DIFFERENTIATION IN HIGHER EDUCATION:

A CASE STUDY OF LESOTHO

BY

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: Signed by candidate
Signature Removed

Date: 24/05/2016

DEDICATION

To my dad, Mokhoele Ignatius Napo Rametse, you have been a great encouragement through this project. You will always have a special place in my heart. I love you daddy.

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ABSTRACT

Differentiation has become a crucial policy driver in higher education systems that attempts to respond to global pressures for a highly skilled labour force, employ new technologies and adapt to unpredictable or volatile global product markets and rapid technological change. In order to be globally competitive, nations have to place knowledge production, accumulation, transfer and application at the centre of their national development strategies.

This study investigates the case of Lesotho, a relatively small African country with a colonial past that has left a lasting imprint, both enabling and constraining, on many aspects of its education system. The aim of this explanatory case study was to identify differentiating trends within Lesotho's higher education system, focusing on two institutional types: the polytechnic and the university. These institutions were investigated at both institutional and programme level.

The research question was "How differentiated is the polytechnic-university binary division in the public sector higher education system in Lesotho?"

The sample for the study comprised two schools and two faculties at the polytechnic and the university respectively. One programme under each school or faculty was investigated.

The findings indicate that the question cannot be answered in a one-dimensional way. At institutional level, the system is vertically differentiated with a blurring of boundaries due to 'mission stretch' as a feature of both institutions. At programme level the polytechnic and the university are strongly differentiated in the sense that each institution directs its programmes at a distinctive labour market level. In the engineering field de-differentiation occurs in the sense that there is a labour market preparation dimension in all engineering programmes, regardless of which institution offers the programme. There is a formal articulation route between engineering programmes at the two institutions but students cannot move 'seamlessly' from diploma to degree, due to the strong conceptual knowledge base required in the degree programme.

The findings confirm that articulation between programmes is not only an institutional or administrative arrangement. Differences in the substantive knowledge base of types and levels of programmes need to be taken into account in policy deliberations about articulation between the various institutions that make up a country's higher education system.

ABBREVIATIONS AND ACRONYMS

ADEA	Association for the Development of Education in Africa
BA	Bachelor of Arts
BSC	Bachelor of Science
CAPA	Commonwealth Association of Polytechnics in Africa
CAS	Centre for Accounting Studies
CHE	Council on Higher Education
CHET	Centre for Higher Education Transformation
COSC	Cambridge Overseas School Certificate
CTI	Commercial Training Institute
GCSH	German Council of Science and Humanities
IEMS	Institute of Extra Mural Studies
IAU	International Universities Association
LGCSE	Lesotho General Certificate of Secondary Education
LP	Lerotholi Polytechnic
MOET	Ministry of Education and Training
NMDS	National Manpower Development Secretariat
NUL	National University of Lesotho
SANTED	South-Africa-Norway Tertiary Education Development
SEM	School of Enterprise and Management
SET	School of Engineering and Technology
SOBE	School of the Built Environment
SOCE	School of Continuing Education

TTS	Technician Training School
UBBS	University of Basutoland, Bechuanaland Protectorate and Swaziland
UBLS	University of Botswana, Lesotho and Swaziland
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNISA	University of South Africa
WGHE	Working Group on Higher Education

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CHAPTER 1

AN INTRODUCTION TO THE STUDY

1.0 Introduction

The introductory chapter provides a brief overview of Lesotho's higher education system in order to provide a rationale for the research question about the extent to which the binary institutional division between university and polytechnic study is sufficiently differentiated to provide access to varying types of studentsand satisfy labour market needs for a greater diversity of graduate skills and levels of training. As a citizen of Lesotho, my interest in this question arises out of previous research carried out in African countries, which did not include Lesotho. As will be discussed, the present study wishes to ascertain the extent to which the system in Lesotho confirms trends regarding the weak relation between differentiation and articulation noted in other higher education systems in Africa.

The second part of the chapter provides a brief overview of the organisation of the study.

1.1 Background to the study

Like other African countries, Lesotho's higher education system faces seemingly irreconcilable challenges. On the one hand, increasing access to higher education is seen as a priority. Only approximately 23,987 Basotho were enrolled at local higher education institutions in 2010/2011, with an unknown number receiving financial assistance through the National Manpower Development Secretariat (NMDS) to pursue their studies at higher education institutions outside the country (Council on Higher Education (CHE), 2010:8). On the other hand the Cambridge Overseas School Certificate (COSC) results, which are used as the main selector for admission of students into higher education institutions, indicate poor performance in Mathematics, Science and English, thus limiting students' access to higher education institutions as they do not qualify for admission into these institutions. Furthermore, higher education institutions have limited capacity in terms of infrastructure and also offer limited career choices for students (CHE, 2010:13).

In response to the challenges stated above, the Lesotho Education Strategic Plan stipulates that during the Strategic Planning period 2005-2015, the main objectives for the higher education subsector will be:

- Increasing access to higher education on an equitable basis.
- Improving the relevance of higher education such that it is responsive to the demands of the labour market.
- Improving efficiency of higher learning institutions.
- Introducing issues of gender and HIV and AIDS in mainstream higher education curriculum and activities (Ministry of Education and Training (MOET), 2005:83).

When introducing the strategic plan, the Minister of Education and Training indicated that "the envisaged economic development for Lesotho is dependent on the availability of highly skilled manpower" (MOET, 2005:2). Access, relevance and institutional efficiency are viewed as key strategic objectives for promoting social and economic development.

This relation is confirmed by research that suggests strong links between higher education participation rates and a country's developmental level. Citing Bloom *et al* (2006), Cloete, Bailey, Pillay, Bunting & Maassen (2011:3) indicate that in several high-income countries, higher education participation rates are more than 50% while for Sub-Saharan Africa, the rates are well below 5%. In Lesotho, figures published by UNESCO in 2009, indicate a participation rate of only 4%, while the 2006 Population & Housing Census yielded a participation rate of 11.1% (CHE, 2012: iv).

Lesotho's higher education system comprises several public and private sector institutions which offer academic programmes with a minimum duration of two-years as opposed to Technical and Vocational Education and Training Stream. These institutions are responsible to MOET and are regulated by CHE. They prepare students at different levels like certificate, diploma, bachelor degree, associate degree, honours degree and masters degree (CHE, 2010:6).

In the public sector there are three publically-funded autonomous institutions: one polytechnic, one college of education and one university. There are also three college-level institutions which are constituted as departments of government ministries. In the private sector there is one profit-making university and four non-profit making colleges of nursing. (CHE, 2012:17-18).

In general, higher education in Lesotho is offered to those who have at least completed senior secondary education successfully. However, there has been a concern that access to higher education in Lesotho is limited due to limited institutional capacity, poor COSC results and limited career choices for students (CHE, 2010:13). In response to these challenges, one of the aims set out by the higher education policy is, to increase access to higher education on an equitable basis (MOET, 2005:83).

1.2 Research Question

This study questions whether the higher education system in Lesotho is sufficiently differentiated to provide access to varying types of students in terms of their academic and social background as well as providing them with different types of skills and knowledge as required by the labour market.

Focussing specifically on the university-polytechnic binary in the public sector, the study aims to investigate the following question:

How differentiated is the university-polytechnic binary division in the public sector higher education system in Lesotho?

In addressing this question, the study seeks to contribute to previous research, conducted in twelve selected Sub-Saharan African countries and focussing specifically on the relationship between differentiation and articulation in universities and polytechnics (Ng'ethe, Subotzky & Afeti, 2008). Lesotho was not included in this study, so the results of the current study will show how the binary system in Lesotho compares to other systems in Africa, as well as further afield.

It is hoped that the findings of the study will contribute to the existing literature on differentiation in higher education systems.

1.3 Organisation of the Study

The six chapters in the study are arranged as follows:

Chapter One: An Introduction to the Study

The chapter outlines the purpose and rationale for the research question that drives the study and discusses the chapter structure of the dissertation.

Chapter Two: Literature Review towards a Conceptual Framework

The chapter introduces and discusses the concepts which will guide the study, in a critical manner. It also refers to studies which will provide a framework for comparison with the findings of the study.

Chapter Three: Research Design

The procedures undertaken to conduct the study are explained. This entails the instruments used and the sampling techniques as well as data collection and data analysis methods. The limitations of the study are also outlined in this chapter.

Chapter Four: Data Presentation and Analysis – Institutional Differentiation

This is an empirical study reporting chapter. It explores institutional differentiation focusing on the polytechnic and the university in Lesotho.

Chapter Five: Data Presentation and Analysis – Programme Differentiation

This, also, is an empirical study reporting chapter which explores the findings of the previous chapter through programme differentiation.

Chapter Six: Findings and Conclusions

The last chapter presents the overall findings and the conclusions of the study. Conclusions are related back to literature in regard to differentiation in higher education systems, with a specific focus on how the study compares to other countries in Africa.

CHAPTER 2

LITERATURE REVIEW TOWARDS A CONCEPTUAL FRAMEWORK

2.0 Introduction

The chapter serves to develop conceptual framework to guide the study. It also refers to studies which will help to make comparison with the findings of the study.

2.1 Globalisation, Knowledge Economy and Higher Education

Over the years, globalisation has shaped the world's economy, with knowledge and information as the main economic resources (Carnoy & Rhoten, 2002:1). A globalised world requires a highly skilled labour force that employs new technologies and adapts to unpredictable and volatile global product markets as well as rapid technological change (Kraak, 2001:89). For nations to be globally competitive, knowledge production, accumulation, transfer and application needs to be at the core of their national development strategies (Santiago *et al*, 2008 and World Bank, 1999, 2002, in Cloete *et al,* 2011:3) and workers in the global labour force are pressurised to constantly upgrade their skills and knowledge (Young & Gamble, 2006:1).

New education and training requirements are central to globalisation (Kraak, 2001:89) and education, particularly higher education, is deemed to contribute significantly towards the production of a competitive national labour force and economic development (Tarabini, 2010:204). During the twentieth century, higher education institutions became the key knowledge-producing institutions in most parts of northern and western Europe and North America. They are viewed as producers of knowledge and knowledgeability. Knowledge comes in the form of scientific results or scientifically trained people who can tackle the challenges of globalisation. Knowledgeability refers to a highly educated, a more rational and a literate population as well as a more skilled and a creative society (Nowotny, Scott and Gibbons, 2001:79).

Contrarily, Wolf (2002:14-15) argues that the link between education and growth is not as straight forward as it seems. While not ruling out the importance of education as well as skills acquired through education to economic growth, she argues that education is often used mainly for ranking, screening and selecting people as staying in education longer indicates possession of qualities

which most employers wish for like motivation, perseverance and organisation (Wolf, 2002:30). Wolf warns that, any government which is serious about economic growth has to be careful and discriminating in its education spending (Wolf, 2002:54).

In response to the pressure that globalisation puts on higher education to provide more places, higher education systems have tended to increase the number of higher education institutions in any particular system, as well as access to these institutions. Ng'ethe *et al* (2008:xvii) and Lolwana (2010:9) note that higher education systems which want to provide increased access and also provide human capital with a mix of skills and knowledge for economic development are characterised by differentiation.

The next section investigates various conceptual dimensions of 'differentiation' as key terms that will drive the study as a whole.

2.2 Institutional Differentiation: Concept Definition

2.2.1 Categories of Differentiation

Differentiation and its accompanying concept diversity have been widely discussed in relation to higher education.

Differentiation is viewed as the emergence or coming into existence of new entities in a system (Rhoades 1983 in Van Vught, 2007:2). It is the emergence of distinct types of higher education institutions that provide different types of skills and knowledge to a wide range of students with various abilities and interests (Ng'ethe *et al,* 2008:xvii). It refers to an increase in the number of institutions within the same higher education system which may have different functions and structures (Ng'ethe *et al,* 2008:5).

Two types of differentiation namely vertical and horizontal differentiation have been identified in literature. *Vertical* differentiation occurs when distinct types of institutions like universities, polytechnics and colleges form part of a single higher education system (Ng'ethe *et al,* 2008:xvii; also cited in Lolwana, 2010:9). It is further indicated that a vertically differentiated higher education system responds to the labour market needs as it provides a diversified type of graduates (World Bank 2000 in Ng'ethe *et al*, 2008:7). Horizontal differentiation among institutions occurs when public institutions are complemented by profit or non-profit private institutions of the same category (Clark, 1978:248; Ng'ethe *et al*, 2008:xvii; also cited in Lolwana, 2010: 9). It is driven by demand for access into higher education (World Bank 2000 in Ng'ethe *et al*, 2008:7).

*Diversity i*ndicates the variety of entities within a system (Van Vught, 2007:2) at a specific point in time (Huisman in Van Vught, 2007:2). According to Trow (1995) in Meek, Goedegebuure and Huisman (2000:3) diversity in higher education has been defined as the existence of distinct forms of post-secondary education, of institutions and groups of institutions within a state or nation that have different and distinctive missions, educate and train for different lives and careers, have different styles of instruction, are organised and funded differently and operate under different laws and relationships to government (Meek *et al,* 2000:3). Diversity is about the variety of institutions. If a unique institution emerges within a higher education system, it increases diversity. However, if provision and services are duplicated, there is no variety hence no contribution towards diversity. Thus differentiation does not necessarily increase diversity (Ng'ethe *et al,* 2008:5-6).

Two forms of diversity have been identified in a higher education system, internal diversity which refers to differences within institutions and external diversity which refers to differences between institutions.

According to Van Vught (2007:2) seven categories of diversity which are largely related to external diversity have been identified by Birnbaum (1983). The categories are:

- *Systemic* diversity is defined as institutional differences within a single higher education system (Codling and Meek, 2006:36) which relates to institutional type, size and control (Van Vught, 2007:2).
- *Structural* diversity is institutional differences which result from historical and legal foundations or the division of labour within the institutions.
- *Programmatic* diversity is about the degree level, degree area, mission, comprehensiveness as well as emphasis of programmes and services provided by institutions.
- *Procedural* diversity expresses how institutions provide teaching, research and services.
- *Reputational* diversity relates to perceived differences based on status and prestige.
- *Constituential* diversity is all about differences in students served as well as other constituencies in the institutions like faculty and administration.
- *Values and climate* diversity relates to social environment and culture differences (Van Vught, 2007:2-3).

Even though there is a clear definitional distinction between differentiation and diversity, the terms tend to be used interchangeably in the literature (Ng'ethe *et al*, 2008:6).

Arguments in support of differentiation have shown that such systems promote positive performance in higher education by increasing the effectiveness of higher education institutions.

Differentiated systems are deemed to respond effectively to both students and labour market. Students' needs are met as the system provides access to students from different educational and social backgrounds and allows multiple entry and exit points. Labour market needs are met in terms of specialisation of labour, which is necessary for economic and social development (Van Vught, 2007:5-6; Meek *et al*, 2000).

2.2.2 Isomorphism and de-differentiation through 'mission stretch'

In opposition to arguments in favour of differentiation, there are also studies that assert that higher education systems are, characterised by isomorphism, *de-differentiation* and decreasing levels of diversity through 'mission stretch', thereby creating a tendency towards uniformity (Van Vught, 2007:7; Codling & Meek, 2006:35). De-differentiation refers to disbanding of differences which previously existed within the higher education system (German Council of Science and Humanities (GCSH), 2010:12).

Two oppositional processes contribute towards mission stretch. The first is 'academic drift', which refers to the process where polytechnics become more like universities by moving into areas which have been exclusively the responsibility of universities. The opposite process is 'vocational drift' which refers to traditional universities shifting towards universities of technology or polytechnics (Codling & Meek, 2006:35).

Codling and Meek's (2006) study of Australian universities shows that universities exhibit vocational drift by:

- Adopting more applied missions
- Developing active partnerships with industry and the new professions
- Offering more qualifications with overt vocational outcomes
- Generating more applied research funded by industry
- Becoming more enabling with their admission policies to encourage non-traditional learners (Codling & Meek, 2006:41)

Universities of Technology exhibit academic drift by:

- Appointing more traditional university trained and experienced academic staff
- Adjusting their organisational cultures to be more academic
- Shifting enrolment patterns to include more school leavers
- Broadening their research focus and increasing emphasis

- Adopting much of the symbolism and nomenclature of the traditional university (Codling & Meek, 2006:41).

Academic drift is mostly associated with isomorphism which is the imitative and aspirational behaviour of non-university, polytechnic-type institutions (Ng'ethe *et al*, 2008:6). These institutions adopt similar features to those of the research universities so that they may have higher status and better quality (Ng'ethe *et al*, 2008:6). According to Van Vught (1992) in Ng'ethe *et al* (2008:6) this imitative process is called institutional isormorphism.

File and Goedegebuure (2000) in Ng'ethe *et al* (2008:6) differentiate between two types of isomorphism. Mimetic isomorphism is caused by an institution's insecurities thus forcing it to imitate more successful institutions. Normative isomorphism is the result of professionalism. Due to shared standards, similarity is encouraged thus leading to similar practices (Ng'ethe *et al,* 2008:6).

Maassen in CHET (2008a:3) confirms dedifferentiating trends in relation to the Norwegian system. In Norway, a college sector was developed, in parallel to universities, to provide professional higher education; thus promoting a highly effective differentiated system. However, the professional education sector was allowed to overlap with the university sector. Colleges were allowed to conduct research, develop doctoral and masters programmes and those colleges that could fulfil specific conditions were allowed to upgrade to university status (CHET, 2008a:3).

2.3 Institutional Differentiation: Empirical Studies

2.3.1 The relation between participation, differentiation and economic development (Pillay, 2010)

In order to address the challenge of access, it is important to study at how other countries have done it. Pillay (2010) undertook a study aimed to flesh out common themes between higher education and economic development. The study focused on three countries namely, Finland, South Korea and North Carolina. The outcome of the study indicates a close relationship between higher education and economic development (Pillay, 2010:1). One of the factors attributed to this positive relationship is high participation rates coupled with institutional differentiation which was evident in each of the three education systems (Pillay, 2010:27).

- **Finland: Strong differentiation, strong state involvement and high participation in a public education system**

  Finland's education system, a dual system, comprises of universities and polytechnics which are distributed country wide and hence, provide equitable access to all. Each sector has its own profile. Universities are more academic with a theoretical and research orientation while polytechnics are geared towards the world of work. They also differ in terms of the degree levels and the programmes they offer. Their administration models and their funding models also support each of their respective missions.

  The system is characterised by a high participation rate coupled with state funding and planning. There is also the creation of conditions which enable the higher education system to constitute a key component of the regional innovation system and to interact closely with business and industry. System enrolment is driven by student demand and is guided by what the labour market needs. As a result, the graduates produced by the higher education sector match the labour market demand (Pillay, 2010).

- **South Korea: Strong differentiation, high state involvement in planning but poor strategic partnerships in a predominantly private higher education system**

  In the case of South Korea the higher education system is clearly differentiated between colleges and universities which are mainly in the main cities. Colleges are closely related to employers and prepare middle-level human resource and technicians in a range of fields, while universities are expected to produce high-level skills as well as researchers for the private and public research institutions. The state plays a key planning role in the economy and ensures that the education system develops in line with the human resource requirements of the economy. However, the state's contribution to the funding of higher education is minimal and the system is predominantly private (Pillay, 2010).

  Unlike Finland, the South Korean reforms did not work as anticipated. Due to the massive expansion of the South Korean higher education system, the quality of higher education has been compromised. There is poor strategic partnership and connections between knowledge-producing institutions. The role of universities as creators and disseminators of knowledge is also weak. Diversity and relevance are limited; hence the system does not provide the quality human resources which meet the changing demands

of the knowledge-based economy. In South Korea there are highly educated workers, but they do not meet the labour market needs (Pillay, 2010:22).

In response to all these challenges the South Korean government announced a University Restructuring Plan in 2004. The reforms are designed to improve human resource capacity so that it is responsive to the challenges of this increasingly globalised and knowledge based economy. The reforms are related to quality, differentiation and relevance, as well as stimulating research capacity in the universities (Pillay, 2010:23-24).

- **North Carolina: University-Community College differentiation**

  North Carolina's higher education system includes universities and community colleges which are differentiated to cater for the differing needs of the population and economy. The system consists of public universities and colleges as well as private universities and colleges. There is a linkage between universities and colleges which results in a clear division of roles and articulation. Colleges address challenges of workforce development and provide access to those who cannot make it straight to university. Universities are specialised, especially the public sector. However, they all want to become world-class teaching and research institutions. The government plays an important part with regard to funding and support and providing a powerful sense of the importance of higher education for economic and social development. The engagement between the private sector and higher education institutions is productive and deals with the changing economic conditions (Pillay, 2010:25).

Looking at the three case studies by Pillay (2010), they indicate that all the countries have high participation rates and binary systems with different roles for each type of institutions. However, not all of them have given the expected results. In South Korea unlike in the other two countries, higher education institutions are mainly in the cities with limited state funding and poor relationship between universities and industry. This shows that success does not only lie in increased participation and differentiation alone. There are factors like funding and industry's labour market needs to be considered (also in Codling & Meek, 2006:42).

2.3.2 Differentiation and Articulation: Trends in Africa (Ng'ethe *et al,* 2008)

Since the study will be focusing at higher education system in Lesotho, it is helpful to consider the trends in some African countries especially the Southern African countries. Although every country is different there are lessons which could be learned from neighbouring countries.

Ng'ethe *et al* (2008:3) argue that African countries are not likely to become meaningful players in knowledge generation as the key driver of the global economy, if they do not have adequate provision of higher education. Ng'ethe *et al* (2008) undertook a study to investigate the extent, range and patterns of institutional and programme differentiation as well as articulation among them. The study was meant to inform and support the Working Group on Higher Education (WGHE) of the Association for the Development of Education in Africa (ADEA) to engage more with the non-university component of the higher education sector.

The study analysed non-university institutions in selected countries in Sub-Saharan Africa. Four countries were selected per each region:

- West Africa: Cameroon, Ghana, Nigeria and Senegal
- East Africa: Kenya, Rwanda, Tanzania and Uganda
- Southern Africa: Malawi, Mozambique, South Africa and Zambia

The study revealed that in African countries higher education systems are generally differentiated to a varying degree and extent across countries. Though most countries' systems began as binary, it is only Ghana, Kenya, Malawi and Tanzania which have maintained such systems. Cameroon, Nigeria and Senegal have been classified as differentiated. Uganda has been classified as trinary while Zambia's system is unitary. Mozambique and Rwanda have semi-differentiated systems. The classification is mainly based on the number of different institutional types that comprise the respective higher education systems.

These differences are viewed as the result of colonial experiences, political economy and post-independence history. Ng'ethe *et al* (2008:22) shows that the differentiation picture displayed by South African higher education system indicates its apartheid policy legacy. In Nigeria, institutional differentiation displayed is the result of the country's size, societal complexities and the nature of demand for higher education. They also indicated that smaller countries like Rwanda and Malawi have a less differentiated higher education system.

However the study shows that, the binary boundaries between the universities and non-university institutions are becoming blurred. There are a number of drivers towards this blurring. Universities

compete in the offering of market driven programs which are also referred to as income-generating programs. Their objective is to provide skills using pedagogies close to training rather than university pedagogy.

Another factor that causes the blurring of the binary boundary is lack of clear policy demarcating the boundaries between the polytechnics and universities. It promotes academic and vocational drift respectively. Academic drift has been noted in countries like Ghana as polytechnics have aspired for university status. In Nigeria, polytechnics have been allowed to offer degrees while in Kenya polytechnics have been elevated to universities. Vocational drift has been noted in all the systems under study as universities tried to cover up their financial short falls by offering market-driven courses and vocational programs.

In South Africa, the binary divide policy has been described as ambiguous. The system has been restructured into three institutional types, traditional universities, universities of technology and comprehensive universities which offer the mix of traditional university and university of technology programs.

Isomorphism is another contributing factor. In some countries newer universities are copying what the older ones are doing especially in their programme offering. This process has been found to be more likely where there is poor regulation of such intuitions as they are at liberty to do as they wish (Ng'ethe *et al,* 2008:35).

There has been expansion in most of the higher education systems studied which did not necessarily guarantee differentiation (Ng'ethe *et al*, 2008:27). Expansion has been a political reaction to public demands for access, rather than being an attempt to produce a well-differentiated higher education system. This resulted in similar programmes being offered, leading to an increase in the number of graduates with similar qualifications as opposed to what the market needs.

In regard to articulation, Ng'ethe *et al* (2008:36) indicated related information to be limited. They highlighted that all countries acknowledged the need for articulation. However, practice proved otherwise as few countries have shown evidence of articulation.

Senegal and South Africa seem to be the only two countries with a highly articulated higher education systems (Ng'ethe *et al*, 2008:36). The post apartheid policy in South Africa emphasise equity-driven access, mobility and articulation between universities and universities of technology (Ng'ethe *et al*, 2008:122). Ghana, South Africa and Uganda are the only three countries which have a unified system oversight body. In Cameroon, Senegal and South Africa, the institutions recognise

the qualification structures of others and they also allow student mobility and credit transfer (Ng'ethe *et al,* 2008:36).

Much as the aim of the study has been to investigate program differentiation Ng'ethe *et al* (2008:24) highlighted this could not be achieved as adequate documentation would require different analytical methods as well as detailed content analysis.

The study has shown that much as the policy on differentiation is evident in African countries, factors like policy, the market, and isomorphism promoted de-differentiation. Moreover, expansion has been a response to public demand for access while differentiation has been basically about different types of institutions. This gives a different picture from the one given by Pillay (2010) where expansion has been made as a move to promote economic development.

Other studies have been considered to find out if differentiation or de-differentiation has been promoted in other countries. Pillay's (2010) study shows that not all the three countries have promoted differentiation successfully. Ng'ethe *et al* (2008) on the other hand shows that African countries have mostly promoted de-differentiation.

2.4 Knowledge Differentiation: Concept Definition

Historically, the division of knowledge in higher education systems around the world reflects institutional divisions between traditional universities and more technical/technologically orientated institutions such as polytechnics. Referring to comprehensive universities in South Africa, Gibbon (in CHET, 2008b:5-6) describes this as a 'knowledge divide'. Referring similarly to South Africa, Shay, Oosthuizen, Paxton and Van de Merwe (2011:101) draw a distinction between 'academic type' professional and general formative programmes offered by traditional universities, and 'technikon-type' programmes which are typically vocational and career-focused.

At one level it is argued that the distinction is more ideological than real. As Gibbons reports:

> … there are ideological and status issues around knowledge. Technikon academics say there is little difference between a diploma and a professional degree in engineering, while university academics say there is an ocean between the two (CHET, 2008b:6)

Curriculum theorists explain distinctions between different types of knowledge in a number of ways. Given that professionally-orientated curricula are usually framed in terms of a formal knowledge component and a practical component, Gamble (2009) discusses the relation between knowledge and practice in a curriculum. On the knowledge side she draws a distinction between 'pure' and 'applied' theoretical knowledge. '*Pure' theoretical knowledge* takes the connective

relation between concepts as the basis of logical reasoning; *'applied' theoretical knowledge* is operationalised through a step-by- step or sequential logic that relates to the world of practice.

On the practical side Gamble (2009) describes three different kinds of practice.

- *Doing* - as sequential task performance
- *Making* - as a process of reproduction of products or processes
- *Creating* - as a process of design and/or innovation of new products or processes

She argues that different forms of knowledge and different forms of practice combine to make up specific types of curricula (Gamble, 2009:18 - 21). This is represented in the diagram that follows.

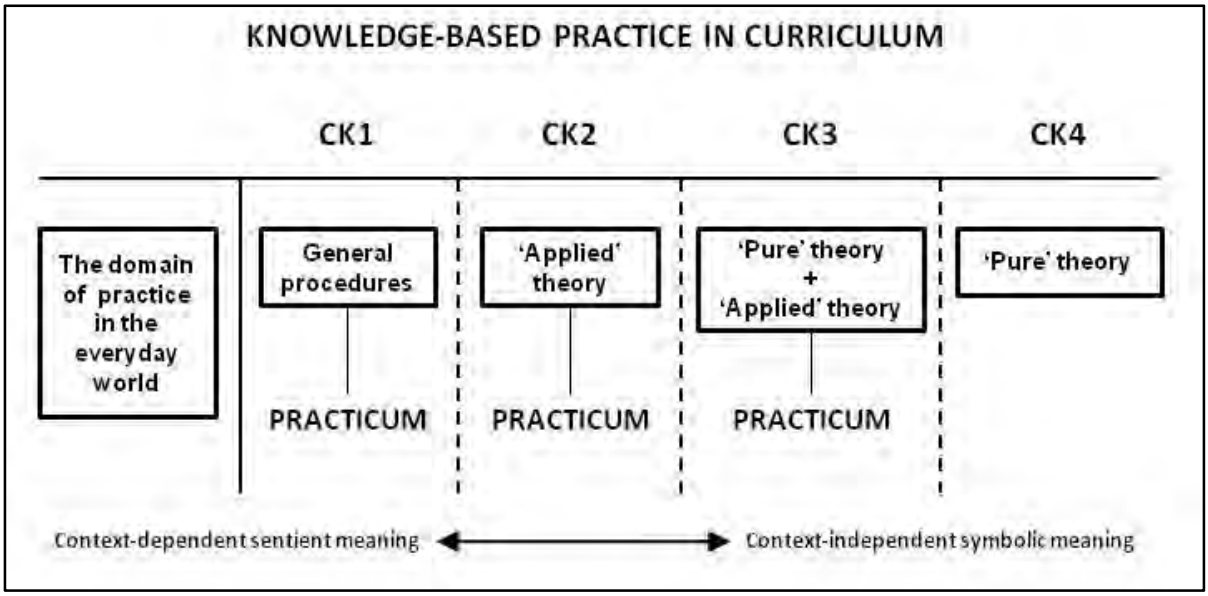


Figure 2.1: Curriculum types in the knowledge-practice curriculum (Gamble, 2013:215)

Muller (2009:216) differentiates between a curriculum's *conceptual coherence* and/or *contextual coherence*. Gamble (2009:15) explains the difference between Muller's concepts as follows:

> When a curriculum is conceptually coherent there is an upward or vertical hierarchy of conceptual abstraction, with later concepts dependent on earlier concepts for their meaning. Order or sequence, pacing and progression matter greatly as the knowledge 'bits' have to fit together in a time and space not given by a specific context. Logic is thus the key criterion for coherence.
>
> Sequence matters less in a curriculum that seeks *contextual coherence*. Here each segment or topic is selected for relevance and coherence to a particular context. The order in which the topics are presented does not really matter, as the key criterion for coherence is adequacy-to-context. Adequacy-to-context is a visible evaluative criterion that announces itself as soon as there is an inadequate fit between practice and context (Gamble, 2009:15)

Muller (2009:217) further explains that within each occupational field, occupations vary. They have different disciplinary cores in their knowledge bases and so they can be distinguished by whether

they have a more conceptual or a more contextual form of practice. But Muller (2009) also argues that:

> The knowledge society means that each occupation and its attendant knowledge base will increasingly be under pressure to augment its quantum of conceptual knowledge, to become at least partly mental. This is because generalisable innovation relies on conceptual knowledge, as we saw above, and it is this kind of innovation that the global economy prizes most at all levels of the division of labour (Muller, 2009:219).

Referring specifically to the vocationally-orientated curriculum Barnett (2006:145) points out that vocational education should relate to academic disciplines as well as to professional practice. Using the sociologist Basil Bernstein's concept of *recontextualisation* which he describes as referring to 'the appropriation and transformation of knowledge for various purposes' Barnett (2006:144) explains how both disciplinary knowledge and situated workplace knowledge have to be re-contextualised to create vocational knowledge. The problem, he argues, is that situated knowledge which is context-dependent does not readily or easily relate to disciplinary knowledge which is context-independent. That is why two independent forms of recontextualisation are required. *Reclassificatory recontextualisation*, refers to the process through which disciplinary knowledge is selected and reorganised for purposes of practical application. This is followed by *pedagogic recontextualisation* to make topics 'teachable' and 'learnable' (Barnett, 2006:147). These two distinct recontextualising processes, Barnet argues, require tough choices from the designers of vocational learning programmes. What is needed is:

> … a degree of insight into the scope and nature of the 'reservoir' of disciplinary knowledges on which the particular syllabus has drawn, as well as of some of the realities of the workplace settings to which this (appropriately refashioned) knowledge is deemed to be relevant. This is a considerably more demanding agenda than that which confronts the subject teacher in general education (Barnett, 2006:156).

The above discussion shows how different theorists rewrite the basic distinction between scientific and applied knowledge in the language of curriculum to provide what Shay *et al* (2011:202) call an 'academic rationale' for differences between different types and levels of qualifications, such as certificates diplomas and degrees.

2.5 Knowledge Differentiation: An Empirical Study

Knowledge differences between a degree and a diploma in a comprehensive university in South Africa (Shay *et al,* 2011)

In a research project funded by the South-Africa-Norway Tertiary Education Development (SANTED) programme which focused on the knowledge relations between undergraduate diplomas and degrees in a comprehensive university, Shay *et al* (2011) drew on the work of Gamble and Muller (as described above) to develop five curriculum typologies that could be used to analyse the types of knowledge and curriculum coherence of the diploma and degree in four fields of study: Architecture, Chemistry, Building Environment as well as Journalism and Media studies.

Programmes analysed under each field are presented in tabular form below.

Table 2.1: Programmes analysed for Curriculum Differentiation

Field	Diploma programme	First degree programme
Architecture	National Diploma in Architectural Technology	Bachelor of Architectural Studies
Chemistry	National Diploma in Analytical Chemistry	BSC Chemistry
Building Environment	National Diploma in Building	BSC Construction Economics
Journalism and Media Studies	National Diploma in Journalism	BA in Media, Culture and Communication

Information obtained from Shay *et al* (2011)

Their findings questioned the idea of easy articulation between diploma and degree programmes in the same department; leading them to conclude that:

> Contrary to the political ideals of the NQF the prospects of systemic articulation pathways from diplomas to degrees are not very promising ... Given these realities, it may be that at this stage the issue of articulation should not be the key driver for curriculum change for comprehensives. Priority should rather be given to reforms which will, firstly, strengthen differentiation of purpose between the diploma and the degree, and secondly, enable progression particularly at the school-university point (Shay *et al*, 2011:119).

At a more general level, they conclude that any debate on differentiation, whether focused at institutional, qualification, programme or curriculum level, needs to take account of knowledge (Shay *et al*, 2011:119).

2.6 Conclusion

This chapter makes two contributions to the study as a whole. The first is that it provides a conceptual framework to guide the empirical design of the study. This is discussed in the next chapter where I introduce two main concepts, namely *institutional differentiation* and *programme differentiation* as the anchors of the study. A number of indicator variables are introduced, which also refer back to the literature reviewed in this chapter.

The second contribution is that the final chapter refers back to the empirical studies discussed in this chapter, to provide a framework for a comparative discussion of the findings.

CHAPTER 3

RESEARCH DESIGN

3.0 Introduction

In the last chapter I discussed a selection of literature sources related to the study, with particular attention to empirical studies that have investigated higher education differentiation in various countries. In this chapter I explain the procedures undertaken to conduct my own study. I start by briefly discussing quantitative approaches to this type of research before locating my study within a qualitative social research tradition.

3.1 Research Approach

3.1.1 Quantitative and qualitative approaches to the study of higher education differentiation

Huisman (2000) argues that theoretical analyses of diversity[1] in higher education far outnumber empirical investigations. He therefore puts forward a model for operationalising and measuring diversity in higher education and proposes the following steps:

Selection of meaningful variables (which I will refer to as 'indicators' for this study)

- Data gathering on those indicators.
- Development of Institutional profile based on the indicators.
- Application of mathematical-statistical techniques in order to interpret data and results.

Figure 3.1 summarises the process.

[1]In my study I prefer to use the term 'differentiation' consistently.

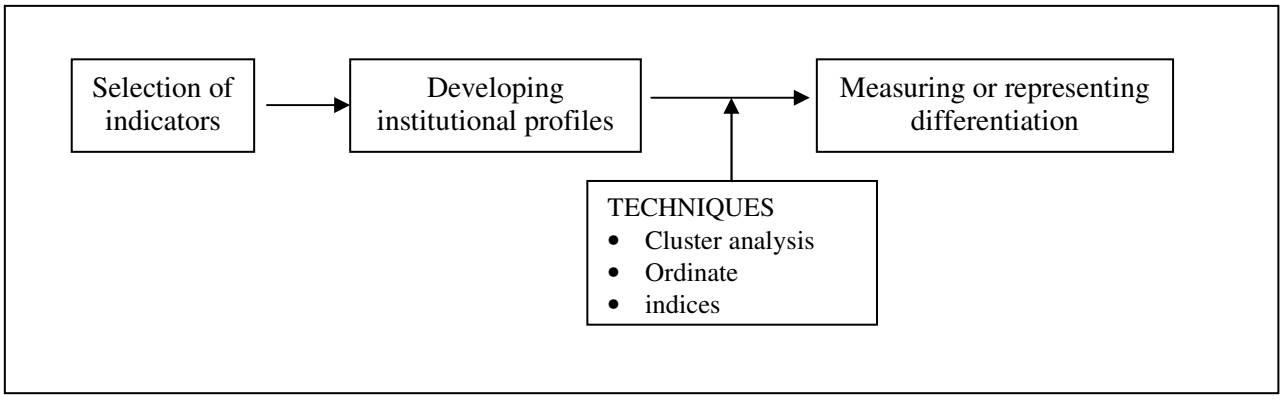


Figure 3.1: A stepwise approach to conceptualise and measure institutional diversity (Huisman, 2000:44).

In quantitative studies, the mathematical-statistical techniques suggested, namely cluster analysis, ordination techniques and the calculation of diversity indices are all termed 'reduction methods' intended to reduce many characteristics to a single measure that lead to 'meaningful, reliable and valid results' (Huisman, 2000:45).

Requirements of reliability and validity tend to pose challenges for qualitative approaches that value the richness and texture of information obtained from various sources in the research setting, without too great a concern for the generalisability of the findings.

My supervisor and I discussed at length the steps that I should take to ensure that my single country qualitative case study produced findings considered to be reliable, valid and, to some extent, generalisable. I set out these procedures in the sections that follow.

3.1.2 Case Study as a Qualitative Research Approach

Rule & John (2011) define a case study as a 'systematic and in-depth investigation of *a particular instance in its context,* in order to generate knowledge' (Rule & John 2011:4; original emphasis). Following Yin's classification system which distinguishes between three types of case study, namely *exploratory, explanatory* and *descriptive* case studies, they view a descriptive case study as a study which presents as complete a description as is possible of a phenomenon, within its context. An exploratory case study lays the basis for further research through examining a phenomenon that has not been investigated before. An explanatory case study attempts to explain what happens in a particular case and why it happens. The aim is often to test existing theory or to generate new theory (Rule & John, 2011:8).

Rule & John also refer to Robert Stake's distinction between *intrinsic* and *instrumental* case studies (Rule & John, 2011:8). In intrinsic case studies, the case itself is unique or innovative and therefore worth examining in its own right rather than serving as an example of a broader issue. Instrumental case study takes a particular issue as its focus and then selects cases that allow this issue to be studied in depth (Rule & John, 2011:9).

In my research I aim to identify differentiating trends in Lesotho's higher education system in two ways: firstly, by describing the two cases as fully as possible and, secondly by attempting to interpret or explain some of the reasons for the findings.

While the study is framed conceptually in relation to current literature on this issue, I am particularly interested in two empirical studies of countries elsewhere in Africa, namely a comparative study of twelve African countries entitled, *Differentiation and Articulation in Tertiary Education Systems (*Ng'ethe *et al*, 2008) and a South African study undertaken by the Centre for Higher Education Transformation, entitled *Differentiation in the South African public university system* (Bunting, 2013). I aim to compare the findings of my single-case study to the findings of both these larger multi-case studies. Confirmation or disconfirmation of trends found in these studies will lend credibility to the findings of the Lesotho study, lend it greater potential for generalisability than would be possible with a single case study.

Using the terms discussed in this section, I would say that my study has a descriptive base, set up in relation to categories of analysis and comparison drawn from the literature and other empirical studies. In that sense it is an explanatory case study. It is instrumental in the sense that the conceptual issue, namely higher education differentiation, came before the selection of the case. I was introduced to the literature in a course on education policy which I attended as part of the taught Masters programme I attended. Class discussion centred mainly round the South African policy terrain and it made me curious about what I could say about my home country, Lesotho. A theoretical orientation (Mouton, 1996:102) therefore preceded selection of the two institutions included in my case study.

3.2 Research Design

3.2.1 The Empirical Setting

The focus of this study is on Lesotho's higher education public sector where two types of higher education institutions, polytechnic and university are compared. In this section I present a short initial description of each institution, starting with the polytechnic. It must be noted that in Lesotho

there is only one polytechnic and one public university hence it will be quite impossible to hide their identity. However, as the interest is on institutional 'type' they will be referred to as the polytechnic and the university so as not to draw attention to their actual identities.

The Polytechnic

The polytechnic is an autonomous institution situated in the capital city of Lesotho, Maseru. It comprises four schools in which it offers a range of programmes from certificate level to diploma level. The four schools are the School of the Built Environment (SOBE), the School of Engineering and Technology (SET), the School of Enterprise and Management (SEM) and the School of Continuing Education (SOCE). SOBE and SET offer a range of certificate programmes in the craft fields and diploma programmes in the engineering fields. SEM offers a variety of diploma programmes in the commercial field. SOCE[2] offers part time and short courses in various fields (Lerotholi Polytechnic, 2013c). The vision of the polytechnic is to become a university of technology (Lerotholi Polytechnic, 2013b).

The University

The university is an autonomous institution situated at the outskirts of the capital city of Lesotho, Maseru. The university offers a variety of programmes across its seven faculties namely, the Faculties of Agriculture, Education, Health Sciences, Humanities, Law, Social Sciences and Science and Technology. It also offers part-time diploma and degree programmes at the Institute of Extra Mural Studies (IEMS) (NUL, 2013). Its vision is to be a leading African university (NUL, 2012:5).

3.2.2 Sampling

Sampling is the selection of participants of the study from the entire population (Mertens, 2010:309). *Purposive sampling* and *convenience sampling* are often used to make a selection of participants. In purposive sampling, the researcher picks participants because of specific characteristics that make them holders of information needed for the study (Cohen *et al*, 2007:114). Opportunity (convenience) sampling refers to selection of participants because they can easily be accessed (Cohen *et al*, 2007:113-114).

The sample for this study comprises two higher education institutions namely:

- the polytechnic and
- the university.

[2]SOCE has also not been included as its focus is on part-time and short courses.

At the polytechnic the study focused on two schools, the School of Commerce and the School of Engineering. One programme was investigated under each School, Diploma in Commerce and Diploma in Engineering respectively. At the university, the study focused on two Faculties namely, the Faculty of Commerce and the Faculty of Engineering. Under each faculty, one programme was investigated, Degree in Commerce and Degree in Engineering respectively. For both institutions, under each programme, five (5) lecturers were interviewed, one of which was at management level.

Table 3.1 summarises the sample.

Table 3.1: The sample for the study

	Faculty / School	**Programme**	**Interview participants**
The Polytechnic	School of Commerce	Diploma in Commerce	5 lecturers
	School of Engineering	Diploma in Engineering	5 lecturers
The University	Faculty of Commerce	Bachelor of Commerce	5 lecturers
	Faculty of Engineering	Bachelor of Engineering	5 lecturers

The institutions were selected purposively as they are the only institutions of their type in Lesotho.The faculties (schools) and programmes were also chosen purposively as they are related to each other hence could provide necessary information required to answer the research question. The interview participants were selected purposefully and conveniently. The selection was purposeful because they could provide rich information required in relation to the chosen programmes. It was conveniently selected because I interviewed those who were available when I returned to Lesotho for data collection.

3.2.3 Gaining Entry and Recruitment of Participants

In order to gain entry into the two higher education institutions, I obtained permission to gather information and interview participants with a letter of entry that I submitted to the relevant offices at the institutions (Appendix 1 and Appendix 2).When permission was granted, I engaged with the Deans or Heads of Departments who helped me to identify relevant and available lecturers for the study. Once appropriate participants were identified, I approached them individually, explained the purpose of my study and requested them to participate. An information sheet explaining the study and their right to choose either to participate or not to participate was provided (Appendix 3 and

Appendix 4). For those who were willing to participate, we agreed on time and venue for interviews.

3.3 Data Collection

3.3.1 Data Sources

Triangulation is a process of checking information from multiple sources or methods in order to establish consistency of evidence (Mertens, 2010:258). In order to increase internal validity and consistency through triangulation, information was gathered from multiple sources: documentary sources and semi-structured interviews. Field work started in July 2013 and was concluded in the third week of September 2013.

- **Documentary sources**

The documentary sources collected included policy documents relating to higher education institutions in Lesotho like Higher Education Act 2004. It also comprised institutional documents and institutional records which could provide the required information (presented in section 3.6.2). For each institution the documents included: legislation which established the individual institution, the prospectus, strategic plan, course outlines and examination question papers.

- **Semi-structured interviews**

Semi-structured interview is one of the techniques used to collect data for the study. According to Nieuwenhuis (2010:87) semi-structured interviews are used to support data from other sources. Questions to be answered by participants are prepared in advance and also allow probing and clarification of answers.

Accordingly, semi-structured interviews were used to support data from documentary sources and records. The questions were prearranged for each group that had to be interviewed (Appendix 5 to Appendix 8). Different interview schedules were used for the polytechnic lecturers and management as well as for the university lecturers and management. Interviews were conducted on a one-to-one basis with five (5) participants per programme. The duration of interviews differed from one participant to another, ranging from 45 minutes to one hour.

The interviews were recorded on an electronic device for participants who agreed to be recorded. For those who did not, notes were taken during the interview.

3.3.2 Data Types

The type of data collected was guided by the conceptual framework derived from the literature, previous studies and practicality in regard to the study. In this way, I could be sure to set up a comparable base between the two institutions but also in relation to the two larger quantitative studies already mentioned.

The two main concepts around which the investigation focused were *institutional differentiation* and *programme differentiation.* For each concept a number of indicators and corresponding sources of evidence were identified. This is presented in Table 3.2 below.

Table 3.2: Indicators of Institutional Differentiation and Programme Differentiation

Category	Indicators	Sources of evidence
INSTITUTIONAL DIFFERENTIATION	1. Historical Purpose	▪ Establishment purpose
	2. Governance and Statutory Functions	▪ Governance Structures and Institution's functions as per legal act
	3. Current Mission and Vision	▪ Mission Statement and Vision Statements
	4. Academic Structure	▪ Programmes offered and their exit level
	5. Academic Staff Qualifications	▪ Required academic qualifications, Academic staff profile
	6. Research	▪ Level, type and role of research
PROGRAMME DIFFERENTIATION	1. Admission Criteria	▪ Minimum admission requirements
	2. Curriculum	▪ Structure of the Programme ▪ Theory - practice sequence and duration ▪ Objectives of a specific course ▪ Course Content of a specific course ▪ Assessment Tasks for a specific course
	3. Articulation	• Structure and Recognition of qualifications for admission

The design innovation here was to investigate the construct of differentiation at the level of both *institution* and *programme.* This is in contrast to two empirical studies already mentioned. I chose to investigate both concepts in an effort to deepen the investigation so as to be able to present a solid set of evidence on which to base the findings.

3.4 Data Analysis

One of the greatest challenges of the study was to find a way of moving from description of each case to analysis and explanation. My supervisor referred me to two qualitative studies[3] which had resolved the issue through turning to the work of the sociologist, Basil Bernstein. In turn, I studied what these studies had done and then developed my own four-point scale to serve as a systematic 'reading device' (Bernstein, in Gamble, 2004:42) that would turn information into data. This allowed me to 'make as explicit as possible the process whereby the data was analysed' (Hoadley, 2005:86).

The coding matrix is presented as table 3.3.

Table 3.3: Differentiation strategies

Categories	**Dimensions**	**Differentiation Modalities**			
		D++ **Very strongly Differentiated**	**D+** **Strongly Differentiated**	**D-** **Weakly Differentiated**	**D--** **Very Weakly Differentiated**
INSTITUTIONAL DIFFERENTIATION	Historical Purpose Governance and Statutory Functions Current Mission and Vision Academic Structure Academic Staff Qualification Research	High degree of differentiation. Strong differences between institutions which are never transgressed	Although there is high degree of differentiation, of institutions, there are also some similarities.	Significant degree of similarities even though the differences are clearly identifiable between institutions.	Minimum or no differentiation between the institutions
		D++	**D+**	**D-**	**D--**
PROGRAMME DIFFERENTIATION	Admission Criteria Curriculum Articulation	High degree of differentiation. Strong differences between programmes which are never transgressed	Although there is high degree of differentiation, of programmes, there are also some similarities.	Significant degree of similarities even though the differences are clearly identifiable between programmes	Minimum or no differentiation between the programmes

[3] The two studies referred to are: *"Knowledge-based expertise as the hallmark of work of risk: an analysis of the curriculum and pedagogy of a National Diploma in Train-Driving* by Coetzee (2011) and *Tacit Knowledge in Craft Pedagogy: a Sociological Analysis* by Gamble (2004).

In this manner I addressed issues of validity and reliability and tried to ensure that my research according to validity and reliability refers to research that is credible and trustworthy (Nieuwenhuis, 2010:80).

3.5 Ethical Considerations

Permission to conduct the research at the two institutions was requested from and granted by the responsible offices in the two institutions. Research participants were provided with an information sheet which explained the purpose of the research and that participation was voluntary; hence they were free to withdraw at any time, without any negative consequences.

Before each interview, the procedures were explained to the participants and were also requested to give their consent by filling the consent form provided. The participants also had to indicate whether they could be voice recorded or not. Not all participants agreed to be recorded hence voice recording was used only on those who granted permission. Moreover, they were not forced to give any information which they felt uncomfortable with like their contact details.

Confidentiality is one of the most important considerations in research. According to (Mertens, 2010:342) confidentiality refers to protecting participants in such a way that the information presented is not linked to them personally. To ensure confidentiality participants names were not used in the transcript instead pseudonyms were assigned.

The transcribed information was stored in the computer and is password protected and the printed copies are stored in a save place where they could not be accessed by unauthorised people.

3.6 Limitations to the Study

There were a number of challenges that I faced during the research process notably:

- There was no choice of institutions due to the limited number of Higher Education Institutions in Lesotho. As such the results might not be generalised as I compared only two institutions.
- It took longer than anticipated to get approval at the University hence this tampered with my schedule.
- Data collection was done during school holidays and most lecturers could not be reached as they were on leave. As a result I had to rely on those who were available at the time. Some of them were new and could not provide all the information required for the study.

- Some interviewees refused to be recorded, thus posing a challenge as it was not possible to capture everything they had said and therefore important information may have been omitted.

CHAPTER 4

INSTITUTIONAL DIFFERENTIATION: A BINARY ANALYSIS

4.0 Introduction

This chapter explores institutional differentiation focusing on two institutional types in Lesotho: the polytechnic and the university. The aim is to explore the extent to which the relation between the only polytechnic and the only public university in Lesotho can be described as vertically differentiated. Is each institution a distinct type of institution or has the traditional binary boundary been blurred as has been found in other African Countries (Ng'ethe *et al,* 2008).

The analysis is based on six indicators as discussed in chapter 3. For ease of reference, the indicators are repeated below.

Table 4.1: Indicators of Institutional Differentiation

Concept	Indicators	Sources of evidence
INSTITUTIONAL DIFFERENTIATION	1. Historical Purpose	Reason for establishment
	2. Governance and Statutory Functions	Governance structures, institution's functions as per legal act
	3. Current Mission and Vision	Mission statement and vision statement
	4. Academic Structure	Programmes offered and their exit level
	5. Academic Staff Qualification	Required academic qualifications, Academic staff profile
	6. Research	Level, type and role of research

The first part of the chapter offers a descriptive account of each institution in terms of the above indicators to set up a systematic basis for comparison. In the second part of the chapter, the classification schema, also discussed in chapter 3, is applied to offer a coherent analysis of the extent and nature of institutional differentiation.

4.1 The Polytechnic

The first case study refers to the Lerotholi Polytechnic in Maseru. As there is only one such public institution in Lesotho, a pseudonym would not guarantee anonymity. It is also important to provide the historical background.

4.1.1 Historical Purpose

The polytechnic is named after its founder, Paramount Chief Lerotholi Letsie who conceptualised the establishment of a technical and vocational school in 1894. The school which was first known as Government Industrial School started in 1905 with few trade departments which increased over the years. The Government Industrial School focused on providing skills on trades like building, blacksmiths, carpentry, stone cutting and many more in order to address the needs of the nation and the labour market. Due to demand for growth, in 1960 the school changed its main focus and later established two new schools namely the Commercial Training Institute (CTI) and Technician Training School (TTS). In 1991 the three schools came together to form what is now known as Lerotholi Polytechnic (Lerotholi Polytechnic, 2013a). Lerotholi Polytechnic was granted autonomy in 1997. Its vision is to become a university of technology (Lerotholi Polytechnic, 2013b)

The next section will give an overview of how the polytechnic is governed and what its legal functions currently are.

4.1.2 Current Governance and Statutory Functions

The polytechnic is an autonomous institution under the auspices of Ministry of Education and Training (MOET). It is regulated through the Higher Education Act, 2004 which appoints the Council on Higher Education (CHE) as the overseer of higher education institutions in Lesotho. The CHE amongst other things is responsible for monitoring policy implementation by higher education institutions as well as quality assurance and accreditation of programmes (MOET, 2004:63 - 66).

The Governance and Management Structures of the polytechnic are in line with the requirements of the higher education act which states:

> Every higher education public institution shall establish the following structures and offices: a Council, a Senate, a Vice-Chancellor or Rector, a Registrar, a Students' Representative Council and other structures and offices as may be provided by the institutional statute or an act of Parliament. (MOET, 2004:78).

The Lerotholi Polytechnic Act 1997 outlines the functions of the polytechnic as follows:

- to provide vocational and technical education;
- to provide courses of study, instruction or training in fields that the Council may from time to time deem appropriate;
- to confer, grant or give or to recommend conferring, granting or giving diplomas, certificates or other educational awards with respect to technical and craft courses;
- to provide facilities for, and undertake, research;
- to disseminate knowledge and to promote scholarship;
- to foster relationships by way of affiliation, association or link with other institutions and individuals;
- to enter into arrangements with other relevant institutions for the purposes of offering joint courses and of conducting research and development work; and
- to exploit the results of research and development work undertaken by the polytechnic either separately or jointly, including entering into arrangements with other bodies or persons and participation in limited liability companies for that purpose. (Lerotholi Polytechnic Act, 1997: section 5).

In terms of the act, the polytechnic still retains its vocational and Technical brief. It is further tasked to conduct applied research and knowledge dissemination brief. This mandate is clearly seen in the polytechnic's mission statement.

4.1.3 Current Mission and Vision

The polytechnic's current mission and vision are as follows:

The Mission

Lerotholi Polytechnic is committed to advancing technological, scientific, commercial education and training through research and development.

The Vision

By 2015 Lerotholi Polytechnic shall be the University of Technology renowned for its excellence in Science, technology and entrepreneurial programmes with its uniqueness of technical and higher education components.

(Lerotholi Polytechnic, 2013b)

Following Dewey and Count in Stemler, Bebell and Sonnabend's (2011:385) three-way classification of educational objectives namely Academic Preparation, Citizenship Development and Occupational Preparation, the frequency of these themes in the Mission and Vision statements can be viewed as presented in the table below. (Please refer to Appendix 9 for coding):

Table 4.2: The frequency of themes in the polytechnic's mission and vision statements

Theme	Mission Statement	Vision	Total
Academic Preparation	3	2	**5**
Citizenship Development	0	0	**0**
Occupational Preparation	3	3	**6**

The values presented in table 4.2 are indicative of how the polytechnic has shifted from its original mandate. It now sees itself as an institution with both vocational and higher education components, as is also evident in its Academic Structure which is discussed in the next section.

4.1.4 The Academic Structure

In order to give effect to its statutory functions, the polytechnic comprises four schools which are the School of Enterprise and Management (SEM), School of Engineering and Technology (SET) the School of the Built Environment (SOBE), and the more recently established School of Continuing Education (SOCE).[4] The three main schools SEM, SET and SOBE are divided into two departments each.

- The School of Enterprise and Management (SEM) is divided into a Textile Department which offers two-year certificate programmes and a Commerce Department which offers three-year diploma programmes.
- The School of Engineering and Technology (SET), just like the SOBE, has a Craft Department and a Technician Department. The Craft Department offers three-year certificates in mechanical fields. The Technician Department offers three-year diploma programmes in mechanical, electrical and computer system engineering.

[4]SOCE deals mainly with part-time and short courses which are not part of the higher education; hence it has been excluded from the study.

- The School of the Built Environment (SOBE) is divided into a Craft Department and a Technician Department. The Craft Department offers two-year certificate programmes in the building trades. The Technician Department offers three-year diploma programmes in civil engineering and construction fields (Lerotholi Polytechnic, 2013c)

The programmes offered under each school are presented below.

Table 4.3: The polytechnic's academic structure

SCHOOL OF ENTERPRISE AND MANAGEMENT (SEM)	
Commerce Department	**Textiles Department**
• Diploma in Business Management • Diploma in Marketing Management • Diploma in Office Administration and Management • Diploma in Tourism Management • Diploma in Hospitality Management	• Certificate in Dress Making • Certificate in Tailoring
SCHOOL OF ENGINEERING AND TECHNOLOGY (SET)	
Technician Department	**Craft Department**
• Diploma in Mechanical Engineering • Diploma in Electrical & Electronic Engineering • Diploma in Computer Systems Engineering	• Certificate in Automotive • Certificate in Electrical Installation • Certificate in Fitting and Machining • Certificate in Panel Beating and Spray Painting
SCHOOL OF THE BUILT ENVIRONMENT (SOBE)	
Technician Department	**Craft Department**
• Diploma in Civil Engineering • Diploma in Architectural Technology • Diploma in Construction Management • Diploma in Water and Environmental Engineering	• Certificate in Bricklaying and Plastering • Certificate in Carpentry and Joinery • Certificate in Plumbing and Sheet Metal Work

Information obtained from Lerotholi Polytechnic prospectus 2013/2014

As can be seen from the above table, the polytechnic has a two-level academic structure. It offers professional programmes at diploma level as well as vocational programmes at certificate level.

4.1.5 Academic Staff Qualifications

The minimum requirement for a lectureship position at the polytechnic is a Bachelor's degree and most academic staff members at the polytechnic are first degree holders.

Table 4.4 shows the qualification range, with reference to two of the professional schools.

Table 4.4: Staff qualification at the polytechnic

	School of Engineering and Technology	School of Enterprise and Management	Total
First Degree	16	13	29
Honours	0	3	3
Postgraduate Diploma	1	0	1
Masters Degree	3	5	8
Doctorate	0	1	1
Total	**20**	**22**	**42**

(Information obtained from Human Resources Department, July 2013)

One of the polytechnic's lecturers explained why the minimum requirement for lectureship position at the polytechnic is a bachelor's degree.

> *Since we are offering diplomas, according to CHE (Council on Higher Education) the minimum requirement for any lecturer to teach is to have a qualification higher than the exit level of where he is teaching. If he*[5] *is teaching a diploma we are expecting him to have a first degree. We are currently offering diplomas so we would like to have people with higher qualifications - the minimum qualification is a first degree.*
>
> (Interview, 24/07/13).

It was also explained that additional requirements like involvement in research, professional accreditation or industrial experience are not mandatory, although lecturers are expected to be involved in research once recruited. Lecturers with industrial experience as well as professional accreditation are preferred.

The effect of a lesser emphasis on research credentials as a recruitment criterion emerged clearly in the discussions about research which forms the basis of the next section.

[5]Most of the staff members in this interviewee's department are male and in that sense the pronouns used accurately reflect a male-dominant culture.

4.1.6 Research[6]

In line with the explicitly stated research focus described in the polytechnic's statutory functions and Mission and Vision statements, research activities are reported to a senior officer at the level of Deputy Rector Academic Affairs and Research. However, the institution does not produce an annual report on research undertaken and journal articles published.

As much as the institution indicates that it values research, interviews with lecturers made it clear that teaching and learning remain the central focus and that very little research activity that results in publications take place at the polytechnic.

Lack of research involvement at the polytechnic is associated with a number of factors, as reported by interviewees. The main constraint mentioned, refers to lack of capacity to undertake research in that most staff members do not have post-graduate qualifications that would equip them to be able to conduct research. One of the lecturers stated the point as follows:

> *For you to have research you need to have teaching staff of highest calibre in terms of qualification which we have failed for several years to attract.*
>
> (Interview, 24/07/13).

Lecturers also say that even if they were adequately qualified for research, they would still not able to do research as there is no time allocated for this type of work. One lecturer highlighted this issue as follows:

> *Time does not allow, no time devoted for that. We require more staff for us to have time set aside for research. The staff which is available is just for teaching.*
>
> (Interview, 10/07/13).

Lecturers seem not to be clear on their research roles, even though they perceive it to be important in terms of it being a promotion criterion.

> *People have been told to research and it has been said research will be one of the criteria that are used to promote people. In a way it says: "Research if you want promotion".*
>
> (Interview, 11/07/13).

[6]Unlike in other sections where documentation was mostly used, this section draws directly from interviews that asked questions about the *perceived importance of research, current research activities* and *perceived research constraints.*

Lack of resources, facilities and funding are cited as further obstacles that prevent lecturers from conducting research.

> *… Financially handicapped; lack of knowledge; I do not know where to begin. The institution has not made any arrangement or contacts with outside research groups. Our library is not fit to assist us to publish. Our library is not well equipped*
>
> (Interview, 10/07/13).

A manager who was interviewed defended the institution and explained that the institution finances and supports research-related activities for lecturers, such as attending and presenting papers at the conferences.

> *The institution finances CAPA (Commonwealth Association of Polytechnics in Africa) activities which require people to research and write papers to attend and the institution is motivating people to do that.*
>
> (Interview, 24/07/13).

Some interviewees were of the opinion that the above incentives are not sufficient to build a research and publications culture. The incentive is actually the *per diem* awarded for conference attendance rather than a strong desire to build individual research capacity.

4.1.7 Discussion

The theoretical lens of 'academic drift' offers a way of understanding the polytechnic's developmental trajectory, as documented in the case study so far. Historically the institution's focus was on offering vocational programmes at a trade level. Since 1997 its mandate has been extended. It has added professional diploma programmes in the commerce and engineering fields while still retaining its vocational focus. It has also been required to take on a strong applied research mandate in partnership with industry, with research and dissemination as important outputs. The polytechnic has therefore moved into areas which are characteristically associated with universities, even though teaching provision is at undergraduate diploma level.

Whether this form of 'mission stretch' can be characterised as successful is a question that cannot be answered by this study. What is clear is that the resources to carry out these tasks are very limited, particularly in relation to the institution's stated research mandate.

4.2 The University

The second case study relates to the National University of Lesotho (NUL) located in Roma on the outskirts of Maseru. Just like with the polytechnic, a pseudonym would not guarantee anonymity as the university is the only public university in Lesotho. It is important to give the historical background.

4.2.1 Historical Purpose

The university was founded in 1945 with the purpose of providing tertiary education and religious guidance to African Catholic students. As it developed and became more established, the college prepared students for the external degrees of the University of South Africa (UNISA) and also trained future civil servants and teachers for the three countries Bechuanaland Protectorate, Basutoland and Swaziland, which shared a common British administration, the High Commission in Cape. By 1959 the college had 171 students. Out of those, 141 were not from Lesotho (Basutoland during that era) (NUL, 2005:1).

In 1964 the college was replaced by the independent, non-denominational University of Basutoland, Bechuanaland Protectorate and Swaziland (UBBS) which was later renamed University of Botswana, Lesotho and Swaziland (UBLS) in accordance with the names which were chosen after the independence of the two countries Botswana and Lesotho in the 1960s. UBLS was soon faced with problems in the areas of growth and administration as the three countries differed in terms of development and future plans; hence they parted ways. This led to the establishment of the National University of Lesotho (NUL) in 1975 (NUL, 2005:1-2).

An overview of how the university is governed, as well as its current statutory functions is given in the next section.

4.2.2 Current Governance and Statutory Functions

The university is an autonomous institution under the auspices of Ministry of Education and Training (MOET). It is regulated through the Higher Education Act, 2004 which appoints the Council on Higher Education (CHE) as the overseer of higher education institutions in Lesotho. The CHE amongst other things is responsible for monitoring policy implementation by higher education institutions as well as quality assurance and accreditation of programmes (MOET, 2004:63 - 66).

The governance and management structures of the university are in line with the requirements of the higher education act which states:

> Every higher education public institution shall establish the following structures and offices: a Council, a Senate, a Vice-Chancellor or Rector, a Registrar, a Students' Representative Council and other structures and offices as may be provided by the institutional statute or an act of Parliament (MOET, 2004:78).

The National University Order, 19 of 1992, outlines the functions of the university as follows:

- to encourage and to provide the facilities for study, and learning generally;
- to provide educational facilities at University standards for persons who, being eligible, seek benefit of such facilities and to give instructions and training to such persons in branches of knowledge as will most effectually improve their education and prepare them for service to their community;
- to promote by research and other means the advancement of knowledge and its practical application to social and technological problems primarily within Lesotho and more generally in Southern Africa;
- to disseminate knowledge and to promote scholarship otherwise than as elsewhere in this section provided; and
- subject to the Statutes, to award and confer degrees, diplomas and other awards. (The NUL Order 19 of 1992: section 4)

The university has a very broad mandate. It is required to carry out both pure and applied research which gives it a leverage to encroach on the territory which is normally allocated to polytechnics.

4.2.3 Current Mission and Vision

The university's current Mission and Vision translate the statutory requirements as follows:

The Mission

NUL is to promote national advancement through innovative teaching, learning, research and professional services, producing high calibre and responsible graduates able to serve their communities with diligence.

The Vision

NUL is to be a leading African University responsive to national socio-economic needs, commitment to high quality teaching, life-long learning, and research and community service, respected nationally and internationally.

(NUL, 2013:2)

In terms of the three-way classification of educational objectives proposed by Dewey and Count (in Stemler, Bebell & Sonnabend, 2011:385), the frequency of the themes in the University's mission and vision are as follows (Please refer to Appendix 9 for coding):

Table 4.5: The frequency of themes in the university's mission and vision statements

Theme	Mission statement	Vision	Total
Academic Preparation	5	3	**8**
Citizenship Development	4	4	**8**
Occupational Preparation	0	1	**1**

The values presented in table 4.5 are indicative of how strongly the university still identifies with its historical mandate, whilst also embracing the requirement for research and socio-economic responsiveness.

4.2.4 The Academic Structure

The university consists of seven (7) faculties which offer a wide variety of programmes at undergraduate and postgraduate level. The faculties are:

- Faculty of Agriculture,
- Faculty of Education,
- Faculty of Health Sciences,
- Faculty of Humanities,
- Faculty of Law,
- Faculty of Social Sciences and
- Faculty of Science and Technology.

Table 4.6 summarises the programmes offered under each faculty.[7]

[7]Part-time programmes have been excluded.

Table 4.6: The university's academic structure

QUALIFICATION LEVEL	DURATION
FACULTY OF AGRICULTURE	
• Bachelor degree programmes (6) • Masters degree programmes (5) • PhD programme (1)	4 years 2 years under review under review
FACULTY OF EDUCATION	
• Teachers' certificate programme (1) • Diploma programme (1) • Higher diploma programme (1) • Bachelor's degree programmes (5) • Post graduate diploma Programme (1) • Master's degree programmes (6) • Master's degree programmes (2) • PHD programme (1)	4 years 3 years 1 year 4 years 1 year 2 years 2 years (under review) under review
FACULTY OF HEALTH SCIENCES	
• Bachelor degree programmes (4) • Honours degree programme (1)	3 to 5 years 5 years
FACULTY OF HUMANITIES	
• Diploma programmes (3) • Bachelor's degree programmes (8) • Honours' degree programmes (3) • Post graduate diploma programme (2) • Master's degree programmes (2) • Masters' degree programmes (4) • PHD programme (4)	2 years 4 years 1 to 2 years 4 years 2 to 4 years 2 years (under review) under review
FACULTY OF LAW	
• Bachelor's degree (LLB) (1) • Postgraduate diploma programme (1) • Masters degree (1)	5 years 1 year under review
FACULTY OF SOCIAL SCIENCES	
• Certificate programme(1) • Bachelor's degrees(10) • Masters degree (5)	2 years 4 years
FACULTY OF SCIENCE AND TECHNOLOGY	
• Bachelor of Science degree programmes (12) • Honours' degree programmes (4) • Bachelor of Engineering programmes (2)	4 years 1 year 5 years

Information obtained from NUL information Booklet 2013/2014

On the surface the Academic Structure appears to be well developed, offering programmes from Certificate level to PhD level. However, when scrutinised more carefully, the range is not as extensive as it seems. Most post-graduate programmes which appear on the information booklet are still under review. Thus programmes which are on offer are mostly first degree-level programmes.

4.2.4 Academic Staff Qualifications

The minimum requirement for a lectureship position at the university is a Master's degree and most academic staff members are Master's degree holders. Table 4.7 shows the qualification progression of two of the university's faculties.

Table 4.7: Staff qualifications at the university

	Faculty 1	Faculty 2	Total
1st Degree	0	0	0
Honours	0	0	0
Postgraduate Diploma	0	0	0
Masters' Degree	44	41	85
PhD	10	27	37
Total	**54**	**68**	**122**

(Information obtained from interviews with Faculty Offices, August 2013)

There are no additional requirements for those who join the university in lectureship positions. However, prior experience is considered to be an added advantage.

For those who are recruited for a senior lecturer and professorship positions there are additional requirements as indicated by interviewees

> *For one to be a lecturer one has to have Masters.... ....if we employ somebody who is a senior lecturer from outside, that person has to meet the teaching of six years teaching experience and has to have at least six publication and we do need additional requirements that is some consultancy reports on top of those*.
>
> (Interview, 12/08/13).

In the next section that deals with research, it becomes clear that an emphasis on publications does not seem to be maintained once recruited.

4.2.6 Research[8]

Research and development are considered important activities. This is in line with the university's statutory functions as well as the Mission and Vision statements. As an indication of its importance, it was stated that there is a designated research unit which coordinates research activities. Research funding and monetary incentives are also provided for those who publish. Research is also considered as one of the criteria for promotion.

Contrary to the status accorded to research by the university, interviews with lecturers indicated decline in research activity and dated publications.

Table 4.8: Journal articles published by interviewees

No of publications	Number of staff	Comments
0 – 2	4	
3 – 5	1	
6 – 8	1	
More than 8	2	One lecturer published these articles before joining the university
Unspecified	2	One lecturer undertook research as 'private work'
Total number interviewed	10	

The decline in research activities at the university is attributed to a number of factors. Lack of time due to heavy work load is seen as an obstacle by lecturers who spend most of their time on teaching-related issues. It is explained as follows:

> *It is not easy because of the work load. We teach a lot of students, a lot of courses, we have a lot of contact hours, and we do not have time to publish. These students are many. When you have given them tests, you have to mark a lot of students*
>
> (Interview, 15/08/13).

[8]Unlike in other sections where documentation was mostly used, this section draws directly from interviews that asked questions about the *perceived importance of research, current research activities* and *perceived research constraints.*

Lack of adequate funding, abolishment of both monetary and promotion incentives leading to low staff morale, as well as lack of team spirit are cited as some of the factors that hinder or reduce research activities. One lecturer explained as follows:

> *... Half is not interested. People are not being promoted. So people are just saying what for? People are busy occupied with their part-time jobs. Another problem is getting research funding, it is almost impossible. Getting research funding here is very difficult.*
>
> *The other thing is that even those who have research grants here at Roma find it very difficult to work as a group - that is what I have realised. I think that is general. As Basotho we have a serious problem; we do not want to work in a group. People cannot work as a group. Everybody wants results to come from him.*
>
> (Interview, 09/08/13).

One senior lecturer who was interviewed indicated that even though there are problems, the university is still committed to support and improve research activities as the budget for research activities and related issues like attending conferences is approved annually.

> *But I have just received a letter now ... saying that they have approved a certain amount for research and for conferences. ... Due to general economic conditions there was nothing before, now something is coming maybe by next year. They [the university] would like to increase it.* (Interview, 12/09/13).

4.2.7 Discussion

In terms of its historical purpose, the university was established to provide religious guidance and tertiary education. It trained civil servants and teachers and prepared students for degrees offered at the University of South Africa (UNISA). Through the years the institution has grown and is now offering a range of programmes across seven faculties.

The faculties have a broad academic structure which offers both undergraduate and post- graduate programmes in a wide spectrum of fields. The staff qualifications are of an adequate level to provide a sound basis for fulfilling its research and publication mandate and also for teaching the range of programmes on offer. Taken together, these characteristics lift the institution to university status. In reality, however, few post-graduate programmes are offered as most of them are under review. Given the sustained emphasis on community service, it is also not certain whether many of these programmes are not more practically than academically orientated.

As a way of understanding the university and its development since its establishment, 'vocational drift' may well be an appropriate analytical lens, particularly if its applied research mandate and the requirement to be responsive to socio-economic needs are taken into account.

4.4 Analysis of Data

The section below compares the two types of higher education institutions discussed in the chapter, namely the polytechnic and the university.

Using the coding values indicated in the table below, the purpose of the coding task is to put forward a systematic analysis of different levels of differentiation.

Table 4.9: Differentiation strategies – Institutional Differentiation

D++	D+	D-	D--
High degree of differentiation. Strong differences between institutions.	Although there is high degree of differentiation, there are also some similarities.	Though the differences are clearly identifiable between the institutions there is a significant degree of similarities.	Minimum or no difference between the institutions

Each indicator is coded, followed by the rationale for allocating this code.

Historical Purpose (D++)

There is a very strong differentiation between the polytechnic and the university in regard to their historical purposes. The purpose of the polytechnic was to provide occupational skills. The institution prepared students who could serve the demands of the labour market at that time. Even when its main focus changed and new schools were established, the Commercial Training Institute and the Technician Training Institute complemented what had already been started. They also addressed the demands of the labour market. Thus, the institution provided occupational preparation focusing on technical and commercial programmes.

On the other hand, the university was established with a broader aim than serving the labour market. This aim was driven by the need to develop Basutoland (which became Lesotho in 1966) as a country by providing well-trained civil servants and teachers with a strong ethos of community service. Its initial focus on religious guidance provided a strong basis for this 'service' orientation and also for a later focus on 'good citizenship'. As it expanded the institution was still involved

with civic and social responsibilities. It also prepared students for degrees for further studies, thus its purpose expanded to include academic preparation.

Based on this a **D++** is allocated as the two institutions were established for completely different purposes.

Governance and Statutory Functions (D+)

Statutorily, the focuses of the two institutions remain in line with their historical purpose. The polytechnic is mandated to provide technical and vocational education as well as to grant diplomas, certificates and other educational awards related to technical and vocational courses. In the case of the university the focus is not narrowly specified, but it is stated that the institution has to provide facilities for study and learning generally in branches that will improve education and prepare students for community service.

Where they converge is that both institutions are charged with the responsibility of disseminating knowledge, promoting scholarship and conducting research. In the case of the polytechnic the type of research is not clearly specified, but applied research is implied as the polytechnic has to form partnerships and make use of their research results. The university is clearly tasked to conduct both pure and applied research as well as affiliate with other educational institutions.

Statutorily the two institutions are differentiated hence a **D+** is allocated. A D++ is not allocated because even though there are strong boundaries between their functions, there are also significant similarities, such as being tasked with the responsibility of conducting applied research as well as disseminating knowledge and promoting scholarship.

Current Mission and Vision (D+)

Based on how they position themselves, through their mission and vision statements, the two institutions are differentiated. Contrary to expectations, the polytechnic seem to have an element of academic preparation. This is an indication that it aims to stretch its purpose of occupational preparation to include academic preparation. This would be in line with its aspiration to become a university of technology.

The university seems to have retained its original purpose. Its focus is still on citizenship development and academic preparation with a small element of occupational preparation. Looking back at the historical purposes, the two institutions were far apart. But the current purposes professed by the institutions have brought them closer.

A **D+** is allocated because even though they have become closer the purposes of the two institutions are still different.

The Academic Structure (D+)

In terms of their academic structure the two institutions are differentiated. The polytechnic seem to have a restricted qualification structure as it offers only specialised diploma programmes in the business and engineering fields.

The university has a far broader range of programmes in different fields including engineering, commerce, humanities, education and other professional programmes. It offers programmes at Certificate level, Diploma level, Bachelor degree level, Masters Degree level and Doctoral level. The university may thus offer programmes at all levels while the polytechnic may not offer degrees and further post-graduate qualifications.

A **D+** is assigned to indicate clearly identifiable differences between the institutions, even though there is a degree of similarity in terms of the award of diplomas and certificates.

Academic Staff Qualifications (D+)

In terms of academic staff qualifications the two institutions are different. The requirement for a lectureship position at the polytechnic is lower as the minimum required is a Bachelor degree, while the university requires a Master degree. As a result the qualification level of staff in the two institutions also differs. The majority at the polytechnic are first degree holders while at the university a Masters degree is the most dominant qualification level.

A D+ is allocated.

Research (D-)

The difference in research at the two institutions is rated **D-.** The polytechnic produces a low level type of research which does not make it to the publication platform. While the university is more involved in research, there is not much activity happening. Looking at the publication rate at the university, there is not much being done. While it is true that most of the lecturers who were interviewed have published in journal articles at some point, it is also true that their publications are few. Some are not that recent and others have not published under the university's wing. Moreover, the two institutions seem to have similar challenges that prevent them from conducting research.

On this basis a **D-** is allocated.

The next section will summarise the findings of this chapter.

4.5 Summary of Key Findings

This chapter explored institutional differentiation as a feature of higher education systems, focusing particularly on two institutional types in Lesotho: the Polytechnic and the University. The particular aim was to establish whether each of these institutions is a distinctive type of institution with a strong a binary boundary between them; or, whether there is boundary blurring as found in other African countries (Ng'ethe *et al,* 2008).

The table below presents a summary of the findings.

Table 4.10: A comparative summary the polytechnic and the university

Indicator	Rating	Description
1. Historical Purpose	**D++**	High degree of differentiation. Strong differences between institutions.
2. Governance and Statutory Functions	**D+**	Although there is high degree of differentiation, there are also some similarities.
3. Current Mission and Vision	**D+**	Although there is high degree of differentiation, there are also some similarities.
4. Academic Structure	**D+**	Although there is high degree of differentiation, there are also some similarities.
5. Academic Staff Qualifications	**D+**	Although there is high degree of differentiation, there are also some similarities.
6. Research	**D-**	Though the differences are clearly identifiable between the institutions there is a significant degree of similarities.

The overall finding at the level of institution is clearly one of differentiation. However, it is also clear that this relation has weakened over time. While the two institutions were established for very different purposes, both are experiencing 'mission stretch' in the direction of the other's statutory functions. The university has become more generally labour market-orientated, especially in

offering professional qualifications. The Polytechnic has retained its vocational education and training focus but is offering programmes at a higher technical level, with aspirations to enter the professional training arena currently occupied by the university.

A further de-differentiation feature is that both were allocated a research mandate as a statutory function (the description in the statute is almost exactly the same) and yet neither is fulfilling this mandate, albeit for different reasons.

In the next chapter a comparative approach will be continued, this time with a focus on programme differentiation.

CHAPTER 5

PROGRAMME DIFFERENTIATION

5.0 Introduction

Chapter 4 explored the extent of institutional differentiation between the polytechnic and the university in Lesotho. It showed that both institutions are experiencing mission stretch towards each other's statutory functions. The university is becoming more generally labour market-orientated, especially in offering professional qualifications. The polytechnic has retained its vocational education and training focus but has also entered the professional training arena.

This chapter explores the findings of the previous chapter through a focus on programme differentiation in and between the two institutions. The aim is to establish whether the findings at institutional level is confirmed or refuted at programme level.

The investigation will focus on one commerce programme and one engineering programme from each institution.

- The polytechnic's commercial programme (which I will refer to as the Diploma in Commerce) will be compared with the university's commercial programme (which I will refer to as the Bachelor of Commerce).
- The polytechnic's engineering programme (which I will refer to as the Diploma in Engineering) will be compared with the university's engineering programme (which I will refer to as the Bachelor of Engineering).

Furthermore, one similar course is investigated across each discipline. The focus will be on *Taxation* for commerce programmes and *Control Systems/Digital Control* for the engineering programme.

- *Taxation* module is offered at first semester of second year for the Diploma in Commerce and for the Bachelor of Commerce it is a whole year module offered at fourth year.
- *Control Systems* is offered at second semester of third year for the Diploma in Engineering and for the Bachelor of Engineering, *Digital Control* is offered in the first semester of third year.

Figure 5.1 summarizes the presentation.

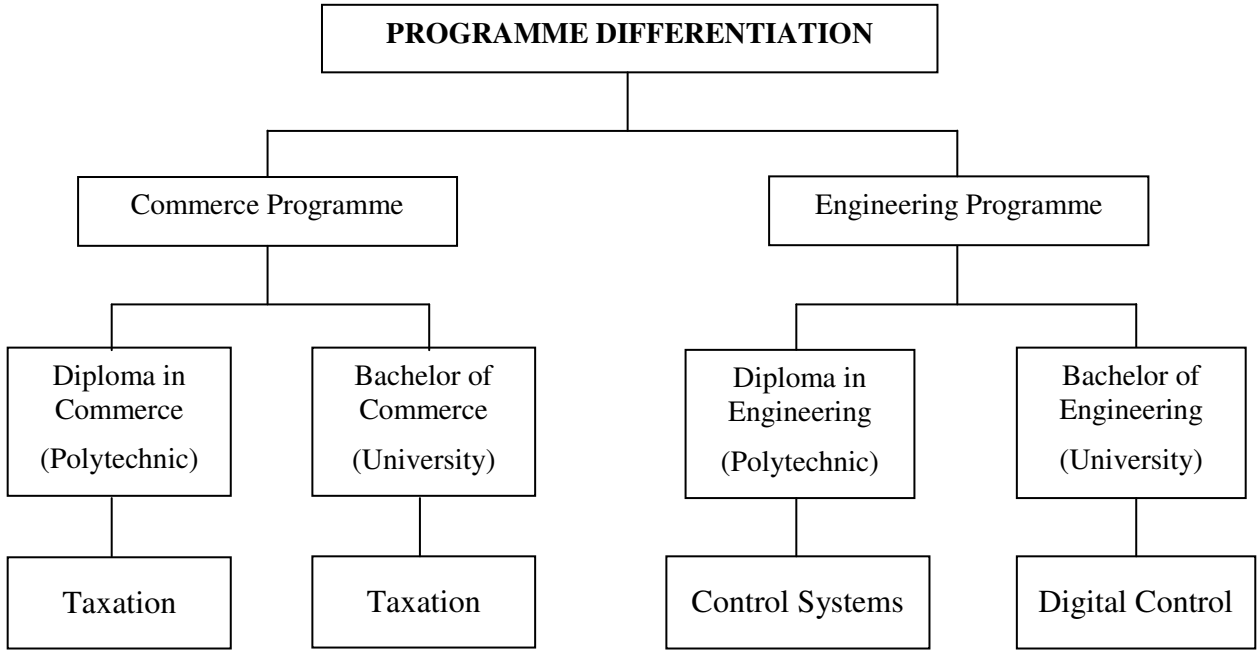


Figure 5.1: Summary of Programme Differentiation presentation

The chapter continues the case studies presented in the previous chapter. Unlike in the previous chapter where the institutions were presented separately as the profile of each institution had to be created, in this chapter the two institutions are presented together to make their comparison easy.

The analysis is based on three indicators, as discussed in chapter 3 which are presented below for ease of reference.

Table 5.1: Indicators of Programme Differentiation

Concept	Indicators	Sources of evidence
PROGRAMME DIFFERENTIATION	1. Admission Criteria	▪ Minimum admission requirements, Students' profile
	2. Curriculum	▪ Structure of the programme ▪ Theory - practice sequence and duration ▪ Objectives of a specific course ▪ Course content of a specific course ▪ Assessment tasks for a specific course
	3. Articulation	• Structure and recognition of qualifications for admission

For each indicator the two programmes under the same field are analysed together. The same classification schema, discussed in chapter 3 and used in the previous chapter, is applied. (The classification schema is reproduced below).

Table 5.2: Differentiation strategies – Programme Differentiation

D++	D+	D-	D--
High degree of differentiation. Strong differences between programmes which are never transgressed	Although there is high degree of differentiation, of programmes, there are also some similarities.	Significant degree of similarities even though the differences are clearly identifiable between programmes	Minimum or no differentiation between the programmes

5.1 Presentation and Analysis of Data

INDICATOR 1: ADMISSION CRITERIA

This section explores the admission criteria of the selected programmes from the two institutions, the polytechnic and the university.

At the end of secondary school, students sit for the Cambridge Overseas School Certificate (C.O.S.C.). Until 2013 this qualification was the exit exam for schooling and an entry requirement for higher education.

In the C.O.S. C. system, results for each subject are placed on a 9-point scale, as shown below.

Table 5.3: Cambridge Overseas School Certificate (C.O.S.C.) grading system

Scale	Marks percentage	Achievement	Comment
1	90 – 100	Pass with credit	The information in this table applied until the end of 2013. In 2014, the new Lesotho General Certificate of Secondary Education (LGCSE) was introduced. As the information for this study was collected in 2013, the C.O.S.C.'s 9 -point scale is pertinent.
2	80-89		
3	75– 79		
4	70 – 74		
5	65 – 69		
6	60 – 64		
7	50 – 59	Pass	
8	40 – 49		
9	0 – 39	Fail or Ungraded	

For this study C.O.S.C. will be referred to as the *Senior Certif*icate.

The overall average grade of the Senior Certificate is obtained by adding the best six subjects to get the total aggregate. If a student has an aggregate of 6 to 24 s/he is awarded a first class pass; an aggregate of 25 to 34 is a second class pass; and, an aggregate of 35 to 48 is a third class pass.

Each programme has its own admission criteria and entry requirements as presented below.

Commerce Programmes (D+)

The admission criteria for commerce programmes are summarised in the table below.

Table 5.4: Minimum entry requirements for commerce programmes

Diploma in Commerce (Polytechnic)	Bachelor of Commerce (University)
A pass in Senior Certificate or its equivalent with: ▪ Credit in one Commercial Subject ▪ Pass in English Language (7) ▪ Pass in Mathematics (7) ▪ Credit in three other subjects. **OR**	A pass in Senior Certificate with: ▪ a minimum aggregate of 34 (Second Class) ▪ Credit in English Language ▪ Credit in Mathematics ▪ Credit in two other subjects. ▪ Pass in any two subjects **OR**
A pass in Senior Certificate or its equivalent with: ▪ Credit in Mathematics ▪ Pass in English Language (7) ▪ Credit in Three other subjects ▪ Pass in any other Subject. **OR**	Diploma in Management Studies of the Institute of Extra Mural Studies (IEMS) with a pass with credit **PLUS** ▪ Pass in Senior Certificate Mathematics ▪ Pass in Senior Certificate English Language **OR**
A pass in Senior Certificate or its equivalent with ▪ A pass in five subjects (English Language inclusive) **Plus** ▪ Certificate in a relevant post-secondary programme	Licensed Accountant of the Centre for Accounting Studies (CAS) **With** ▪ A pass in Senior Certificate Mathematics ▪ A pass in Senior Certificate English Language

Information obtained from admissions offices (August 2013)

The minimum entry requirements for the two programmes are different. They both require a Senior Certificate pass with four credits and two passes. The difference is in the courses where credits are required. The polytechnic requires a pass in Mathematics and English Language while the university requires credits for both subjects.

Both programmes also consider students who already have a post-secondary qualification, but at different levels. The polytechnic requires a certificate while the university requires a diploma. In addition, both programmes require the same grade for Senior Certificate Mathematics and English.

A **D+** is allocated to indicate differentiation with some similarity.

The Engineering Programmes (D++)

The admission criteria of engineering programmes are summarised in Table 5.5.

Table 5.5: Minimum entry requirements for engineering programmes

The Diploma in Engineering (Polytechnic)	The Bachelor of Engineering (University)
A pass in C.O.S.C. or its equivalent with: ▪ Credit in Science ▪ Credit in Maths ▪ Credit in English **OR** A pass in Science, Maths and English plus an average of 65% in upgrading **OR** A pass in Science, Maths and English plus an additional relevant certificate	Successful completion of year 2 of a general Bachelor of Science or its equivalent with: ▪ a second class second division pass including ▪ Credit in Physics– Introductory Electronics ▪ Credit in two computer programming courses. **OR** A pass with credit in Diploma in Electrical and/or Electronic Engineering, which allows entry into the second year of a general Bachelor of Science

Information obtained from admissions offices (August 2013)

Admission into the engineering programmes refers to different entry levels. The polytechnic's engineering programme admits mostly Senior Certificate (C.O.S.C.) holders while the university's engineering programme admits students who have completed the second year of a Bachelor of Science degree. It also admits diploma holders, including polytechnic diploma holders who have to first complete the second year of the Bachelor of Science before they can continue.

The two programmes are very strongly differentiated in relation to entry level and a **D++** is allocated.

INDICATOR 2: CURRICULUM

This section explores the curriculum. The evidence is provided in the form of programme structure, theory and practice relation, objectives, course content and assessment tasks. The first two are investigated at programme level while others are investigated at the course level.

- ***The Programme Structure***

The Commerce Programmes (D+)

The Diploma in Commerce is a three-year programme while the Bachelor of Commerce is a four-year programme. The courses offered under each programme are presented in table 5.6.

Table 5.6: Programme structure for commerce programmes

Diploma in Commerce (Polytechnic)		Bachelor of Commerce (University)	
Year 1 – Semester 1	**Year 1 – Semester 2**	**Year 1 – Semester 1**	**Year 1 – Semester 2**
▪ Accounting Procedures and Principles ▪ Introduction to Quantitative Methods ▪ Supervisory Management ▪ Communication Skills ▪ Basic Principles in IT	▪ Accounting II ▪ Supervisory Management II ▪ Quantitative Methods ▪ Communication Skills ▪ Organisational Behaviour	▪ Introduction to Business ▪ Principles of Macro-Economics ▪ Algebra I for Non-Mathematics Majors ▪ Introduction to Statistics I	▪ Principles of Micro-Economics ▪ Computer Awareness Skills ▪ Introduction to Statistics II ▪ Calculus for Non-Mathematics Majors
		▪ Communications Skills ▪ Financial Accounting I	
The Diploma in Commerce (Polytechnic)		**The Bachelor of Commerce (University)**	
Year 2 – Semester 1	**Year 2 – Semester 2**	**Year 2 – Semester 1**	**Year 2 – Semester 2**
▪ Accounting III ▪ Cost Accounting I ▪ Business Management (HR) ▪ Mercantile Law ▪ **Taxation** ▪ Microeconomics	▪ Accounting IV ▪ Cost Accounting II ▪ Entrepreneurial Skills I ▪ Mercantile Law ▪ Macroeconomics ▪ Business Management (MK)	▪ Elements of Marketing ▪ Intermediate Micro-Economics ▪ Statistical Methods and Application	▪ Intermediate Micro-Economics ▪ Statistical Methods and Application
		▪ Financial Accounting II ▪ Management Process ▪ Business Law	
The Diploma in Commerce (Polytechnic)		**The Bachelor of Commerce (University)**	
Year 3 – Semester 1	**Year 3 Semester 2**	**Year 3 – Semester 1**	**Year 3 Semester 2**
Industrial Attachment	▪ Entrepreneurial Skills II ▪ Fundamentals of Finance ▪ Business Management III (PROC) ▪ Risk Management ▪ Banking Principles ▪ Management Accounting	▪ Financial Management ▪ Organisational Behaviour ▪ Human Resource Management	▪ Research Methodology ▪ Operations Management
		▪ Cost Accounting ▪ Financial Accounting III ▪ Computer Applications	

The Diploma in Commerce (Polytechnic)		The Bachelor of Commerce (University)	
		Year 4 – Semester 1	**Year 4 - Semester 2**
		▪ Strategic Management	▪ Entrepreneurship
		▪ Management Accounting ▪ Auditing and Investigations ▪ **Taxation** ▪ Financial Management II ▪ Advanced Financial Accounting	

(Information obtained from faculties, July 2013)

The programme structures of the two courses are different. Although the Diploma in Commerce has a disciplinary base, it is specialised and students are specifically oriented to the commercial field from the commencement of the programme. Even when they do other courses like law, it is not general it is specifically related to the commercial field.

The Bachelor of Commerce has a wide spectrum of courses which provide students wide exposure. During the first two years of their studies students do not focus only on commerce-related courses. They are also exposed to courses outside the field like statistics and mathematics. At third year they start specialising in courses specifically related to the commerce field.

A **D+** is allocated because even though the structure is wide for the Bachelor of Commerce, both programmes have similar focus but to a varying degree.

The Engineering Programmes (D+)

The Diploma in Engineering takes three years and the Bachelor of Engineering takes three years for those who have done the first two years of general Bachelor of Science specialising in Physics, Mathematics and Computer Science and four years for Diploma holders. However, I will just focus on the three year module as it is done by both groups. The courses offered under each programme are presented in table 5.7.

Table 5.7: Programme structure for engineering programmes

Diploma in Engineering (Polytechnic)	Bachelor of Engineering (University)
Year 1	**Year 1**
• Engineering Drawing • Engineering Mathematics I • Communication Skills • Computer Skills • Electrical Installation I • Electrical Engineering I • Electronics I • Engineering Mathematics II • Computer Networks • Digital Systems • Computer Aided Drawing • Electrical Engineering II	• Electronic Measurements and Instrumentation • Analogue Circuit Design • Electrical Circuit Analysis • Principles of Microprocessors • Analogue Communication • Digital Communications • Semiconductor Electronics • Practicals in Networking: Basic Routing • Data Structures and Algorithms • Computer Organisation and Architecture • Operating Systems I • Computer Communication and Networks I • Differential Equations I

Diploma in Engineering (Polytechnic)	Bachelor of Engineering (University)
Year 2	**Year 2**
▪ Electronics II ▪ Digital Systems II ▪ Electrical Engineering III ▪ Engineering Mathematics III ▪ Electrical Machines II ▪ Structured Programming ▪ Power Electronics III ▪ Digital Systems III ▪ Communication Systems II ▪ Process and Instrumentation ▪ Electrical Machines III ▪ Electrical Distribution III	▪ Workshop Practice ▪ Electronic Materials and Devices ▪ Digital Circuit Design ▪ Radio Wave Transmission and Propagation ▪ Engineering Study Project ▪ Principles of Automatic Control ▪ Engineering Management I ▪ Advanced Topics in Computer Science ▪ Cryptography and Network Security ▪ Ordinary Differential Equations ▪ Mathematical Methods ▪ Electromagnetic Theory
Diploma in Engineering (Polytechnic)	**Bachelor of Engineering (University)**
Year 3	**Year 3**
▪ Industrial Attachment ▪ Microcontroller Applications III ▪ **Control Systems III** ▪ Electrical Protection III ▪ Design Project III ▪ Industrial Management III ▪ Entrepreneurial Skills	▪ **Digital Control** ▪ Telecommunication System ▪ VLSI Design ▪ Engineering Management II ▪ Individual Project ▪ Industrial Attachment

The Diploma in Engineering which admits mostly Senior Certificate holders has a predominant preparatory and vocational focus, with courses referring divided into three categories: preparatory courses in subjects such as mathematics and computer skills; engineering-related courses, with a strong focus on engineering drawing and computer-aided drawing (CAD) in the first year; and, more general occupational preparation in the form of communication, entrepreneurship and industrial management throughout the three years. A secondary aim is to prepare students for degree studies (as discussed in the section on Admission Criteria).

The knowledge base of the Bachelor of Engineering degree is at a more advanced level and requires students to have had post-secondary exposure (as discussed in the section on Admission Criteria). Courses start at a more technical and professional level and students are exposed to a broader spectrum of engineering-related topics that assume an adequate disciplinary base.

Both programmes include application through individual projects and an industrial attachment.

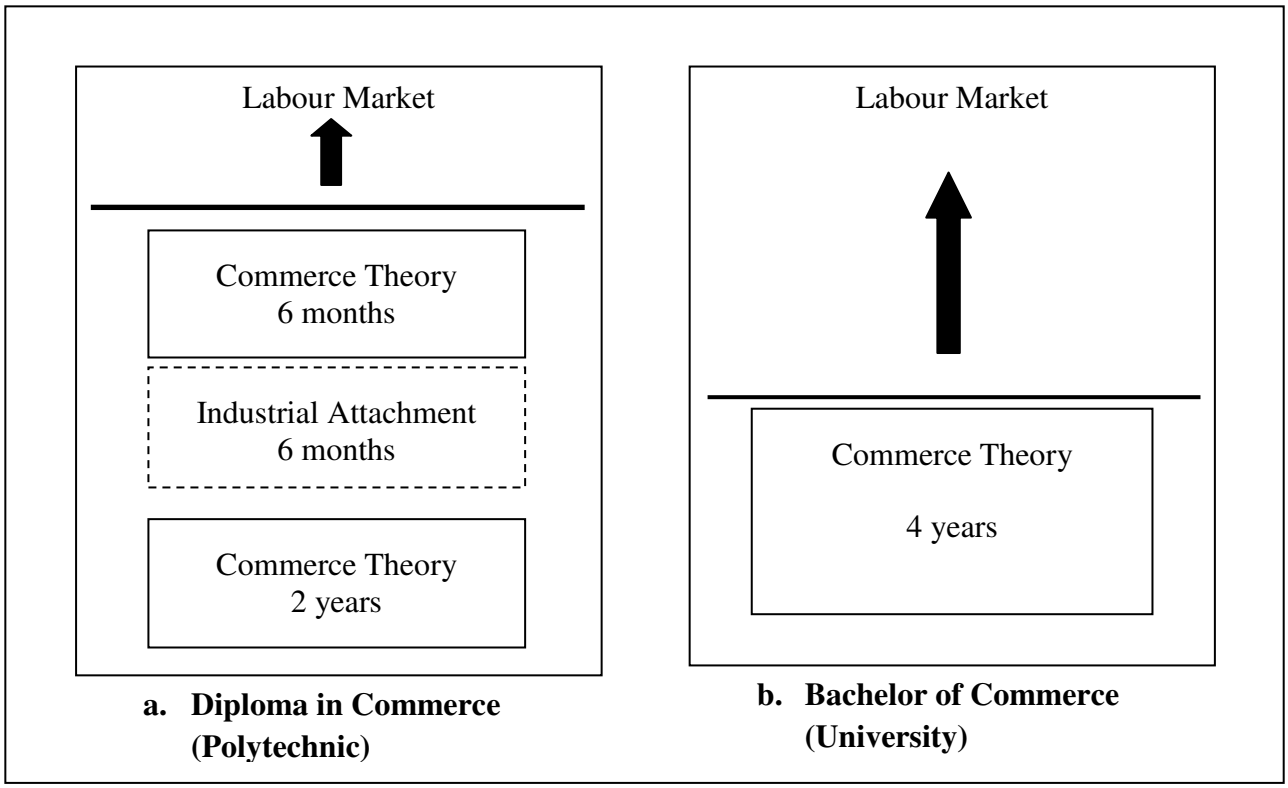
A **D+** is allocated to indicate differentiation but also some similarity.

- ***Theory- Practice Relation***

This section explores the duration and sequence of theory and practice for the selected programmes from the two institutions, the polytechnic and the university.

The Commerce Programmes (D++)

Figure 5.2 summarises the relation between theory and practices for commerce programmes.[9] The summary is based on the information from interview responses and documentation regarding programme structures.



Note: The horizontal bold black line indicates when the qualification is awarded

Figure 5.2: Theory-Practice relation model for commerce programmes

The Diploma in Commerce is a three-year programme which is divided into three parts in a 'sandwich' model. After successful completion of two years of classroom study, students are expected to go on a six-month industrial attachment offered by various employment companies. After six months of industrial attachment students come back to the polytechnic for six months to complete the theoretical component of the programme. They are now expected to integrate theory with the experience gained from industry. After successful completion of all three components, students graduate with a Diploma in Commerce.

[9] A prototype for the diagrams can be found in Kruss as cited in Gamble (2009).

The Bachelor of Commerce is a four-year programme. After successful completion of four years of theoretical studies, which include university-based practical work, students graduate and are ready to enter the labour market.

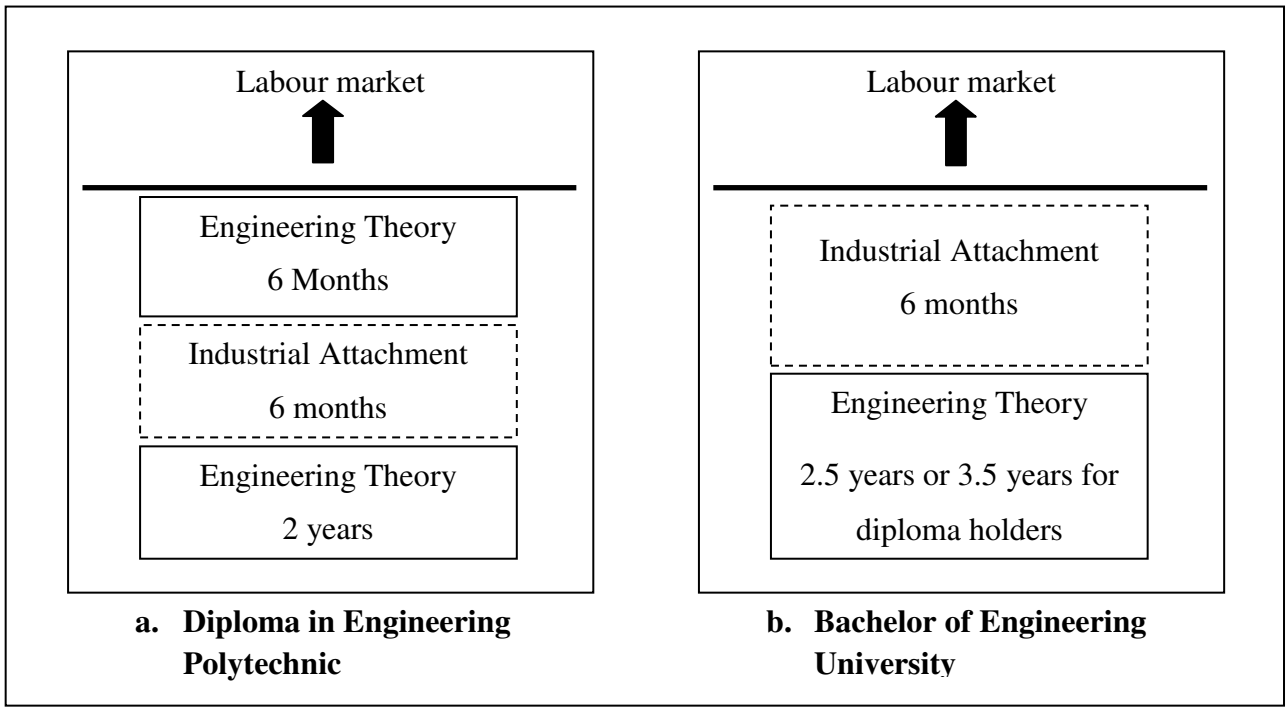
Staff members interviewed indicated that even though industrial attachment is not part of the curriculum, students are encouraged to do it if they manage to get a placement. However, due to a limited number of companies where they could be attached most of them fail to do so. One of the lecturers stated as follows:

> *Under normal circumstances students get attachment at third year but it is very limited. It is not part of the curriculum but we encourage them to do that but it is not compulsory. It is not like they cannot graduate if it is not done.*
>
> (Interview, 15/08/13).

Based on a visual depiction of the theory-practice relation (as above), the two programmes are strongly differentiated. A **D++** is allocated for the theory-practice relation in the two commerce programmes discussed.

The Engineering Programmes (D-)

The theory-practice relation in the engineering programmes is remarkably similar, as indicated in the diagram below.



a. Diploma in Engineering Polytechnic

b. Bachelor of Engineering University

Note: The horizontal bold black line indicates when the qualification is awarded.

Figure 5.3: Theory-Practice relation model for engineering programmes

The Diploma in Engineering at the polytechnic is a three-year programme with a three-part division similar to the Diploma of Commerce described in the previous section.

The Bachelor of Engineering is also a three-year programme, with an industrial attachment but no subsequent theory component. A further distinguishing feature is that students, who enter with a prior diploma rather than having completed the second year of a Bachelor of Science degree, or its equivalent, complete the programme in four years and not in three years.

In terms of a theory-practice relation, programme differentiation is weaker rather than stronger. A **D-** is allocated to indicate that, unlike many other university degrees, the engineering degree shares the applied orientation of polytechnic programmes, in that sense they are similar. Differences in the depth of the knowledge base are addressed elsewhere and are not taken into consideration here.

- ***Course Objectives***

The analysis for this section focuses on a specific course selected under each field. For the commerce programmes the selected module is Taxation. For the engineering programmes, the selected module is System Control and Digital Control.

Commerce Programmes (D+)

Table 5.8: Course objectives for Taxation

The Diploma in Commerce – Taxation (Polytechnic)	The Bachelor of Commerce – Taxation (University)
This course aims to develop the ability to prepare computations of tax liability for both individuals and businesses resident in Lesotho for the purpose of income tax, corporation tax and value added tax. At the end of this course students should be able to:	This course introduces students to the theory and general principles of taxation and provides the core knowledge of the underlying principles as they affect the activities of individuals and businesses. The main focus will be on Lesotho Tax System. On completion of this course students should be able to:
Explain and **discuss** the tax systems and its principles	**Explain** the operation and scope of the Lesotho tax system.
Compute basic personal and business taxes based on Lesotho regulations	**Explain** and **compute** income tax liabilities for both individuals, partnerships, companies, trusts and estates of deceased persons.
Apply tax principles to practical scenarios	**Explain** and **compute** chargeable gains arising from business assets for both companies and individuals
	Explain and **apply** the principles of value added tax (VAT)

The objectives of the two courses are strongly differentiated. The aim of the *Diploma in Commerce Taxation* is to develop students' computational skills in a practical manner. The *Bachelor of Commerce Taxation* aims to equip students with theory and core general principles with practical application as part of a more general preparation. There is a clear distinction between technical/occupational preparation and professional preparation.

A **D+** is allocated to indicate that although differences between the two programmes are clearly identifiable, they refer to the same knowledge field.

The Engineering Programmes (D++)

The course objectives for engineering programmes are presented in table 5.9.

Table 5.9: Course objectives for *Control Systems* and *Digital Control*

The Diploma in Engineering – Control Systems (Polytechnic)	The Bachelor of Engineering – Digital Control(University)
On completion of the course students should be able to: ▪ **Understand** the function of and the relationship between components of a control system ▪ **Determine** how systems behave with time when subject to some disturbance. ▪ **Recognises** system responses to standard test signals. ▪ **Understand** the principles of different modes of control. ▪ **Describe** the operation and construction of practical control systems ▪ **Understand** the hardware structure of a Siemens PLC system and work with both digital signal Modules and Analogue signal Modules. ▪ **Install** STEP 7 software on the computer. **Configure** PLC hardware in Simatic Manager. **Write** programmes to solve automation problems, **perform** diagnostics using Simatic Manager and **run, debug** and **load** the programme into the PLC.	This course provides an introduction to analysis and design of computer-controlled systems. This course not only focuses on mathematical concepts in digital control, including z-transform, pulse transfer functions, state space models and digital controllers design, but also provides students with hands-on experience in analysis and design of digital control systems using simulation software and microcontroller. After this course, students are expected to know how to **analyse** the performance of digital control systems and **design** feedback controllers to meet the required performance system specifications The course objectives are: ▪ **Knowledge** about principles and techniques of A/D and D/A conversions and basics of z-transform ▪ Knowledge in stability **analysis** of digital control systems ▪ Knowledge about the **design** of digital control systems for different engineering model ▪ Knowledge about the **implementation** of digital controllers on different systems ▪ Knowledge of state-space **analysis** and **feedback** control for various systems

The course objectives for the *Control Systems* module aim to focus more on the practical aspects of the course. *Digital Control* aims to provide students with analytical skills and related conceptual background. It also aims to provide practical application so that students can apply what they have learned.

Within a common focus on a particular knowledge field the types of knowledge included in the objectives of each programme differ significantly, in line with a clear distinction between technical/occupational preparation in the diploma and professional preparation in the degree.

A **D++** is allocated.

- ***Course Content***

The Commerce Programmes (D+)

Table 5.10 shows that the Diploma in Commerce *Taxation* course is covered over a period of one academic semester in which eight (8) topics are covered. The topics have a varying number of sub-topics under them.

The Bachelor of Commerce *Taxation* is covered over a period of one academic year in which four (4) topics are covered. The topics have a different number of topics under them.

Table 5.10: Course content for *Taxation*

Second-year course: *Taxation* (Diploma in Commerce – Polytechnic)		**Fourth-year course: *Taxation* (Bachelor of Commerce – University)**
Basis of Lesotho income tax • Objectives and contribution to the economy • Sources of revenue • Types of taxes • Classes of income • Charging section and scope of change **Employment Income** • Difference between income from employment and income from profession • Gross income from employment • Fringe benefit tax • Allowance expenses and exemption • Computation of adjusted and statutory income **Capital Allowances** • QPE for plant and machinery • Computation of IA, AA and accelerated capital allowances • Disposal (balancing charge and balancing allowance) **Partnership** • Types of partnerships • Provisional adjusted income and divisible income • Adjusted income of a partner • Capital allowances • Computation of tax liability • Changes in partnerships	**Resident status for individual and source rules** • Determination of resident status under the Income Tax Act • The importance of residence status **Business Income** • Scope of business income • Deem derived section • Allowable expenses • Prohibited expenses • Computation of tax • Commencement of business • Cessation of business **Tax Relief and rebates** • Joint and separate assessment • Types of relief • Types of rebates • Computation of tax liability **Tax Administrations** • LRA assessment and collection branch and its functions • Types of return • Responsibility of employee and employer • Deemed assessment and appeal procedure • Collection and recovery • Penalties and Offences	**Lesotho Tax System** • The purpose of taxation in a modern economy • Tax avoidance and tax evasion • Different types of taxes in Lesotho **The scope of value added tax** • Interpretation of VAT Act • The VAT registration requirement • Computations of VAT liabilities **The obligations of the taxpayers** • Self -Assessment System (SAS) • Time limits for submission of information: returns and payments • Penalties for non – compliance **The scope of income tax** • Interpretation of Income Tax Act 1993 • Bases for collection of income tax: residence and source • Gross income: employment; business; property and any other income. • Exemptions • Tax allowable deductions • Depreciation allowance • Computations for income tax liabilities: individuals, partnerships; trusts and estates; companies. • Explain and compute chargeable gains • Fringe benefits tax: fringe benefits; fringe benefits taxable amount; fringe benefits tax imposed; exempt fringe benefits

Even though there are similarities in course content, differentiation is the strongest feature of this comparative depiction. The *Diploma of Commerce – Taxation* covers a large number of topics within a short space of time. Restricted pacing of this nature very often has a negative effect on content coverage so that coverage tends to be shallow. In contrast, the *Bachelor of Commerce – Taxation* has fewer topics to cover in double the time. Its pacing requirements are therefore likely to allow for more in-depth coverage.

A **D+** is allocated.

The Engineering Programmes (D++)

Course content in the third-year module on *Control Systems* in the Diploma comprises seven topics covered in one academic semester. The third-year module on *Digital Control* in the Bachelor degree covers four topics and a case study over a period of one academic semester.

Table 5.11 presents the course outlines of the *Diploma in Engineering Control Systems* and the *Bachelor of Engineering Digital Control.*

Table 5.11: Course content for *Control Systems* and *Digital Control*

Third-year Course: *Control Systems* (Diploma in Engineering, Polytechnic)	**Third-year Course: *Digital Control* (Bachelor of Engineering, University)**
Control System Elements	Introduction to digital control
Mathematical Modelling of physical systems	Design of digital control using classical methods
System Response	Design of digital control using modern methods
Modes of Control	Introduction to state –space designs
Practical Analogue Controllers	Case Study on digital control of any systems which a student can have access to.
Programmable Logic Controllers	
PLC Programming and Applications	

The course content to be covered in one semester is strongly differentiated in the two courses. Even though both are third-year courses in engineering the Bachelor degree module indicates the stronger prior disciplinary knowledge base required for design. The content directed at the engineering technician/technologies focuses more predominantly on programming.

A **D++** is allocated to show very strong differentiation at the level of course content.

- ***Assessment Tasks***

This section analyses the examination question papers for each programme. The questions are classified according to the kind of information required to answer the questions. Is it theoretical or practical? It further checks the marks allocated as this helps to establish what type of knowledge is valued.

The Commerce Programmes (D+)

The marks for each component per questions are presented in a tabular form in table 5.12 below.

Table 5.12: Classification of *Taxation* assessment tasks

	Taxation **(Diploma in Commerce: Polytechnic)**			***Taxation*** **(Bachelor of Commerce: University)**		
	Total	**Theory**	**Application**	**Total**	**Theory**	**Application**
Question 1	20	0	20	25	10	15
Question 2	20	20	0	25	8	17
Question 3	20	0	20	25	2	23
Question 4	20	0	20	25	9	16
Question 5	20	20	0			
Total	**100**	**40**	**60**	**100**	**29**	**71**

It is difficult to make anything other than a superficial classificatory judgement on similarities or difficulties between the assessment tasks of the two qualifications as detailed subject matter expertise is required for this type of judgement.

At a superficial level, the two programmes appear to be weakly differentiated. Both examination papers specify more application than theory and both the applications foreground calculations. However, the way the questions are presented, is different. In the Diploma, *theory* (recall, explanation and discussion) and *application* are put into different questions with no noticeable relation between the two. In the Bachelor degree *theory* (recall and explanation) and *application* are mixed together in each question even though more emphasis is placed on application.

The two examples presented on the next page illustrate this difference, with a distinct difference in the complexity of the scenario provided in the Bachelor degree question and the extent to which the

examination candidate has to infer and work out what is required. In the Diploma questions, the question is direct with no inference required.

In order to capture both sets of observations a **D+** is allocated.

Table 5.13: Examples of *Taxation* assessment tasks

Taxation **(Diploma in Commerce: Polytechnic)**		***Taxation*** **(Bachelor of Commerce: University)**
Question 1	**Marks**	**Question 1**
1. **What is** the adjusted cost base of an asset transferred between spouses and former spouse?	3	Mr. Thabo is working as the Finance Director of a private company. He received the following benefits and payments for the year ended 31 March 2012. 1. An annual salary of M390, 000 2. A company car which was valued at M330, 000 when it was first provided to him in Jan. 2009. The current market value of the car is M220, 100. 3. Housing allowance of 10% of the basic salary. 4. Entertainment allowance of M1, 500 per month. 5. The company pays M1, 000 per month to Vodacom Lesotho in respect of cell phone used by Mr. Thabo. 6. The company pays M700 and M500 per month on behalf of Mr. Thabo, for utilities and security guard respectively. Mr. Thabo contributes M2, 235 per month to approved employer superannuation fund. The company contributes M5, 600 per month on his behalf. **Required** a. **Explain** the four types of income or benefits which are excluded from the taxable employment income. (4) b. **Calculate** chargeable income for Mr. Thabo for the year of assessment ended 31 March 2012. (6) c. **Calculate** the allowable superannuation fund contributions to the company. (4) d. **Calculate** the fringe benefits tax (FBT) payable by the company in respect of the benefits provided to Mr. Thabo for the year assessment ended 31 March 2012. (6) e. **State** when the employers should file the fringe benefits tax returns. (5) Total (25 marks)
2. **What is** the purpose of classifying taxable income?	2	
3. **Give** examples of an asset disposal where nobody acquires ownership.	2	
4. **Explain** any two classes of tax according to the effect of tax on the income of the tax payer and give examples	8	
5. **Discuss the difference** between tax evasion and tax avoidance and give an example in each case.	5	
Total	**20**	
Question 2	**Marks**	
Mr. Thabiso a sole trader acquired a new taxi for transporting public business venture. The Taxi was bought on the 1st July 2007 for M196, 200.00 was sold on the 31st December 2010 for M94, 000.00. (Group 1 asset at 25%) **Required:** Use the single asset method to calculate gain or loss on the disposal of this business asset.	20	

The Engineering Programmes (D++)

The classification of assessment tasks for engineering programmes is presented in table 5.13.

Table 5.14: Classification of Control Systems and Digital Control assessment tasks

	Control Systems **(Diploma in Engineering: Polytechnic)**			***Digital Control*** **(Bachelor of Engineering: University)**		
	Total	**Theory**	**Application**	**Total**	**Theory**	**Application**
Question 1	20	6	14	25	10	15
Question 2	20	3	17	25	5	20
Question 3	20	8	12	25	3	22
Question 4	20	2	18	25	2	23
Question 5	20	0	20	25	2	23
Total	**100**	**19**	**81**	**125(100)**	**22 (18)**	**103(82)**

Table 5.15: Examples of *Control Systems* and *Digital Control* assessment tasks

***Control Systems* (Diploma in Engineering: Polytechnic)**		***Digital Control* (Bachelor of Engineering: University)**	
Questions	**Marks**	**Questions**	**Marks**
1. **Explain** what is meant by "system modelling in regard to control systems engineering design.	3	1. **Explain** what introduces internal instability in a process system.	2
2. For the passive electrical network shown in figure Q2 (a), **determine,** the transfer function relating $V_2(s)$ and $V_1(s)$.	8	2. Use partial fraction method to **find** the inverse z-transform of the following output function. $$F(z) = \frac{z+1}{z^2 + 0.3z + 0.02}$$	6
3. When C = 2μF and $R_1 = R_2 = 1M\Omega$, **determine** the steady-state gain K and the time constant τ.	4	3. **Convert** the pulse transfer function to its state-space model. $$g(z) = \frac{4z^2 + 3z + 5}{2z^2 + 6z + 8}$$	10
4. **Find** an expression for the unit step response.	5	The root locus for a process system *g(z)* is shown in *Figure 3*. $$g(z) = \frac{z+1}{z^2 - 2z + 1}$$	
Total	20	4. **Design** a suitable controller that will stabilise the system and then **draw** a rough sketch of the new root loci. **Explain** your answer.	7
			25

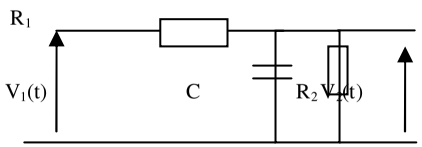


Figure Q2 (a) Passive electrical network

Even though the way the questions are presented show some similarity. The types of assessment questions are very different in terms of their focus on calculation. The design question in the Bachelor degree question paper and the explanation of the design also require a very different knowledge base.

A **D++** is allocated to indicate strong knowledge differentiation in relation to the combination of conceptual and applied knowledge required to answer the questions.

INDICATOR 3: ARTICULATION

The Commerce Programmes (D++)

There is no articulation between the Diploma in Commerce and the Bachelor of Commerce. The entry requirements presented above clearly indicates that the university does not accommodate students from the polytechnic.

This was confirmed by lecturers from the university who indicated that the polytechnic's qualification is not considered when admitting students. The reasons for not considering this qualification are mentioned below

> *"... There is Business Studies, at the Polytechnic we have never even tried this qualification. Students apply to do a degree. We (the university) do not understand the polytechnic's qualification at all. We do not know whether we want to take them or we do not want to take them (Students from the polytechnic). We do not know anything about them to an extent that the department which I am in basically does not even take those students because we do not know whether they qualify to be with us ..."*
>
> (Interview, 12/08/ 2013)

This indicates that there is no form of articulation and also no discussion about articulation between the two departments.

The Engineering Programmes (D-)

The entry requirements as advertised on the university's information brochure indicate a clear articulation route from the Diploma in Engineering to the three-year Bachelor degree in Engineering. As noted in a previous section, the Bachelor degree requires completion of the second year of a general Science degree as a prior entry criterion - overall a five year-trajectory.

On the basis of a formally stated articulation route, a **D-** is allocated to indicate a degree of formal programme articulation.

A D-- is not allocated as articulation is not a seamless process. Like entrants from the schooling system, students who hold a three-year Diploma in Engineering have to complete the second year of a general Bachelor of Science before they may enter the Bachelor of Engineering programme. Their pathway is thus two years longer as it consists of three years in the Diploma and four years in the Bachelor degree –overall a seven year-trajectory.

This was explained by one of the lecturers as follows:

> *... We also admit students from the polytechnic and other South African institutions with diploma or certificates in Electronic or Electrical Engineering. We do admit students who have an electrical and electronic background. These ones do not start at first year they start second year of BSc. Which is physics Mathematics and Computer Science ...*
>
> (Interview, 09/08/2013)

The interviews further indicated that students from the polytechnic do not have a smooth transition when they get into the university. One lecturer from the university stated

> *I think the way our degree has been structured; it does not really favour people from the polytechnics because of the level of mathematics that we do at second year. We have algebra and people from the Lerotholi polytechnic are more interested in Calculus and applied mathematics. We have a lot of pure mathematics and abstract algebra. So mostly they do not do well ...*
>
> (Interview, 09-08-2013)

In practice, the engineering articulation route therefore seems to be one that is seldom used and the differentiation between the two programmes is mostly just as strong as found between the commerce programmes.

5.2 Summary of Key Findings

This chapter explored programme differentiation as a feature of higher education systems, focusing particularly on two institutional types in Lesotho: the polytechnic and the university.

The table below presents a summary of the findings.

Table 5.16: Summary for the Programme Differentiation findings

Indicator	Commerce Programmes (Polytechnic and University)	Engineering Programmes (Polytechnic and University)
1. Admission Criteria	D+	D++
2. Curriculum		
▪ Structure of the Programme	D+	D+
▪ Theory - Practice sequence and duration	D++	D-
▪ Objectives	D+	D++
▪ Course Content	D+	D++
▪ Assessment Tasks	D+	D++
3. Articulation	D++	D-

Overall, the programme investigation in two fields shows that the polytechnic and the university remain strongly differentiated at programme level' in the sense that each institution directs its programmes at a distinctive labour market level. Convergence occurs in the engineering field which displays a labour market preparation dimension in all its programmes, regardless of which institution offers the programme. It must be noted though that, even though there is a formal articulation route between the two engineering programmes, the strong conceptual knowledge base required in the degree programme mostly prevents students from moving from the diploma to the degree.

CHAPTER 6

DISCUSSION OF THE FINDINGS

6.0 Introduction

This research study set out to question whether the higher education system in Lesotho is sufficiently differentiated to provide diversity in terms of access to qualifications.

The last chapter brings together the two main dimensions investigated in the study, starting with a summary table of the overall differentiation ratings for both *institutional and programme differentiation*. This is followed by an analysis that links the study to two of the empirical studies discussed in the literature review. The first is a comparative study of twelve African countries Ng'ethe *et al* (2008), entitled*Differentiation and Articulation in Tertiary Education Systems.* The second is a South African study undertaken by the Centre for Higher Education Transformation, entitled *Differentiation in the South African public university system* (Bunting, 2013).

Key findings from these two studies provide analytical vantage points from which to interpret differentiation in Lesotho's public higher education system in relation to trends elsewhere on the continent.

The chapter concludes with a provisional discussion about the implications of the findings for the future of public higher education in Lesotho. Limitations of the study are discussed in the final section.

Table 6.1: Summary of findings

INSTITUTIONAL DIFFERENTIATION		PROGRAMME DIFFERENTIATION		
Indicator	**Rating (Polytechnic and University)**	**Indicator**	**Rating Commerce Programmes (Polytechnic and University)**	**Rating Engineering Programmes (Polytechnic and University)**
1. Historical Purpose	D++	1. Admission Criteria	D+	D++
2. Governance and Statutory Functions	D+	2. Curriculum		
3. Current Purpose	D+	▪ Structure of the Programme	D+	D+
4. Academic Structure	D+	▪ Theory - Practice sequence and duration	D++	D-
5. Academic Staff Qualifications	D+	▪ Objectives	D+	D++
		▪ Course Content	D+	D++
		▪ Assessment Tasks	D+	D++
6. Research	D-	3. Articulation	D++	D-

6.1 Discussion of Findings

6.1.1 A Binary System

Ng'ethe *et al* (2008), a study discussed in the review of the literature, indicate that binary systems, consisting of universities and polytechnics, are prevalent in African countries like Ghana, Kenya, Malawi and Tanzania. However, the study also finds an increasing blurring of the boundaries. This 'blurring' is explained in terms of a two-way vocational-academic 'mission stretch' caused by market forces and reinforced by a lack of clear policies regarding boundaries between polytechnics and universities.

The summary of findings in Table 6.1 shows that the above findings partially apply to the higher education system in Lesotho but, as in other countries, the explanation is not one of straightforward institutional diversity.

Historically the two higher education institutions in Lesotho, (the university and the polytechnic), were established to address different purposes and were very strongly differentiated. In terms of its espoused purpose the polytechnic has made the transition from a trade and craft-orientated industrial school to a technical institute or polytechnic. Three specialised diploma-awarding schools have been established, while each school simultaneously retains a craft/trade certificate-awarding section.

It could be argued that while the polytechnic has remained true to its original purpose as a post-school institution that prepares students directly for the labour market, it has, in effect, become a 'dual mandate' institution. The polytechnic now overlaps with the university in the award of diplomas, but does not yet share the statutory status of awarding degrees and post-graduate degrees. However, the aspiration to become a university of technology is explicitly stated in the vision statement. Once this is achieved the institution will be granted the statutory authority to award degrees and post-graduate qualifications.

What of the university? Both its mission and vision and its academic structure show a 'dual mandate' of a different kind, namely that of academic preparation and citizenship development towards community service. The orientation towards community service in a rural context is clearly discernible in the university's academic structure, particularly in the focus on Agriculture and Education. It is also notable that the Faculty of Education awards a wide range of qualifications, stretching from certificates to PhD degrees.

A large degree of 'boundary overlap' could reasonably be expected in a context where a university explicitly has a mandate to prepare civil servants for bureaucratic positions and for professional community service. What needs to be noted, though, is that in the university's Faculty of Science and Technology, the faculty which overlaps most with two of the schools in the polytechnic, provision starts at bachelor degree level so that there is no overlap with the range of certificates and diplomas offered by the polytechnic's School of The Built Environment (SOBE) and School Of Engineering and Technology (SET).

Under such conditions there is a need for strong 'articulation' arrangements between the two institutions and it is this finding that is discussed in the next section.

6.1.2 Articulation

Given the strong emphasis on engineering-related programmes in both institutions, it is to be expected that access from one institution to the other in terms of different levels of programmes will be in place. This study found this to be the case but also found that this finding is completely misleading. While formal articulation arrangements may be stated in faculty documentation, interviews showed that the level of disciplinary knowledge content required for entry into the Bachelor degree in engineering is at a much higher level than what is offered by the polytechnic. A 'gate keeping' mechanism is in place at the level of course content and assessment and few students from the polytechnic are able to move from one institution to the other.

This is also the case in the commerce programmes and it is fair to conclude that, despite formal statements to the contrary, programme articulation between the two institutions is very limited.

6.1.3 Knowledge Production and Dissemination.

Two findings cast light on institutional ability to produce and disseminate knowledge, as set out in this statutory functions of both institutions and the discussion will be set against the findings of the CHET study of differentiation in public universities in South Africa (Bunting, 2013).

In South Africa universities are classified as'university' or 'comprehensive university' or

'university of technology'. Statistics cited in the CHET study show the average percentage of postgraduate students in the 'university' category to be 26%, as contrasted with 10% in the 'comprehensive university' category and 3% in the 'university of technology' category.

The average percentage of permanent academic staff with doctoral degrees in the 'university' category is 45%. In the 'comprehensive university' category it is 29% and 14% in the 'university of technology' category.

The high-level knowledge outputs of permanent academics are measured in terms of research publication units. The count for permanent academic staff with doctorates is significantly higher than for the same category of staff without doctorates. In the 'university' category, the average research publication unit count for permanent academic staff with doctorates is 1.6 and 0.7 for the same category of staff without doctorates. In the 'comprehensive university' category the average research publication unit count for permanent academic staff with doctorates is 1.1 and 0.3 for the same category of staff without doctorates. In the 'university of technology' category it is 0.9 for permanent academic staff with doctorates and 0.0 for the same category of staff without doctorates. (The statistical information cited in Bunting, 2013, refers to the years 2008 - 2010.)

The South African scenario clearly shows the usual impact of the doctoral qualification on knowledge production and dissemination in all universities, whilst at the same time showing the discrepancies between the different categories of universities. Overall, we can draw the conclusion that there is a positive relationship between academic staff doctoral qualifications and research publication, as well as between staff with doctoral qualifications and postgraduate teaching.

The findings of the Lesotho study show the Bachelor degree to be the dominant staff qualification at the polytechnic and the Masters degree followed by the PhD as the dominant academic staff qualifications at the university. In line with the South African trend, a difference in research output could have been expected between the two institutions. However, while the complete lack of research publications at the polytechnic is the same findings as the findings for staff without doctorates at South African universities of technology, there is little indication of a significant difference between the two Lesotho institutions in terms of research and publication. This is contrary to the South African

findings where there is a significant difference between universities and universities of technology.

The overriding conclusion that one can draw here is that in Lesotho neither the polytechnic nor the university is teaching or supervising at the 'cutting edge' of research and publication. Without research and publications the higher education sector in Lesotho has weak information-sharing links with the international academic community. Even though conference attendance may keep lecturers in touch with global research trends, interviews indicated that the contribution made by academic staff of the two public Lesotho higher education institutions, is minimal.

A second consequence of the absence of research is that both institutions would be unable to claim that they are responsive to national social and economic needs, or that they are in touch with the needs of employers in industry and commerce. The study found no evidence of the applied research required to build these kinds of partnerships.

These findings would apply to many other African countries, as confirmed by a report of a speech delivered by the chair of the International Universities Association (IAU) task force in 2012. The discussion on doctoral education highlighted 'the direct link between doctoral studies and research for the development of Africa' (Cloete, Mouton & Sheppard, 2015:8) and focussed on many of the constraints identified by interviewees in the Lesotho study.

6.2 Conclusion

On the basis of the study, undertaken to answer the research question: "*How differentiated is the university-polytechnic binary division in the public sector higher education system in Lesotho?"* I can say it is not easy to answer the question in a one-dimensional way.

At an institutional level the Lesotho Higher Education System is *vertically differentiated* even though there is an indication of a blurring of boundaries through both academic drift and vocational drift. However, *a de-differentiated future* may be a real prospect. Should the polytechnic be granted 'university of technology' status and obtain degree-awarding authority, the one institution may well start resembling the other more closely (CHET, 2008b). This would be facilitated by two factors. The first is that the university, with its strong community service orientation and its lack of research capacity to build institutional and programme knowledge foundations, is particularly vulnerable to vocational drift. The

second is that if both institutions continue to function without a thriving research and publication dimension, both face stagnation rather than renewal and vibrancy. Like other countries in Africa Lesotho needs to build stronger institutional and programme articulation routes, and address the challenges of academic staff development that leads towards a vibrant research culture within regional networks and through partnerships with industry and commerce, rather than remaining trapped in its colonial 'civil service' and 'skills-based' past.

6.3 Further avenues of research

While I am excited about what I managed to find out in a small study subject to the restrictions of a minor dissertation for a Masters degree, I must immediately acknowledge that many dimensions were left unexplored. Future research that would address some of the obvious limitations of this study could include:

- An investigation of student perceptions of the differences between similar programmes offered by the two institutions
- An employer survey to find out how local and regional employers view the employability of graduates from the two institutions.

While comparisons with other studies on institutional differentiation has been a helpful way of being able to point to wider conclusions, it would also be important to introduce a quantitative dimension that places the study on a more equal footing with the empirical studies which it aimed to augment.

REFERENCES

Barnett, M. (2006) 'Vocational Knowledge and Vocational Pedagogy'. In M. Young and J. Gamble (eds). *Knowledge, Curriculum and Qualifications for South African Further Education.* Cape Town: Human Sciences Research Council Press.

Bunting, I. (2013) 'Differentiation in the South African Public University System'. Cape Town: CHET.

Carnoy, M. and Rhoten, D. (2002) 'What Does Globalization Mean for Educational Change? A Comparative Approach'. *Comparative Education Review,* vol. 46(1):1-9.

CHET (2008a) 'Distinctions blur, steering differentiates'. *University World News – Africa Edition,* CHET January 2008:3-4.

CHET (2008b) Comprehensives– straddling the knowledge and binary divides. *University World News Africa edition.* January 2008: 5 - 6.

Clark, B. (1978) 'Academic Differentiation in National Systems of Higher Education'. *Comparative Education Review,* Vol. 22 (2): 242-258.

Cloete, N., Bailey, T., Pillay, P., Bunting, I. and Maassen, P (2011) *Universities and Economic Development in Africa*. Cape Town, Wynberg: The Centre for Higher Education and Transformation (CHET).

Cloete, N., Mouton, J. and Sheppard, C. (2015) *Doctoral Education in South Africa.* Cape Town: African Minds.

Codling, A. and Meek, V. L (2006) 'Twelve propositions on diversity in higher education'. *Higher Education Management and Policy*, vol. 18(3): 31-54.

Coetzee, G. (2011) 'Knowledge-based expertise as the hallmark of work of risk: an analysis of the curriculum and pedagogy of a National Diploma in Train-Driving' Unpublished Master of Philosophy dissertation, University of Cape Town.

Cohen, L., Manion, L. and Morrison, K. (2007) *Research Methods in Education.*USA: Routledge.

Council on Higher Education (2010) *Strategic Plan 2010/11-2014/15* [Online] 08 March 2013. URL:http://www.che.ac.ls/documents/StrategicPlan.pdf.

Council on Higher Education (2012) '*Developing a Higher Education Policy & Strategic Plan for the Kingdom of Lesotho – Situational Analysis*. Maseru: CHE.

Gamble, J. (2004) 'Tacit knowledge in craft pedagogy: A sociological analysis'. Unpublished PhD dissertation, University of Cape Town.

Gamble, J. (2009) 'The relation between Knowledge and Practice in Curriculum and Assessment'. University of Cape Town.

Gamble, J. (2013) Why improved formal teaching and learning are important in technical and vocational education and training (TVET). In UNESCO-UNEVOC e-publication: *Revisiting global trends in TVET - Reflections on theory and practice.* Bonn: UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training. 204 – 237.

German Council of Science and Humanities (2010) *Recommendations on the differentiation of higher education institutions* [Online] 15 August 2012.URL: http://www.wissenschaftsrat.de/download/archiv/10387-10_engl.pdf.

Hoadley, U. (2005) 'Social class, pedagogy and the specialization of voice in four South African primary schools'. Unpublished PhD dissertation, University of Cape Town.

Huisman, J. (2000) 'Higher Education Institutions: As different as chalk and cheese'. *Higher Education Policy,* vol.13:41-53.

Kraak, A. (2001) 'Policy Ambiguity and Slippage: Higher Education under the New State, 1994-2001'. In A. Kraak and M. Young, (eds). *Education in Retrospect: Policy Implementation Since 1990.* Pretoria: Human Science Research Council.

Lerotholi Polytechnic (2013a) *History* [Online] 18 March 2013. URL: http://www.lp.ac.ls/index.php?mid=lp&sid=history.

Lerotholi Polytechnic (2013b) Vision and mission [Online] 18 March 2013. URL: http://www.lp.ac.ls/index.php?mid=lp&sid=visionandmission.

Lerotholi Polytechnic (2013c) Lerotholi Polytechnic 2013/2014 Prospectus.

Lerotholi Polytechnic Act (1997) Act No.1 of 1998 [Online] 18 March 2013. URL: http://www.unesco.org/education/edurights/media/docs/12b17a6893e075254ad252e3e692f4e584c7d3f9.pdf.

Lolwana, P. (2010) 'Expanding the South African Post-secondary Education Systems through differentiation and new forms of Institutions'. Paper commissioned by the Higher Education of South Africa (HESA).

Meek, V. L., Goedegebuure, L. and Huisman, J. (2000) 'Understanding Diversity and Differentiation in Higher Education: an Overview'. *Higher Education Policy*, vol. 13(1): 1-6.

Mertens, D.M. (2010) *Research and Evaluation in Education and Psychology.* Thousand Oaks: SAGE Publications.

Ministry of Education and Training (2004).Higher Education Act (2004).*Government Gazette*, *Extraordinary, 2004-01-27,* Vol. XLIX, No. 7, pp. 1-59.

Ministry of Education and Training (2005) *Education Sector Strategic plan 2005-2015.*Maseru, BeePee Printers and Stationers.

Mouton, J. (1996) *Understanding social research*. Pretoria: J. L. van Schaik Publishers.

Muller, J. (2009) 'Forms of Knowledge and Curriculum Coherence'. *Journal of Education and Work,* vol. 22(3): 205-226.

National University of Lesotho (2005) *2005/2006 NUL Calendar.* Roma NUL information office.

National University of Lesotho (2012) *NUL Academic Information Booklet 2012/2013.*

National University of Lesotho (2013) *NUL Academic Information Booklet 2013/2014.*

National University Order, 19 of 1992, [Online] 27 August 2013. URL: http://www.nul.ls/about/nul_order/

Ng'ethe, N., Subotzky, G. and Afeti, G. (2008) *Differentiation and Articulation in Tertiary Education Systems: A Study of Twelve African Countries.* World Bank Working Paper, no. 145. Washington, D C: The World Bank.

Nieuwenhuis, J. (2010) 'Analysing Qualitative Data'. In K. Maree, (ed). *First steps in Research.* Hatfield Pretoria: Van Schalk.

Nowotny, H., Scott, P. and Gibbons, M. (2001) *Re-thinking Science: Knowledge and the public in an age of uncertainty.* Cambridge: Polity Press.

Pillay, P. (2010) *Linking Higher Education and Economic Development: Implications for Africa from three successful systems.* Cape Town, Wynberg: The Centre for Higher Education and Transformation (CHET).

Rule, P. and John, V. (2011) *Your guide to Case Study Research.* Pretoria: Van Schaik.

Shay, S. Oosthuizen, M. Paxton, P. and Van de Merwe, R. (2011) 'Towards a Principled Basis for Curriculum Differentiation – Lesson from a Comprehensive University

Stemler, S.E., Bebell, D. and Sonnabend L.A. (2011) 'Using School Mission Statements for Reflection and Research'. *Educational Administration Quarterly*, Vol. 47(2): 383-420 [Online] 15 August 2013. URL: http://eaq.sagepub.com/content/47/2/383.full.pdf+html

Tarabini, A. (2010) 'Education and Poverty in the global development agenda: Emergence, Evolution and Consolidation'. *International Journal of Educational Development,* vol. 30:67-84.

Van Vught, F. (2007) 'Diversity and differentiation in higher education systems'. Paper delivered at CHET conference Cape Town.

Wolf, A. (2002) *Does Education Matter? Myths about education and economic growth.* England: Penguin Books.

Young, M. and Gamble, J. (2006) 'Introduction: Setting a context for debates about the senior secondary curriculum'. In M. Young and J. Gamble, (eds). *Knowledge, Curriculum and Qualifications for South African Further Education.* Cape Town: Human Sciences Research Council Press.

APPENDICES

UNIVERSITY OF CAPE TOWN

HIGHER & ADULT EDUCATION STUDIES AND DEVELOPMENT UNIT
Level 7, Room 7.38
PD Hahn Building, 36 North Lane

Private Bag, Rondebosch, 7701
Tel: (021) 650 3478
Fax: 021 650 5045
Email: kashiefa.hearne@uct.ac.za

13 June 2013

The Registrar

Lerotholi Polytechnic

P.O. Box 16

Maseru 100

Lesotho

Dear Sir

Request to conducting research at the Lerotholi Polytechnic

This letter serves to introduce Mamthembu Phenduka to you. Mamthembu is a student at the University of Cape Town pursuing a Masters degree in Educational Planning, Administration and Policy Studies. She is currently conducting a study on institutional differentiation in higher education focusing on Lesotho. Institutional differentiation refers to the existence of distinctive types of higher education institutions that provide different types of skills and knowledge to a wide range of students with various abilities and interests. Two higher education institutions, namely the National University of Lesotho and the Lerotholi Polytechnic, have provisionally been selected as case study areas.

We ask that you grant Mamthembu Phenduka permission to use the Lerotholi Polytechnic as one of her study areas. This would mean assisting her to obtain the following information:

- **Institutional policies:** Staff recruitment and Student admission policies
- **Institutional Records**
    - ***Profile of Staff*** in the School of Engineering and Technology and the School of Enterprise and Management, in terms of
        - Previous occupation
        - Current Position
        - Highest academic qualification

- Additional qualifications

- ***Profile of students*** pursuing Diploma in Electrical and Electronic Engineering and Diploma in Business Management entailing
  - Pre-admission qualifications both academic and non-academic
  - Previous school or college attended
- **Curricular documents, such as** course outlines and handbooks.

She also needs to conduct interviews with the following people:

- Deans in the following Schools
  - School of Engineering and Technology
  - School of Enterprise and Management
- Heads of Programme for the following programmes
  - Diploma in Electrical and Electronic Engineering
  - Diploma in Business Management
- 3 lecturers from each of the above-mentioned programmes

The information sought will be used entirely for educational purposes and will be treated confidentially and with the utmost discretion. Should you wish to discuss the proposed study further please contact me, as her research supervisor, via email at jeanne.gamble@uct.ac.za or via telephone on 0027 83 444 3865 (cell) or 00 27 21 650 4074 (office landline).

Your institution's co-operation would be greatly appreciated.

Yours sincerely

Signature Removed

Jeanne Gamble (Dr.)

UNIVERSITY OF CAPE TOWN

HIGHER & ADULT EDUCATION STUDIES AND DEVELOPMENT UNIT
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13 June 2013

The Registrar

The National University of Lesotho

P.O. Roma 180

Lesotho

Dear Sir

Request to conducting research at the National University of Lesotho

This letter serves to introduce Mamthembu Phenduka to you. Mamthembu is a student at the University of Cape Town pursuing a Masters degree in Educational Planning, Administration and Policy Studies. She is currently conducting a study on institutional differentiation in higher education focusing on Lesotho. Institutional differentiation refers to the existence of distinctive types of higher education institutions that provide different types of skills and knowledge to a wide range of students with various abilities and interests. Two higher education institutions, namely the National University of Lesotho and the Lerotholi Polytechnic, have provisionally been selected as case study areas.

We ask that you grant Mamthembu Phenduka permission to use the National University of Lesotho as one of her study areas. This would mean assisting her to obtain the following information:

- **Institutional policies:** Staff recruitment and Student admission policies
- **Institutional Records**
  - ***Profile of Staff*** in the Faculty of Science and Technology and the Faculty of Social Sciences, in terms of
    - Previous occupation
    - Current Position

- Highest academic qualification
- Additional qualifications

- ***Profile of students*** pursuing Bachelor of Engineering (B.ENG in Electronics) and Bachelor of Accounting entailing
  - Pre-admission qualifications both academic and non-academic
  - Previous school or college attended
- **Curricular documents, such as** course outlines and handbooks.

She also needs to conduct interviews with the following people:

- Deans in the following faculties
  - Faculty of Science and Technology
  - Faculty of Social Sciences
- Heads of Programme for the following programmes
  - Bachelor of Engineering (B.ENG in Electronics)
  - Bachelor of Accounting
- 3 lecturers from each of the above-mentioned programmes

The information sought will be used entirely for educational purposes and will be treated confidentially and with the utmost discretion. Should you wish to discuss the proposed study further please contact me, as her research supervisor, via email at jeanne.gamble@uct.ac.za or via telephone on 0027 83 444 3865 (cell) or 00 27 21 650 4074 (office landline).

Your institution's co-operation would be greatly appreciated.

Yours sincerely

Signature Removed

Jeanne Gamble (Dr.)

Appendix 3

INFORMATION SHEET

Title of the study: **Institutional Differentiation in Higher Education System: A case study of Lesotho**

I, 'Mamthembu Phenduka am the student at the University of Cape Town pursuing Masters in Educational Planning, Administration and Policy Studies. I am conducting a study on *Institutional differentiation in Higher Education: The case of Lesotho*, in partial fulfilment of a Masters degree in Education. The study has been approved by the Faculty of Humanities Ethics Committee of the University of Cape Town.

The study aims to investigate the range and pattern of institutional and programme differentiation in the higher education system in Lesotho, in order to establish if the binary system of university and polytechnic is responsive to the aims set out by higher education policy and, most importantly, if this system addresses the 'access' challenges that face the country.

The results of the proposed study will provide useful information on the kind of higher education system that exists in Lesotho. The findings will enable policy makers to make informed decisions regarding access challenges in the higher education subsector. It will also enable and guide individual institutions as to how they should development initiatives that contribute positively towards the nation's social and economic development. At a more general level, the study will show how the binary system in Lesotho compares with other systems in Africa and further afield and it hopes to contribute to the existing literature on institutional differentiation in higher education systems.

You are requested to participate in this study by availing yourself for an interview with the researcher. The interview will be conducted at the National University of Lesotho for those who are working at the university and at Lerotholi Polytechnic for those who are working at the polytechnic. The exact venue will be communicated to you closer to the time. This interview will take approximately one hour and will be conducted in English.

The researcher would like to use an audio recorder to record the interview. The information that you will share with the researcher will be treated with confidence and will not be shared

with any one besides the research supervisor, who is based in South Africa. The tape recorded data will be kept safely. It will be password protected so that other people cannot access it.

Participation in this study is voluntary and you are free to withdraw from the study or the interview at any time. Your participation or withdrawal from the study will not affect you in any way.

No payment will be given to you for taking part in this study.

Thank you for participating in this study.

For further information about the study you can contact:

Researcher: 'Mamthembu Phenduka

Contact details: Cell- (+27) 785764515/(+266)62868182/(+266)58868182

Email- mamochelep@yahoo.com

Supervisor: Dr. Jeanne Gamble

Contact details: jeanne.gamble@uct.ac.za

Appendix 4

CONSENT FORM FOR PARTICIPATION IN RESEARCH

Title of the study: **Institutional Differentiation in Higher Education System:**

A case study of Lesotho

This is to certify that I (name of the participant)..... agree to participate in the study.

I also confirm that

1. Details of procedures and any risks have been explained to me.
2. I agree ☐ or disagree ☐ to audio recording of the information that I provide. (tick one of the boxes).
3. I understand that:
   - This interview will be treated as confidential and its contents will not be discussed or shared with anyone besides the supervisor of the study.
   - Neither my name nor my contact details or any information that might make me identifiable will be used in the written report.
   - I can withdraw from the study at any time and withdrawalwill not have negative consequences for me.
   - I may ask that the recording/observation be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.

Signature of the participant ……..…… Date……

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Signature of the researcher ……..…….... Date……..……

Appendix 5

INSTRUMENT 1

RESEARCH ON INSTITUTIONAL DIFFERENTIATION

JULY 2013

Interview with Lecturers: National University of Lesotho

A. Demographic Details

1	Date	Day	Month	Year
2	Position			
3	Responsibilities			
4	Faculty	Faculty of Science and Technology		Faculty of Social Sciences
5	Programme	Bachelor of Engineering in Electronics (B.Eng. Elec).		Bachelor of Accounting (Accounting)
6	Highest qualification			
7	Previous Experience	Name of Company	Position held	Responsibilities
8	Additional qualifications			
9	Professional Accreditation			
10	Present teaching subjects			
11	Contact Details	Email address		Cell no:

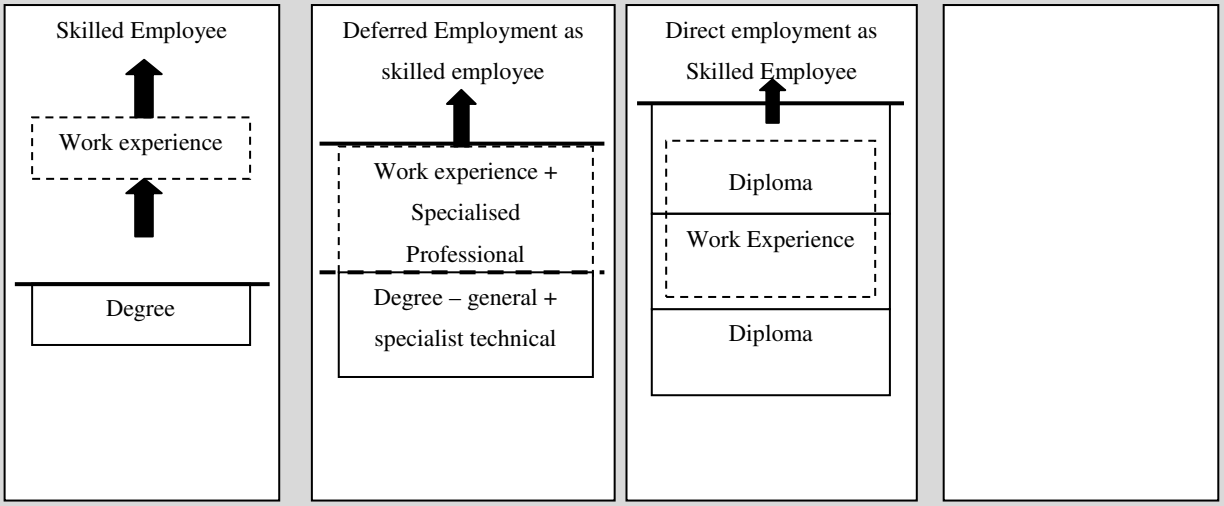
B. Questions

INSTITUTIONAL DIFFERENTIATION

1. TEACHING AND LEARNING

How is the relation between theory and practice organised in the curriculum? Refer to the diagrams below.

A	B	C	D



Explain

How long does each component take?

Diploma / Degree	Work Experience

What type of quality assurance measures do you have? Explain briefly how each is undertaken.

Internal Moderation	External Moderation

2. STUDENT PROFILE

What types of students are admitted into the programme? Discuss in relation to the headings below		
Academic Background	Financial Background	Social Background
What type of problems do students face?		
Academically	Financially	Socially

3. RESEARCH AND PUBLICATIONS		
From NUL mission statement I learn that NUL is involved in research. Based on that would we say NUL has a research culture?	YES	NO
If **NO** go to **3.1** If **YES** go to **3.2**		

3. 1 No Research Culture		
Why not?		
Is it something that the institution aspires to do?	YES	NO
Explain your answer?		

3. 2 NUL Research Culture	
What kind of research is undertaken? Tick one of the boxes below.	
Pure research	**Applied research**
What is the purpose of research? Tick one of the boxes below.	

Knowledge production and publication	Income generation

Is there any funding provided for research?	YES	NO

If yes by whom? Tick one of the boxes below.

Government	The institution	The industry

Is there any department or section designated for research?	YES	NO

If yes, what does it do?

Are there any incentives provided for research?	YES	NO

If yes, what kind of incentives?

Have you published in Journal articles?	YES	NO

If NO why not? **If YES Approximately how many publications?**

Are there any incentives provided for Publications?	YES	NO

If yes, what kind of incentives?

4. ASPIRATIONS

Indications are that LP wants to become the university of technology. In what way will that affect the relationship between NUL and LP?
How will that affect the position or status of NUL?
What effect will that have on the Lesotho's higher education system?
5. ANY ADDITONAL INFORMATION
Is there anything that you would like to add?

THANK YOU VERY MUCH FOR PARTICIPATING IN THIS RESEARCH STUDY.

Appendix 6

INSTRUMENT 2

RESEARCH ON INSTITUTIONAL DIFFERENTIATION

JULY 2013

Interview with Management: National University of Lesotho

A. Demographic Details

1	Date	Day	Month	Year
2	Position			
3	Responsibilities			
4	Faculty or Department	Faculty of Science and Technology		Faculty of Social Sciences
5	Programme	Bachelor of Engineering in Electronics (B.Eng. Elec).		Bachelor of Accounting (Accounting)
6	Highest qualification			
7	Previous Experience	Name of Company	Position held	Responsibilities
8	Additional qualifications			
9	Professional Accreditation			
10	Present teaching subjects			
11	Contact Details	Email address:		Cell no:

B. Questions
INSTITUTIONAL DIFFERENTIATION
1. FIELDS OF STUDY
NUL has seven faculties which offer a number of programmes at different levels. How does NUL make its programmes responsive to industry?
2. STUDENTS' ADMISSION CRITERIA
What are NUL admission criteria?
What are the minimum entry requirements?
What other values besides academic achievement do you consider when admitting students?
3. ACADEMIC STAFF QUALIFICATIONS
What are the recruitment criteria for academic staff?
What are the minimum academic qualifications required?

Are there any other additional requirements?		
Active in research	Professionally Accreditation	Industrial Experience

Do staff get sabbatical leave or research leave? How long does each take?	
Sabbatical Leave	Research Leave

How would you rate the level at which staff have access to resources?			
Excellent	Mostly good	Average	Poor

4. RESEARCH AND PUBLICATIONS		
	YES	NO

If **NO** go to 4**.1** If **YES** go to 4**.2**

4. 1 No Research Culture		
Why not?		
Is it something that the institution aspires to do?	YES	NO
Explain your answer?		

4. 2 NUL Research Culture			
What kind of research is undertaken? Tick one of the boxes below.			
Pure research	**Applied research**		
What is the purpose of research? Tick one of the boxes below.			
Knowledge production and publication	**Income generation**		
	It is consultancy not		
Is there any funding provided for research?		YES	NO
If yes by whom? Tick one of the boxes below.			
Government	**The institution**	**The industry**	
Is there any department or section designated for research?		YES	NO
If yes, what does it do?			
Are there any incentives provided for research?		YES	NO
If yes, what kind of incentives?			
Have you published in Journal articles?		YES	NO
If NO why not? **If YES Approximately how many publications?**			

Are there any incentives provided for Publications?	YES	NO
If yes, what kind of incentives?		
5. RELATIONSHIP WITH INDUSTRY		
Does NUL have any relationship with industry?	YES	NO
If yes, what type of relations do they have?		
6. ASPIRATIONS		
Indications are that LP wants to become the university of technology. In what way will that affect the relationship between NUL and LP?		
How will that affect the position or status of NUL?		
What effect will that have on the Lesotho's higher education system?		
7. ANY ADDITONAL INFORMATION		
Is there anything that you would like to add?		

THANK YOU VERY MUCH FOR PARTICIPATING IN THIS RESEARCH STUDY.

Appendix 7

INSTRUMENT 3

RESEARCH ON INSTITUTIONAL DIFFERENTIATION

JULY 2013

Interview with Lecturers: Lerotholi Polytechnic

A. Demographic Details

1	Date	Day	Month	Year
2	Position			
3	Responsibilities			
4	Faculty	School of Engineering and Technology (SET)	School of Enterprise and Management (SEM)	
5	Programme	Diploma in Electrical and Electronic Engineering (EE).	Diploma in Business Management (BM)	
6	Highest qualification			
7	Previous Experience	Name of Company	Position held	Responsibilities
8	Additional qualifications			
9	Professional Accreditation			
10	Present teaching subjects			
11	Contact Details	Email address:	Cell no:	

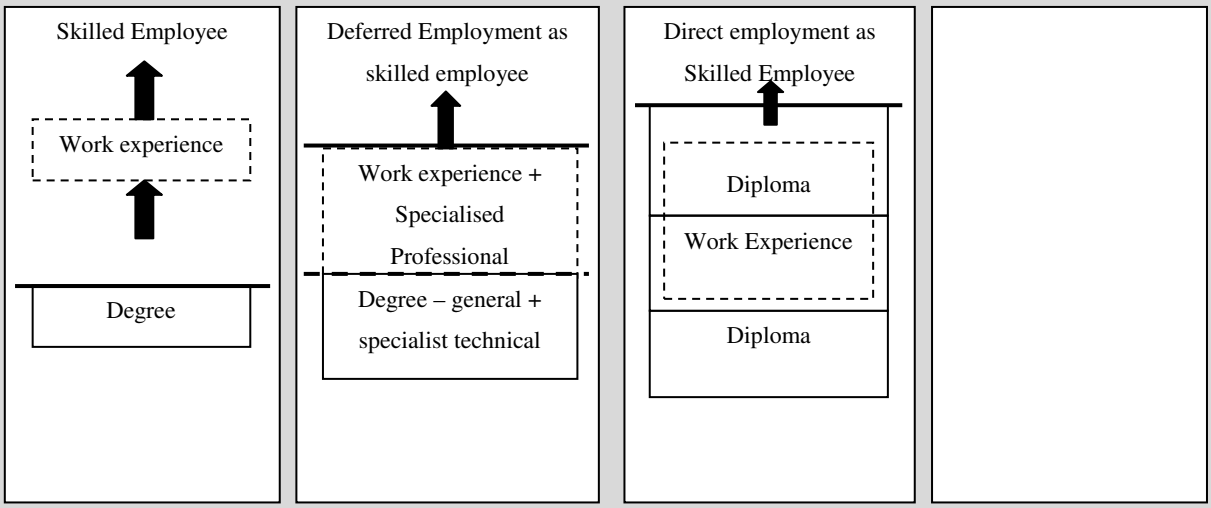
B. Questions

INSTITUTIONAL DIFFERENTIATION

1. TEACHING AND LEARNING

How is the relation between theory and practice organised in the curriculum? Refer to the diagrams below.

A	B	C	D



Explain

How long does each component take?

Diploma / Degree	Work Experience

What type of quality assurance measures do you have? Explain briefly how each is undertaken.

Internal Moderation	External Moderation

2. STUDENT PROFILE		
What types of students are admitted into the programme? Discuss in relation to the headings below		
Academic Background	Financial Background	Social Background
What type of problems do students face?		
Academically	Financially	Socially

3. RESEARCH AND PUBLICATIONS		
	YES	NO
If **NO** go to **3.1**	If **YES** go to **3.2**	

3. 1 No Research Culture		
Why not?		
Is it something that the institution aspires to do?	YES	NO
Explain your answer?		

3. 2 LP Research Involvement			
What kind of research is undertaken? Tick one of the boxes below.			
Pure research	**Applied research**		
What is the purpose of research? Tick one of the boxes below.			
Knowledge production and publication	**Income generation**		
Is there any funding provided for research?		YES	NO
If yes by whom? Tick one of the boxes below.			
Government	**The institution**	**The industry**	
Is there any department or section designated for research?		YES	NO
If yes, what does it do?			
Are there any incentives provided for research?		YES	NO
If yes, what kind of incentives?			
Have you published in Journal articles?		YES	NO
If NO why not? **If YES Approximately how many publications?**			

Are there any incentives provided for Publications?	YES	NO
If yes, what kind of incentives?		
4. ASPIRATIONS		
Indications are that LP wants to become the university of technology. In what way will that affect the relationship between NUL and LP?		
How will that affect the position or status of LP?		
What effect will that have on the Lesotho's higher education system?		
5. ANY ADDITONAL INFORMATION		
Is there anything that you would like to add?		

THANK YOU VERY MUCH FOR PARTICIPATING IN THIS RESEARCH STUDY.

Appendix 8

INSTRUMENT 4

RESEARCH ON INSTITUTIONAL DIFFERENTIATION

JULY 2013

Interview with Management: Lerotholi Polytechnic

A. Demographic Details

1	Date	Day	Month	Year
2	Position			
3	Responsibilities			
4	Faculty	School of Engineering and Technology (SET)	School of Enterprise and Management (SEM)	
5	Programme	Diploma in Electrical and Electronic Engineering (EE).	Diploma in Business Management (BM)	
6	Highest qualification			
7	Previous Experience	Name of Company	Position held	Name of Company
8	Additional qualifications			
9	Professional Accreditation			
10	Present teaching subjects			
11	Contact Details	Email address:	Cell no:	

B. Questions
INSTITUTIONAL DIFFERENTIATION
1. FIELDS OF STUDY
LP has three schools which offer a range of programmes. LP has indicated that their programmes have to be responsive to the needs of industry. What do they do to ensure that they reach their envisaged goal?
2. STUDENTS' ADMISSION CRITERIA
What are LP admission criteria?
What are the minimum entry requirements?
What other values besides academic achievement do you consider when admitting students?
3. ACADEMIC STAFF QUALIFICATIONS
What are the recruitment criteria for academic staff?
What are the minimum academic qualifications required?

Are there any other additional requirements?		
Active in research	Professionally Accreditation	Industrial Experience

Do staff get sabbatical leave or research leave? How long does each take?	
Sabbatical Leave	Research Leave

How would you rate the level at which staff have access to resources?			
Excellent	Mostly good	Average	Poor

Discuss your answer

4. RESEARCH AND PUBLICATIONS		
LP mission is to advance education and training through research. Does that mean LP is involved in any kind of research?	YES	NO

If **NO** go to 4**.1** If **YES** go to **4.2**

4. 1 No Research Culture		
Why not?		
Is it something that the institution aspires to do?	YES	NO

Explain your answer

4. 2 LP Research Involvement			
What kind of research is undertaken? Tick one of the boxes below.			
Pure research	**Applied research**		
What is the purpose of research? Tick one of the boxes below.			
Knowledge production and publication	**Income generation**		
Is there any funding provided for research?		YES	NO
If yes by whom? Tick one of the boxes below.			
Government	**The institution**	**The industry**	
Is there any department or section designated for research?		YES	NO
If yes, what does it do?			
Are there any incentives provided for research?		YES	NO
If yes, what kind of incentives?			
Have you published in Journal articles?		YES	NO
If NO why not? **If YES Approximately how many publications?**			

Are there any incentives provided for Publications?	YES	NO
If yes, what kind of incentives?		
5. RELATIONSHIP WITH INDUSTRY		
Does LP have any relationship with industry?	YES	NO
If yes, what type of relations do they have?		
6. ASPIRATIONS		
Indications are that LP wants to become the university of technology. In what way will that affect the relationship between NUL and LP?		
How will that affect the position or status of LP?		
What effect will that have on the Lesotho's higher education system?		
7. ANY ADDITONAL INFORMATION		
Is there anything that you would like to add?		

THANK YOU VERY MUCH FOR PARTICIPATING IN THIS RESEARCH STUDY.

Appendix 9

ANALYSING MISSION AND VISION STATEMENTS FOR THE POLYTECHNIC AND THE UNIVERSITY

In analysing the position statements I used thematic analysis following the work of Stemler, Bebell and Sonnabend (2011) which they also adopted from Stemler and Bebell (1999). Three major themes which have been classified as objectives of schooling (Dewey and Counts in Stemler *et al.* 2010) namely Academic Preparation, Citizenship Development and Occupational Preparation were used to code the positioning statements for each institution.

The statements (words) are underlined and the related theme number is assigned a superscript as illustrated below.

CODING:

[1] Academic Preparation; [2] Citizenship Development; [3] Occupational Preparation

In figure **A** I apply the rubric to the mission and vision statements of the two institutions and record the frequency of each theme in table 4.3.

Figure A: Coding of the polytechnic's and the university positioning statements

THE POLYTECHNIC	**THE UNIVERSITY**
THE MISSION STATEMENT Lerotholi Polytechnic is committed to advancing technological[3], scientific[1], commercial education[3] and training[3] through research[1] and development[1]. **THE VISION** By 2015 Lerotholi Polytechnic shall be the University of Technology renowned for its excellence in Science[1], technology[3] and entrepreneurial[3] programmes with its uniqueness of technical[3] and higher education[1] components.	**THE MISSION STATEMENT** NUL is to promote national advancement[2] through innovative[1] teaching[1], learning[1], research[1] and professional services[1], producing high calibre and responsible[2] graduates able to serve their communities[2] with diligence[2] **THE VISION** NUL is to be a leading African University responsive[1]to national socio-economic needs[2], commitment to high quality teaching[1], life-long learning[1], research[1] and community service[2], respected nationally[2] and internationally[2].

In table **A** I present the frequency at which each theme is cited in the positioning statements of the two institutions

Table A: The frequency of themes in the polytechnic's positioning statements

	THE POLYTECHNIC			THE UNIVERSITY		
THEME	**Mission**	**Vision**	**Total**	**Mission**	**Vision**	**Total**
Academic Preparation	3	2	**5**	5	3	**8**
Citizenship Development	0	0	**0**	4	4	**8**
Occupational Preparation	3	3	**6**	0	1	**1**