3	3	-
2	Lecturer-student relationship	3	3	-
3	Commitment of learning	3	3	-
	Motheo TVET College (lecturers)			
1	students class attendance	3	3	-
2	Lecturers-student relationship	3	3	-
3	Commitment of learning	3	3	-
Lerotholi Polytechnic (students)				
	Behaviour		**Judgement**	
		Chances	Good	Bad
1	Attendance of classes by students	3	3	-
2	Students-teacher relationship	3	3	-
3	Commitment to learning	3	3	-
Motheo TVET College (students)				
1	Attendance of class by students	3	3	-
2	Student-Teacher relationship	3	3	-
3	Commitment to learning	3	3	

Both lecturers and students have generally shown good attendance of students in both institutions. In the context of Motheo TVET College, the institution has ensured that attendance is good, that is, the students become absent for valid reasons, not just for unacceptable ones, by attendance register that the lecturers administer as per class out of which all students should at least score 80%. In the case of Lerotholi Polytechnic such incidence is done on the basis of importance recognised by the students that keep emphasising. Concerning student-lecturer relationship, the lecturers and students in both institutions reported generally having harmonious relationship, part of the elements needed for condusive environment for TVET while in the case of commitment towards learning the lecturers and students reported this is confirmed by consultations and passing both coursework (Motheo TVET College as compulsory) as well as examination. (The researcher has seen question papers and those reflected content in memo and notes).

Theme 8: Students self-owned materials

LECTURERS	
Lerotholi Polytechnic	**MOTHEO TVET College**
Computer, stationery	Text-books, stationery
Computers, stationery	Text-books, stationery
Computers, stationery	Text-books, stationery
STUDENTS	
Lerotholi Polytechnic	**Motheo TVET College**
Computers, stationery	Text-books, stationery
Computers, stationery	Text-books, stationery
Computers, stationery	Text- books, stationery

Concerning learning materials that the students possess, there are clearly lines of demarcation between the two institutions, but identical in both groups of respondents, that is, in the case of Motheo TVET College, the students have text-books and stationery. Since theory-based materials are available and well-contextualised in their national territory; they have never any problem of reading materials as they rely on their text-books. In Lerotholi Polytechnic, the students with government financial assistance buy computers out of will and those are sources of information to better their knowledge.

To actually engage in the process of teaching/training-learning, there are specific institutional resources endowed with knowledge or acting as source of knowledge as per programme. These resources confirm to the purpose of the course. On the question asked about the availability of such resources, this theme later emerged.

Theme 9: Content of WEE and EE

Lerotholi Polytechnic (lecturers, students)	**Motheo TVET College (lecturers, students)**
Hydro-software development, entrepreneurship skills, irrigation, project management, irrigation engineering, project management, integrated environmental management, reticulation design and water management, research project	Industrial Electronics Digital electronics Communication-Electronics Mathematics

These are a few of courses in the programmes especially at N5 and N6 and third. It is believed that with knowledge of these programmes, there would be personnel adding to lacking/shortage of specialised skills.

Theme10: Instructional-learning resources in WEE and EE

LECTURERS	
Lerotholi Polytechnic	**Motheo TVET College**
text-books, internet	Text-books, internet
Textbooks, internet	Text-books, internet
Modules, text-books, internet	Text-books, internet
STUDENTS	
Computers are many, but not well services or many not working properly.	Students have text-books.
Some facilities like sprinkler irrigation not available.	Only observed was shortage in other in other chained trades (woodwork-carpentry-fitting). The students complained about shortage of materials (planks and others).

The lecturers in both institutions make use of computers available in their offices to access some content, especially, on recent studies alongside that contained in their course-related books. In the case of Motheo TVET College the materials are never a problem because they are locally produced, text-books. In the context of Lerotholi Polytechnic, computers are numerous; nevertheless, they are accessed on class schedule basis. (It has been observed by the researcher that Motheo TVET College has the same textbooks on display in the library given to the students. Lerotholi Polytechnic has about 200 books on water in the library and none in the reserve. In the case of 192 students undertaking WEE there is student-book ratio – 1:1. This implies shortage of books as these are different books not to be used by all streams.

With these present, the lecturers decide on the instructional strategy to use in class. The study has, in fact, asked question on what strategy do lecturers mostly use followed by how effective is such a strategy. On the basis of that, two themes emerged, one on the strategy and another on its usefulness.

Theme 11: WEE and EE Instructional-learning strategy

LECTURERS	
Lerotholi Polytechnic	**MOTHEO TVET COLLEGE**
Learner-centred approach	Participatory
Learner-centred approach	Student-centred approach
Learner-centred approach	Learner-centred approach
STUDENTS	
Lerotholi Polytechnic	**Motheo TVET**
Student centred strategy	Student centred strategy
Lecture	Lecture (talking as though students understand what the lesson is all about)
Student centred strategy	Strategy centred strategy

All the lecturers in both institutions have reported employing the most knowledge endowed student-centered strategy to the students used interchangeably with participatory approach/strategy. However, in the judgement of the students, this strategy applies at 33.3% chances. The responses generally inform that the lecturers employ much of student-centred strategy with less of lecturing.

Theme12: Importance of student -centered strategy

LECTURERS	
Lerotholi Polytechnic	**Motheo TVET College**
It trains students to learn on their own.	The students have wider understanding of phenomena from scientific point of view.
It best builds knowledge of students.	It stimulates self-exploration of the world.
It is key to producing productive products (experts)	It promotes application and generation of knowledge for societal needs.
STUDENTS	
Lerotholi Polytechnic	**Motheo TVET College**
It enables understanding, not memorising.	It makes students understand more.
Students are able to apply what they have learnt.	Through it, students are able to apply knowledge.
It engages students do and that that is done is remembered for so long.	It enables application of knowledge into real life.

The Lecturers have shown that through student-centred approach, this capacitates the students to find knowledge on their own thereby building on the knowledge already assimilated and then have wider understanding. Furthermore, it is considered key to producing experts to apply the knowledge and at the same time to generate other knowledge.

In the case of the students, students-centred approach is significant in some senses. It enables them to apply knowledge they have learnt. It also enables them to remember for so long in real life situations as a result of understanding. In short, with student-centred approach, the students as the benefactor, understand the content and then apply it in real life situations.

The forms of assessment in class follow class instructions. Assessment is carried out during the instruction on what is just taught and over time. They must be valid and be a means of certification. The question was asked therefore as to what forms of assessment are conducted out of which the theme assessment approaches of WEE and EE emerged.

Theme13: Assessment approaches of WEE and EE

	Assessment forms	**Lerotholi Polytechnic**		**Motheo TVET College**	
		Lecturers	**Students**	**Lecturers**	**Students**
1	Exercise	1	1	1	1
2	Tests	1	1	1	1
3	Assignment	1	1	1	1
4	Presentation	1	1	1	1
5	Practicals	1	1	1	1
6	Research	1	1	0	0
7	Examination	1	1	1	1

According to theme 13, assessment forms employed, on average, in these institutions are the following: exercises, tests, assignments, presentations, practicals, research and examinations. Lerotholi Polytechnic applies all the forms whilst Motheo TVET College applies majority of them. The most given activity done is working out exercises in class situation, which in the context of Motheo TVET, are said being voluntary. In the case of Motheo TVET College two tests determine seating for an examination of the student when performed well. Before sitting for examination at Lerotholi Polytechnic, the students are expected to have gone for internship and

are evaluated by the institution on the information recorded in the field. However, in the case of Motheo TVET College, the students complete theory first, get examined and then head for practicals (18months). Only Lerotholi Polytechnic conducts research project. The Higher Education Learning Department conducts assessment of Motheo TVET College practicals to issue certificates. The difference among assessment measures are also seen among institutional programmes. The examinations are valid as they test what the students never complained about encountering questions out of context.

There are expected forms of behaviour in learning showing that instructions have been effective, and the opposite suggests failure to achieve the set goals nationally and institutionally. The question has been asked on what could be signs for effective scenario of instruction and learning. The emerging theme on thinking levels is creativity to respond to changes in the world of work.

Theme 14: Measures of proficiencies of WEE and EE Student

Levels	**Competencies**	**Lerotholi Polytechnic**		**Motheo TVET College**	
		Lecturers	**Students**	**Lecturers**	**Students**
3	Creativity/innovative (products made/ideas generated)	-	-	-	-
2	Problem-solving (application of knowledge)	3	3	3	3
1	Memorisation (having information in mind without exploitation)	-	-	-	-

According to theme 14, in both institutions, the lecturers and students pointed proficiencies at peak centrally in problem-solving level. This is a challenge for the students who are to join the world of work with already remarkable unemployment rate. So, this answers the question why the RSA and Lesotho's economy are been characterised by low specialised skills with the element of creativity which would drive it. Then a challenge for the lecturers on what should be done to go beyond this so that our economy can be knowledge-based.

8.4 EMPLOYMENT LEVELS

The careers that once students were informed about never evaporate their minds. It is critical for such students to be aware of employment levels and commence digesting what they can do and be done as well for their potential to contribute in development.

Theme 14: Employment Status

Levels	Lerotholi Polytechnic		Motheo TVET College	
	Lecturers	Students	Lecturers	Students
3 high employment	-	-	-	-
1 moderate	-	-	-	-
3 low employment	3	3	3	3

According to this theme, the responses in both institutions indicate that the lecturers and students are aware of levels of employment. This suggests new thinking on how students have to be assisted to explore their skills; and how those to join the programmes can be guided enough to avoid these scourge of graduates with knowledge reproduction which could be the core remedy. Despite this situation, about 400 graduates of TVET have been employed.

8.5 CHAPTER SUMMANRY

The chapter has presented findings on WEE and EE in Motheo TVET College and Lerotholi Polytechnic and highlighted the main issues. They include the following: career awareness significance, the purpose of WEE and EE, status of factors affecting relevance of curricula and understanding of employment levels.

CHAPTER NINE
DISCUSSION OF FINDINGS

9.1 INTRODUCTION

This chapter relates the findings from Motheo TVET College and Lerotholi Polytechnic with reviewed literature. It initially presents the discussion of research findings. It contains the analytical framework of TVET for the RSA and Lesotho in relation to the main findings. Secondly and lastly, it presents summary of the chapter.

9.2 DISCUSSION OF RESEARCH FINDINGS

This section shows connectivity between the frameworks highlighted in chapter two for the study guidance and the study findings at its commencement. The theoretical framework is briefly indicated and connected to, and forms basis for, conceptual framework to which findings later are given relatively.

9.2.1 Conceptual Framework of Analysis for TVET in RSA and Lesotho

Based on the theoretical framework and research questions as well as research objectives, discussion of research findings looks descriptively into the four following issues as explaining basis for skills generation for employment in the sphere of the economy. These include awareness activity for candidates into higher TVET institutions; the purpose for TVET offered; its relevance to societal development (incorporating factors by which it is facilitated or constrained) and assistance by such institutions to graduates alone or in tandem with others probably private sector.

9.2.1.1 Career Awareness

Careers by far require certain attributes from potential employees in order that duties can be effectively performed. In this study context, TVET institutions of higher learning are faced with career awareness which is a great means for their growth in enrolment and eventually fulfilling societal needs. The negative perception of TVET as a compromise for poor performing students at lower education cycles has exerted pressure for career awareness thereby promoting positive image. To this end, diverse means are being employed depending on the institutional economy:

they include media and visits to schools. The former further inform the public with new faculties and programmes as well. On the basis of this initiative, secondary graduates make the best possible decisions for themselves for future fitting well within the labour market demands and production dynamics.

Career awareness furthermore interconnects the students with the outside world when they are on the verge of completing their studies. Importantly, this is by training on writing cover letter that stakeholders (businesses) anticipate when seeking jobs. This is a step followed by many to achieve income earning for households' support and business capitals (financial and real). Also, it informs the students on labour market requirements and conduct of employees. This is rendered as an independent course or incorporated exercise in higher learning institutions. This study indicates the extent to which and by what means career awareness is executed as well as its longevity within the context of an academic year and challenges it encounters.

9.2.1.2 Purpose of TVET

The importance of education is noticed by its outputs and outcomes in the society. Thus, TVET programmes should be established in the same understanding especially that today it is considered as an alternative to the saturated public services in terms of employment by empowering people's rate of employability and employment. The national development goals are guidelines to what governments intend to achieve through TVET. Also, states perceive such goals more important in that they provide means of interconnectedness to the international context. In this study context, significantly purpose of TVET is being established in relation to national development goals of the study areas.

9.2.1.3Curriculum Aspects

Achieving the goals normally relies on the relevance level of curriculum development and implementation capacity. This implies that TVET has to align with national policies and the guiding issues are its elements closely related to such policies. In this study context, at least four determinant issues of relevance into which TVET curricula are looked are:

- The purpose that highlights institutional desires joined to main goals of the society;

- The subject matter that gives explanations and descriptions of TVET courses to fulfill societal needs;
- The pedagogical dimensions that methodically operationalise TVET subject matter for societal development. Various resources (human, natural, man-made) facilitate pedagogical dimensions; thus, they need careful consideration in their option; and
- The assessment that occurs alongside instructional processes ensuring education quality.

9.2.1.4 Skills Operationalisation for Employment Creation

The incidence of graduation fully approves that graduates only have the resource skills more than any other linked to their success in the world of work. Since the graduates are tasked with employment creation, a challenge remains that they have deprivation of other additional resources to operationalise their enterprise ideology. The importance of this is that it has different dynamics being to create jobs for oneself and wage-employment from which economy is generated. This implies that the institutions that are rich enough to provide sponsorship are expected to assist with extra resources, capital as the backbone. It is on this framework that the study context sets out establishing forms of assistance by training institutions, governments and private sectors to graduates to promote a resilient economic landscape.

9.2.2 Relation to Research Findings

9.2.2.1 Career Awareness on WEE and EE

This study has established that Lerotholi Polytechnic and Motheo TVET College have engaged in career awareness. The Marketing officer at Motheo TVET College and a team member at Lerotholi Polytechnic have explained that their institutions hold career awareness phenomenon by means of being visited by schools and they too visit schools when invited and that they attend exhibitions. Also, the institutions employ electronic devices: ((facebook pages (@officialmotheoTvetcollege; @fokothi), twitter, websites (https//:www.motheotvet.com; www.lmpa.org.ls)) and hard copies (flyers, prospectus-possibly accessed by many students). The electronic measures have been confirmed on the institutional websites. Unlike Lerotholi Polytechnic, Motheo TVET College has further employed other measures like buying a slot at Lesedi FM. This exercise of career awareness has further been confirmed by the lecturers and students although at low figures: Lecturers (Lerotholi Polytechnic – 13.4 times 1.42 below

average aware 64.25% (14); Motheo TVET College 44.95% divided 2.33 times below) and students (Lerotholi Polytechnic 15.1 times 1.54 %: Motheo TVET College 23.9 time 054% minus the general average 52.65% (35). Motheo TVET College students have shown that they were alerted by the radio and website while those of Lerotholi Polytechnic were conscientised by other friends and visits to Lerotholi by their secondary schools. Career awareness in these two institutions is confined to alerting only prospective secondary students, not their internal students about the world of work as explained in section 9.2.1.1.

Consistent to some degree with the findings is literature especially to the prospective secondary students. This is shown by the purpose for which career awareness is executed which is to alert such students on their capabilities and the requirements of the programmes and courses for which they correspond. This is important in the sense that it assists students to apply for the courses of their interest, not compromise, which has the possibility to produce incompetent graduates. The means employed in the Philippines are more similar to those above encompassing broadcast media (radio, not television), print media (leaflets), mass media (gatherings) and social media (facebook, twitter) (Philippine Technical Education and Skills Development Authority 2010:01). The use of media is highly imperative in the sense that many young are associated with them, hence wide coverage. The purpose of career awareness is further shown by the definitions: ministry of education (2016) which denotes that career awareness is knowledge, skills and values impartation for informed decisions amongst stages, education stages, work and lifelong learning. In the same way, Watts (in Loan and Van 2015:136) describes this as service joined to orientation with the intension of empowering individuals with education and training and occupation choices and career management. Specifically, outlined, the purpose of career awareness is assisting students make decisions based on their interests, passion and abilities whilst taking into account current and future career opportunities.

In consistent with findings is that component of career awareness being to alert the prospective TVET graduates on the world of work. In this context, it involves meeting companies' managers, knowing their style of cover letter and getting connected to the outside world especially on procedures of job search. This, according to Amani and Sima (2015:20), has been a success in Tanzania as graduates have been absorbed without constraints in the labour market. Along with

this had been some professional challenges that the exercise has been under the implementation and control of the lowly qualified counsellors (Amani and Sima 2015:24). When institutions do not offer this, they deny their graduates the opportunity to know more about searching jobs and how they should respond to the environment outside learning communities.

9.2.2.2 Purpose of WEE and EE

9.2.2.2.1 National goals/development

The study has established that Lerotholi Polytechnic and Motheo TVET College offer the engineering programmes (WEE, EE) in relation to development purpose, particularly, promotion of employment rate. In both institutions, the lecturers have agreed to this at the highest possible rate 74.65% (17) while the students have similarly agreed, but by less than 10% (64%-45). In the qualitative aspect, responses of the lecturers and students in both institutions point to the fact that both WEE and EE promote students participation in the world of work through employment creation.

Appearing consistent with findings is literature in several aspects. The theoretical framework by HCT emphasises that the people need undergoing learning experience to acquire skills for productivity to achieve societal development (Santos-Rodrigues 2010:55). Concerning KBE, to the point that there should be high investment in knowledge industries for high-technology investments, Lucci and Harrison (2011:01) highlight that in the industrialised countries, industries have been the highest employers and this has recovered the economy from the impact of recession. These indicate that without or with low TVET involvement, people definitely have low production levels in any society as there is no other alternative. The time for collapse of TVET for the reasons that it was found unproductive and costly took shorter as it is compared to its lifespan (Tripney and Hombrasdos 2013:02). This suggests that TVET has forever been important despite the costs of its inputs which need serious commitment by the governments by subsidisation to satisfy. This is to avoid losing longstanding positive outcomes by TVET in development context. Furthermore, there has been an argument that within empirical literature by Dienye (2011:15) the developed countries have secured their development through TVET.

Within the AU and the SADC context, the framework within which TVET is conceptualised for development are *strategy to revitalise technical and vocational education and training in Africa* and *protocol on education and training and the second Decade of Education for Africa plan of Action 2006 – 2016*. While these are providing policy guidelines and mobilising resources for TVET, they are ultimately geared towards economic development. For example, in the case of the RSA and Lesotho, as guided by international (the UN, SADC) and local (policy makers) frameworks, literature indicates the areas involving TVET for the purpose of achieving development such as: historical perspective in both countries, policies and acts (RSA – *RDP, Education Policy and Education Act 1996, higher education amendment act 2008;* Lesotho – *education policy for development* effective in 1971, *Technical and vocational act of 1984, education sector development plan1991/1992-1995/1996 and 2005-2015 and Lesotho constitution 1993*. Furthermore, the countries have established policy managerial and administrative frameworks such as TVET structures, NQFs, CHEs, government financing organisations and admission requirements (based on subjects grouping at secondary levels) and technology or TVET institutions to execute lesson experiences leading to national development which involve among many Lerotholi Polytechnic and Motheo TVET College. It is usually believed that most forms of development follow from increasing employment rate especially in the context of the young engaging in adulthood.

9.2.2.2.2 Programme Necessity/Demand

Both lecturers and students in both institutions have the highest agree average responses levels (74.65%, 64.3%) that graduates are produced on demand (by companies, or communities). However, there are no exact numbers of student-graduates that companies are expecting. This indicates that those who are not absorbed have to set their own businesses as a means of earning livelihoods.

Literature is inconsistent with the findings by presenting that CBT is characterised by demand-driven aspect of training in some societies including Ghana. This is achieved since the industrial needs of labour are made known to education and training institutes and an agreement is made by the institutes and companies about the number of graduates to produce for them. About 149 graduates by means of CBT have attained 100 percent wage employment (Anane 2013:120).

However, this cannot be the main means of training since the institutes should produce other experts in generating business ideas as the predecessors are likely to reach saturation.

9.2.2.2.3 Entrance Requirements

The study has also established that Lerotholi Polytechnic and Motheo TVET College follow standards to admit members in their communities. The lecturers in both institutions have pointed out they qualify for lecturing in the institutions at an average of 92.3% (20) while the students too agree at an average 95.7% (62). With this nature, the lecturers are able to execute their allegiances and students learn; these have a mutual efficacy to increased productivity. For Lerotholi Polytechnic, all lecturers' qualifications were printed out for verification.

Consistent with findings is literature on standards for admission of the students at both institutions. At Motheo TVET College, for engineering, the students ought to have obtained at least N3/grade 12 – mathematics and science while at Lerotholi Polytechnic engineering, they obtain at least 34 overall points with at least 60% score in sciences and mathematics (Motheo TVET College .n.d; Lerotholi Polytechnic 2016).

In consistency with findings is literature by Damsani (2011:71) that, in Ghana, the lecturers recruited were qualified. This produces probably positive results as the students are well-trained. Equally, Ayonmike *et al*. (2015:27) and Serumu (2014:102) have revealed that TVET in some Nigeria training institutions has suffered from the problem of unqualified lecturers. These lecturers contribute to ills of administering lesson by poor planning. Also, in the case of the students, Ayonmike *et al.* (2015:28) have found that the students who were admitted were lacking requisite knowledge. The lack of this knowledge is a challenge for some students who may learn well because they lack it.

9.2.2.3 Curricula Aspects of WEE and EE

9.2.2.3.1 Motheo TVET College and Lerotholi Polytechnic Stakeholders (WEE and EE)

The study has established that Motheo TVET College and Lerotholi Polytechnic involve different parties in transformation of their curricula. The lecturers agree to this at 66.2% against 36.55%, and the students at one-third responses plus 3.15 times1.11%. At Lerotholi Polytechnic, responses agreeing average 10% below that across the institutions show that it happens, but not openly as many lecturers are not involved and therefore do not know about external stakeholders' curricula involvement and so does Motheo TVET College at 22.7%. The marketing officer and team member have attested that the institutions have had the idea of involving capable citizenry in institutional transformation. At Motheo TVET College, for the whole institution, this activity was reported to have been successful whereas at Lerotholi Polytechnic it failed. The team member explained that this was caused by stakeholders of the panel chosen responsible who wanted allowances which however were not budgeted. Motheo TVET College has had the following as the stakeholders: CHE in its capacity, companies and small-medium enterprises. Furthermore, the lecturers have confirmed curricula transformation stakeholders as: CHE – Lesotho and RSA, companies/businesses and students as well as small-medium enterprises. The students have almost the same responses with the lecturers.

Consistent to some large extent to the findings is literature by CHE-Lesotho (2010:06) confirming that Lerotholi Polytechnic is one of the higher education institutions in Lesotho that falls under its guidance, comprising three technical schools. This shows that CHE-Lesotho has started from its inception to work with Lerotholi Polytechnic to promote its curriculum as an outside body.

However, this finding to some remarkable degree disagrees with part of the literature by Ayonmike *et al.* (2015:27) that content had in some institutions been poorly planned. This usually occurs where no sufficient consultations have been made by the curriculum developers. Therefore, this leads to irrelevant content. As emphasised by Serumu (2014:102), in furtherance of this observation, in some parts of Nigeria, involvement of stakeholders had been poor and this

postulates education and training with shortcomings. The outcomes of such content are producing graduates not meeting the requirements of labour market hence continuing unemployment. The same case has happened in the context of Ghana where education and training at higher education (TVET) has been without transformation for a long period of time (Ansah and Ernest 2013:177). This has further been experienced in the continent of Asia: the literature in Pakistan manifests that 53 percent (slightly more than half) of responses have indicated that TVET unsuccessfully met the requirements of industries (Reliance Services 2012).

9.2.2.3.2 Professional development For WEE and EE

The study has found that professional development occurs in both institutions. In confirming this, the lecturers have scored average response at 63.5% (15) while the response rate of Motheo TVET College similarly agrees at 53% (32). The theme supports that the institutions have planned to engage in professional development of the lecturers. As said by the lecturers, they have recently arranged with higher learning institutions the NUL and CUT for such purpose. Concerning the students, only in the case of Motheo TVET College students have shown awareness that the institution has planned to contribute to professional development of the lecturers while in Lerotholi they were not sure saying they think it happens.

9.2.2.3.3 Infrastructure

The study has established that the institutions experience deprivation of infrastructure to a large extent. The lecturers have confirmed this by the average score 68.45% (16) while the students were not able to do so. Despite this achievement, the study concludes on the basis that the two institutions have failed significantly to accommodate all qualifying applicants for different reasons including lacking classrooms and other infrastructural assets that in their absence education would be ineffective. The theme consistently presents limitations related to infrastructure being failure to meet standards (space and facilities). These have negativity on the learning of the students. The libraries are too small, that of Motheo TVET College has carrying capacity of 200 occupants for thousands students while that of Lerotholi Polytechnic exceeds by 37 seats. In the case of classrooms, Lerotholi Polytechnic's are characterised by the small-size. This happens despite the use of quotes in admitting new students. This is worse in the case of hub course, for instance, they designed a lecturer-student ratio 1:75, but the team member who is

also a lecturer has experienced students exceeding this (1: <120). The institutions further experience shortage of chairs and this is worse where some students were reported to learn standing. In the case of buildings, Motheo TVET College has a closed workshop while Lerotholi Polytechnic does not have even a laboratory.

The findings are consistent with literature in Nigeria that there has been inadequacy of classrooms blocks and furniture for instructional purposes which hindered growth of educational institutions for the betterment of the society (Ayonmike *et al.* 2015:29). Alongside this, Anane (2013:125) presents statistics that some institutions have unbearable ratio (1:100) which under normal circumstances is supposed to be 1:16. This compromises quality education. Adding to this, Anane (2013:125) argues that it disallows lecturers from deploying didactic methods. As a result, it influences universities to offer unattractive services through teaching.

9.2.2.3.4 Equipment

The study has revealed that the two institutions are challenged in inadequacy of machines. The lecturers have revealed this at the average 69.65% (16) and the students at 69.65% (44). The theme on equipment approves that equipment is in short supply at Lerotholi Polytechnic as the students had to attend training in computer laboratory grouped. The computers are around seventy while in Motheo TVET College higher levels (N5, N6) students have none, but promised to have some internet soon to check on information. The computers are not course-based at Motheo TVET College in EE.

The study findings are consistent with literature in some aspects: there has been lacking basic tools and equipment for technical institutes and there has also been absorption of the students in the labour market not fully trained or equipped with required skills (Damsani 2011:72). This predicament usually results from financial constraints of the nations. Woldetsadik (2012:61) suggests that the resolutions are cost recovery, national and private bursaries. Sufficient financial capital is not required in promoting accessibility of equipment alone, it is also essential in ensuring that infrastructural needs are largely improved. In both the RSA and Lesotho, provision of sponsorship in the education system is largely the responsibility of their governments (Higher Education South Africa 2014:03; CHE – Lesotho n.d).

9.2.2.3.5 *Instructional-learning resources*

9.2.2.3.5.1 Institutional resources

The study has established that instructional-learning resources are on average 55.8% (22). However, the students' responses on material accessibility by Lerotholi Polytechnic are averaged at 20% (6) and those without material 60% (18). In the case of the lecturers, both institutions make use of computers available in their departments to access some information, especially, recent studies alongside text-books. In the case of Motheo TVET College the materials (text-books) are never a problem because they are locally produced. In the context of Lerotholi Polytechnic, computers are numerous; nevertheless, they are accessed on class schedule basis. In the case of library books, the researcher has observed that Motheo TVET College has the text-books on display that were been given to the students. Concerning Lerotholi Polytechnic, the researcher found that it has about 200 books on water in the library and has none in the reserve. In the case of 192 students undertaking WEE there is student-book ratio – 1:1. This implies shortage of books as these are different books not to be used by all streams.

9.2.2.3.5.2 Student owned materials

The study has found that in both Lerotholi Polytechnic and Motheo TVET College, there is a problem of shortage of materials own by the students. The average between the agree category among the lecturers and students is 51.95% (12) and 45.7% (34), respectively, which indicate a great concern on personal materials. Using qualitative research analysis, the researcher has found that there is a great difference as the students in Motheo TVET College are reported to receive hard-copies materials from the government while in the case of Lerotholi Polytechnic the students receive money from the government which, instead of buying books, they report that they spend it on computers for learning.

Literature shows that the students should have books for their significance as the source of information (Ayonmike *et al.*2013:29). This supports the findings in the case of Motheo TVET College where the students are certainly distributed books while in that case of Lerotholi

Polytechnic it is the opposite. When the students have such books as those in Motheo TVET College, they are able to study any time they feel a need to do so.

In consistency with Motheo TVET College and consistent with Lerotholi Polytechnic is that Ayonmike *et al.* (2013:29) and Akhuemonkhan and Raimi (2014:11) have discovered a shortage of text-books and that some of which lack exercises for the students to engage in practise testing their understanding. This denies the students their full right to learning. In the discovery of Ismail and Mohammed (2015:73), text-books have, in fact, dominated experimentation and this shows they are never scarce. This is similar to the case of Motheo TVET College where there are books for instruction and learning, but without time for experimentation on campus.

9.2.2.3.6 Content

The study has found that Lerotholi Polytechnic and Motheo TVET College offer the engineering programmes relevant to national development goals. The institutions as well as the CHE - RSA and CHE - Lesotho have vehemently believed that the programmes through their content have capacity to alter lives of the South Africans and the Basotho. While Lerotholi Polytechnic offers entrepreneurial education course (60 % lecturers agreeing (6)), Motheo TVET College does not offer it at all.

Consistent with the findings is literature that content important is that suiting the students and societies (Mulengeki *et al.* 2013:20). It is further noted that education's importance has to be from the bottom cycle to the top cycle. This means that failure to reach this standard makes the content irrelevant. Ensuring that content is important or relevant; it has to comply with the objectives earning it accreditation (Primrose and Alexander 2013:59). This implies that such content is connected to national development as it directly addresses the vision and mission statements of the institutions which are definitely linked with operationalisation of national goals. The programmes, WEE and EE, appear to have integrated this earlier (Mulengeki *et al.* 2013:06).

Against this consistency is existence of irrelevant programmes with low rate of employment or employability (Primrose and Alexander 2013:60). This means that if such programmes are found difficult to improve they are definitely phased out for pertinent use of resources. Consistent with

this argument is literature by Lekoko *et al.* (2012:12031), in the University of Botswana and Limkokwing University, about entrepreneurial education course where they revealed that it was excluded among the hub courses. In this case where the students have not assimilated skills related to the making of businesses, they become disadvantaged, especially those trained in hard skills, in that they are not in a position to establish their own economic entities for livelihoods when they do not gain wage-employment.

9.2.2.3.7 Class-size

The study has also found that Lerotholi Polytechnic has agree categories with the highest response levels among lecturers at (70% - 7) and the students at (53% - 16) saying that the class-size is manageable while in that context of Motheo TVET College the pattern is different, but with the same average scores of opposing agree of the lecturers and students at 38.5%(5) and 39.5% (14), respectively, showing unmanageable class-size owing to big-size. Literature is consistent with Motheo TVET College showing prevalence of the problem of class-sizes which is reported to have been caused by inadequacy of class blocks (Ayonmike *et al.* 2015:29).

9.2.2.3.8 Lecturer-student relationship

The study has further found impressive relationship amongst the lecturers and students in both institutions. In the case of the lecturers, they have all (100%-23) agreed that they have good relationship with the students for education purpose. There are also students who reflect that they have good relationship with their lectures, but they are just around half of their total (49.1%-32 responses). These correspond with the qualitative information which shows that relationship among the lecturers and students is overwhelming, as part of the elements that are necessary for conducive learning atmosphere. However, the findings disagree with literature in the sense that the unqualified lecturers often not maintain professionalism and prepare lesson experiences for their classes and create unhealthy relationship with students (Ayonmike *et al.* 2015:27).

9.2.2.3.9 Attendance

Furthermore, the study has revealed that the students attend classes in large numbers from time to time and acquire in general most of the content prepared for them. It is found that response level of the lecturers to this is 88.6% (20), as people working closely with the students than anybody else in learning, and that of the students of is 81.5% (53). These are approved by thematic findings: both lecturers and students have generally shown good attendance of the students in both institutions. In the context of Motheo TVET College, the institution has ensured that attendance is good as the students experience absenteeism when they undergo valid reasons. Again, the lecturers attend classes with attendance register to mark attendance of the students which has to at least be 80% to allow them sitting for final examinations. In the case of Lerotholi Polytechnic such incidence is done on the basis of importance recognised by the students. Literature is inconsistent in the sense that Ayonmike *et al.* (2015:28) have found that sometimes the student attend classes irregularly and miss the part of content.

9.2.2.3.10 Instructional load

The study further reveals that instructional loads of the lecturers are manageable. The lecturers to this have had response level at 74.65% (17) while the students' responses level is at 46.4% (30). The students are admitted based on restricted numbers guided by classroom size and facilities. This excludes the hub classes. Therefore, this gives the lecturers time to mark and address needs of their students. These findings are in opposition to literature that in some universities there has been a challenge of overloaded lecturers (Serumu 2014:104). This leads to some of the classes which are not well planned for, taught and marked.

9.2.2.3.11 Instructional strategies

With regard to instructional methods, the study has found that Lerotholi Polytechnic and Motheo TVET College employ instructional methods enabling participation of the students. The lecturers have shown this at an average 88.5% (20) while the students have been roughly below it at 81.5% (53). In general, both lecturers and students have appreciated the use of student-centred approach in that it enables the students to explore on their own to understand better and apply their knowledge which is impossible with lecturing.

The model of instruction which is consistent with the findings is that by Mulengeki *et al.* (2013:05) of Ausubel's presentation which emphasises the involvement of the lecturers to first of all establish pre-requisite knowledge of the students and new content follows. Then, the lecturers create room for the students through exercises to show understanding. It is within this practice that the students then acquire and develop skills expected and new ones. Deksa (2013:17) further shows that practice of this, besides the experimentations carried out on campus, can be outside and within enterprises – internships. This means that at classroom level mostly theory dominates followed by some practicals and then attachments (Amedomme and Fiagbe 2013:255; Damsani 2011:69; Serumu (2014:100). This trend shows that more is done at instructional setting on theory and less on practice.

Inconsistent with the findings is part of literature on Bruner's discovery model in which the lecturers present materials and assign the students some work (Mulengeki *et al.* 2013:15). Furthermore, some institutions do not employ at all the method – competence based approach where they offer exactly what industries requirement in the proportion expected (Anane 2013:119).

Further inconsistence with findings, and African literature, is that literature about European context with the representation of Germany. In this consideration, 30% of the skills is acquired within the school setting while the remaining 70% of skills the students train in it at apprenticeship with an advantage of more experience, an easy way of getting jobs (Ratnana 2013:1). Lerotholi Polytechnic however follows the Africa model, where there is more theory at school and less experience at workplace, while the RSA has a blend of African and European models. Alongside these are skills by which the students conduct themselves and intra and interpersonal skills which all assist in their learning.

9.2.2.3.12 Assessment

The study has established that examinations in WEE and EE are valid and credible. This reflects in the average score of agree category where that of the lecturers is 86% (20) while that of the students is low and, specifically, at 60.45% (39). The two institutions on average employ the

following forms of assessment: exercises, tests, assignments, presentations, practicals, research and examinations. Comparing the two institutions, Lerotholi Polytechnic applies all assessment forms whilst Motheo TVET College utilises almost all of them. At Motheo TVET College, only two tests and final examinations are compulsory while exercises are not. These tests when they have been successfully performed decide the students to sit for the final examinations. Concerning internship, the students undertake it at the end of the term to obtain diploma certificates. Concerning validity, the researcher has had some access to question papers and content to reflect on the relationship for validity and, in fact, has found that the paper reflect content taught and learnt.

The literature is highly consistent with the findings by showing implicitly that the lecturers keep testing the students on regular basis – monitoring (Mulengeki *et al.* 2013:16). This is imperative in its capacity that it takes full control and responsibility on learning and institutional interaction. At the end of the academic year, the students usually take deterministic tests for proceeding to the next classes (evaluation) (Westbrook *et al.* 2013:16).This final assessment leads to the award of certificates to those meeting minimum requirements of pass mark.

9.2.2.3.13 Academic needs (remedial work)

The study has also found that the lecturers assist the students when ever need arises. The lecturers have reported themselves ready to assist the students at 83.5% (20). In the case of the students, it is noticed that there is equal number of those agreeing and disagreeing in Lerotholi Polytechnic (43.05%-41.65%) while in the case of Motheo TVET College lecturers undoubtedly assist students. Contrary to these findings is the literature by Ayonmike *et al.* (2015:27) that some lecturers who were even unqualified were found to be in academic assessment and therefore this was conducted in poor approaches. This action implies failure to reflect the real performance of the students in relation to their instructors' defined objectives.

9.2.2.3.14 Workplace

The study has also established that practicals at workplaces allow the students gain necessary skills. The lecturers and students at 85% (20) and 56.9% (34), respectively, emphasise that internships are basic to training of the students. Both institutions offer the students a chance to

undergo internships. In the course of these, the students fill in lock-books to show attendance on working days. These are submitted when the practice is over along with other documents for assessment. Motheo TVET College has its duration of period 18 months while that of Lerotholi Polytechnic is 6 months. When the students have done well in these, they are, as a result, awarded certificates in diploma.

Agreeing with the findings is the literature that, in African context, TVET lecturers deploy in their facilitation and trades pursuit the following instrumental measures: placements and attachments, and they follow some theoretical perspective forming base of knowledge and skills at classroom setting (Amedomme and Fiagbe (2013:255). This approach is of paramount importance in the sense that it exposes the students in the world of work. Furthermore, this enables formation of rapport between students and companies to possibly culminate in employment. This follows the companies' appraisal on the students' performance through closely working by providing mentorship in training course. For instance, in the outside context of Africa, workplace is considered similarly critical to acquisition of skills. However, Germany has much prolonged time (70%) of training in companies and shortened school theoretical dimension (30%). These are called dual system within apprenticeship landscape (Ratnana 2013:01).

9.2.2.3.15 Research Project

The study has established that research project as an instructional strategy is in practice in Lerotholi Polytechnic while it is not in Motheo TVET College's case. The issue of research project amongst the two programmes takes place mainly in WEE at 76.7% (23) – students and 70.0% (7) – lecturers, earning the students some marks. Supported by qualitative aspect, the researcher has found that there is no research in EE. Within WEE, where it exists, it is meant to promote the level of creativity of the students. However, this happens only when the students are guided well in developing ideas and opportunities and further given time to test them to promote their certainty.

9.2.2.3.16 Interest and readiness indices for production

The study has discovered that the students mostly graduate showing interestingly and readily signs intended for production. The lecturers in the institutions have had response level at 71.2% (17) while that of the students slightly above half is 52.35% (34). That the institutions confer certificates to the students in large numbers is convincing in the sense that they work hard in general. However, reviewed literature stands against this finding; Ayonmike *et al.* (2015:28) point that the students have portrayed signs of lacking commitment. That is, they do remarkably less in consultations and at the same time, the reading culture is ebbing as the exploratory means of skills and knowledge. Further to this, the students become unconfident and this compromises in general their learning and performance (Ayonmike *et al*. 2015:28).

9.2.2.3.17 Innovation

The study has further established that in both institutions the students lack innovation. The lectures response level to this consideration is averaged at 38.1% (9) for undecided category while that of the students is at 65.5% (39) in the agree category. To strongly argue that the students are not innovative, the average of those who disagree is 36.55 % which when added to that of the undecided is 74.6%. The thematic analysis also affirms that by the highest level of proficiencies below innovative capacity. Furthermore, the notion that Motheo TVET College and Lerotholi Polytechnic only offer WEE and EE theoretically on campuses which does not give chance to exercise innovation strengthens that their students are never innovative.

9.2.2.3.18 Business Ideas

The study has established that Lerotholi Polytechnic students have some ideas for business making while those in Motheo TVET College have no such ideas. The lecturers have shown that at Lerotholi Polytechnic students have some enterprises ideas 50% at Motheo TVET College they lack ideas for enterprising. The same pattern reflects from the students among the two institutions. Lerotholi Polytechnic has 56.6% (17) showing that its students have business ideas while those of Motheo TVET College arguing that it has such students at 23.9% (9), an insignificant value. The exclusion of education course responsible for business ideas generation

is the main cause of these differences. The practice of not including business ideas generating course was noticed also at the University of Botswana by Lekoko *et al.* (2012:12031).

9.2.2.3.19 Examination validity

The study has found that the lecturers (86% - 20) and students (60.45% - 39) in both institutions have indicated the examinations valid and credible. This is against literature which shows that examinations in some institutions in Nigeria were associated with malpractices. This incidence leads to accrediting awards (certificates) to students who deserve them.

9.2.2.4 Employment Levels

The question arises whether graduates get work and it can best be answered by the idea that graduates should be ready to generate ideas with which they generate livelihoods that in other territorial contexts are incubated by their former training institutions and both the government and private sectors. However, the study has lastly established graduates hardly receive assistance for enterprising from any possible means. The lecturers and students have disagreed to the statement that Lerotholi Polytechnic and Motheo TVET College offer assistance at the averages at 44.25% (10) and 60.95% (39), respectively. Even governments and private sectors hardly assist graduates, and to this, the lecturers disagree at 39.25% (9) while students too disagree at 53.7% (31). The theme indicates that the responses in both institutions indicate that the lecturers and students are aware of levels of employment, especially that it is low. This suggests new thinking on how they students have to be assisted to explore their skills; and how those to join the programmes can be guided enough to avoid these scourge of graduates with knowledge reproduction which could be the core remedy. Despite this situation, about 400 graduates of TVET have been employed. This number still constitutes insignificant decrease of unemployment relative to rate of graduation from 50 colleges in the RSA.

Against the findings is the conceptual literature that quality education is that that achieves purpose (Certo 2006:35). According to Makhubela and Nyapfungwe (2015:02), achieving the purpose is increasing employment. The high employment rate in Lesotho which often exceeded the graduates and graduates being recruited even before graduating had culminated (Dar El

Saledem 1993:17). This says that new graduates have to establish their own entities (for self-employment.

Furthermore, findings differ from literature in the respect of assistance of graduates. Unlike Lerotholi Polytechnic and Motheo TVET College, the University of Michigan, United States of America made a conclusion to incubate graduates ideas in 1994 (Lewis *et al.* 2011:21). This implies that not assisting graduates is just a construct, not principle nor law. In the context of Michigan, it can be deduced that certain amount of capital asset had been budgeted to assist graduates. As a result of incubation, Qian, Haynes, and Riggle (2011 cited in Hoffman and Radojeovich-Kelley 2012:04) indicate some prosperity in jobs creation around 100 000 which generated on average $17 billion revenue. This experience can possibly apply in RSA and Lesotho if incubation occurs and in a proper way. This already exists in the RSA: the University of Stellenbosch undertakes acceleration in business growth and when this reaches maturity there is a likelihood of economic boom.

9.3 CHAPTER SUMMARY

This chapter shows that literature has consistency with findings to some large extent in the context of Africa which is either negative or positive to TVET in relation to its purpose. The study-based institutions, to the large extent, are the same in challenges, for example, that of insufficient infrastructure and, to some less extent, differ especially in the case of course enhancing innovation as one has it another one does not.

CHAPTER TEN

FINDINGS, CONCLUSION AND RECOMMENDATIONS

10.1 INTRODUCTION

This is the last chapter of the study and it is conclusive in nature. It initially presents the summary of the main findings of the study. Secondly, it gives the conclusion on the study. Thirdly, it presents the recommendations on the study.

10.2 SUMMARY OF MAIN FINDINGS

10.2.1 Overview of the Research

The study has been conceptualised in the two perspectives. The first is the economy of the RSA and Lesotho which is responsible for general societal development, but not doing well because of a shortage and a lack of specialised skills. As a result, there is still observation of poverty among the communities at different degrees. The second is that in the two countries, there are TVET institutions established with the purpose of responding to low economy through their specialised skills, but this scourge continues despite the formation of the institutions. The possible conditions for poor economy in the presence of TVET are that a large proportion of citizenry is not aware of it, the quality of curriculum is poor and that there is a shortage of basic factors of production of graduates to engage in production. These factors dictate carrying out a study to establish the relationship between TVET institutions and societal development based on these factors, and in fact, it has been conducted comparatively between the RSA and Lesotho.

A conceptual framework for analysis of TVET awareness and relevance responses has been developed to guide this investigation. This framework comprises the following issue elements:

- That when TVET institutions have introduced new programmes and courses, they would organise career awareness services to prospective entrants from secondary schools. The services would also be extended to the enrolled students to be equipped on how they can best cope in their former communities after graduation. The training on ways of finding jobs is also incorporated in these services' provision.
- That the purpose of TVET is to address the national development goals;

- That the extent of relevance of curricula to societal development is facilitated and constrained within the main factors including: infrastructure (buildings, power and water), lecturers qualifications, instructional-learning resources (books, materials for practicals), instructional pedagogy, internships, examination's validity under TVET jurisdiction; and
- That training institutions assist their graduates in creating economic entities. They may carry out this on individual basis or in tandem with other institutions such as government and private sector.

10.2.2 Main Findings

10.2.2.1 Career Awareness on WEE and EE

Lerotholi Polytechnic and Motheo TVET College have exercised career awareness through gatherings and electronic devices. This exercise of career awareness has further been confirmed by the lecturers and the students although at low figures: the lecturers (Lerotholi Polytechnic with 13.4 times 1.42 below average 64.25% (14) and Motheo TVET College with 44.95% divided 2.33 times below) and the students (Lerotholi Polytechnic with – 15.1 times 1.54 %: Motheo TVET College 23.9 time 054% minus the general average 52.65% (35).

10.2.2.2 Purpose of WEE and EE

10.2.2.2.1 National goals/development

It is established by the study that Lerotholi Polytechnic and Motheo TVET College offer the engineering programmes (WEE, EE) in relation to national development goals, particularly, promotion of employment rate. The lecturers have had high response level at 74.65% (17) while that of the students appeared low at 64.3% (45). Specifically, responses point to the fact that both WEE and EE promote students participation in the world of work, through employment.

10.2.2.2.2 Programme Necessity/Demand

Both lecturers and students in both institutions have the highest agree category average response at 74.65% and 64.3%, respectively, that the students are produced on demand (by companies, or communities). However, there are no exact numbers of students that companies are expecting.

However, not all of the graduates are absorbed by companies. This shows a room for unemployment if graduates are not taken immediately as nobody when it will happen and at what size.

10.2.2.3 Curricula Aspects of WEE AND EE

10.2.2.3.1 Entrance Requirements

In both institutions, the lecturers and the students qualify for entrance. The lecturers have shown responses at 92.3% (20) while that of the students is slightly higher at 95.7% (62). For the lecturers, at least the higher certificate offered at the level of instruction is acceptable. The students at Lerotholi Polytechnic have to acquire second class with at least 60% score in mathematics and science while at Motheo TVET College is N4 or grade 12 with mathematics and science (at least 60%).

10.2.2.3.2 Stakeholders (WEE and EE)

The study has established that curricula engage many in their transformation hence what Lerotholi Polytechnic and Motheo TVET College have done. The lecturers agree to this at 66.2% against 36.55%, and students at one-third respondents plus 3.15 times1.11%. However, the lecturers are not largely aware of this exercise. In Lerotholi Polytechnic, it has failed because an agency invited demanded allowances which the institution failed to offer while, at Motheo TVET College, it has been success.

10.2.2.3.3 Professional Development For WEE and EE

Both institutions have confirmed that they engage in professional development. The lecturers have responded at average 63.5% (15) while the students in responding have dropped to 53% (32) in confirmation to professional development. The lecturers in both institutions have explained that their institutions have organised training in education courses with the following institutions: the NUL and CUT.

10.2.2.3.4 Infrastructure

The study has established that the institutions experience deprivation of infrastructure to a large extent. The lecturers have confirmed this by the average score at 68.45% (16) while the students did not do so. Lerotholi Polytechnic has library with carrying capacity of 237 students while Motheo TVET College 100. About classroom, Lerotholi Polytechnic has had one big class which takes the students for different programmes at the ratio 1:120. Despite this, the study concludes this on the basis that the two institutions have failed significantly to accommodate all qualifying applicants for different reasons including lacking classrooms and other infrastructural assets that in their absence education would be ineffective.

10.2.2.3.5 Equipment

The study has revealed that the two institutions are challenged in inadequacy of machines. The lecturers have revealed this at the average 69.65% (16) and the students have responded at 69.65% (44). The theme on equipment approves that equipment is in short supply at Lerotholi Polytechnic as the students had to attend training grouped in computer laboratory. The computers are around seventy while in Motheo TVET College higher levels students have none, but promised to have some internet soon to check on information. They are not course based at Motheo TVET College.

10.2.2.3.6 Instructional-learning resources

10.2.2.3.6.1 Institutional resources

The study has established that instructional-learning resources are on average 55.8% (22). However, the students' responses on material accessibility by Lerotholi Polytechnic are averaged at 20% (6) and those without material at 60% (18). In the case of the lecturers, both institutions make use of computers available in their departments to access some materials, especially, recent studies alongside text-books. In the case of Motheo TVET College the materials are never a problem because they are locally produced, text-books. Lerotholi Polytechnic has about 192 library books and these are too few for students.

10.2.2.3.6.2 Student-owned materials

The study also found that in Lerotholi Polytechnic and Motheo TVET College, there is a problem of materials owned by the students. The average between the agree category among the lecturers 51.95% (12) and the students 45.7% (34) show that there is a great concern of personal materials. At Motheo TVET College, the students have text-books and stationery supplied by government. Since theory based materials are available and well-contextualised in their national territory, they have no any problem of materials hence relying on their text-books. In Lerotholi Polytechnic, the students with government financial assistance buy computers out of will and that they are a source of information to better knowledge. So, the students do not have prescribed books in the form of softcopy or hardcopy.

10.2.2.3.7 Content

It is also found that both institutions have engineering programmes EE and WEE relevant to national development. This has been approved by CHEs that at least they met minimum standards operations; otherwise, they would have been closed. However, there is no hub course entrepreneurial education at Motheo TVET College which its presence at Lerotholi Polytechnic is confirmed by 60% (6) and WEE course outline.

10.2.2.3.8 Class-size

The class-size response pattern shows that at Lerotholi Polytechnic it is manageable with the lecturers responding at (70% - 7) and students at (53% - 16) while in the context of the Motheo TVET College, it appears unmanageable as it is indicated by the same scores of the lecturers at 38.5% (5) and students at 39.5% (14). They are unmanageable because of being bigger.

10.2.2.3.9 Lecturer-student relationship

Concerning lecturer-student relationship, the study has found that it is impressive in both institutions. The lecturers have shown response level at 100% (23) while that of the students is as low as 49.1% (32). The lecturers and students have described verbally the relationship good.

10.2.2.3.10 Attendance

The study has also found that attendance of classes or lesson experiences is remarkable in both institutions; the lecturers and students have equally responded to this with 88.6% (20) and 88.6% (53), respectively. To encourage this, at Motheo TVET College, the students enter examination room on the score of attendance at least at 80% while in the case of Lerotholi Polytechnic students attend mostly on the basis of their education importance.

10.2.2.3.11 Instructional load

The study has also found that the instructional load of the lecturers, in both institutions, is generally manageable (that is, it is not too much) as shown by the lecturers average response level at 74.65% (17) and that of students at 46.6% (30). The students are admitted based on the resources available.

10.2.2.3.12 Instructional strategies

The study has also found that in both institutions, about instructional strategies, the lecturers generally employ participatory/student-centered approach, with response levels of the lecturers and the students at 88.5% (20) and 81.5%, respectively. This has been appreciated by both parties that it enables students' exploration seeking better understanding.

10.2.2.3.13 Academic needs (remedial work)

The study reveals that the lecturers have attended to students' needs especially on content-based challenges shown by response level at 83.5% (20). In the case of the students, it is noticed that there are slightly different number of those agreeing and disagreeing in Lerotholi Polytechnic (43.05%-41.65%) while in the case of Motheo TVET College the lecturers undoubtedly assist the students. In the case of Lerotholi Polytechnic, the students are not satisfied with the ways in which they are assisted.

10.2.2.3.14 Workplace

The study also reveals that workplace has further been an instructional strategy that both institutions practice for diploma qualification. To this, the lecturers have had response level at

85% (20) and that of the students is at 56.9% (34). The institutions produce lock-books to students for internship and these are returned and submitted on completion. The period for Lerotholi is one third of that of Motheo TVET College (18months).

10.2.2.3.15 Research project

According to findings research, project is in practice only at Lerotholi Polytechnic. The issue of research project amongst the two programmes takes place mainly in WEE at 70.0% (7) – lecturers and 76.7% (23) – students, earning students some marks. Within EE, there is no such course as research, thus the students have no research skills (proven by 72% of respondents who disagree and are undecided), even testing on research.

10.2.2.3.16 Interest and readiness indices for production

The study has discovered that the students mostly graduate showing interestingly and readily signs intended for production. The lecturers in the institutions have had response level at 71.2% (17) while that of the students, in the same institutions, is slightly above half at 52.35% (34).

10.2.2.3.17 Innovation

The study has further established that in both institutions the students lack innovation which in some contexts is creativity. The lectures response level to this consideration is averaged at 38.1% (9) undecided. The theoretical part of the presentations on campus denies the students innovative capacity.

10.2.2.3.18 Business Ideas

The study has discovered that owing to difference in entrepreneurship education available in Lerotholi Polytechnic and not offered at Motheo TVET College, the EE students have no business ideas while WEE students have. At Lerotholi Polytechnic, the students and the lecturers have shown availability of business ideas at fair levels (56.6% - 50%, in that order). This indicates that many students are not able to generate such ideas.

10.2.2.3.19 Examination validity

The study has also found that the examinations in both institutions that are taken have been proved valid and credible. The lecturers and the students have responded at these levels 86% (20) and 60.45% (39), respectively. The question papers have reflected on what the students have been taught appearing in the notes.

10.2.2.4 Employment Levels

The study has further found that both institutions do not assist their graduates in enterprising. This appears at response levels of the lecturers and the students at 44.25% (10) and 60.95% (39), respectively. In the same vein, governments and private sector hardly assist graduates on the same issue: the rate of responses by the students is 53.7% (31) while that of the lecturers is 39.25% (9). Despite this situation, about 400 graduates of TVET have been employed in the RSA. However, this has a low impact as the population of the TSA is very high (53 million).

10.3 CONCLUSION

This has elaborated how TVET is conducted in the RSA and Lesotho. It has established that the purpose of TVET by Lerotholi Polytechnic and Motheo TVET College is generally stimulating and promoting socio-economic development and market as this value through career awareness is considered a critical factor, which of course has performed its purpose. The curricula which turn out being the core of TVET are not immune to limitations compromising quality. The institutions have experienced adequacy of infrastructure limiting high levels of intake and limited space for the enrolled as well as facilities, shortage of machines not allowing independence in learning and that many graduates are not working which however is against the purpose for which they had been trained. It is in this context that the study recommends career awareness as activity benefiting even the outgoing students; availability by construction and purchasing buildings, workshops and facilities and equipment; integration or introduction of entrepreneurial education and employability skills since graduates are supposed creating jobs; intervention by government, private sector and consumers as well as TVET institutions (employment commission) for graduates enterprising as dimensions for employment in its perspective.

10.4 RECOMMENDATIONS

10.4.1 Recommendations on the Study Findings

The study's recommendations largely focus on the means by which the governments' TVET policy could be reformed, upgraded and fully actualised thereby capacitating TVET institutions, private organisations and graduates to achieve maximum possible economic benefits from enterprising. Specifically, the governments' policy frameworks aim at achieving increasing levels of employment and the economy at large by TVET. In the context of the above outlined challenges, the study makes the following recommendations for ensuring achieving quality of TVET in employment creation, the indices of societal development in its context:

- The study has found that career awareness is made focused on the incoming of prospective secondary students neglecting the outgoing, compromising the value of conduct and abilities they would have got about work search thereby promoting employability. It is then recommended that TVET institutions should extend that awareness services to the outgoing to inform about the hardships for instance unemployment and ways with which to cope, linking students with companies through exhibitions and appreciable ways of job searching as noted by companies (format of cover letter, Curriculum Vitae). This initiative generally promotes positive image of TVET and that by the last recommendation which if otherwise executed arise the fainting negative perception of TVET.

- The study has found that at Lerotholi Polytechnic curriculum transformation was a failed activity by invited body. It is therefore recommended that its management has to cater for stakeholders allowances/payments.

- The study has also found deficiencies factors influencing relevance of curricula: infrastructural constraints (few buildings hindering as much as possible absorption of all applicants, small space for students in library and workshops) and equipment (old, scarce) and lacking inputs/materials. It is therefore recommended that governments with supplementary and complementary efforts of private companies should finance TVET

institutions to meet more fully their infrastructural developments, equipment for instructional and learning purposes and other materials of the purpose.

- The study has found that Motheo TVET College does not offer entrepreneurial education within engineering programmes. The study recommends introduction of that course as enables commercialisation of technical skills and then promote employment rate which at the moment is low. As volume of enterprises increase the economic activities network broadens and many graduates get employed.

- The study has also revealed the situation that students are lacking innovation with the potential of self-employment. Against this, both the institutions are held responsible to promote their levels of delivery and strongly enhance innovation of models not just to reproduce content, to introduce new products in the market to reduce adolescence of skills. The continuity in generation of products should be culture of the graduates in the world of work and this would remarkably reduce high levels of skilled labour unemployment. Further to this, there should be practicals on campus for theory and practice collaboration as well as enhancing innovation. Innovation is inherent in practicals so without it, education and training becomes more of reproduction of existing ideas whereas the world today needs creative minds to promote industrial establishment from which employment and other development indices emerge.

- The study has also found the challenge that companies' absorptive capacity is exceeded in general terms by output graduates, but this not meaning they (graduates) are not any more valuable. For a few with sound business ideas, it is high time that they are operationalised and hoping more would appear in production processes. In fact it is by their operationalisation they remain valuable, otherwise not. It is therefore recommended, as a resolution to financial constraint and low confidence in taking business risks, that the government in tandem with TVET institutions and other business entities and consumer stakeholders should form liaison commission which its purpose is to guide and finance proposal by graduates ensuring engagement and exploitation of their skills in the economy atmosphere. This should have more of TVET and consumer dominance to actually see to it that there is flow of information from the two institutions promoting

knowledge-based economy. The government and private sectors role would be that of financial sources and auditing of financial reports internally and externally for neutrality with enhancement on transparency and accountability.

10.4.2 Recommendation for Further Studies

This study, as based on a focus on two countries and one institution in each, may not have provided a sufficiently comprehensive picture of the RSA and Lesotho's TVET sector as a whole. Although the study sought to provide a comparative experience picture by tertiary levels of TVET, it has not gone far enough in covering such status. There is large part of this status area which is even more critical as source of information for course at college level institutions. It is context that the study recommends further studies that sufficiently and appropriately covers area status reflecting more RSA and Lesotho's TVET to societal development.

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APPENDIX A

PERMISSION TO CONDUCT RESEARCH

CENTRAL UNIVERSITY OF TECHNOLOGY, FREE STATE
YUNIVESITI E BOHARENG EA TEKENOLOJI, FOREISITATA

Faculty of Humanities
Department of Post-Graduates Studies-Education
P/bag Bloemfontein

21th February 2017

TO WHON IT MAY CONCERN

Dear Sir/Madam

RE: Application for data collection

I wish to inform you that Mr. Mosebekoa, Motsamai, (2160099514) the former student of your institution in both levels prerequisite to doctoral degree in pursuit at CUT, requests to conduct part of his study in your institution.

Title of the thesis: Technical and Vocational Education and Training and Technology Education as basis for societal development: the comparative study of South Africa and Lesotho

PROPOSED DEGREE: DOCTOR OF EDUCATION (RESEARCH)
SUPERVISOR: DR. J.R. MAIMANE
CO-SUPERVISOR: DR. M.P. RANKHUMISE

With anticipation, this application will be approved.

Yours faithfully

Dr. JR. MAIMANE (PhD)

Lerotholi Polytechnic
P.O. Box 16
Maseru 100
LESOTHO

Rector's Office

26th April 2017

Dr. JR. Maimane (PHD)
Central University of Technology
FREE STATE

Dear Sir/Madam

MR. MOTSAMAI MOSEBEKOA JOSEPH

Receipt of your letter regarding your above mentioned student is acknowledged.

Permission is hereby granted for Mr. Motsamai to collect data at Lerotholi Polytechnic in pursuance of his doctoral research.

He should liaise with the office of the Deputy Rector Academic Affairs and Research (DRAAR), Mr. Ntoane Lepota.

Your understanding is highly appreciated.

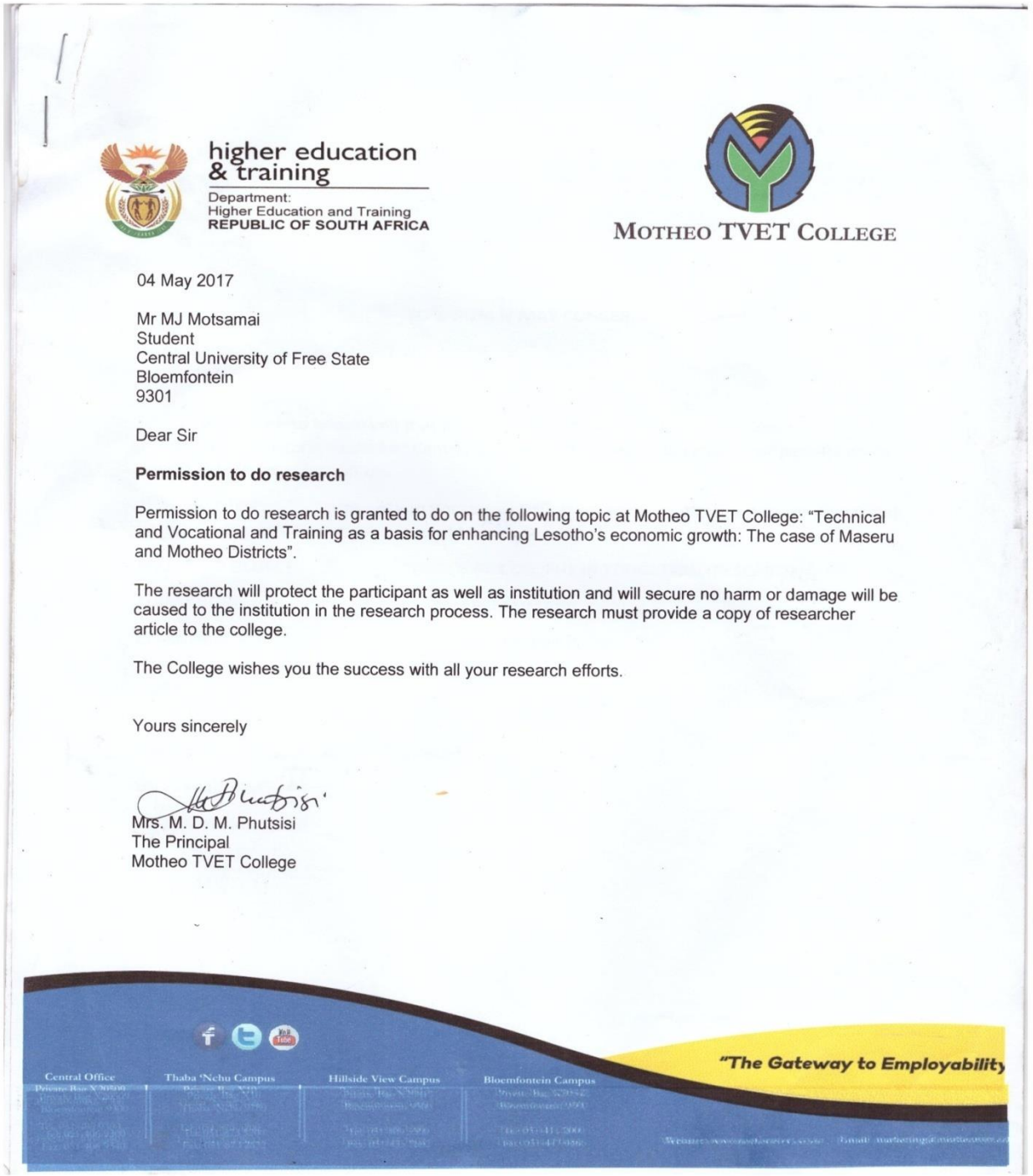
Yours faithfully

.....

H. MAJARA (MS)
RECTOR (A.I)

CC: DRAAR

Tel.: (+266) 22 322 045 Fax: (+266) 22 310 265
E-mail: rector@lp.ac.ls



higher education & training
Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MOTHEO TVET COLLEGE

04 May 2017

Mr MJ Motsamai
Student
Central University of Free State
Bloemfontein
9301

Dear Sir

Permission to do research

Permission to do research is granted to do on the following topic at Motheo TVET College: "Technical and Vocational and Training as a basis for enhancing Lesotho's economic growth: The case of Maseru and Motheo Districts".

The research will protect the participant as well as institution and will secure no harm or damage will be caused to the institution in the research process. The research must provide a copy of researcher article to the college.

The College wishes you the success with all your research efforts.

Yours sincerely

Mrs. M. D. M. Phutsisi
The Principal
Motheo TVET College

"The Gateway to Employability"

Central Office | Thaba 'Nchu Campus | Hillside View Campus | Bloemfontein Campus

APPENDIX B

CONSENT FORMS (RESEARCH PARTICIPANTS)

Consent Form (Lecturer's Questionnaire)

I have discussed the research study with Mr Mosebekoa, Motsamai Joseph and I fully understand the purpose and extent thereof, and accept the intended level of my involvement, that is:

- Completing questionnaires about the comparison of TVET in South Africa and Lesotho

I give my approval to be involved in the study on the conditions outlined below:

- I can ask Mr Mosebekoa any questions about the study.
- I can withdraw any time from being involved any anytime I feel, without having to give reasons.
- No reports will be written in which I could be identified.

Signed: ----------

Date: ----------

APPENDIX C

LECTURER'S QUESTIONNAIRE

LECTURERS

SECTION A (personal information)

Please make a cross **(x)** in appropriate box.

GENDER	
Male ☐	Female ☐
RACE	
Blacks	☐
Whites	☐
Coloureds	☐
Asians	☐
Others	☐
AGE	
Under 20	☐
20-25	☐
26-30	☐
31-35	☐
36-40	☐
41 and above	☐
QUALIFICATION	

SECTION B

The table below is an example of how you should answer questions in the larger table. The five Abbreviations are shown below in terms of meaning. Tick in a box for the write answer.

SA = Strongly Agree

A = Agree

UD = Undecided

D = Disagree

SD = Strongly Disagree

No.	Items	SA	A	UD	D	SD
1	You are a qualified lecturer.	1	2	3	4	5
2	Your institution conducts career guidance.	1	2	3	4	5
3	Your institution offers courses addressing national goals.	1	2	3	4	5
4	Your institutional courses are demand driven.	1	2	3	4	5
5	External stakeholders engage in curriculum development	1	2	3	4	5
6	Your institution engages in professional development.	1	2	3	4	5
7	Institution has enough teaching-learning materials (books).	1	2	3	4	5
8	Your institution has enough buildings, water and power.	1	2	3	4	5
9	Your institution has enough equipment (in lab.).	1	2	3	4	5
10	Your class size is manageable.	1	2	3	4	5
11	You attend classes regularly.	1	2	3	4	5
12	You employ constructivist learning approach.	1	2	3	4	5
13	You expose students to workplace experience sufficiently.	1	2	3	4	5
14	You assess students regularly.	1	2	3	4	5
15	You have good relationship with students.	1	2	3	4	5
16	You have enough time to address students' needs.	1	2	3	4	5
17	Your instructional load is manageable.	1	2	3	4	5
18	Students show commitment in learning.	1	2	3	4	5
19	Students have learning materials.	1	2	3	4	5
20	Students acquire entrepreneurial skills.	1	2	3	4	5
21	Students are innovative.	1	2	3	4	5
22	Students show signs of productivity and readiness.	1	2	3	4	5
23	Examinations are worth doing as are valid and credible.	1	2	3	4	5
24	Students conduct research project.	1	2	3	4	5
25	Students graduate having business ideas.	1	2	3	4	5
26	Institutions assist graduates in enterprising.	1	2	3	4	5
27	Public and private sectors assist graduates enterprising.	1	2	3	4	5

APPENDIX D

STUDENTS' QUESTIONNAIRE

The questionnaire consists of two sections:

SECTION A: Demographic profile

SECTION B: Students' data handling activities

General information for the completion of the questionnaire

1. This questionnaire consists of two pages. Thee completions thereof should not take more than 15 minutes.
2. Do not write the name of your college/university and your name as this is not to be disclosed.
3. Only with your friendly, correct and honest responses will be objectives of this research be realised.
4. Complete this Questionnaire anonymously.

THANK YOUR FOR YOUR TIME.

SECTION A (personal information)

Please make a cross **(x)** in appropriate box.

GENDER	
Male ☐	Female ☐
RACE	
Blacks	☐
Whites	☐
Coloureds	☐
Asians	☐
Others	☐
AGE	
Under 20	☐
20-25	☐
26-30	☐
31-35	☐
36-40	☐
41 and above	☐
PROGRAMME	

SECTION B

The table below is an example of how you should answer questions in the larger table. The five Abbreviations are shown below in terms of meaning. Tick in a box for the write answer.

SA = Strongly Agree

A = Agree

UD = Undecided

D = Disagree

SD = Strongly Disagree

No.	Items	SA	A	UD	D	SD
1	You qualified for the course.	1	2	3	4	5
2	Your institution took you through career guidance.	1	2	3	4	5
3	Your course addresses national development goals.	1	2	3	4	5
4	Your course is demand driven.	1	2	3	4	5
5	Curriculum development engages external stakeholders.	1	2	3	4	5
6	Institution engages in training of lecturers on new courses.	1	2	3	4	5
7	Institution has enough teaching-learning materials (books).	1	2	3	4	5
8	Institution has enough buildings, water and power.	1	2	3	4	5
9	Institution has enough equipment (in lab.).	1	2	3	4	5
10	Class size is manageable.	1	2	3	4	5
11	You attend classes regularly.	1	2	3	4	5
12	Lecturers engage students in learning activities.	1	2	3	4	5
13	Students are exposed to workplace experience sufficiently.	1	2	3	4	5
14	Students are assessed regularly.	1	2	3	4	5
15	Lecturer- student relationship is good.	1	2	3	4	5
16	Lecturers have time to address students' needs.	1	2	3	4	5
17	Lecturers' instructional loads are manageable.	1	2	3	4	5
18	Students show commitment in learning.	1	2	3	4	5
19	Students have learning materials.	1	2	3	4	5
20	Students acquire entrepreneurial skills.	1	2	3	4	5
21	Students are innovative.	1	2	3	4	5
22	Students show signs of productivity and readiness.	1	2	3	4	5
23	Examinations are worth doing as are valid and credible.	1	2	3	4	5
24	Students conduct research.	1	2	3	4	5
25	Students graduate having business ideas.	1	2	3	4	5
26	Your institution assists graduates to set up businesses.	1	2	3	4	5
27	Public and private sectors assist graduates to enterprise.	1	2	3	4	5

APPENDIX E

LECTURERS INTERVIEW SCHEDULE

Interview procedure

I would like to thank you for availing yourselves in order to meet me today. I am Mr Mosebekoe and I would like to talk to you about your experiences and your participation in my PhD research study.

I am conducting a research to determine how TVET is practised in South Africa as compared to Lesotho and the significant as far as its benefits are and the eradication of poverty in Motheo and Maseru districts.

The interview will take place at your institution and should take less than an hour (60 minutes). I will tape the interview because I do not want to miss any of your comments. Although I will be taking notes during the session, the tape recorder will be used as a back-up.

All the responses will be treated under confidentiality as your responses will be dealt with within the team members and the information to be included in the research report will not identify you as a respondent.

As a participant if you feel that you want to withdraw from participating in the research you can do that at any time.

Do you have any questions about what I explained? Are you willing to participate in this interview?

---------- ----------

Signature for consent Interviewee's Witness

Date:----------

LECTURERS

1. Are you a qualified lecturer?
2. Does your institution hold career guidance?
3. How does your course better the country?
4. What stakeholders does your institution engage in curriculum design?
5. What materials (books and machines) do you have for teaching? Are they enough? If no, why?
6. What method of teaching do you commonly use and why?
7. How is field work/placement conducted?
8. How do students attend?
9. What attitude do students show to their courses?
10. What is the teacher student ratio?
11. How are students assessed in classroom instruction?
12. How are the classrooms and facilities?
13. How are students assessed?
14. How is your institution assisting graduates to establish businesses?

STUDENTS INTERVIEW SCHEDULE

Interview procedure

I would like to thank you for availing yourselves in order to meet me today. I am Mr Mosebekoe and I would like to talk to you about your experiences and your participation in my PhD research study.

I am conducting a research to determine how TVET is practised in South Africa as compared to Lesotho and the significant as far as its benefits are and the eradication of poverty in Motheo and Maseru districts.

The interview will take place at your institution and should take less than an hour (60 minutes). I will tape the interview because I do not want to miss any of your comments. Although I will be taking notes during the session, the tape recorder will be used as a back-up.

All the responses will be treated under confidentiality as your responses will be dealt with within the team members and the information to be included in the research report will not identify you as a respondent.

As a participant if you feel that you want to withdraw from participating in the research you can do that at any time.

Do you have any questions about what I explained? Are you willing to participate in this interview?

---------- ----------

Signature for consent Interviewee's Witness

Date: ----------

STUDENTS' INTERVIEW

1. Did you a qualified for the programme?
2. Did the institution take you through career guidance?
3. How does your course better the country?
4. What stakeholders does your institution engage in curriculum design?
5. What materials (books and machines) do you have for teaching? Are they enough? If no why?
6. What method of teaching do you commonly experience?
7. How is field work/placement conducted?
8. How do students attend?
9. What attitude do students show to their courses?
10. How are you assessed?
11. Are there enough classrooms and facilities?
12. How does your institution arrange for graduates in the world of work?

MARKETING OFFICERS INTERVIEW SCHEDULE

Interview procedure

I would like to thank you for availing yourselves in order to meet me today. I am Mr Mosebekoa and I would like to talk to you about your experiences and your participation in my PhD research study.

I am conducting a research to determine how TVET is practised in South Africa as compared to Lesotho and the significant as far as its benefits are and the eradication of poverty in Motheo and Maseru districts.

The interview will take place at your institution and should take less than an hour (60 minutes). I will tape the interview because I do not want to miss any of your comments. Although I will be taking notes during the session, the tape recorder will be used as a back-up.

All the responses will be treated under confidentiality as your responses will be dealt with within the team members and the information to be included in the research report will not identify you as a respondent.

As a participant if you feel that you want to withdraw from participating in the research you can do that at any time.

Do you have any questions about what I explained? Are you willing to participate in this interview?

---------- ----------

Signature for consent Interviewee's Witness

Date:----------

1. Does your institution offer career awareness?
2. What is the purpose for career awareness?
3. What methods are used in career awareness?

APPENDIX F

EDITOR'S LETTER

Matholeng- Lifelekoaneng
Mafeteng 900
Lesotho

19/11/2017

TO WHOM IT MAY CONCERN

1, Nkopane Mathibeli, declare that I proofread and edited the thesis: ***The Technical and Vocational Education and Training as the Basis for Societal Development: The Comparative Study of the Republic of South Africa and Lesotho*** by Mr. Motsamai Mosebekoa (student number 2106009514) at the Central University of Technology, Free State. My qualifications are as follows: Bachelor of Education and Master of Arts. I write articles and have produced a manuscript of development studies textbooks for grade 11 and 12.

Mathibeli, N. (Mr.)

Language and Development Practitioner

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