Report No: ACS4393

Republic of Sierra Leone
Higher and Tertiary Education Sector Policy Note

July 15, 2013

AFTEW
AFRICA

Document of the World Bank

CONTENTS

Tables

Figures

Boxes

ACKNOWLEDGEMENTS

The World Bank Team worked closely with members of The Higher and Tertiary Education Working Group in the development of this report. The Working Group is composed of heads of all public tertiary institutions; Mr. Nabie Kamara (Director of Higher Education, Science and Technology); Mrs. Musu Gorvie (Deputy Director of Higher Education, Science and Technology); Dr. Alhaji Mohamed Kamara (Chief Education Officer); Ms. Kiyomi Koroma (Consultant, Japan International Cooperation Agency); Professor David Koroma (Executive Secretary, Tertiary Education Commission).

The World Bank team was led by Susan Hirshberg (Senior Education Specialist and TTL of the study), and composed of Bidemi Carrol (Human Development Specialist, AFTED) and Mohamed Allak (Consultant, Higher Education Financing). Adama Ginorlei and Rose-Claire Pakabomba provided administrative support to the team. The World Bank team worked in close collaboration with JICA on this initiative. JICA commissioned a study on Access and Equity, which informed part of this report, and our thanks to Mr. Mohamed Lamin and his team for their work on that report. JICA also funded the meetings of the Higher and Tertiary Education Working Group, for which we are grateful.

The World Bank team carried out numerous field visits, primarily to perform data collection and gather relevant information for the study. During these visits, the team benefited from valuable contributions from senior staff, administration, and students from various public and private higher and tertiary education institutions in Sierra Leone. In addition, ministries, state agencies, and private employers provided information and data, engaged in technical discussions, and offered comments and suggestions.

The team would like to thank them all for their contribution and support.

ACRONYMS AND ABBREVIATIONS

ACTEA	Accrediting Council for Theological Education in Africa
AfP	Agenda for Prosperity
AML	African Minerals Limited
BOTA	Botswana Training Authority
BTI	Bonthe Technical Institute
CAPS	Career Advisory Placement Centre
CCTVs	Closed Circuit Televisions
CHET	Center for Higher Education Transformation
CMS	Church Missionary Society
COMAHS	College of Medicine and Allied Health Sciences
COTVET	Council for Technical and Vocational Education and Training
CPSS	Council of Principals of Primary Schools
CSR	Country Sector Report
ECOWAS	Economic Community of West African States
EFA-FTI	Education for All Fast Track Initiative
EP	Eastern Polytechnic
EQA	External Quality Assurance
FBC	Fourah Bay College
GAP	Graduate Advancement Program
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
GIA	Grant-in-Aid
GIZ	German Agency for International Cooperation
GOSL	Government of Sierra Leone
GPE	Global Partnership for Education
HE	Higher Education
HES	Higher Education Strategy
HTE	Higher and Tertiary Education
HTEI	Higher and Tertiary Education Institution
ICASL	Institute of Chartered Accountants in Sierra Leone
IPAM	Institute of Public Administration and Management
IQA	Internal Quality Assurance
IRC	International Rescue Committee
LCP	Local Content Policy
LIC	Low Income Countries
LMC	London Mining Company
MAS	Minimum Academic Standards

MDA	Ministry, Department, Agency
MDG	Millennium Development Goals
MEST	Ministry of Education, Science and Technology
MMCET	Milton Margai College of Education and Technology
MOFED	Ministry of Finance and Economic Development
MQA	Mauritius Qualifications Authority
MRY	Most Recent Year
NCTVA	National Council of Technical, Vocational and other Academic Awards
NGOs	Non-Governmental Organizations
NP	Northern Polytechnic
NU	Njala University (or Njala)
NVQ	National Vocational Qualification
PPP	Public-Private Partnership
PSDS	Private Sector Development Strategy
QA	Quality Assurance
SLIA	Sierra Leone Institute of Architects
SLIE	Sierra Leone Institution of Engineers
SLIHS	Sierra Leone Integrated Household Survey
SLNMB	Sierra Leone Nurses and Midwifery Board
SSA	Sub Saharan Africa
STEM	Science, Technology, Engineering, and Mathematics
TEC	Tertiary Education Commission
TVET	Technical Vocational Education and Training
UNICEF	United Nations Children's Fund
UniMak	University of Makeni
USL	University of Sierra Leone
VC	Vice Chancellor
WASSCE	West African Secondary School Certificate Examination

EXCHANGE RATE

USD 1.00 = SLL 4352

1 SLL = 0.00023 USD
(July 2012)

EXECUTIVE SUMMARY

Introduction

A consensus has recently emerged on the need for a reform agenda for higher and tertiary education (HTE) in Sierra Leone. Diverse groups – including government, employers, educational institutions, students, civil society organizations, and large companies – have articulated a need for a more vibrant and dynamic HTE sector, which is more attuned to the economy and the developmental aspirations of the government and people of Sierra Leone. Higher and tertiary education is expected to play a key role in economic growth, social development and poverty reduction by producing individuals with the necessary skills and knowledge to fuel and sustain national development. In addition, research and innovation from the HTE sector can provide the country with sustainable solutions for reducing poverty, enhancing social welfare, and building peace and security. Finally, the graduates from the higher education system are needed to develop strong institutions that are essential for growth and democracy.

Sierra Leone has made considerable progress since the end of the civil war, with economic growth, infrastructural development, improved governance, and better delivery of some basic services. Recent improvements in social and economic stability have attracted new investments in the agriculture, mining, and energy sectors. In addition, construction and manufacturing sectors are slated to grow significantly in the coming years. Increasing skills and employment in these sectors, through HTE, is a key component to achieving shared prosperity and middle-income status by 2035 as envisioned by the latest Poverty Reduction Strategy Paper (Agenda for Prosperity).

In response to the need for higher education reform, the World Bank commissioned a series of policy notes on HTE in Sierra Leone focusing on three client-identified areas: quality assurance, relevance, and cost and financing. Each note provides an overview and assessment of current policies, systems, and structures that support these areas and concludes with recommendations for improvement. The notes are presented as chapters of this report, and this summary provides a background of HTE in Sierra Leone, and encapsulates some of the key findings and recommendations from the individual chapters.

These policy notes were compiled through desk reviews of relevant policies, reports, data and information. Interviews and focus groups were also used as sources of information. Supporting analytic work on Access and Equity was commissioned by the Japan International Cooperation Agency (JICA), and the main findings and recommendations are included in this executive summary so as to provide a holistic picture of the sub-sector.

Chapter One provides Background and Context for these policy notes. It includes information on the history of HTEs, learning structures, the economy, relevant legal frameworks, and the general education sector. Chapter Two deals with Quality Assurance: the structures of administration, legal framework, monitoring Commissions, internal and external quality assurance, policies, accreditation and participants. Chapter Three highlights issues of academic Relevance to economic, social and national development. It reviews the Government of Sierra Leone (GOSL) priorities, the labor market, skills and

competencies and employment status and opportunities for HTI graduates. The chapter further explores the supply of programs and courses while identifying gaps in offerings. Recommendations are provided. Chapter Four provides insight into the Cost and Financing of HTIs. The report highlights the financing of institutions, public financing, subventions, scholarships and projected demand for HTE and associated costs. Policy recommendations are provided in each chapter, and summarized here.

Key Findings and Recommendations

Quality Assurance

There is widespread agreement that the quality and relevance of higher education has declined since the pre-war era. Evidence of this decline includes a lack of facilities such as libraries and labs, poor and inadequate infrastructure, dwindling numbers of academics, and informal reports from employers about the quality of graduates.

The two main institutions responsible for external quality assurance (EQA), the Tertiary Education Commission (TEC) and the National Council for Technical Vocational and Other Academic Awards (NCTVA), have relatively weak capacities to carry out their legislative functions. Higher education institutions themselves do not have comprehensive quality assurance policies or practices. QA processes and policies are limited and external participation is low. The following are recommended.

- Review decade-old laws governing the functions of EQA agencies. New laws should take into consideration the new context surrounding higher education and the increased complexities of the system - new providers of higher education and new delivery mechanisms. The laws should also clarify the functions of various external agencies and specify relationships between them.
- Improve the organizational, human, and financial capacity of EQA agencies to allow them to better perform their functions. In addition, the functions of the EQA agencies should be kept relatively simple in the beginning and extended over time.
- EQA agencies should provide the public with information on performance of HTEIs in a systematic and coordinated manner. TEC can work with HTEIs to establish a set of indicators, with definitions and templates for data collection, which HTEIs would be expected to report on annually (or as agreed). That information would then be made publicly available. Make performance contracts publicly available.
- Involve external stakeholders (institutions, employers, civil society) in EQA processes in a systematic way.

For HEIs

- Develop an overall QA policy with a central unit in charge of its monitoring and evaluation. The establishment of this unit should be a part of a broader review of the governance and management of HTEIs.
- Conduct annual internal QA audits based on agreed procedures, which will be submitted to the TEC. Taking action on internal QA audit report will need to be part of performance appraisals for institutional heads and staff.

- Institutionalize initiatives to improve teaching quality by providing standard tools for evaluation and using the feedback to help improve teaching, and eventually to study their effectiveness.
- Involve external stakeholders and students in QA processes in a more structured and comprehensive way.
- Provide and publish pertinent information on enrollment, finances, course offerings, learning objectives, and student performance and other indicators as agreed with TEC.

Relevance

There is an undersupply of skills in the identified growth areas of applied sciences, technology and engineering sectors. Sierra Leone needs skilled doctors and other health workers, science and mathematics teachers, engineers, technicians, managers, and other professionals to support the main growth areas and to provide basic human services. Although, quantitative evidence is scarce, lack of skills is seen as one of the binding constraints in achieving economic growth through the development of agriculture, natural resource, and oil and gas sectors. Links between employers and HTEIs are weak. The following are recommended.

- Conduct comprehensive review of courses and programs to ensure that courses are aligned to labor market demands and GOSL priorities. Employer input should be actively sought in these reviews, and new programs for emerging industries should be considered. Finally, certification and qualification framework are needed for key programs.

- Develop a short-term strategy for providing skills needed for priority areas. One option is through partnerships with HTEIs in neighboring countries like Ghana or Nigeria. Another option is providing scholarships for students to study overseas.

- Provide incentives for students to enroll in skills areas to support the growth sectors of the community – these could include scholarships, low interest loans, paid internships, etc. Given the importance of agriculture in the country's development, Sierra Leone may want to increase the shares of enrolments in these areas.

- Encourage stronger links with employers, and encourage their involvement in various governing bodies, curriculum review committees, and research. Develop internships and job experience opportunities for students.

- Conduct regular tracer studies and employer surveys as a way of measuring and increasing accountability for relevance.

- Strengthen outreach to secondary schools to ensure students are aware of career options, and to encourage enrolment in technical and vocational areas and STEM subjects. Consider programs to increase enrolment in science and technology disciplines such as bridging or summer courses; working with secondary schools to improve the quality of science teaching; and refresher programs for secondary school science teachers.

- Develop strong policies to attract qualified students into the critical subject areas of mathematics, sciences, and languages, for which there is a need for teachers.

Cost and Financing

The demand for higher education is projected to be high in the future, and the challenge for the GOSL is how to increase enrolments in a financially sustainable manner, while at the same time enhancing quality and equity. While GOSL funding for higher education is strong, the mechanisms for allocating resources across institutions is not transparent and does not reward performance. Grants are awarded to students in HTEIs, but again, there is not enough transparency in the current system for allocation of student grants, which is widely perceived to be captured by political and social elites. The following are recommended.

- Move towards formula-based budgeting in the allocation of grants as a way of improving transparency and accountability in financing of HTEIs. Best practice is for allocations to be based on data such as student enrolment, programs offered, graduation rates, and types of awards granted. Further, this formula should be kept as simple as possible, made public, and provide incentives for institutions to improve performance.
- Develop a sustainable system for collecting and analyzing key data on a regular basis to provide information for management decision-making, budget preparation, and preparing and monitoring the progress of the sub-sector programs and plans.
- Increase efficiency of spending and diversify the sources of funding for higher education. Many public institutions already raise income through fees and other activities, and these should be improved. Fees should be allowed to increase even as government provides targeted grants to the most disadvantaged and loans to others who need it.
- Encourage the growth of the private higher education sector while at the same time strategically invest public funds to areas within higher education that the private institutions will not offer in the medium run, but is required for SL's development: health, science and engineering, post-graduate programs, and access for low-income and rural families.
- Reform the current system for providing student financial assistance to ensure that only the neediest gets grants. In general, the process of awarding scholarships needs to be more transparent to dispel the perception that political influence plays a big role in the process. As one option, this function could be taken out of the MEST.
- Consider the development of a student loan system, possibly in partnership with private financial institutions.
- Encourage diversification of HTEI options to encourage low-cost, high quality provision as an entry point for economically less advantaged students.
- Provide capacity development in financial planning, management and budgeting for the relevant staff of HTEIs and the TEC as these would be the institutions responsible for budget preparation, management, and reporting to ensure adherence to standards.

Access and Equity

Enrolments in the higher education sector have increased significantly over the last decade, and demand for higher education continues to be high. This high demand for higher education has led to a boom in the private higher education sector as well – in 2011, there were 24 private institutions registered with the TEC where there was none in 2004.

Despite the increase in enrolments in the sub-sector, coverage remains low compared to other countries in the sub-region: the tertiary enrolment per 100,000 inhabitants in Sierra Leone in 2011 is estimated at about 600 compared to 1180 in Ghana and 700 in Rwanda.

In addition to the low coverage, access is also inequitable across a number of dimensions including gender, rural-urban residence, and household wealth. The tertiary education participation rate for population 18-25 is 6.1 percent for males and 4.8 percent for females; it is 0.4 percent for poorest households and 13.4 percent for richest households.

The following are recommended.

- Establish place funding mechanisms that are better targeted to the most vulnerable to ensure that they are able to access and complete higher education.
- Develop multiple routes for entry into HTEIs and establish qualifications framework that encourage mobility across different parts of the HTE sector.
- Improve physical infrastructure of existing public institutions. In addition, encourage cost-effective private sector providers and extend student financial aid to all students regardless of whether they are enrolled in public or private institutions.
- Explore alternative ways for delivering higher education. Distance education has shown some promise in delivering higher education to large numbers of learners in teacher education. With the promise of improved information and communication technologies, there is potential for using ICT as a means of delivering higher and tertiary education and skills programs to a wide range of students cost-effectively.

Conclusion

HTE has an important role to play in fueling and sustaining economic growth, international competitiveness, social development and poverty reduction in Sierra Leone, and as such much more attention needs to be directed at the sector to ensure quality and equitable provision. These policy notes have made recommendations, which if implemented would improve the quality of higher education provision for the benefit all Sierra Leoneans. Two recommendations, in particular, cuts across every issue: (1) to improve on data collection, management, and analysis in the sub-sector ; and (2) to develop a Higher Education Strategy to consolidate the policies for addressing equitable growth, and quality and relevance improvements in a coherent framework and within the overall GOSL strategy directions.

CHAPTER 1: BACKGROUND AND CONTEXT

Introduction

In recent times, a consensus has emerged on a reform agenda for higher education in Sierra Leone. Diverse groups – including government, employers, educational institutions, students, civil society organizations, and large companies – have articulated a need for a more vibrant and dynamic higher education sector of quality, which is more attuned to the economy and the developmental aspirations of the government and people of Sierra Leone.

In response to the need for higher education reform, the World Bank commissioned a series of policy notes on higher and tertiary education in Sierra Leone focusing on three client-identified areas: (1) quality assurance; (2) relevance; and (3) cost and financing. The Japan International Cooperation Agency (JICA) commissioned a policy note on access and equity. This report output is intended to serve as a discussion paper between the government of Sierra Leone (GOSL) and its higher education stakeholders, to help set priorities for reform in higher and tertiary education, and to support GOSL's agenda to transform the higher and tertiary education (HTE) sector.

The present analysis uses data and information from primary and secondary sources. The primary sources are interviews with students, lecturers, and administration of public and private higher and tertiary education institutions (HTEIs), personnel from the Ministry of Education, Science and Technology (MEST), personnel from the government of Sierra Leone (GOSL), personnel from the Tertiary Education Commission (TEC), private employers, and other key stakeholders. See Appendix A for list of institutions visited. The secondary sources include higher education data, household surveys, GOSL policy and other sector-specific reports and documents some of which are included in the bibliography.

The individual policy notes have been combined into this report, which is divided into 4 chapters. Chapter One provides Background and Context and includes information on the demographic, economic and social context; an overview of the education sector; and a description of the HTE sector – history, student population, types of institutions, governance framework, etc. Chapter Two deals with Quality Assurance and includes description of systems and policies for QA, types of QA activities covered, and how information is used to support QA processes. Chapter Three highlights issues of Relevance to economic, social and national development. It reviews the Government of Sierra Leone (GOSL) priorities, the labor market, skills and competencies and employment status and opportunities for HTI graduates. The chapter further explores the supply of programs and courses while identifying gaps in offerings. Chapter Four provides insight into the Cost and Financing of HTE. Chapters Two to Four provide policy recommendations.

Demographic, Economic, and Social Context

Sierra Leone is a relatively small country in West Africa, with a population of about six million people. The population is very young with 40 percent of school-going age (3-17 years) and 75 percent below 35 years. The majority of the population (about 60 percent) lives in rural areas. Still recovering from the aftermath of a decade-long civil war, Sierra Leone is ranked 177 out of 187 countries in the UNDP

Human Development Index (HDI) of 2013. Between 1980 and 2012, Sierra Leone's HDI value increased from 0.255 to 0.359, an increase of 41 percent. While this is good progress, the majority of the population lacks access to basic services.

Though poverty rates are declining, the country is still amongst the poorest in the world. At USD 374, GDP per capita still falls short of the sub-Saharan African average of USD 1,445. Real GDP has grown at 5.2 percent on average per year, from Le 7,475 billion in 2004 to Le 10,687 billion in 2011. In 2012, GDP growth rate was 15 percent as two large iron ore mining plants became operational. Growth is projected to be robust in future years, as mining revenues are expected to grow. Principal mineral exports are iron ore, rutile and diamonds.

Despite the growth in the mining sector, the economy is largely agricultural-based. In 2011, agriculture contributed 57.3 percent to the GDP, compared to 7.8 percent industry and 34.8 percent services. Recent announcements of discoveries in off-shore wells continue to raise expectations of a boom in the oil and gas sector. These developments in the extractives sector are very significant, and potentially transformative. Mineral exports and prospective discovery of oil and gas are likely to transform the economic landscape in the short to medium-term.

The Government of Sierra Leone (GOSL) recently launched its new 5-year Poverty Reduction Strategy called the Agenda for Prosperity (AfP). In that document, GOSL outlines its vision to become a middle income country:

> *Sierra Leone's Vision for 2013 to 2035 is to become a middle-income country. It would be an inclusive, green country, with 80% of the population above the poverty line. It would have gender equality, a well-educated, healthy population, good governance and rule of law, well-developed infrastructure, macroeconomic stability, with private-sector, export-led growth generating wide employment opportunities; there would be good environmental protection, and responsible natural resource exploitation*
>
> **Source:** *(Government of Sierra Leone 2013)*

On the road to middle income status, the AfP is considered a step towards achieving this vision, and it will focus on the following eight pillars: (1) economic diversification to promote inclusive growth; (2) managing natural resources; (3) accelerating human development; (4) international competitiveness; (5) labor and employment; (6) Strengthen social protection systems; (7) governance and public sector reform; (8) gender equality and women's empowerment. The AfP is a very ambitious development agenda. Given this ambition, the higher education sector will be essential in terms of providing the skills and knowledge necessary to spur economic growth and competitiveness, build strong institutions, as well as improving social progress and maintaining the hard won peace.

Development of Higher and Tertiary Education

Sierra Leone has a long history of higher education. (See Figure 1.1 below) Fourah Bay College (FBC), founded by the Church Missionary Society (CMS) in 1827 as an institution for training clergy, is the oldest tertiary institution in West Africa. In 1867, it began awarding degrees, through its affiliation with the University of Durham in the United Kingdom. Bunumbu Teachers College (initially Union College) was established by the same CMS in 1933. Other pre-independence tertiary institutions were the Government Technical Institute, which was founded in 1957 and the Milton Margai College of Education, founded in 1960.

After independence in 1961, Njala University College (NUC) was established in 1964 with support from the United States Agency for International Development (USAID) to focus on agriculture and education programs. With the passing of the University Act of 1972, NUC and FBC became constituent colleges of the University of Sierra Leone (USL). In the seventies and eighties other teacher training colleges were established across the countries in Bo, Port Loko, and Makeni. Similarly, tertiary level technical and vocational institutes were established in Freetown and Magburaka.

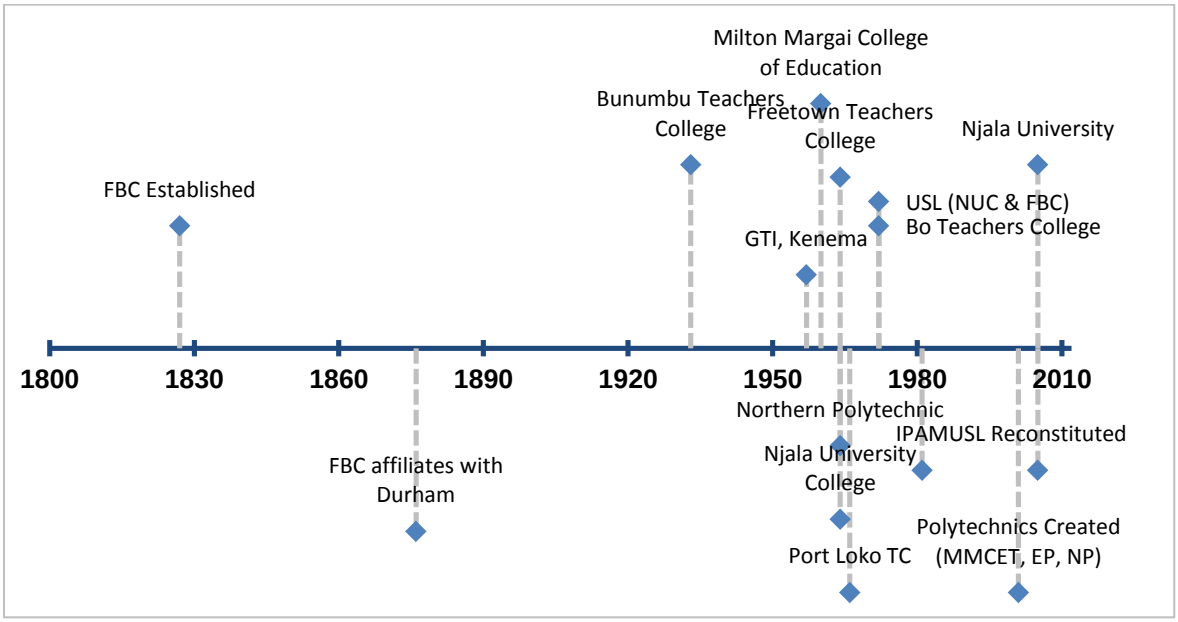
The higher and tertiary education (HTE) sector was a small but thriving sector, up until the seventies. By the eighties, one party-politics and structural adjustment programs began to take their toll on the sub-sector. The worst period for HTE subsector was during the decade-long civil war, which started in the late nineties – HTE institutions were targeted and attacked. Campuses were ransacked and looted; lecturers were captured; some even killed. Njala University and other institutions outside of Freetown suffered heavy losses.

Since the end of the war in 2001, the sector has been undergoing a process of restoration. Between 2001 and 2005, four laws were passed that re-organized the HTE sector:

- The Polytechnics Act of 2001 established polytechnic institutions by combining education colleges and technical vocational institution and outlined their governance and institutional arrangement. The polytechnics were initially set up to grant post-secondary diploma and certificates awards. They included: Eastern Polytechnic (EP), Milton Margai College of Education and Technology (MMCET), and Northern Polytechnic (NP)
- The National Council of Technical, Vocational and other Academic Awards (NCTVA) Act of 2001 established the NCTVA as a body to certify graduates at the diploma and certificate level and to accredit such programs in tertiary institutions
- The Tertiary Education Commission Act of 2001 (TEC 2001) established the Tertiary Education Commission (TEC) as the agency responsible for quality assurance of higher and tertiary education institutions
- The University Act of 2005 reconstituted the University of Sierra Leone and established Njala University. The University of Sierra Leone consisted of Fourah Bay College (FBC), College of Medicine and Allied Health Sciences (COMAHS), and the Institute of Public Administration and Management (IPAM). Njala University consisted of Njala University College, Bo Teachers College

and School of Health Sciences, and Bonthe Technical Institute as an affiliate institution. This Act also allowed for the establishment of private universities.

Figure 1.1 Development of Higher Education in Sierra Leone, 1800-present



Education Sector Overview

The formal education system is organized into the following sub-sectors:

- *Pre-primary education,* for children aged 3-5 years, to prepare them for primary school
- *Primary education, a 6-year cycle* for children 6-11 years. At the end of the last grade all pupils are required to pass the National Primary School Examination (NPSE) to proceed to junior secondary education.
- *Junior Secondary education, a 3-year cycle* culminating in the Basic Education Certificate Examination (BECE)
- *Senior Secondary education*, a 4-year cycle for students who successfully complete BECE. There are two kinds of senior secondary school programs: general education and technical and vocational education. At the end of the general SS program, students take the regional West Africa Senior School Certificate Examination (WASSCE). Those in the technical programs take the National Vocational Qualifications (NVQ) exams. Both examinations are administered by the West African Examinations Council (WAEC).
- *Higher and Tertiary education*, which includes: (i) university programs, leading to bachelor's (four years), master's and doctorate degrees; (ii) teacher training programs, leading to the Higher Teacher Certificate (HTC - three years); Polytechnics, leading to the Higher National Diploma (HD – two years), and other professional courses.

Access to education at all levels, but especially in the post-primary level, has increased in the last decade. Yet, many children are still not in school. Table 1.1 below provides the range of gross enrollment ratios found in Sub-Saharan African countries with low GDP per capita (below US$ 800 per month). It shows that: (i) Sierra Leone's preprimary school coverage is very low compared to other countries (6.5 percent, against a subsample average of 20.3 percent); (ii) primary coverage is above average (1.2 times higher than the subsample); (iii) secondary level GERs are much higher than for other SSA countries, both for JSS and SSS (1.5 times and 1.9 times higher, respectively); and (iv) tertiary level coverage in Sierra Leone is on par with the subsample average.

Table 1.1: GERs in Sub-Saharan African Context, by Level, 2011 or MRY

	Pre-primary	Primary	JSS	SSS	Tertiary
SSA Subsample Minimum	1	49	16	4	61
SSA Subsample Maximum	141	156	80	35	956
SSA Subsample Average	20	104	42	17	429
Sierra Leone	7	122	62	32	540
Ratio of Sierra Leone to SSA Subsample	0.3	1.2	1.5	1.9	1.1

Source: (Ministry of Education, Science and Technology 2013)
Note: SSA minimum and maximum refers to the lowest and highest subsample country GERs for each cycle. Tertiary enrollment is measured as the number of students per 100,000 inhabitants.

Education spending has generally remained stable over the 2004-11 period, although slight improvements are noted for some indicators. Education spending increased in real terms from Le 247 billion to Le 374 billion, equivalent to an increase in the share of GDP of 0.2 percentage points (from 3.3 percent to 3.5 percent). Despite this improvement, spending as a share of GDP is below the average of other low income countries (LICs) (3.9 percent). However, if one considers the education recurrent budget in proportion to total public recurrent expenditure (excluding debt service), Sierra Leone compares favorably to other countries. Sierra Leone devotes 29 percent of its recurrent budget to education, compared to an average of 22 percent for other LICs in the region.

Higher and Tertiary Education Sector

According to the Education Act of 2004, higher or tertiary education in Sierra Leone refers to formal education received after the successful completion of secondary schooling in institutions that require the minimum entry qualification to be the West African Senior School Certificate of Education (WASSCE) or its equivalent. Tertiary or higher education is provided by universities, polytechnics, colleges, technical and vocational institutes, and professional schools or institutes. For the purpose of this paper there will be no distinction made between higher and tertiary education as the Act does not provide guidance on this.

Higher Education Institutions

In 2011, there were 32 higher and tertiary Institutions (HTEIs) registered with the Tertiary Education Commission (TEC), the body responsible for licensing and accrediting HTEIs. (See Appendix B for a full list) An analysis of the mix of institutions reveals the following:

- Three Universities (2 public, 1 private)
- Three Polytechnics (3 public)
- Three Teacher Training or Education Colleges (2 public, 1 private)
- Four Theological Schools or Colleges (4 private)
- Eleven Technical and Professional Colleges or Institutes (1 public, 10 private)

All four regions of the country host at least one public HTEI, although they are mainly located in big towns. The number of private tertiary institutions has increased quite considerably in the last decade, from 2003 when there were no private institutions to twenty-four in 2011.The private HTEIs are also mainly located in the urban centers, especially Freetown the capital city.

The number of institutions is expected to grow in the short to medium term. Some of the current GOSL projects include: plans to establish a new public university in the Northern Region which will combine Northern Polytechnic, Port Loko Teachers College, and Teko Veterinary Centre. The Islamic Development Bank is financing a project that will construct four technical and vocational institutes across the country. There are a number of private HTEIs in the registration pipeline of the TEC, and there is a proposal for the establishment of The African Peace University, a university dedicated to skills development in social enterprise.[1]

Table 1.2 below lists the eight public HTEIs and their location and enrolment. USL is the largest institution with 9,408 students across its three constituent colleges and 30 percent of enrolment in the public sector. NU is second largest with 6,154 students and MMCET is third largest with 4,329 students. Together the three largest institutions make up 64 percent of enrolment in the sector.

Table 1.2. List of Public HTEIs with location and enrolments for 2011/12

Public HTEIs	Location	Male	Female	Total
University of Sierra Leone:	West	6,123	3,285	9,408
FBC		3,341	1,143	4,484
COMAHS		635	821	1,456
IPAM		2,147	1,321	3,468
Njala University (NU)	South	4,022	2,132	6,154
MMCET	West	2,842	1,487	4,329
Eastern Polytechnic (EP)	East	2,286	1,268	3,554
Northern Polytechnic (NP)	North	1,734	1,200	2,934

[1] African Peace University: Strategic Business Plan 2012-2020 (DRAFT)

Table 1.2. List of Public HTEIs with location and enrolments for 2011/12

Public HTEIs	Location	Male	Female	Total
Bonthe Technical Institute (BTI)	South	54	28	82
Port Loko Teachers College (PLTC)	North	834	580	1,414
Freetown Teachers College (FTC)	West	2,115	1,113	3,228
TOTAL Enrolments		20,010	11,093	31,103

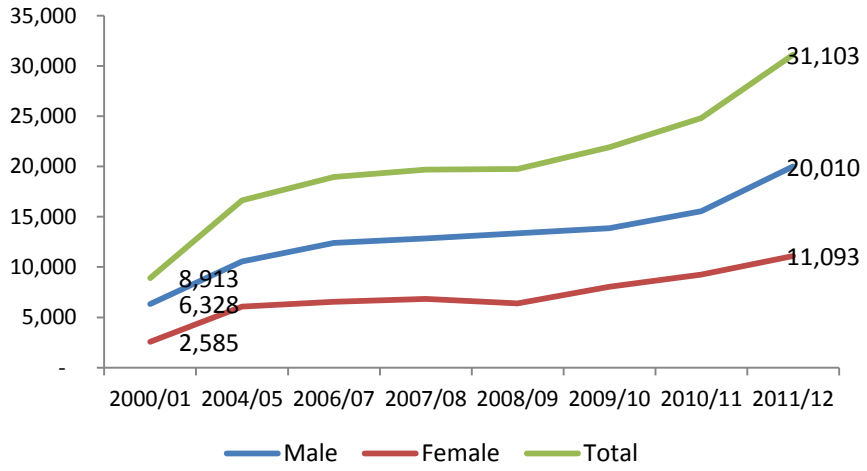
Source**:** Tertiary Education Commission (2012)

The institutions offer a range of programs at the certificate, diploma, and degree levels, which will be described in some detail in the chapter on Relevance. However, links between the various institutions are weak. For example, there is no clear path for students between teacher training colleges and universities. A student who graduates with a higher diploma from a polytechnic cannot easily transfer credits into a university institution, and the student will spend the same four years to obtain a degree as a student coming straight from secondary school. There is a need for a qualifications framework to deal with this issue.

Student Population

Growth has occurred not only in the supply side, but also on the demand side of higher and tertiary. See Appendix C for enrolment trends in public HTEIs from 2006-2011. The student population in public HTEIs has increased by 257 percent over the last decade - from 8,913 in 2000 to 31,103 in 2011 (see Figure 1.2). In addition, female students make up an increasing share of public enrolment – from 29 percent in 2000 to 36 percent in 2011.

Figure 1.2 Enrolment in Public Higher and Tertiary Institutions, 2000-2011



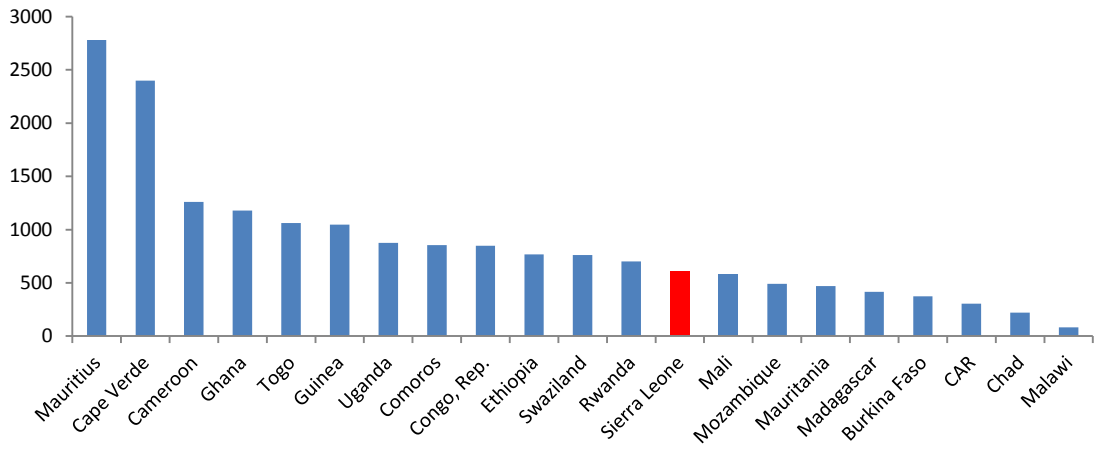
Source: World Bank EdStats Database

Unfortunately, there are no reliable estimates of enrolment in private sector HTE institutions. The last available information from the TEC is from the 2009/2010 academic year, when the enrolments were reportedly around 3,758 students (accounting for approximately 15 percent of total enrolment). Given that the private sector enrolment is increasing even faster than public sector, this share of private

enrolment would have increased. The student population has increased across all public HTEIs, except for MMCET. The largest increases over the last five years have been in Freetown Teachers College (FTC) (317 percent), NU (137 percent) and IPAM (120 percent). Female enrolments have grown at a faster rate than men in all public HTEIs.

Despite the growth in the student population, the participation rate in higher education in Sierra Leone is lower than for countries in sub-Saharan Africa. Figure 1.3 below show the number of students in tertiary education per 100,000 inhabitants. At approximately 607, Sierra Leone's participation rate is lower than the average of the selected sample.

Figure 1.3 Numbers of Students in Tertiary per 100,000 Inhabitants, 2011

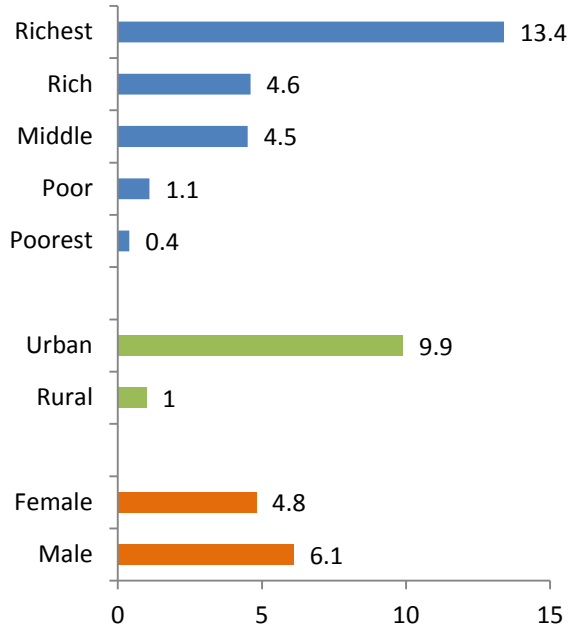


Source: EdStats World Bank Database. Accessed June 16 2013

Participation rate in HTE is lower than countries like Togo, Cameroon, and Benin, with which it shares similar primary completion rates.

In addition to low participation rates, those who attend HTE come predominantly from rich, urban households. According to the 2011 Sierra Integrated Household Survey (SLIHS), gross tertiary participation rate for richest households is 13.4 percent compared to 0.4 percent for the poorest households making the wealth parity index 0.02 (See Figure 1.4). The urban-rural parity index is 0.10, whereas the gender parity index is 0.79. Compared to other countries in sub-Saharan Africa, where the average gender parity index is 0.62, Sierra Leone is doing much better in terms of gender parity in access to HTE. However the disparities that are due to household wealth and residence are egregious, and may be explained by high cost of tertiary education, location of institutions (mainly in urban centers), and relatively poorer success rates in the WASSCE exam for schools outside urban centers.

Figure 1.4 Gross Tertiary Participation Rate for different sub-populations, (%)



Source: Sierra Leone Integrated Household Survey, 2011
Note: Gross Tertiary Participation Rate is the number of students enrolled in tertiary education as a percentage of total 18-25 year olds in the population.

Admission to Higher Education

In order to enter tertiary institutions, students have to gain a credit pass in at least 5 subjects (for university admission) or 4 subjects (other tertiary institutions). In addition, in most cases, credit passes are required for English Language and Mathematics. The number of candidates for the West Africa Senior School Certificate Examination (WASSCE) has quadrupled since 2003 from 11,135 to 44,790 in 2001. However, pass rates (defined as credit in at least four subjects) have been abysmal. In 2011 only 10 percent of students passed the exam, and an even smaller five percent of students got a credit pass in Mathematics, which is a requirement for entry to universities. Sierra Leonean students perform far below Nigerian and Ghanaian students in the WASSCE: the pass rate in English Language is less than half of pass rates in Nigeria and Ghana, whereas for math it is 10 times lower (Ministry of Education, Science and Technology 2013).

Quality (Academic Staff)

Despite low availability of data, there is a widespread belief that the quality of higher education is on the decline. This perception is held by a wide range of stakeholders including students, higher education officials, employers, and even the political leadership.

One way common way to measure quality is using the share of faculty with graduate degree as a proxy for good teaching capacity to do research. The available data (Table 1.3) shows that 34 percent of lecturers at USL and 20 percent at Njala have a doctoral degree, which does not compare favorably to

other flagship public universities across Africa: 52 percent of academic staff have doctoral degrees at Makerere University, 45 percent at the University of Mauritius, 51 percent at the University of Botswana, 71 percent at University of Nairobi, and 30 percent at the University of Ghana (Bunting and Cloete 2012).

Table 1.3 Number of lecturers and distribution by qualifications (%) for public HTEIs, 2009/10

HTEI	Total	% Doctoral	% Masters	% Bachelor	% Other
USL	349	34	40	18	8
NJALA	319	20	62	10	8
MMCET	279	4	51	16	29
EP	149	4	38	42	17
NP	158	3	47	31	21
PLTC	98	1	39	51	10
FTC	83	0	42	54	2

Source: Tertiary Education Commission

In 2009/2010 academic year there were a total of 1,779 full time and 168 part time academic staff in the ten core institutions. There were 20 professors and 9 associate professors, representing a very small proportion (2%) of full time academic staff. Up to 1,108 of the full time staff (63%) have a master's degree or higher and hold a substantive position not below the status of Lecturer.[2] There are very few female lecturers available. Out of 1,779 full time academic staff only 267 (18%) are females. The polytechnics and teacher training colleges, in particular, have to increase their share of academic staff with at least a master's degree – over 50 percent of staff in teacher training colleges are first degree holders.

Governance

Two acts, The University Act of 2005 and the Polytechnics Act of 2001 outline the governance and institutional arrangements for the sector. The governing authorities for the universities are the Vice-Chancellor and Principal; the Pro-Vice Chancellor; the Deputy Vice-Chancellor; the Court; and the Senate. The President is the Chancellor for public universities, and he appoints the Pro-Chancellor to act on his behalf as head of the Court. Universities have autonomy over their administration and academic matters; however because of the link to the Presidency, public universities are not immune to political intervention in their activities.

The Polytechnic Act established that every polytechnic and teacher training college should have a council to manage its affairs. The Chair of the Polytechnic Council is appointed by the President on the

[2] TEC Categorization of Staff by Academic Status and qualification: 2009/2010

recommendation of the Minister. The Council is made up of a cross-section of individuals from the University of Sierra Leone, the MEST, NCTVA, and Local Councils.

Although the institutions are intended to be autonomous, there is a high level of state control in decisions regarding how the governance bodies of the institutions are constituted. The Minister of Education has approval authority over membership of both University Court and College Councils. There is little representation from private citizens or private employers in any of the governing bodies.

Governance reforms aimed at making institutions more flexible, accountable, and autonomous are needed to support the required transformation of the sector.

References

Bunting, Ian, and Nico Cloete. *Cross-National Performance Indicators: A case study of eight African universities.* Wynberg, South Africa: Centre for Higher Education Transformation, 2012.

Government of Sierra Leone. "The Agenda for Prosperity: Road To Middle Income Status. Sierra Leone's Third Generation Poverty Reduction Strategy (2013-2018)." Freetown, 2013.

Ministry of Education, Science and Technology. "Education Country Status Report: An analysis for further improving the quality, equity and efficiency of education system in Sierra Leone." 2013.

Sierra Leone Conference on Development and Transformation. "Report of the Sierra Leone Conference on Development and Transformation: Charting the next 50 years forward." Freetown, 2012.

Tertiary Education Commission. "Annual Report 2011." Freetown, 2012.

Tertiary Education Commission. "Registration New Institutions - Analysis Form." 2011.

CHAPTER 2: QUALITY ASSURANCE

Introduction

This chapter, focuses on quality assurance (QA), provides an overview and assessment of current policies, systems, and structures that support the quality assurance of higher education in Sierra Leone with recommendations for improvement. It covers both external (initiated outside HTEIs) and internal (within HTEIs) quality assurance.

The definition of quality assurance used is that supplied by Materu (2007): "planned and systematic review process of an institution or program to determine whether or not acceptable standards of education, scholarship, and infrastructure are being met, maintained and enhanced." QA is the process of checking whether the standards and quality of higher education provision meets the agreed expectation.

The chapter starts by outlining the current structures and policies that support QA; the next sections outline QA structures and policies, practices, participation in QA processes, and information availability and use. It ends with some recommendations.

QA Structures and Policies

External QA Systems

Most HTEI systems globally have an external structure responsible for regulating and assuring quality of higher education institutions and programs. The need for external QA agencies is more pertinent with the growing demand for HTE, new modes of provision such as private and cross-border higher education, and louder calls for greater public accountability in the use of public resources (Martin and Stella 2007).

In Sierra Leone, there are two main semi-autonomous agencies tasked with carrying out quality assurance of higher education institutions: (1) the Tertiary Education Commission (TEC) and (2) the National Council for Technical, Vocational and Other Awards (NCTVA). In addition to these two main agencies, there are other minor agencies that are tasked with specialized QA functions (such as the accreditation of professional courses).

Tertiary Education Commission

The GOSL established the TEC in 2001, and its functions are highlighted in two legal documents: (1) the Tertiary Education Commission Act of 2001 and (2) the Tertiary Education Commission Regulations of 2006.The main functions of the TEC, according to the TEC Act 2001, are to: review budgets and expenditure of HTEIs; raise funds for tertiary education; ensure funding for HTEIs are aligned with the socio-economic goals of the country; sanction poor performing HTEIs; ensure financial compliance with the GOSL laws; promote fairness and equity in processes of student admission, staff recruitment, and promotion; and advise government on establishment of new institutions (Government of Sierra Leone 2001).

In recognition of increased private and cross-border provision of HTE, The TEC Regulations of 2006 expanded the functions of the Commission to include accreditation of private HTEIs operating in Sierra Leone. The Regulations cover the rules regarding establishment of new HTEIs, institutional standards, accreditation, and quality assessment (Government of Sierra Leone 2006).

The members of the Commission are made up of retired academics who are primarily presidential nominees; in addition, statutory members include: vice-chancellors of the two public universities, a Principal of a teacher training college, a principal of a polytechnic, chairperson of the Conference of Principals of Secondary Schools (CPSS), chairperson of NCTVA, and representatives of the Science and Technology Council; Sierra Leone Academy of Arts and Science; Chamber of Commerce, Industry and Agriculture; Ministry of Education, Science and Technology (MEST); and the Ministry of Finance and Economic Development (MOFED).

In addition to the members of the Commission, there is a Secretariat, headed by the Executive Secretary, which is responsible for the administration of the Commission. The Secretariat has only six professional staff – an administrative manager, a public relations officer, and project officers/managers for its five directorates. The current directorates are: (1) Research, Innovation and Publications (2) Finance and Funding; (3) Academic Audit and Institutional Affairs; (4) Academic Programs, New Institutions & Legislation; and (5) Staff Welfare and Conditions of Service.

Funding for the TEC comes primarily from the GOSL. Because of limited financial and staff capacity, the TEC is unable to fully conduct many of its functions satisfactorily. It has not published data on HTEIs since 2005, could not maintain its website, does not have reliable Internet access to facilitate communication with member HTEIs, and neither has it succeeded in accrediting the majority of institutions

National Council for Technical, Vocational and Other Awards

In the same year that it established the TEC, the GOSL also established the NCTVA as a body responsible for awarding certificates and diplomas in HTEIs. The functions of the NCTVA as highlighted by the NCTVA Act are the following: examine candidates for the award of certificate and diplomas; provide accreditation and validation services for institutions; and ensure that the awards provided are comparable globally. However, the future of the NCTVA is unclear as the latest government White Paper recommended that it be merged with another institution (Government of Sierra Leone 2001).

Other specialized agencies

Other agencies examine and certify students for professional degrees. For example, the Sierra Leone Nurses and Midwifery Board (SLNMB) examines and certifies students enrolled in nursing programs in HTEIs. The Sierra Leone Institution of Engineers (SLIE), the Institute of Chartered Accountants in Sierra Leone (ICASL), and the Sierra Leone Institute of Architects (SLIA) are also agencies that provide licensure and registration services; but unlike the SLNMB, these agencies license individuals after graduation from programs in HTEIs and not as a condition for graduation.

In a bid to improve accountability and quality of service delivery, the Office of the President has entered into performance contracts with each public HTEI. The contracts are signed by the President, Head of the University Court or Polytechnic Council, Head of the HTEI (Vice-Chancellor or Principal) and countersigned by the Minister of Education, Minister of Finance, and the Chair of the TEC. These contracts have agreed performance targets and reporting requirements, which are monitored by the staff of at the Office of the President.

Internal QA Systems

HTEIs also have responsibilities for ensuring that the programs and services they provide meet defined quality standards. None of the public HTEIs in Sierra Leone had a unit or department that oversees or coordinates all QA activities, which is considered to be good practice (Loukkola and Zhang 2010). However, they do have a variety of organizational structures that support QA practices (e.g. curriculum review committees, senate, and councils). Similarly, none had a comprehensive QA policy; instead there are QA-related policies embedded in other policy documents on student admission, staff promotion, examinations, renewal of staff contracts, student handbooks and others.

QA Practices

External QA Practices

Martin and Stella (2007) identify the following core functions of most effective QA systems: (a) assessments related to the establishment of new programs and/or institutions; (b) accreditation (c) monitoring and supervision of existing programs and HTEIs; (d) professional certification of graduates; (e) provision of information regarding recognition and accreditation of HTEIs. This section highlights how the EQA system in Sierra Leone deals with each of these activities, highlights challenges, and suggests areas for improvement.

(a) Assessments related to the establishment of new institutions and programs

The TEC is responsible for registering (or licensing) of new institutions, and the 2006 regulation provides the guidelines. This registration or licensing process gives an HTEI authority to operate in Sierra Leone. The process consists of two phases – a) an initial institutional assessment leading to a certificate of recognition and b) within 3 years of recognition, another institutional assessment leading to accreditation. As of 2011, 38 HTEIs had been registered by the TEC, and nine have been accredited (Tertiary Education Commission 2012). The initial assessment consists of an application for registration, self-assessment by HTEIs, site visit by TEC, and payment of all fees regarding application and registration.

The self-assessment questionnaire covers areas related to faculties and programs to be established, intended awards, admission requirements, student enrolment numbers, final examination results, student expenses, academic staff qualifications, affiliations with other institutions, sources of financing, and physical structures or facilities (classrooms, laboratories, and libraries), including space and type of equipment available. On submission of the self-assessment survey and all relevant documentation, the

TEC will make an evaluation of the HTEI's eligibility for registration based on Institutional Standards outlined in the Third Schedule of the TEC Regulations 2006, which cover mainly physical facilities.

(b) Accreditation

Accreditation is a process by which judgment is made about whether a particular institution or program meets a standard of quality, and both the TEC and the NCTVA are authorized to accredit HTEIs. There is some ambiguity over the role of the two institutions in this regard. The TEC Regulations Act of 2006 says that any tertiary institution can apply to the TEC for accreditation after three years of registration. The NCTVA Act says that one of the functions of the NCTVA is to "provide accreditation for institutions at which courses for awards validated by the Council are offered" (Government of Sierra Leone 2001). In practice, what seems to happen is that TEC focuses on accreditation of universities, whereas and NCTVA accredits other tertiary institutions. But, there is still a further confusion about whether NCTVA accredits institutions or programs within institutions. While there is clear evidence of the implementation of activities around registration and licensing of new institutions, there is less clarity around the accreditation process. There is no publicly available list of accredited tertiary institutions.

The TEC wants to move towards accreditation of academic programs, and has written a proposal to MEST for establishment of minimum academic standards (MAS). The funding requested for the implementation of such standards for accreditation has not been realized. The MAS would allow TEC to improve on its accreditation functions, and it is envisioned that TEC will liaise with industry, professional bodies, and tertiary institutions to define the skills, knowledge and attitudes that graduates of particular programs should have. See Appendix D for the components of evaluation.

The NCTVA's accreditation process is to determine whether the institutions are qualified to offer programs that would be assessed by NCTVA. HTEIs complete a self-study report that asks for information about governance and management structure, entry requirements and duration of programs, composition of their academic board, composition of internal and external examination boards, list of programs offered and the enrolment numbers, staffing (qualifications and subjects taught), infrastructure and tools or equipment to support the program, facilities (capacity of classroom, lab/workshop etc.), funding, library facilities (space and size of collection), internet facilities, and recreational and other facilities. While there is some overlap between the list of NCTVA-accredited institutions and the list of TEC-recognized institutions, they are not the same. NCTVA also accredits post-secondary, non-tertiary institutions. Appendix E provides a list of the institutions accredited by NCTVA.

(c) Monitoring and supervision of existing programs and institutions

There is little evidence of ongoing monitoring and supervision of programs by either the TEC or the NCTVA even though their various Acts call for it. Once the initial recognition has been given, HTEIs can keep their status by paying the annual registration fees. The recently developed performance contracts with public HTEIs partially fill the gap for public institutions as they are meant to ensure that public higher education institutions meet acceptable standards. The GOSL has embarked on these performance

management contracts with various public agencies as a bid to enhancing transparency and accountability in the use of public funds.

In the contract between USL and GOSL, the performance tracking table for 2012 has eighteen indicators relating to the following outcomes: (1) enhanced admissions process, (2) improved financial management, (3) improved working environment, (4) enhanced quality assurance, and (5) improved curricula. The performance indicators and their targets were negotiated and agreed to by all parties. However, from the contract with USL, it is unclear whether all targets would be achieved. In addition, the contract does not specify any ramifications for under or over-achieving targets. With regards to quality assurance, the USL has committed to improve staff evaluation processes, reduce examination malpractices through the use of technologies, and improve exam administration.

(d) Professional certification of graduates

The SLNMB conducts examination and certification services for students in the nursing profession and NCTVA for other technical and non-technical programs offered in tertiary institutions, including teaching certificates. The NCTVA has extended its mandate quite substantially from that of providing examination and certification services for "certain specialized and professional programs" in tertiary education to providing these services to all manner of programs (including arts, international relations) in tertiary and non-tertiary institutions. NCTVA's assessment exams are currently limited to pen-and-paper exams as they do not have the capacity to test whether a candidate has acquired the necessary practical skills.

Some institutions also provide short courses that are linked with international certification agencies. For example, IPAM provides courses that lead to certification by the UK-based Association of Business Executives and to certification by the Cisco Networking Academy. Other private HTEIs also do similar programs and act as testing or examination centers for internationally-recognized professional certificates.

Internal QA Practices

The objectives of higher education in Sierra Leone as highlighted by various institutions in their policy documents include teaching, research, and community service. HTEIs themselves have responsibilities for ensuring the quality of their programs and services, and this section describes the current QA practices that are undertaken by HTEIs. The study finds that the existing QA activities typically cover *student admission, teaching, student learning, and research*; less common are QA activities that cover *community service, facilities, student support services, or administration*. Also in many institutions, there is a gap between QA policies and practice, as QA policies are not always implemented as stated.

(a) Student Admission

All institutions have policies and requirements for the admission of students. In general, the policies used to admit students to HTEIs are clear and explicit; however, there is a sense from students that they are not consistently applied. Entry requirements require heavily on the WASSCE, and there is some scope to review the admissions policy to provide multiple routes of entry into HTEIs for non-traditional

students, while at the same time making it more difficult for the polices to be circumvented. In addition to the performance in exams, some institutions also rely on oral interviews to select students.

(b) Approval, Monitoring and Review of Programs

Most institutions have policies and formal processes for approval of new programs and review of existing programs. Curriculum revision typically starts at the level of the faculty, reviewed by a Curriculum Committee and approved by the Academic Senate or Polytechnic Council. These processes are typically led and driven by academics with limited opportunities for student involvement or private sector involvement. The guidelines for the approval makes clear what is required for each new or revised program - background, justification and rationale, objectives, learning outcomes, teaching and learning resources and strategies, assessment modality, etc. Despite the clearly laid out polices – there are some implementation challenges: programs and curricula are not reviewed as regularly as the policies might dictate. Furthermore, the participation of external stakeholders (industry, employers, professional associations, trades associations etc.) is limited, except in the development of short professional courses that are usually tailored for private sector.

(c) Student Assessment

HTEIs typically use assessments for a variety of purposes: to evaluate whether a student has acquired the expected knowledge, skills and abilities and can therefore progress to the next level, to provide feedback to students that will enable them to improve their performance, or to inform the public, prospective students or employers on how well an institution is doing in terms of ensuring that their students achieve an agreed minimum standard.

Good practice in assessment would mean that a wide variety of assessments would be used to identify whether students have achieved the expected learning outcomes. It would also mean that not only do clear and transparent assessment policies exist, but that they are consistently applied. In Sierra Leone, the most common use for assessment is to judge whether students have acquired expected knowledge and can progress to the next level. Students are examined using a combination of continuous assessment and a final examination. In addition to the internal assessments, students in some fields of studies (e.g. teacher certificate programs, nursing programs etc.) have to sit for an examination set by an external body. Continuous assessments could include varied assessment activities (e.g. essays, tests, attendance, class participation, group and class presentations), but in practice, written exams and tests are the most common forms of assessments.

Students in the honors program or postgraduate program write a thesis or dissertation, and sometimes external examiners are brought in to evaluate these. IPAM is experimenting with team-based research and supervision (Cluster Supervision) as a way of lessening the load on lecturers and promoting social or team-based learning (Institute of Public Administration and Management 2012). One example of a program that uses multiple types of assessments is the Bachelor of Education at the University of Makeni, where students are assessed using written reports, case studies, portfolio of activities, and practical tasks.

While information about types of assessments and marking scheme are widely available, less available to students are expected learning objectives and outcomes for each course. Students report rarely receiving feedback on their exams and tests. Furthermore, exam malpractice is widespread on many campuses – there are many stories of grades or exam papers being acquired by money and/or transactional sex[3]. Some administrations have gone to great lengths to minimize corruption, while others turn a blind eye. This is an area that needs urgent attention at all levels. Recent performance contracts between GOSL and some institutions explicitly acknowledge exam malpractice, but the proposed strategies (e.g. employing CCTVs in exam halls) do not tackle the root causes of the problem. The difficulty and/or unwillingness to dismiss students and lecturers for malpractice has resulted in administration employing various methods to minimize cheating such as stamping of blank scripts, changing exam questions few hours before administration or locking exam papers in Vice-Chancellors office – these result in a waste of time and valuable resources.

(d) Teaching and Learning

The senior administrations of HTEIs readily acknowledge that the quality of teaching is an important component of higher education. The quality of teaching is usually understood in two ways: (1) ensuring that academic staff is appropriately qualified and (2) ensuring that the lecturers teach effectively using the appropriate methodology. With regards to quality of the teaching staff, most HTEIs have written policies on hiring, renewal of contract or promotion of the teaching staff, which is mostly dependent on qualifications, experience, and research capacity. However, progression up the academic ladder is slow, primarily because of the research expectation. Also, because of the shortage of skills, some HTEIs have had to rely on part-time staff, who may not have the necessary qualifications.

On processes to assure the quality of teaching, some institutions like Eastern Polytechnic and UniMak report that they undertake classroom based monitoring of new staff; others are experimenting with student evaluations of teaching, and others are focused on monitoring teacher attendance and promptness as a basic indicator of effectiveness. In support of quality teaching processes, some HTEIs have one-off training and education for academic staff on pedagogy. Others, like IPAM and Njala, are considering more structured continuing education programs for academic staff focused on improving their teaching skills.

Students who want to choose HTEIs based on quality of teaching and learning would have very little information by which to make that choice as there is very little publicly available information about the quality of teaching process at HTEIs. A few institutions provide information about the qualifications of key staff in their brochures or websites (e.g. UniMak and Njala University).

(e) Research

[3] Locally referred to as sexually-transmitted grades

Universities and colleges expect their academic staff to conduct research. In addition, university students in undergraduate honors programs and post-graduate programs have to conduct research as part of their degree requirements. Promotion of academic staff at universities and colleges is explicitly tied to research output, yet it is widely acknowledged that research output among Sierra Leone academics is very low. Lecturers simply do not have the time or inclination to do research, even when resources (though limited) are made available. As such, there are very few opportunities for young academics to move up the ladder.

Research production and dissemination in peer reviewed journals is low. A report on research output in Africa ranks Sierra Leone below countries like Rwanda, Gambia, Reunion, Eritrea, Guinea Bissau, Rwanda, Mauritania, Central African Republic, Guinea, Chad, Burundi in terms of publication volume between 1998 and 2008; it did better than Liberia, Comoros, Equatorial Guinea, Cape Verde, Djibouti, Sao Tome & Principe, Somalia (Adams, King and Hook 2010).

Research students are assigned to internal or external examiners who supervise their work. The use of external examiner and oral defense of dissertation is compulsory for Ph.D. programs at the universities, and the examiners are usually from other institutions in Sierra Leone or abroad. In the documents reviewed, there was very little information on clear mechanisms for monitoring and support of the research process, or about the expectation in terms of supervision.

(f) Community service, facilities, student support services, or administration

There is little available evidence of systematic processes to assure quality in these areas. The Njala University (NU) Charter is an exception as it provides some policies regarding service delivery in these areas (Njala University 2012). For example, it contains the following service delivery expectations:

- *Finance:* Finance Directorate shall adhere to budgetary provisions and process approved payments within no more than five working days
- *Student Support:* Students shall receive identity cards within two months from registration
- *Student Library Access:* NU will provide access to 100 percent of obtainable items listed in course outlines and queries from library users shall be responded to within 2 days.

In addition to providing these service delivery promises, the Charter outlines a system for submitting complaints or feedback, and assurance that all complaints would be processed within 7 working days.

Participation in QA activities

The quality of higher education is of concern not only to HTEIs and QA agencies but to all stakeholders including students, parents, and employers. The involvement of relevant stakeholders in QA processes is crucial to the development of a quality culture within institutions. However, in Sierra Leone participation is limited to personnel of EQA agencies and senior administration of HTEIs. Students and employers, in particular, have very few structured opportunities to participate in either internal or external QA processes.

However, there are some promising practices that are being tried in certain HTEIs to encourage student participation. For example, UniMak and IPAM recently started soliciting feedback from students through formal evaluations at the end of the academic term. Student assessment forms typically ask students to evaluate the teaching ability, attendance and punctuality, relevance of course content, and knowledge of subject content of lecturers. At UniMak where these forms have been in use for longest, the administration reports using them to help lecturers improve on their teaching and in determining whether contracts should be renewed. Another practice at NU is the use of suggestion boxes on campus for students to provide feedback especially in the area of exam malpractice. The VC acts on recommendations from the suggestion boxes, and they appear to have contributed to student's perception that the administration is committed to improving quality of service.

Private sector involvement is less common, but even here there are some promising initiatives to encourage their participation. IPAM recently conducted a formal survey of employers to ascertain the quality of the graduates and their performance in the job market. Information from that survey was used in the review and revision of curriculum. Courses are being developed in some institutions for and with the support of private sector. External stakeholders are sometimes involved in specific processes such as consultation during the development of a strategic plan.

Despite the promising practices highlighted above, much more needs to be done to ensure there is a structured process for engaging relevant stakeholders in all aspects of QA activities.

Information Availability and Use

Information is one of the key drivers in developing a quality culture and for successful quality assurance. Administrators, lecturers, staff and students all need good and reliable information if they are to improve on quality and make good strategic decisions. Employers need information about courses and programs and certification to know that graduates have received the knowledge and skills required for participation in the labor market. The general public needs good information on HTEIs in order to be able to hold HTEIs and GOSL accountable for quality service delivery and the efficient use of public resources. Prospective students should have the information required to make good decisions as to which HTEI they attend, and current students also need information about their prospects and learning progression. Unfortunately, apart from a few exceptions, the availability of information on HEIs is very limited.

Few institutions have a centralized information system in place. Various departments or units might hold information on the numbers of students enrolled, student examination results, graduates, student profile, graduate employment, but these are not collected or analyzed in a systematic manner. In HTEIs that have various campuses, the challenge to collect and analyze data in a systematic way is harder. For example, the University of Sierra Leone, prior to 2012, did not have a centralized admission process – the various colleges conducted their own admissions, and collected and stored data in their own way. The information that is available is not usually analyzed to produce reports for quality improvements.

The most common way to disseminate information to the public (or at least prospective and current students) is through the prospectus of the HTEI. However, only limited numbers of these are available and only by request at the institution. The institutional prospectus typically contain the following types of information: (1) background information – history, aims and objectives; (2) academic programs – courses offered, duration, course objective, admission criteria, assessment and examinations; (3) campus facilities – health services, internet, library, campus clubs and organizations; and (4) rules and regulations – admission policies, exam policies, dress codes etc. Less common are information about fees, lecturer qualifications, student profiles, and other detailed quantitative information.

Very few HTEIs have an Internet presence: UniMak, Njala University, and the University of Sierra Leone have working websites. However, no university has taken full advantage of the Internet. The website of USL provides very limited information and what is there is not current. Web presence and visibility is increasingly being used as a way of judging and ranking HTEIs: one such example is the Webometrics Ranking of universities, which ranks universities around the world based on their web presence (Cybermetrics Lab 2012). These rankings have gained some traction within the university sector in Sierra Leone, and during the course of interviews, students and administration of NU and USL made reference to this ranking. NU and USL are included in the ranking, and USL ranks well below Njala, which has caused a lot of consternation amongst USL administration to the extent that improving their position on these rankings is included as an indicator in the performance contract signed with the GOSL.

Very little information regarding evaluation results of TEC or NCTVA is in the public domain. Neither of these institutions has a functioning website. The TEC has in the past published a list of tertiary institutions in Sierra Leone with information regarding awards offered, faculties and departments, academic staff and their qualifications, and data on library collection (no. of volumes, Internet facilities, etc.). However, the information is not presented in a form that makes for easy comparison across institutions, and the last known published volume is from 2006. The TEC has been collecting data from HTEIs since then but have not been able to publish them.

The TEC does publish an annual report but this report is not widely available, and it is more about the institution itself than about HTEIs. There has been a lot of work done on indicators for higher education over the last decade across the world; in South Africa, the Center for Higher Education Transformation (CHET) has recently published a set of performance indicators that has been piloted in universities[4] across Africa (Bunting and Cloete 2012). The indicators are provided in Appendix F as an example.

Conclusion and Recommendations

QA in Sierra Leone, while it exists in limited forms, still needs to be made a much more effective and comprehensive process and practice. In order to improve internal and external QA processes, the following are recommended:

[4] Pilot universities were: University of Botswana, University of Dar es Salaam, Eduardo Mondlane University, University of Ghana, Makerere University, University of Mauritius, University of Nairobi, and University of Cape Town

For EQA agencies

- Review decade-old laws governing the functions of EQA agencies. New laws should take into consideration the new context surrounding higher education and the increased complexities of the system - new providers of higher education and new delivery mechanisms. The laws should also clarify the functions of various external agencies and specify relationships between them.
- Improve the organizational, human, and financial capacity of EQA agencies to allow them to better perform their functions. In addition, the functions of the EQA agencies should be kept relatively simple in the beginning and extended over time.
- EQA agencies should provide the public with information on performance of HTEIs in a systematic and coordinated manner. One of the most important service that the TEC could provide is to work with HTEIs to establish a set of indicators, definitions, with templates for data collection, which HTEIs would be expected to report on annually (or as agreed). That information would then be made publicly available. Make performance contracts publicly available.
- Involve external stakeholders (institutions, employers, civil society) in EQA processes. More opportunities need to be provided for employers and other external stakeholders (such as alumni and professional associations) to provide feedback on quality of higher education in a systematic way.

For HEIs

- Develop an overall QA policy with a central unit in charge of its monitoring and evaluation. The establishment of this unit should be a part of a broader review of the governance and management of HTEIs.
- Conduct annual internal QA audits based on agreed procedures, which will be submitted to the TEC. Taking action on internal QA audit report will need to be part of performance appraisals for institutional heads and staff.
- Institutionalize initiatives to improve teaching quality by providing standard tools for evaluation and using the feedback to help improve teaching, and eventually to study their effectiveness.
- Involve external stakeholders and students in QA processes in a more structured and comprehensive way.
- Provide and publish pertinent information on enrollment, finances, course offerings, learning objectives, and student performance and other indicators as agreed with TEC.
- Take swift and decisive action against lecturers and students who are involved in any type of exam malpractice.

References

Adams, Jonathan, Christopher King, and Daniel Hook. *Global Research Report: Africa.* Leeds: Evidence, by Thomson Reuters, 2010.

Bunting, Ian, and Nico Cloete. *Cross-National Performance Indicators: A case study of eight African universities.* Wynberg, South Africa: Centre for Higher Education Transformation, 2012.

Government of Sierra Leone. *Tertiary Education Commision Act.* Freetown: Government Printing Press, 2001.

Government of Sierra Leone. *The National Council for Technical, Vocational and Other Academic Awards Act.* Freetown: Government of Sierra Leone, 2001.

Government of Sierra Leone. *The Tertiary Education Commission (Tertiary Education Institutions) Regulations.* Freetown: Government Printing Press, 2006.

Institute of Public Administration and Management. "Cluster Supervision: Ways Forward." 2012.

Institute of Public Administration and Management. "Student Handbook 2011-2012." Draft, 2011.

Loukkola, Tia, and Thérèse Zhang. *Examining Quality Culture: Part 1 - Quality Assurance Processes in Higher Education Institutions.* Brussels: European University Association, 2010.

Martin, Michaela, and Antony Stella. *External Quality Assurance in Higher Education: Making Choices.* Paris: UNESCO: International Institute for Educational Planning, 2007.

Materu, Peter. *Higher Education Quality Assurance in Sub-Saharan Africa: Status, Challenges, Opportunities, and Promising Practices.* World Bank Working Paper No. 124, Washington, DC: World Bank, 2007.

Tertiary Education Commission. *Annual Report 2010.* Freetown: Tertiary Education Commission, 2011.

Tertiary Education Commission. “Annual Report 2011.” Freetown, 2012.

Tertiary Education Commission. "Registration New Institutions - Analysis Form." 2011.

Tertiary Education Commission. "TEC Guidelines for Accreditation of Academic Programmes and Tertiary Educational Institutions in Sierra Leone." Draft, n.d.

Tertiary Education Commission. "Tertiary Institutions in Sierra Leone 2003/2004/5." 2006.

University of Makeni. "Prospectus 2011-2012." *University of Makeni.* 2011. http://universityofmakeni.com/wordpress/wp-content/uploads/PROSPECTUS-whole-2.pdf (accessed July 18, 2012).

CHAPTER 3: RELEVANCE

Introduction

As societies move towards more knowledge-based economies, the demand for higher and tertiary education (HTE) increases, as does the expectation that higher education will contribute towards economic, social and national development. Discussions of relevance in higher education are usually focused on how well higher and tertiary education institutions (HTEIs) are fulfilling the role that society expects of them.

The UNESCO World Declaration on Higher Education for the 21st Century states that, "relevance in higher education should be assessed in terms of the fit between what society expects of institutions, and what they do" (UNESCO 1998). However, society is not monolithic and, as Brennan (2007) highlights, an equally important question is: "relevance to whom?" This question recognizes that different stakeholders in society (government, academics, students, employers) may hold different conceptions of the idea of relevance.

Concept of Relevance

The debates about relevance in higher education in Africa have been around for a long time and are intricately linked to the debates about the purpose of higher education. In Sierra Leone, these debates started as early as 19th century with people like Edward Blyden and Africanus Horton, both graduates of Fourah Bay College, who had strong opinions about the need for a truly African University that responded to the needs of Africans (Ajayi, Goma and Johnson 1996). Blyden criticized missionary education as too narrow for African needs: he argued for a liberal education that would develop race consciousness among Africans while Horton favored a university that focused on science and technology.

In more recent history, higher education has becoming increasingly linked to Africa's development. This developmental role of the university came into the forefront during and following the independence era, when HTEIs were seen as vital for Africa's development because they were to provide the human capacity needed for economic development and public administration. Julius Nyerere, President of Tanzania at Independence, was an early supporter of this view as can be seen in his article entitled "The University's Role in the Development of the New Countries," from volume 11 of *News on the Hill* magazine:

> I believe that a University in a developing society must put the emphasis of its work on subjects of immediate moment to the nation in which it exists, and it must be committed to the people of that nation and their humanistic goals. This is central to its existence; and it is this fact which justifies the heavy expenditure of resources on this one aspect of national life and development. Its research, and the energies of its staff in particular, must be freely offered to the community, and they must be relevant. Cited in (Carrol 2005).

Although this instrumental role of HTE is not without its critiques (Ikpe 2010), the notion that HTEIs should serve a national developmental role has taken root in much of Africa (Cloete, et al. 2011).

A quick review of the mission statements of selected HTEIs in Sierra Leone (see Appendix G) reveals that HTEIs see their role as supporting national (socio-economic) development needs through their core functions of teaching, research and community service. Excerpts from the vision and mission statements of the University of Sierra Leone and the Eastern Polytechnic are provided below as examples.

> [To provide] the best higher education possible that emphasizes quality academic programs that are responsive to the critical emerging needs of Sierra Leone, paying particular attention to the tripartite mission of instruction, research, and public service. (Vision Statement, University of Sierra Leone)
>
> …..
>
> [To] provide the essential services for our community and the nation and serve as an industry for quality human resource development as we train technicians and polyvalent educators molding them in the best moral and spiritual traditions of the founding fathers of this institution. (Mission Statement, Eastern Polytechnic)

Given that the GOSL, civil society, and institutions themselves want a higher education sector that is responsive to the needs of society and the economy, this chapter will assess, to the extent possible, how well HTEIs in Sierra Leone are performing in this role based on available evidence. One major challenge is there are no clearly defined measures of the concept of relevance. This policy note will address the issue in the following ways: (1) it considers the strategic priorities of GOSL and assesses how well HTEIs are providing the needed skills for those areas; (2) it examines trends in labor market demand and evaluates how this compares to supply of graduates; (3) it reviews employment patterns of recent graduates; and (4) it makes recommendations for policy makers.

Socioeconomic Context and GOSL Priorities

Sierra Leone has made considerable progress since the end of the civil war, with sustained economic growth, and has attracted new investments in the agriculture, mining, and energy sectors. However, a certain level of fragility remains in the economic, social and democratic development forecasts. The GOSL's aspiration is for Sierra Leone to become a middle income country by 2035 (Sierra Leone Conference on Development and Transformation 2012).

The Poverty Reduction Strategy Paper (PRSP) of the Government of Sierra Leone (GOSL), called Agenda for Change, prioritizes **infrastructure** – **energy** and **transportation network**, enhancing productivity in **agriculture and fisheries,** and **human development.** The Agenda for Change also highlights the need to sustain peace and security and good governance, to grow the private sector, and to effectively manage natural resources (e.g. **mining, tourism,** and **agriculture**). The GOSL has recently launched a new PRSP, called the Agenda for Prosperity (AfP), to replace the Agenda for Change document. The AfP provides the first steps builds on the foundation for the Agenda for Change, and outlines GOSL's strategy for achieving middle-income status by 2015.

In order to ensure that Sierra Leoneans increase their ownership of and participate in the growing extractive and industrial sectors, the GOSL recently passed a Local Content Policy (LCP). Local Content policies have been passed by other countries (e.g. Nigeria, Ghana, and Brazil) who want to ensure that individuals and local firms are well placed to take advantages of opportunities in growth sectors, like oil and gas. For the objectives of LCP to be achieved, there is an urgent need for the development of human and institutional capacity through education, training, and transfer of skills and technology. The LCP highlights some strategies that it will take to support HTEIs to deliver on capacity needs to support its objectives, and these are highlighted below:

> *Transform the education curriculum of tertiary, vocational, technical and commercial education institutions to prioritize science and technology according to the skills requirements of the industrial sector.*
>
> *Align the education curriculum of tertiary, vocational, technical and commercial education institutions with the growth sectors of the economy, such as mining, oil and gas, fisheries, agriculture, etc. to produce a skilled workforce for these sectors by 2025.*
>
> *Encourage private sector investments in the development of entrepreneurship and management training institutes.*
>
> *Provide incentives for sector-specific training and skills development in entrepreneurship and management, in public and private sector training institutions as well as within industry associations and at the firm-level.*
>
> Source: *(Government of Sierra Leone 2012)*. p 14.

In addition to the LCP, other policies such as the Private Sector Development Strategy (PSDS) also reference the importance of HTEIs in providing skills. The PSDS calls for the incorporation of entrepreneurship skills in higher and tertiary education (Ministry of Trade and Industry 2010). The GOSL also has an ongoing agenda tied to the achievement of the Millennium Development Goals (MDG), and HTEIs are expected to provide the necessary skilled personnel – teachers, health workers, etc. – that will enable the GOSL to meet its MDG commitments.

Given this ambitious development agenda, there is a need for HTE to play a bigger role in the country's socio-economic development, to ensure that citizens have the skills to participate in the labor force and to promote research and innovation for development. The next section assesses how HTEIs are responding to these societal needs.

Supply of Programs or Courses

HTEIs in Sierra Leone provide training in a range of disciplines and subjects at degree, diploma and certificate levels: an analysis of the programs currently on offer at the 8 public HTEIs found that there

were approximately 100 programs distributed across the following broad fields:[5] Engineering, Manufacturing, and Construction (13); Arts and Humanities (8); Social Sciences, Business, and Law (22); Health and Welfare (9); Sciences (11); Agriculture (17); Services (10); Education (10). A full listing of the programs on offer at the largest HTEIs is provided in Appendix H.

There is some degree of specialization across the institutions - for example, Njala University started as an agricultural college and still emphasizes training on agriculture and related areas; teacher training colleges focus on preparing teachers for the primary and secondary schools and other education programs; polytechnics cover a range of programs – from teacher training to technical and vocational programs.

Just over a third of students enrolled in public HTEIs are in education (34 %). The remaining students are distributed across the other fields as shown in Table 3. below. After education, the fields with the largest enrolments are social sciences, business and law (31%), health and welfare (13%), and engineering, manufacturing and construction (11%). The least subscribed fields are in the Services (1%), Agriculture (2%), Sciences (3%), and Humanities and Arts (5%). The two largest fields make up over two-thirds of enrolment at all HTEIs. While it is difficult to make claims about the relevance of one discipline over another, there are some areas like agriculture that are growth areas of the economy but attract relatively few students.

Table 3.1 Distribution of enrolments across broad fields of study at public HTEIs, 2011/12

Fields of Study	USL	NU	EP	NP	MMCET	PLTC	FTC	TOTAL	% of Total
Agriculture		570	-	-	-	-	-	570	2%
Education	148	1,082	1,825	1,967	782	1,038	1,720	8,562	34%
Engineering	500	1,431	134	180	519	-	-	2,764	11%
Health & Welfare	1,330	1,003	474	250	295	-	-	3,352	13%
Humanities & Arts	1,188	-	-	-	-	-	-	1,188	5%
Science	306	313	55	-	53	-	-	727	3%
Services	-	-	-	22	184	-	-	206	1%
Social Sci., Business, & Law	3,867	1,182	461	391	1,876	-	-	7,777	31%
Unspecified	-	315	-	-	-	-	-	315	0%
TOTAL	7,339	5,896	2,949	2,810	3,709	1,038	1,720	25,146	100%

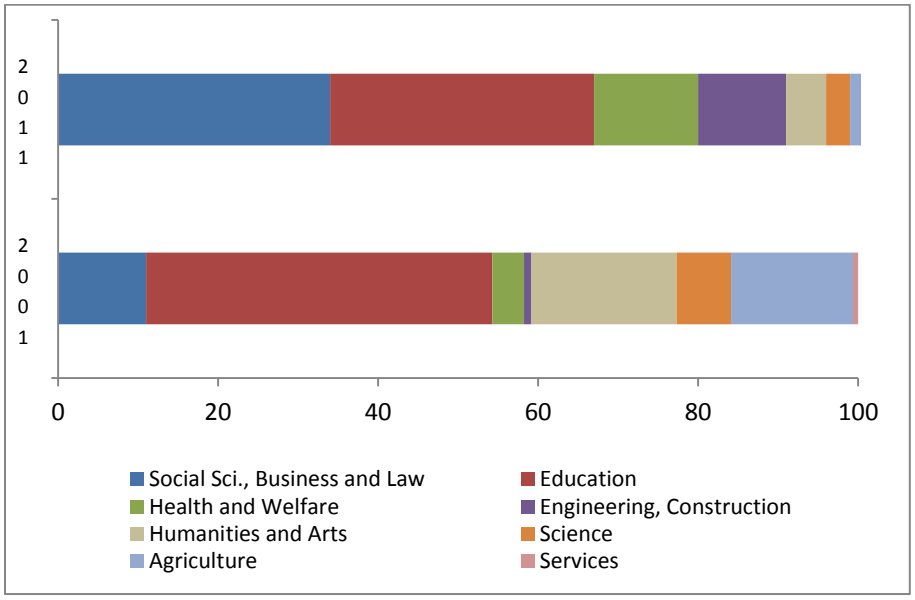
Source**:** Enrolment data from various HTEIs

When compared to enrolment distribution in 2001 (see Figure 3.1), there appears to have been quite a significant shift in patterns of HTEI enrolment in Sierra Leone. The share of enrolment in agriculture

[5] Categories employed are the broad groups of fields of defined by the International Standard Classification of Education (ISCED 1997)

dropped from 15 to 2 percent over the decade; enrolment in humanities and the arts dropped from 18 to 5 percent and education from 45 to 35 percent. The fields that have shown relative gains are Engineering, Manufacturing & Construction (1 to 11 percent); Social Sciences, Business and Law (11 to 31 percent); and Health and Welfare (4 to 13 percent). The changes are large enough to be convinced that they are not merely due to errors in reporting, and reflect a change in the supply and demand of HTE programs over the last decade.

Figure 3.1 Distribution of Enrolments in public HTEIs, 2001 and 2011



Source: Data from various HTEIs

Both demand and supply issues converge to explain the higher enrolments in the education, social sciences, business and law. On the supply side, these programs can admit more students as they are not limited by laboratory space and equipment as in the sciences. Furthermore, they are seen as more 'job-oriented' than programs in the humanities and arts. Finally, each HTEI offers programs in these areas, so there are more spaces available.

On the demand side, there are many more students seeking admission into these programs as many do not have the requirements to enter into programs in science, technology, engineering and mathematics (STEM). Acceptance into the latter programs is based on student's performance in STEM-related subjects at the WASSCE, and many students either do not take these courses, or when they do, they do not perform satisfactorily. For example, credit passes in Mathematics, Chemistry, and Physics are needed to enter a degree program in engineering at USL; as Table 3.2 below shows, apart from Mathematics and English Language, which are compulsory, the most popular subjects, English Literature (73%), Economics (72%), Biology (68%), and History (48%). The least popular courses are those in the technical and vocational areas: Wood Work, Building and Construction, Automobile Mechanics, Applied Electronics and Technical Drawing, Shorthand, and Typewriting. Language courses are also not popular.

Table 3.2. Percentages of students who sat and received a credit pass for various subjects at WASSCE 2011 (%)

Social Science & Business	% sat	% pass	Sciences	% sat	% pass	Arts & Humanities	% sat	% pass	Technical & Vocational	% sat	% pass
Economics	72	12	Math	99	3	English Language	99	12	Health Sci.	5	8
Financial Accounting	42	23	Biology	68	3	English Literature	73	3	Physical Education	7	35
Business Mgmt.	32	15	Chemistry	17	6	History	44	40	Home Management	5	18
Cost Account	38	11	Physics	14	11	Government	39	34	Food and Nutrition	2	39
Commerce	16	11	Science	7	29	Geography	28	10	Clothing and Textiles	1	37
Clerical Studies	0	8	Further Math	67	14	Christian Religion	25	13	Engineering Sci.	1	18
Typing	0	*	Agriculture	61	10	Islamic Studies	7	10	Technical Drawing	1	19
Shorthand	0	*				French	0	*	Applied Electronics	0	*
						Visual Arts	0	*	Metal Work	0	*
						Arabic	0	*	Wood Work	0	*
									Building and Construction	0	*
									Automobile Mechanics	0	*
									Management in Living	8	21
									Electronics	0	

Source: Authors Calculation from data from West African Examinations Council

As Table 3.2 above shows, even when students study these STEM subjects, the pass rates in the WASSCE are very low. In 2011, only three percent of students received a credit pass in Mathematics; the latter is a requirement for entry into STEM courses at the HTEIs. The pass rates in physics, chemistry, and biology are also just as low. The subjects with highest pass rates in 2011 were history, government, physical education, and home management. More needs to be done in the pre-tertiary education sub-sector to attract students into subjects that will allow them to enter into programs in technical and vocational education and STEM.

The Labor Market and Higher Education

There are no recent labor market studies in Sierra Leone; what employment data exists can be culled from the last population census conducted in 2004, the Sierra Leone Integrated household survey (2003), and the Demographic Health Survey (DHS 2008). The data from these surveys are presented, but as mentioned above, the economy has changed quite significantly since these data were collected. The Ministry of Labor and Social Security is in talks with ILO and other donors to conduct a labor force

survey, but there is not a definite timetable for it. In addition to the employment data, this section also considers the employment opportunities for graduates in a number of key sectors, from information collected from interviews and other secondary sources.

Employment. The Labor Force participation rate for persons aged 15 and above was 66.4 percent in 2009, but only a small proportion of workers were in salaried or wage employment (7.6 percent in 2004).[6] The education sector employed most of the workforce with higher education (53 percent) in 2004. The results from the more recent DHS 2008 provide further insight into the educational patterns of higher education graduates. See Table 3.3, below. Males and females with higher education are mostly employed in professional, technical and managerial jobs (61 percent for men and 67 percent for women), and much less likely to be in agricultural jobs. The benefits of higher education for adult women are especially high as without it adult females are largely confined to agricultural work - 57 percent of women without higher education work in the agricultural sector compared to 0.9 percent of women with higher education. Similarly, only 6 percent of women without higher education work in professional, technical or managerial fields compared with 36.5 percent of men and 67 percent of women with higher education.

Table 3.3 Distribution of employed persons by occupational category, for all women and men, and those with higher education (%)

	Prof., tech, manager	Clerical	Sales & Services	Skilled Manual	Unskilled Manual	Domestic Service	Agriculture	Missing
Males, 15-59	36.5	3.1	19.3	9.2	3.0	0.5	25.6	2.8
Males, 15-59 with higher ed.	61.8	1.3	19.4	9.3	1.6	1.1	4.2	1.1
Females, 15-49	6.0	0.3	33.6	1.5	0.2	0.2	56.9	1.3
Females, 15-49 with higher ed.	66.6	8.1	20.8	2.5	0	0	0.9	1.1

Source: Demographic and Health Survey, 2008

A survey on perception of good jobs found that respondents in urban areas still prefer very traditional jobs - doctors, shop owners, teachers, and government employees were the most preferred for both urban and rural women (Hatloy, et al. 2013). In rural areas, the most preferred job by both genders was farmer. Shop owner and farmer were considered to be the jobs easiest to pursue, whereas doctor, government employee and teacher, the most difficult – presumably because of the years of education needed to pursue these jobs. The survey found that only 17 percent of people in Freetown were engaged in wage work, and in rural areas almost no one was engaged in wage work.

[6] ILO Statistics, Accessed from: http://datatopics.worldbank.org/jobs/country/sierra-leone. 8/28/2012

In summary, the formal labor force in Sierra Leone is small and challenged by lack of skills. The recent Investment Climate Survey by the U.S. Embassy identified the lack of skilled individuals as one of the major market challenges:

> *Most young to middle-aged Sierra Leoneans (25-35 years old), the prime labor demographic needed by business, government, and civil society, are today's victims of the war and poverty. Few have more than four years of education, fewer are trained in a vocational skill, and even fewer have management skills. The result is a critical void of talented Sierra Leoneans available to manage local staff and assist in navigating the cultural, governmental, and logistical challenges which foreign industry faces in the country.*
>
> **Source:** *(U.S. Embassy 2012)*

The next section considers the employment opportunities in selected growth sectors of the economy and what HTEIs are doing to produce graduates who can make use of these opportunities.

Employment opportunities in growth sectors

In addition to the natural resource sector, the GOSL identifies agriculture, fisheries, tourism, and manufacturing as potential growth sectors with opportunities for job creation. Employment opportunities for these and other sectors are explored.

Natural Resource (Mining, Oil and Gas)

The natural resource sector is the foundation for the country's economic growth strategy in the short term. The two largest companies mining companies in the country are London Mining Corporation (LMC) and African Minerals Limited (AML) both mining iron ore. An interview with the HR manager at LMC reveals the need for three broad categories of skills: mining specific technical skills, core admin skills, and core financial skills. In addition, they need employees with a good work ethic.[7] About 30 percent of job opportunities are for highly skilled individuals and the remaining 70 percent for service staff (e.g. security guards, caterers, drivers, etc.). These latter positions will also need strong business acumen and depth of experience. The mining companies report difficulties finding local staff with the right level of skill and experience, despite the residue of skills from the earlier phase of iron ore mining in the seventies.[8] A list of vacancies at LMC, obtained from the Ministry of Labor and Social Security, showed job openings in the areas of Human Resources, Community Relations, Supply Chain & Logistics, Finance and Administration, Mining Operations, Mining Construction, and Health, Safety and Environment. However many of these jobs require at least five years of experience, which they usually cannot find in-country.

As a way of addressing the lack of relevant skills for industry, some large companies have embarked on initiatives to train graduates through a variety of programs. Addax Bioenergy implemented the Graduate

[7] Understanding what it takes to work in large corporation – work conduct and behavior.
[8] Information from this section from interviews with HR manager at London Mining Company

Advancement Program (GAP) in 2012, which recruits a small number of high-ability graduates and provides on-the-job training via a year-long internship program. LMC, through a public-private partnership (PPP), with GIZ and St. Joseph's Vocational Training Institute, will develop the capacity of the institute to become a model vocational training institution by working with them on development of teaching modules, testing and certification services. The project will also actively support the participation of women in the training courses. Through this it hopes to inform government policy and decision making as well as exploring the potential for scaling up the program through the Chamber of Mines and Commerce. This project is in its early stages of development, but if successful can provide a guidepost for PPPs in the TVET arena.

Agriculture and Fisheries

Agriculture is the most significant sector in Sierra Leone's economy contributing 57 percent of the GDP in 2011, and employing about 70 percent of the adult population. Crops make up the major share of agricultural production, followed by fisheries, livestock, and forestry (Government of Sierra Leone 2010). The coutnry has an estimated 5.36 million ha of arable, but less than 15 percent of arable land was under cultivation in 2010.

Lack of skilled professionals in the agricultural sector is highlighted as a major constraint to growth in the National Sustainable Agriculture Development Plan:

> *Before and during the national conflict, most highly skilled experts left the country for the safety of family and for livelihood sustenance. During and after the conflict, national universities, colleges and polytechnics were not able to train new staff due to lack of teachers and professors who had fled the country and due to unstable conditions. Experts that were able to stay are now approaching retirement. The sum effect is that there is a massive expert crisis just on the horizon in 3-5 years when the well-trained and experienced agriculturalists, animal scientists, foresters, fishery experts, and others will retire and no new people will be able to train them. In addition, the sector is weakened by staff movement to better paid jobs due to low remuneration to staff by government, and limited staff development and promotion opportunities.*
>
> *Due to lack of expertise, the GoSL is unable in its current form to fully provide strategic and technical direction for the implementation of key macroeconomic and social policies, including the Agenda for Change and NSADP/CAADP without external assistance.*
>
> **Source:** *(Government of Sierra Leone 2010)*, p. 15

Though much of agriculture is dominated by subsistence farming, the GOSL's vision for the medium term is to develop smallholder commercialization and larger-scale agro-based production and improve value-added activities.

In the last five years, there have been a number of large-scale commercial agriculture deals signed by the GOSL including:

- Addax Bio-Energy: 10,000 ha for sugarcane plantation in Bombali and Tonkolili districts
- SOCFIN Agriculture Group, 6500 ha for development of oil palm plantation in Pujehun district
- China Hainan Co., Ltd, 40,000 ha for rubber and rice plantations in the North

For the country to gain the most benefits from these deals, they would need to ensure enough skilled workers who can be employed by these companies. Njala University was set up to train experts for the agricultural sector, but share of enrolments in agriculture related fields have dropped over the years. Only two percent of enrolments in tertiary institutions are in agriculture-related areas. More needs to be done to attract students into the agricultural fields.

Tourism

With its beautiful beaches, the country has potential to become a tourist destination despite challenges in infrastructure. According to industry insiders, about 1000 hotel rooms will be added over the next few years, potentially creating around 2,000 new jobs in the sector.[9] Two of these hotels are linked to international brands: The Cape Sierra Hilton and the Mammy Yoko Radisson Blu. Because of concerns about the lack of appropriately trained people to fill these positions, the International Finance Corporation is in early talks with various stakeholders to investigate the potential of private-public-partnerships in training for the hospitality and tourism sector.

In addition to the jobs needed at the hotels, there will be even more opportunities created down the tourism value chain. The tourism industry, more broadly, is labor intensive and touches on multiple sub-sectors – travel agencies, airlines, tour operators, transportation, food and beverage, and local arts and entertainment (Christian, et al. 2009). Many of these jobs will need workers with a tertiary qualification. The MMCET is the only public HTEI that provides training in hospitality and tourism related areas, but this campus enrolls only around 180 students a year. In addition, they do not have the facilities and staff needed to provide training to international standards. According to the ILO, tourism sector relies on "soft skills including language and communication skills, courtesy, ethics, friendliness, good behavior, discipline, conscientiousness, self-confidence, adaptability, creativity and punctuality" (International Labor Organisation 2010) . The focus of MMCET is on more specific technical skills, and they would need to do more to enhance the softer skills to match the needs of the sector.

Financial Sector

A recent study of the banking sector in Sierra Leone highlights remarkable growth in the banking sector over the last decade (Decker 2012). The number of banks grew from 5 to 13 between 2001 and 2010,

[9] Email correspondence with the Chair of the National Tourist Board

and the number of branches from 13 to 81. The Banking Sector employs graduates from HTEIs without experience and provides supplementary training. Most banks recruit recent graduates for entry level positions – graduates from all fields are considered, and those who are successful in passing entry level tests set by the banks are hired either as interns or entry level staff. Discussions with HR managers of a few leading banks (national and international) reveal that graduates have some difficulty passing the general aptitude tests set by the Banks – even some who graduate from universities with second class and higher degrees.

Education

As seen above, over a third of all higher education enrolments (over 8,000) are in the education fields. The education sector is the largest employer of higher education graduates; the 2004 Census shows that the education sector employed over 50 percent of adults with higher education. Yet there are still large numbers of teachers in schools without the relevant qualification. Approximately 50 percent of teachers in the primary sector and over 40 percent of teachers in the junior secondary sector lack relevant qualifications.[10] Preliminary results from education projections show that the GOSL will need to hire over about 2,500 teachers a year over the next five years if they were to reach their desired ratios for pupil-teacher ratio.[11] There is an unmet demand for trained and qualified teachers in the public sector. In addition to needing more qualified teachers in schools, there are certain subject areas (e.g. mathematics, sciences, languages) at the secondary level that are in dire need of trained specialist teachers. Teacher training institutions are not graduating enough teachers in these key subject areas. As Table 3.4 below shows, 55 percent of students at the MMCET, which prepares junior secondary school teachers, specialize in Social Studies and 14 percent in Business Studies; these two specializations make up 69 percent of enrolments.

Table 3.4 Subject specialization of students in the Higher Teacher Certificate Program at MMCET, 2011/12

Subject Specialization	Male	Female	Total	Share of Total
Business Studies	21	30	51	14%
Agricultural Science	11	1	12	3%
Languages, Religious Moral Education, Language Arts	22	20	42	12%
Home Economics	0	15	15	4%
Physical Health Education	6	6	12	3%
Technical Studies	10	1	11	3%
Mathematics and Computing	5	0	5	1%
Integrated Science	2	2	4	1%

[10] Preliminary data from 2010 Annual Census

[11] Very preliminary data from education simulation model 2011

Subject Specialization	Male	Female	Total	Share of Total
Creative Practical Arts	2	2	4	1%
Social Studies	150	44	194	55%
Secretarial Studies	0	1	1	0%
Performing Arts	1	0	1	0%

Source: Enrolment Data from MMCET

Public Sector

The GOSL is one of the largest employers of higher education graduates. A report of human resource needs of Ministries Departments and Agencies (MDAs) for FY2012 showed 13,225 established posts, 7,619 staff, and 5,606 vacancies. (Government of Sierra Leone Human Resource Management Office 2011) There were 753 potential job vacancies (existing and new posts) ranked at grades 7 and 8, which are entry-level graduate positions; of those, 40 percent were in the health sector, 13 percent in agriculture, 9 percent in engineering-related careers, and 28 percent in social sciences, business or humanities. Unfortunately, the HRMO office has very weak links to the HTEI sector, and information about where opportunities in the public sector lie are not always available to students.

The information presented in this sector has highlighted potential opportunities for recruiting higher education graduates in sectors such as tourism, banking, mining, agriculture, and the public sector. The HTEI community should coordinate with these sectors to ensure that they produce graduates to the standards desired. The next section focuses on skills and competencies that are important for all sectors.

Skills and Competencies for all Sectors

This section considers whether HTEIs are producing graduates with skills and competencies that will allow them to be good citizens and productive at work, regardless of which sector they are employed. While there is no agreed upon definitive list of such skills, many organizations such as the Association of American Colleges and Universities[12] and the Organization of Economic Cooperation and Development (OECD) have produced such a skills inventory. With funding from the Hewlett Foundation, Finegold and Notabartolo (2010), conducted a review of the literature of these 21st century skills and summarized their findings into five groups: (1) analytic skills (critical thinking, problem solving, decision-making, research and inquiry); (2) interpersonal skills (communication, collaboration, leadership and responsibility); (3) ability to execute (initiative and self-direction, productivity); (4) information processing (information literacy, media literacy, digital citizenship, ICT operations and concepts); and (5) capacity for change (creativity, innovation, adaptive learning/learning to learn, flexibility).

[12] List of Essential Learning Outcomes from can be found here: http://www.aacu.org/leap/vision.cfm

As part of the research for this section of the Policy Note, students, employers and HTEI officials were presented a list of 18 skills and competencies, adapted from the AACU list and asked to choose the 5 most important for graduates. (See Appendix I for questionnaire). The survey was administered to 43 students, 23 employers, and 15 higher education officials. The results of the survey are presented in Table 3.5 below. The shaded areas indicate the top outcomes for the three different groups. It is encouraging to note that students, HTEI administrators and managers have some common expectations about what general skills and competencies that graduates are expected to have: ability to problem solve and think analytically, computer skills, and team work were chosen by all three groups as important skills for graduates. There are some important differences as well – 70 percent of employers chose "sense of values, principles, and ethics" as a top-5 competency, but it does not feature in the choices of students and HTEI officials. The same is true, but to a lesser extent, for 'writing and oral/speaking' skills – 48 percent of employers ranked it amongst the five most critical skills for graduates compared to 40 percent of HTEI staff and 40 percent of students. HTEI administrators differ from the other two groups in choosing critical thinking and leadership skills in amongst their top five, and only students chose 'self-discipline' amongst their top five skills.

Table 3.5 Top five skills and competencies for graduates as selected by students, HTEI administration, and employers (% of respondents that chose the stated skill as one of their top 5)

Skills and Competencies	Students	HTEI	Employers[a]
A sense of maturity and how to succeed on your own	26%	27%	13%
Improved ability to solve problems and think analytically	44%	53%	48%
Time-management skills	49%	20%	65%
Independent and critical thinking/reasoning skills	19%	67%	39%
Strong work habits	19%	20%	43%
Greater commitment to being involved in the community and more informed about contemporary social and civic issues	21%	13%	0%
Strong writing and oral/speaking skills	40%	40%	48%
Tangible business skills, and a specific expertise and knowledge in your field of focus	14%	13%	26%
Competency in computer skills	51%	53%	52%
Expanded understanding of science and its relevance to other areas of study	21%	13%	4%
Expanded knowledge of Sierra Leonean culture and history	9%	7%	4%
Expanded knowledge of cultures and societies outside Sierra Leone	2%	0%	4%
Knowledge of and respect for people of other backgrounds, ethnicities, and lifestyles	26%	7%	4%
Teamwork skills and the ability to get along with and work with people different from yourself	44%	47%	48%
Exposure to the business world	9%	0%	13%
Sense of values, principles, and ethics	19%	40%	70%
Leadership skills	40%	53%	9%
Self-discipline	47%	27%	22%

Skills and Competencies	Students	HTEI	Employers[a]

[a] Employers and business leaders represented the following sectors: Finance, Mining, Human Resource Management, Banking, Retail, Energy, Social Sectors, Tourism, Engineering & Construction, Information and Communication Technologies

Identifying the critical outcomes for graduates is important; more important is deciphering how well students learn these important skills. The perception of many employers is that graduates are lacking in these skills, which is why many of the large employers administer tests to graduates seeking jobs. These tests usually cover (depending on the organization) quantitative reasoning, verbal aptitude, writing, and computer skills. To be fair, not all of these outcomes can be delivered effectively by HTEIs, although they can contribute to ensuring graduates acquire these skills through their teaching, research and community service expertise. For example, acquiring minimum level of writing and oral communication skills could be a requirement for graduation; similarly computer literacy courses could be mandatory, and HTEIs will have to ensure that they have adequate computer resources to ensure all students have access. Students themselves ask for these during discussions with them. Encouraging team work and oral presentations as part of course work will also help develop critical skills needed for work.

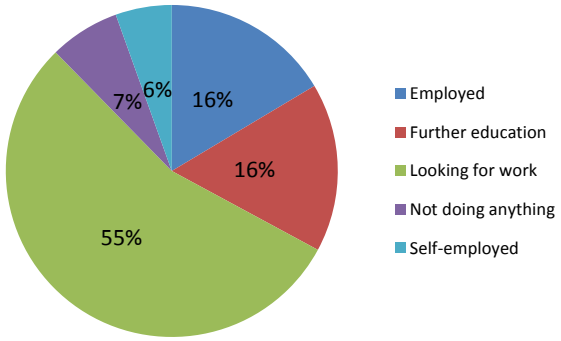
Employment Status of Recent Graduates

Using mobile phone data from students from the University of Sierra Leone who participated in career seminars organized by the Career and Advisory Placement Services (CAPS) between 2010 and 2012, the researchers conducted a rapid assessment of the employment status of recent graduates using SMS technology. Four hundred and forty-eight (448) mobile phone numbers were received from students from the USL – 63% were male; 24% from COMAHS, 57% from FBC and 19% from IPAM. An IT consultant was hired who developed an SMS-based survey and administered it to students. One hundred and twenty-two students responded to at least one question in the survey for a response rate of 27 percent. While this is low, it is comparable to a similar SMS-based survey of graduates conducted in Pakistan where the response rate was 16 percent.

Of the 122 students who responded, 73 successfully completed the survey. The low response rate means generalizations should be done with care, but it does give enough to be able to do a preliminary analysis. Of the respondents, three percent graduated with a certificate, 28 percent with a diploma and 69 percent with a degree.

Figure 3.2 Employment Status of USL Graduates

In terms of employment status, the results showed that the majority of students (55 percent) were looking for work, 16 percent were employed, 16 percent were engaged in further education or training, 7 percent reported not doing anything, and 5 percent were self-employed. . See Figure 3.2. The large numbers of graduates who were reportedly unemployed (looking for work), may be because there was a mismatch between their skills and that of the labor market or because there simply were not enough jobs. Or it may just reflect the long lead time for finding a job deemed suitable by the graduate. Data from the 2007 CWIQ survey showed that it takes Sierra Leone youth about 3.5 years (all education level) to make the school-to-work transition. Another possibility is that respondents were likely to report as unemployed if they were simply under-employed or if they thought that they might get a better job as a result of filling out the survey.



Conclusion and Recommendations

Despite the lack of adequate data in this area, the preceding analysis leads to a number of key findings: (1) higher education has an important role to play in providing the skills needed for the Sierra Leonean economy; (2) given the growth areas of the economy, there is a potential under-supply of skills in the applied sciences and technology; (3) HTEIs need to place more emphasis on more generic skills such as communication skills, computer literacy, time management, etc. which are in demand across all sectors; and (4) the links between HTEIs and private sector are weak.

The following are recommended to address some of the challenges identified in the analysis above:

- Conduct comprehensive review of courses and programs to ensure that courses are aligned to labor market demands and GOSL priorities. Employer input should be actively sought in these reviews, and new programs for emerging industries should be considered. Finally, certification and qualification standards are needed for key programs.

- Develop a short-term strategy for providing skills needed for priority areas. One option is through partnerships with HTEIs in neighboring countries like Ghana or Nigeria. Another option is providing scholarships for students to study overseas.

- Provide incentives for students to enroll in skills areas to support the growth sectors of the community – these could include scholarships, low interest loans, paid internships, etc. Given the importance of agriculture in the country's development, Sierra Leone may want to increase the shares of enrolments in these areas.

- Encourage stronger links with employers, and encourage their involvement in various governing bodies, curriculum review committees, and research. Develop internships and job experience opportunities for students.

- Conduct regular tracer studies and employer surveys as a way of measuring and increasing accountability for relevance.

- Strengthen outreach to secondary schools to ensure students are aware of career options, and to encourage enrolment in technical and vocational areas and STEM subjects. Consider programs to increase enrolment in science and technology disciplines such as bridging or summer courses; working with secondary schools to improve the quality of science teaching; and refresher programs for secondary school science teachers.

- Develop strong policies to attract qualified students into the critical subject areas of mathematics, sciences, and languages, for which there is a need for teachers.

References

Ajayi, J. F. Ade, Lameck K. H. Goma, and G. Ampah Johnson. *The African Experience W ith Higher Education.* Accra, London, Athens, OH: Association of African Universities, James Currey, Ohio University Press, 1996.

American Association of Colleges and University. *Liberal Education and America's Promise.* 2012. http://www.aacu.org/leap/vision.cfm (Accessed 21 August 2012).

Ananiadou, Katerina, and Magdalean Claro. *21st Century Skills and Competences for New Millennium Learners in OECD Countries.* OECD Education Working Papers, No. 41, OECD Publishing, 2009.

Brennan, John. "The Academic Profession and Increasing Expectations of Relevance." In *Key Challenges to the Academic Profession*, edited by Maurice Kogan and Ulrich Teichler. UNESCO Forum on Higher Education Research and Knowledge and International Centre for Higher Education Research Kassel, 2007.

Carrol, Bidemi. *Private Monies, Public Universities: Implications for Access and University Behavior. A Study of Makerere University.* Palo Alto: Stanford University, 2005.

Christian, Michelle, Karina Fernandez-Stark, Ghada Ahmed, and Gary Gerei. *The Tourism Global Value Chain: Economic Upgrading and Workforce Development.* Center on Globalization, Governance & Competitiveness, Duke University, 2009.

Cloete, Nico, Tracey Bailey, Pundi Pillay, Ian Bunting, and Peter Maassen. *Universities and Economic Development in Africa.* Centre for Higher Education Transformation (CHET), 2011.

Cybermetrics Lab. *Ranking Web of World Universities.* January 2012. http://www.webometrics.info/index.html (accessed July 23, 2012).

Finegold, David, and Alexis Spencer Notabartolo. “21st-Century Competencies and Their Impact: An Interdisciplinary Literature Review.” 2010.

Government of Sierra Leone Human Resource Management Office. “A report of the 2011 Manpower Hearings and the Human Resource Plan and Budgets of Ministries, Departments and Agencies (MDAs) for FY 2012.” 2011.

Government of Sierra Leone. “National Sustainable Agriculture Development Plan 2010-2030.” 2010.

Government of Sierra Leone. “Sierra Leone Local Content Policy.” 2012.

Government of Sierra Leone. “The Agenda for Prosperity: Road To Middle Income Status. Sierra Leone's Third Generation Poverty Reduction Strategy (2013-2018).” Freetown, 2013.

Hatloy, Anne, Tewodros Kebede, Huafeng Zhang, and Ingunn Bjørkhaug. “Perceptions of Good Jobs: Analytical Report, Port Loko and Freetown, Sierra Leone.” Background Paper for the World Development Report 2013, 2013.

Ikpe, I. B. “Beyond relevance: In praise of useless knowledge.” *South African Journal of Higher Education* 24, n.º 4 (2010): 525–537.

International Labor Organisation. “Developments and challenges in the hospitality and tourism sector.” Issues paper for discussion at the Global Dialogue Forum for the Hotels, Catering, Tourism Sector, Geneva, 2010.

Ministry of Trade and Industry. “Unleashing the Talent of our People: A Vision and a Promise. Private Sector Development Strategy for Sierra Leone.” Freetown, 2010.

OECD. *Testing student and university performance globally: OECD’s AHELO.* s.d. http://www.oecd.org/education/highereducationandadultlearning/testingstudentanduniversityperformancegloballyoecdsahelo.htm (acedido em 24 de August de 2012).

Sierra Leone Conference on Development and Transformation. “Report of the Sierra Leone Conference on Development and Transformation: Charting the next 50 years forward.” Freetown, 2012.

U.S. Embassy. “2012 U.S. Embassy Sierra Leone Investment Climate Statement.” 2012.

UNESCO. *World Declaration on Higher Education.* 1998. http://www.unesco.org/education/educprog/wche/declaration_eng.htm (accessed 27 July 2012).

CHAPTER 4: COST AND FINANCING

Introduction

Sustained and efficient financing of higher education is the cornerstone of a well-functioning higher education sector, and it is one mechanism by which governments can ensure that the higher education system is delivering outcomes that are relevant for the social and economic advancement of the society.

In the sections to follow, the study describes the current levels financing of higher education, the financing policies and practices that are currently in use in higher education, the projected demand for higher education and public resources, and concludes with some recommendations on financing higher education.

Objectives and Coverage

The analysis in this chapter is based on an analysis of quantitative and qualitative information gathered during interactions with government officials and policy makers at the Ministry of Education and Science and Technology (MEST), the Tertiary Education Commission (TEC), and the Ministry of Finance and Economic Development (MOFED), and with the senior administration of public and private higher education institutions (HTEIs). Though the focus of this analysis is on public HTEIs, it also includes some discussion of the private sector in higher education. A major challenge of the current analysis was the unavailability of quality higher education data in Sierra Leone. The report makes use of available data to the extent possible.

Through public financing of higher education, GOSL can help tackle some of the issues highlighted in other areas of this report; for example, it can help address equity concerns through provision of scholarship and loans, and it can support the development of program areas that it deems critical to the country's success whether STEM or Peace Studies.

Higher Education Financing

Public Financing

Overall, the GOSL has maintained its commitment to funding the higher education sector over the last 6 years, with a significant increase in funding in 2012. GOSL allocated an average of 0.65 percent of GDP to higher education between 2007 and 2012 (Table 4.1), which is about the same as other low-income countries in Africa.[13] The large increase in 2012 was as a result of negotiated salary increases for staff of HTEI, and it is unlikely that that level of growth will be sustained.

[13] The average for other low income African countries in 2006 was 0.63 and 0.66 for Non-African developing countries. (World Bank 2010).

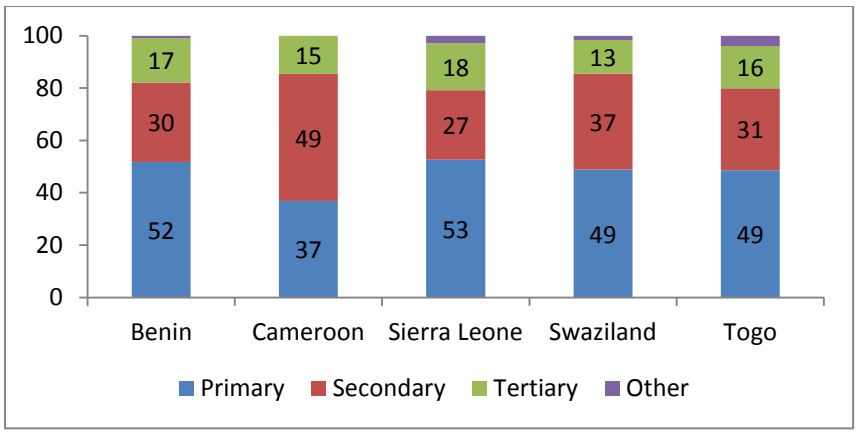
Table 4.1. Public expenditure on higher education – amount, growth rate, and as a percentage of GDP, 2007-2012

Year	Public current expenditure on tertiary education (in billion Leones)	Annual growth rate of current expenditure (%)	Public current expenditure on tertiary education as % of GDP
2007	27.5		0.62%
2008	29.5	7	0.58%
2009	37.7	28	0.72%
2010	43.8	16	0.64%
2011	49.3	13	0.63%
2012	105.8	114	0.73%

Source. Ministry of Finance and Economic Development (2012) GDP for 2012 is an estimate

The priority given to higher education in relation to the other sub-sectors is slightly higher than other countries that have similar primary completion rates to Sierra Leone, indicating a strong commitment to funding higher education. Before the 2012 increase in funding, public expenditure on tertiary education accounted for between 18-20 percent of total public current expenditure on education; in 2012, it increased to 23 percent. As Figure 4.1 below shows, at 18 percent the share of current expenditure going to higher education was higher in Sierra Leone than in four other sub-Saharan countries with the same primary completion rate. With the 2012 increase, GOSL is showing increasing commitment to higher education at the expense of lower levels.

Figure 4.1: Percentage distribution of public current expenditure on education by level, 2010 or 2011



Source: Education Statistics Database World Bank. (Accessed June 2013)

Government spending per tertiary education student is high compared to the other sub-sectors. As seen in Table 4.2, expenditure per tertiary student is 18 times the spending per primary school student and 131 percent of per capita GDP.

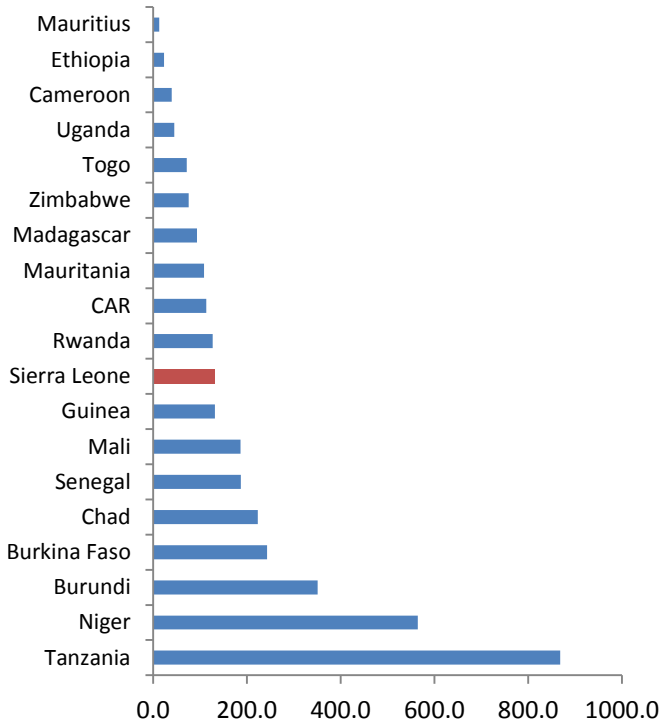
Table 4.2: Public Expenditure per Student in Leones and as percentage of GDP, 2012

	Primary	Secondary	Tertiary
Total Exp. in Million Le	234,944	114,181	110,139
Enrollment	1,249,947	400,787	31,813
Cost per student Leone	187,963	284,893	3,462,084
As percentage of GDP per capita (%)	7.1	10.8	130.9
Ratio to Primary	1	1.5	18.4

Source: Finance data from MOFED and Education Data from MEST

However, the higher education unit cost is comparable to that of other countries in sub-Saharan Africa as seen in Figure 4.2 (Ministry of Education, Science and Technology 2013). The level of funding in Sierra Leone is around the median for the countries with recent data.

Figure 4.2. Public expenditure per tertiary student as a percentage of GDP per capita, 2011 or MRY



Source: World Bank EdStats Database. For Sierra Leone, based on author's calculations

Most of the recurrent budget of the HTEIs goes to finance staff salaries. GOSL is under pressure from staff of HTEIs to increase their salaries and improve working conditions. Since 2011, the academic staff of public HTEIs has held numerous strikes, and university closures have been frequent. In response to the demands from academic staff, this government has negotiated a series of increase in staff salaries, with the largest increase in 2012. In 2012, grants to universities increased from Le 59 billion in 2011 to an estimated Le 102 billion – a 75 percent increase. According to the GOSL, academic salaries have now almost tripled since 2007 (Table 4.3).

Table 4.3. Monthly salaries of academic staff, 2007 and 2012

Rank	2007	2012	% Growth
Level 1	1,792,294	5,645,725	215%
Level 10	2,075,288	6,532,156	215%
Level 1 US$	600	1,298	
Level 10 US$	695	1,502	
Level 1 US$, PPP	1,501	3,245	
Level 10 US$, PPP	1,738	3,755	

Source: MEST Public Relation Office

At the current levels, the level of salaries of the top ranked academics is lower than that of Nigeria and South Africa (US $6229 and US $9330 respectively, by US $PPP) and much higher than that of Ethiopia (US $1,580). The levels of salaries of the lowest ranked academics ($3,245) is higher than Nigeria ($2,758 and Ethiopia ($864), but slightly lower than South Africa ($3,927).[14]

Own-Income Generation

In addition to receiving funding from government, HTEIs generate their own income, which comes mainly from tuition fees. In 2011, the institutions reported self-generated income of Le 47.5 billion - slightly less than what government spent on the sub-sector Le 49.3 billion (see Table 4.4). Only Njala University reported donations and income from research as other sources of income. However, it likely that not all sources of income are reported to the MoFED as more detailed financial statements show income from sources such interest from endowments and other investments and rental income.

[14] These salary figures are from website: International Comparison of Academic Salaries in 28 countries. http://acarem.hse.ru/data. Accessed March 2013

Table 4.4. Income internally-generated by HTEI in billions of Leones, 2011

HTEIs	Tuition	Other fees	Total Fee Income	Donations	Income from Research	Total Income
USL	12.51	12.60	25.11			25.11
Njala	9.22	1.50	10.72	5.40	0.75	16.87
MMCET	1.30	0.90	2.20			2.20
NP	0.39	0.19	0.58			0.58
EP	1.41	0.15	1.56			1.56
PLTC	0.33	0.05	0.38			0.38
FTC	0.50	0.28	0.78			0.78
BTC	0.00	0.00	0.00			0.00
Total	25.66	15.67	41.33	5.40	0.75	47.48

Source: MOFED 2012

There is scope for HTEIs to do more to increase internally-generated income. Though the average fee per year is high compared to per capita income, there is scope to increase fees in some of the institutions. In addition, other HTEIs in Africa are able to generate income from sales of goods and services, and gifts and donations.

Current policies in practices in financing of higher education

Sierra Leone, like many other African governments, uses a traditional budget allocation method to determine allocations for HTEI: decisions are made based on available government revenues, political priorities, and historical allocation amounts.[15] Budget discussions rarely account for the true magnitude of the funding need and they are not linked with development objectives, performance of institutions, or incentives for efficiency. In other countries, including a few from Africa, other methods for allocating budgets include earmarked funding, formula funding (either input or performance based), performance contracts, and competitive funds (World Bank 2010).

The Government of Sierra Leone finances recurrent expenditure for public higher education using two main mechanisms: (1) block grants to institutions (called subventions), and (2) scholarships for students (called Grants in Aid). Development budgets are limited and financed primarily by donors. The next section provides some details on subventions and student scholarships.

Government Subventions

Each year the GOSL provides institutional funding for public HTEIs in the form of grants or subventions. In general, the allocation of subventions is based on historical budget, plus some incremental increases

15

based on inflation rates or, as in the case of the 2012 increase, political negotiations. Table 4.5 below shows government subventions to HTEIs between 2007 and 2012, and the distribution of allocation over the same period. The distribution of the grants has remained relatively constant over the period, except for the two universities (NU and USL) whose share has increased. The two universities captured 64 percent of total subvention in 2012 compared to 59 percent in 2007.

Table 4.5. Government subventions to HTEIs in millions of Leones, 2007-2012 and distribution percentages for 2007 and 2012

HTEI	2007	2008	2009	2010	2011	2012	Per Student 2012	% of total 2007	% of total 2012
BTI	102	126	161	174	200	230	2.8	0%	0%
EP	2,213	2,002	2,960	3,342	3,844	8,526	2.4	8%	8%
FTC	1,455	1,597	1,876	2,048	2,355	4,848	1.5	5%	5%
MTC	1,610	1,681	2,079	2,865	2,697	5,740		6%	5%
MMCET	3,964	4,029	51,44	5,618	6,461	1,2727	2.9	14%	12%
NU	6,967	8,660	11,099	12,418	14,281	28,645	4.7	25%	27%
PLTC	1,496	1,661	1,953	2,324	2,557	5,003	3.5	5%	5%
USL	9,449	9,431	11,971	14,033	16,138	39,133	4.2	34%	37%

Source: Ministry of Finance and Economic Development, 2013

The main advantage of historical budgeting is that it is simple; its disadvantages are that it has very little impact on the performance of the sector, and rewards the negotiation skills of various institutions (World Bank 2010). Another disadvantage is that the lack of transparency in allocations causes conflict amongst the HTEIs. For example, when government substantially increased the subventions to USL in 2012, NU lecturers went on strike as they expected a similar increase. If there was a transparent formula for allocating grants, it would be possible to understand why subvention per student at Freetown Teachers College was Le 1.5 million and at Port Loko Teachers College it was Le 3.5 million. Currently these differences appear to reflect differences in negotiation skills or bargaining power of different HTEIs or decisions about how fast to grow enrolments.

Some countries in Africa have started moving away from historically based budgets to input-based formulas (e.g. Ghana, Kenya, Nigeria and Uganda) and performance-based formula (South Africa). These input-based formulas typically taking into account number of staff, student enrolment, and the average cost per student, and they improve the transparency of the budget allocation process. Governments can also use these formulas to earmark budget for certain components (see the Nigeria example in Box 4.1).

Box 4.1 Input-based funding in Nigeria

The Nigeria Universities Commission has the statutory responsibility for determining the formula for allocating funds to federal universities. The calculation of the funding formula relies on a number of parameters including the number of degree students admitted, number of academic and non-academic staff, and ratio of science to humanities based disciplines.

Starting from student numbers, normative guidelines for student-staff ratios by discipline are used to calculate academic and non-academic staff numbers. Then total compensation is calculated, which is then used to compute goods and services value (e.g. for example, the value of goods and services for arts faculty is 20 percent of salaries). Furthermore 10 percent of recurrent grant is earmarked for library development and 5 percent for research.

Source: World Bank 2010.

In addition to input based funding, performance-based financing has been on the rise, although less so in Africa. In performance-based formulas, output indicators (e.g. graduation rates or research productivity) are included in the formula. Sierra Leone has recently initiated the concept of performance contracts for HTEIs, but without linking it to budgetary allocations. However, there are indications that MOFED is currently considering the application of a funding formula to be based on: the number of students enrolled, admitted, and graduated; type of courses offered in the institution (degree, diploma, and certificate); the ability of the university to generate income from other sources; and the annual increase in the standard of living. In an environment where data collection and quality is low, it would be important to keep the formula as simple as possible, and to develop the capacity of HTEIs in data collection and management. South Africa is an example of a country that uses formula-based funding (see Box 4.2), that could serve as a lesson for Sierra Leone.

Box 4.2 Performance-based Formulas: Lessons from the South African Experience

South Africa's funding formula combines performance-based formulas, earmarked funding and block grants. The funding formula is based on a combination of input and output parameters:

1. Teaching inputs: based on student enrolment and cost per student for various subjects.
2. Teaching outputs: based on graduation benchmarks
3. Research outputs: research publications
4. Institutional factors**:** (a) diversity (b) maximizing enrolment capacity (c) enrolment pattern reflect government priority areas.

In addition, there are earmarked funds for research development, financial aid scheme, and approved capital projects.

Four lessons from the South Africa experience are:

1. Formulas should be as **simple** as possible
2. Employ **consultative** mechanisms in their development, and provide training to key staff on their use.
3. Develop **effective data management systems** at both the institutional and government levels to ensure effective implementation
4. Design an effective system to monitor the outputs and outcomes of the higher education system in relation to the needs of the labor market and economy.

Source: World Bank 2010. Pillay 2003.

Student Financial Assistance (Grants in Aid or GIA)

In addition to the subventions provided for general recurrent expenditures, the GOSL also provides funds to institutions that are earmarked for student financial assistance (grant in aid). These grants cover tuition and other related charges for selected students in degree, diploma and certificate programs in public HTEIs. The GOSL's stated policy is that priority for grants should be given to the needy, women who study STEM-related courses, and learners with disabilities. In addition, the top ten students in the WASSCE also get automatic grants. In 2011, approximately 2,000 grants were given to new students and 2,400 awards given to continuing students. The total of 4,400 students receiving grant in aid represents about 14percent of total enrollment (Table 4.6).

Table 4.6 Number and amount of students grants, 2011

	Number of GIA offered to students			GIA Amount paid (Le mil)		
HTEIs	Existing Grants	New Grans	Total	Existing Grants	New Grants	Total
FBC	587	472	1,059	636	591	1,227
COMAHS	268	153	421	978	498	1,476
IPAM	497	380	877	820	801	1,621
NU	588	458	1,046	1,722		1,722

Table 4.6 Number and amount of students grants, 2011

	Number of GIA offered to students			GIA Amount paid (Le mil)		
HTEIs	Existing Grants	New Grans	Total	Existing Grants	New Grants	Total
MMCET	113	185	298	83	162	245
EP	77	44	121	65		65
PLTC	52	47	99	41		41
NP	158	142	300	169		169
FTC	67	95	162	48		48
Total	2,407	1,976	4,383	4,562	2,052	6,614

Source: MEST, Student Section, obtained by mission Feb 2012

Like the allocations of subventions, the process of allocating grants is not transparent. There are district-based quotas and quotas for each institution, but it is unclear how these are determined. For example, MEST says the district quotas are based on population size, but the data shows otherwise: Bo has a population share of 9.3 percent and a senior secondary enrolment share of 15 percent, but only receives 6 percent of grants. The Scholarship Awards and Advisory Committee in MEST reported that they award grants to students after review of their application and an oral interview using as criteria: academic performance of the student, needs of the labor market, and the student's economic status. This committee then recommends to the Minister, who gives the final approval. However, lack of available data does not allow us to ascertain how closely these criteria are followed, and there is widespread perception that the process is flawed and corruptible and that political and social elites capture most of the grants.

The expenditure on grants has been increasing over time and reached six percent of the non-salary recurrent budget in 2012. The number of new GIA is increasing faster than the growth rate of the total enrollment in the HTEIs. During the period 2008-2011 the number of new grants jumped from 1,250 to about 2,000 at an annual growth rate of 17 percent whereas the total enrollment growth rate of the public HTEIs for the same period was 11 percent per year. Grants are also given to students enrolled in programs in foreign countries. Although not widely publicized and little data exists, there are many students attending foreign universities that receive support from the GOSL. Government provides allowances and (partial) tuition for students enrolled in China, Cuba, United Kingdom, Turkey, Morocco, and others. Lack of information about these grants makes it difficult to ascertain their effectiveness or usefulness.

Apart from the grant-in-aid program, there are no other financial assistance programs to help students cover the cost of tuition and other expenses. The establishment of a student loan scheme has been a topic of discussion over many years, and after the end of the war, the universities prepared a concept for a student financial assistance program with a student loan program as one of the options.[16] These early efforts were abandoned, but are now being reconsidered given the financial pressures in the system. The universities need to study the administrative cost of managing the loan programs versus offering the scholarships and assess the cost and benefits of such programs. Many African countries now have student loan programs, but the record of loan recovery is mixed. The main challenges to loan recovery include: poor record keeping, weak legal systems, long grace periods, unclear repayment guidelines, and low interest rates (World Bank 2010). The effective recovery of student loans depends on the rate of interest, the repayment period, the rate of non-payment and defaults, and the cost of servicing the loan accounts. A student loan scheme that does not require co-signatories usually has a significant default rates. Student loans can provide financial assistance for students, but they have to be carefully designed.

Since all students in higher education are expected to pay fees, the GOSL has to strengthen its policies and student financial assistance programs to ensure that poor students have an opportunity to access higher education. From the above discussion, the GIA program can be improved to ensure that only the neediest benefit from it. In addition, a well-designed student loan program may help alleviate the financial burden to students and their parents.

External assistance to higher education

Direct external support to higher education is low and unevenly distributed across the various institutions. In recent years, there have been high profiling announcements of capital funding for infrastructure development at FBC. In April 2013, the MOFED signed a $13 million loan with the OPEC Fund for International Development (OFID) for the rehabilitation and expansion of FBC. In June of the same year, the GOSL signed a loan agreement worth $US 8 million with the Arab Bank for Economic Development in Africa (BADEA) towards the Rehabilitation of FBC project. In addition, the MOFED recently signed a $21 million dollar loan with the Saudi Bank for infrastructure development at Fourah Bay College. It is unclear why given the need of various HTEIs, it is only FBC that is receiving these support for rehabilitation.

Projected Demand for Higher Education and Public Financing

This section estimates how costly it would be to achieve improvements in access and better outcomes in the higher education sub-sector. It highlights some of the trade-offs between sub-sectors that GOSL will face as it looks to finance the whole education sector in a sustainable way. Sierra Leone is yet to achieve universal primary education, and so the country expects that primary and secondary enrolments will continue to increase over the next decade, thereby increasing demand for higher education.

[16] Discussions with university officials

Using a demographic-based simulation model, projections show that enrolments in junior secondary and senior secondary will increase by 128 percent and 140 percent respectively between 2010 and 2025. The increase in the number of students projected to complete secondary education and the projected expansion of the modern economy will also put pressure on the higher education system to expand. To widen access and increase quality at the tertiary level, the GOSL would have to make significant investments in higher education.

The annual growth rate in public higher education enrolment over the last five years was 11 percent. If higher education continues to grow at the current rate of 11 percent yearly, it will double in about 5 years and quadruple by 2025. This is not a financially sustainable growth rate, and therefore unlikely to happen. Future enrolment growth in primary and secondary education is projected to be robust over the next 12 years (until 2025) based on the current projections. In the policy scenarios under discussion, universal primary completion is projected to be achieved by 2025 and completion rate for junior secondary would increase from 49 percent to 76 percent.[17] The achievements of these goals will require significant resources from the government.

For GOSL to expand basic education as described above, it will need to limit the growth of public higher education enrolments and focus instead on the quality of provision. It is expected that the private higher education sector, will be encouraged to grow to accommodate the increasing demand for higher education. For that to happen, private higher education may require some support from GOSL in terms of more favorable legislation coupled with stronger accreditation mechanisms.

Government will have to balance growth in higher education with growth in the compulsory basic education sector as it is still far from meeting the universal primary completion goals. The education sector plan will provide the long-term vision for growth in the whole sector, but it is imperative that the higher education sub-sector develops its own sub-sector strategy as well. This is discussed below.

The need for a Higher Education Strategy (HES):

There is a pressing need to prepare HES for Sierra Leone to address the issues of quality, growth and relevance to the labor market and consolidate the policies within a strategic framework. There is no medium to long- term national plan for higher education and the HTEIs rarely have such plans mainly because of the lack of capacity and their preoccupation with their operations. Such a strategy would set the directions for the improvement and development of the higher education in the short to medium-term, and would fall within the education sector plan and the sector plan should be part of the overall social and economic strategy of Sierra Leone.

A higher education strategy needs to include the future vision and directions, achievable goals and targets, policies to reach these goals, and programs and projects of these policies. As well, the financing plan to ensure implementation and fiscal sustainability needs to be developed. Experience in other countries showed that successful strategic plans were prepared by the national expertise with the

[17] Policy dialogue with MEST is on-going on policy choices that are financially sustainable.

support of international development organizations to increase ownership. Also, these plans were supported by high level political, which continued through the preparation and implementation stages.

The preparation of such plan also requires projection exercises that cover enrollment and cost as well as policy simulations to assist in setting reasonable, achievable and affordable targets given the limited resources and capacity. Considerable capacity building is needed for the national technical staff of the government departments that will prepare and implement the HES.

International experience showed that successful plans were prepared by national committees at different levels to increase ownership with the support of development partners. The process of preparing the strategic plan includes the formation of: (i) a high level inter-sectoral National Task Force (NTF) to set the overall vision and sector directions, (ii) a Technical Working Groups (TWG) to conduct the diagnostics on priority areas, and (iii) a full-time Secretariat to coordinate the activities and report progress to the NTF.

Conclusions and Recommendations

The following are recommendations for HTEIs and policy makers based on preceding analysis:

- Move towards formula-based budgeting in the allocation of grants as a way of improving transparency and accountability in financing of HTEIs. Best practice is for allocations to be based on data such as student enrolment, programs offered, graduation rates, and types of awards granted. Further, this formula should be kept as simple as possible, made public, and provide incentives for institutions to improve performance.
- Develop a sustainable system for collecting and analyzing key data on a regular basis to provide information for management decision-making, budget preparation, and preparing and monitoring the progress of the sub-sector programs and plans.
- Increase efficiency of spending and diversify the sources of funding for higher education. Many public institutions already raise income through fees and other activities, and these should be improved. Fees should be allowed to increase even as government provides targeted grants to the most disadvantaged and loans to others who need it.
- Encourage the growth of the private higher education sector while at the same time strategically invest public funds to areas within higher education that the private institutions will not offer in the medium run, but is required for SL's development: health, science and engineering, post-graduate programs, and access for low-income and rural families.
- Reform the current system for providing student financial assistance to ensure that only the neediest gets grants. In general, the process of awarding scholarships needs to be more transparent to dispel the perception that political influence plays a big role in the process. As one option, this function could be taken out of the MEST.
- Consider the development of a student loan system, possibly in partnership with private financial institutions.

- Encourage diversification of HTEI options to encourage low-cost, high quality provision as an entry point for economically less advantaged students.
- Provide capacity development in financial planning, management and budgeting for the relevant staff of HTEIs and the TEC as these would be the institutions responsible for budget preparation, management, and reporting to ensure adherence to standards.

References

Government of Sierra Leone. "The Agenda for Prosperity: Road To Middle Income Status. Sierra Leone's Third Generation Poverty Reduction Strategy (2013-2018)." Freetown, 2013.

Ministry of Education, Science and Technology. "Education Country Status Report: An analysis for further improving the quality, equity and efficiency of education system in Sierra Leone." 2013.

World Bank. *Financing Higher Education in Africa.* Washington, D.C.: The World Bank, 2010.

APPENDIX A. LIST OF INSTITUTIONS VISITED

Table A.1. List of Institutions Visited and People Met

Institutions	People Met and Interviewed
USL	Vice-Chancellor, Planning Director, Registrar
IPAM	Acting Deputy Vice Chancellor
FBC	Acting Deputy Registrar, Lecturers, Students
COMAHS	Registrar, Lecturers
University of Makeni	Vice-Chancellor, Registrar, Director of Programs, Lecturers
Njala University	Vice-Chancellor, Registrar, Deans of Faculties, Students
Eastern Polytechnic	Principal, Registrar, Dean of Education, Lecturers
MMCET	Principal, Vice-Principal and Director of Programs, Registrar
Northern Polytechnic	Lecturers
Institute of Advanced Management and Technology	Principal, Vice-Principal
Freetown Teachers College	Principal, Lecturers, Deans of Faculties
Tertiary Education Commission	Executive Secretary, Administrative Manager, Project Managers, Commissioners
Office of the President	Director of Operations
Human Resource Management Office	Director
Ministry of Education, Science & Technology	Director and Deputy Director for Higher Education, Chief Education Officer

APPENDIX B. LIST OF HTEIS REGISTERED WITH THE TEC (2011)

Table B.1. List of HTEIs Registered with the TEC as of 2011 and their Locations

	Institution	Location
	PUBLIC INSTITUTIONS	
1	University of Sierra Leone	Western Urban
2	Njala University	Moyamba, Bo
3	Milton Margai College of Education and Technology	Western Urban
4	Freetown Teachers College	Western Urban
5	Port Loko Teachers College	Port Loko
6	Northern Polytechnic	Makeni
7	Eastern Polytechnic	Kenema
8	Bonthe Technical College	Bonthe
	PRIVATE INSTITUTIONS	
1	University of Makeni	Makeni
2	Institute of Electoral Administration and Civic Education	Western Urban
3	College of Management and Administration (COMA)	Western Rural
4	College of Business Studies	Western Urban
5	College of Travel and Tourism Studies	Western Urban
6	Banktec College of Information Technology	Western Urban
7	MASTEE College of Technology	
8	Emibex College of Management & Finance	Western Urban
9	Crown Technical College	
10	Evangelical College of Theology	Western Rural
11	Silicon Pro	Western Urban
12	Every Nation College of Administration	
13	Freetown College of Management and Accountancy	Western Urban
14	Christian Leadership College	
15	Institute of Advanced Management and Technology	Western Urban
16	Institute of Business Studies & Administration (IBSA)	
17	Institute of Business Administration & Technology (IBATECH)	Western Rural
18	Institute of Continuing Education and Consultancy Services	Western Urban
19	Institute of Management, Accounting & Tourism (IMAT)	Western Urban
20	Orthodox College of Education of West Africa	Western Urban
21	Pentecostal International Christian College of Management and Administration	
22	Kelhas College for International Studies	
23	LICCSAL Business College	Western Urban
24	Sierra Leone Theological College & Church Training Centre	Western Urban

APPENDIX C: ENROLLMENT AT PUBLIC HTEIS 2007-2011

Table C.1. Enrolment at Public HTEIs, 2007-2011

HTEI	2007/08			2008/09			2009/10			2010/11			2011/12		
	M	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**
USL	4730	2092	6822	4851	2261	7112	5129	2472	7601	5586	2835	8421	6123	3285	9408
FBC	2949	773	3722	3008	897	3905	3128	1059	4187	3212	1120	4332	3341	1143	4484
COMAHS	502	520	1022	445	589	1034	478	586	1064	513	693	1206	635	821	1456
IPAM	1279	799	2078	1398	775	2173	1523	827	2350	1861	1022	2883	2,147	1321	3468
Njala (NU)	2591	1338	3929	2791	720	3511	2298	1449	3747	2731	1772	4503	4022	2132	6154
MMCET	2068	1296	3364	1893	1760	3653	2218	1448	3666	2341	1461	3802	2842	1487	4329
EP	1421	594	2015	1534	683	2217	1302	785	2087	1521	842	2363	2286	1268	3554
NP	870	546	1416	1318	456	1774	1619	1026	2645	1623	1112	2735	1734	1200	2934
BTI	49	13	62	43	10	53	38	15	53	46	20	66	54	28	82
PLTC	717	562	1279	736	293	1029	724	347	1071	782	360	1142	834	580	1414
FTC	408	397	805	197	204	401	553	505	1058	934	843	1777	2115	1113	3228
TOTAL	12,854	6,838	19,692	13,363	6,387	19,750	13,881	8,047	21,928	15,564	9,245	24,809	20,010	11,093	31,103

Source**:** Tertiary Education Commission (2012)

APPENDIX D: CRITERIA FOR EVALUATING HTEI PROGRAMS

Table D.1. Criteria designed by TEC for the evaluation of programs in HTEIs

Component	Details	Percentage Score (%)
Staffing	- Teaching Staff - Staff/Student Ratio Staff Mix by Rank - Qualification - Competence - Administration - Non-teaching Staff - Staff Development	25
Academic Content	- Philosophy and Objectives - Curriculum - Admissions - Academic Regulations - Tests and Examinations - Evaluation of Students - Practical/Project Work - External Examination System - Industrial Links (e.g. apprenticeships)	25
Physical Facilities	- Labs/Clinics/Studio - Space - Equipment - Classroom Space and Equipment - Office accommodation - Safety and Environment - Recreational and Health Facilities	20
Library	- Books and journal collections - Internet access - Appropriate software and hardware	14
Funding	- Internal and external auditing - Financing of programs	10
Employer's Rating		6

Source: TEC Guidelines for Accreditation of Academic Programmes and Tertiary Educational Institutions in Sierra Leone

APPENDIX E LIST OF INSTITUTIONS ACCREDITED BY NCTVA

Table E.1. List of Institutions Accredited by NCTVA as of 2011

Institution	Location
ABBAKO Institute	Port Loko
College of Accountancy and Public Administration	Western Urban
College of Business Studies	Western Rural
College of Health and Environmental Sciences	Western Urban
College of Management and Administration	Western Rural
College of Professional Studies	Western Urban
College of Travel and Tourism	Western Urban
East Freetown International College	Western Urban
Eastern Polytechnic	Kenema
Emibex College of Management & Finance	Western Urban
ESTU Maritime Institute	Western Urban
Evangelical College of Theology	Western Rural
Evangelical Technical/Vocational Institute	Port Loko
Freetown College of Management and Accountancy	Western Urban
Freetown Teachers College	Western Urban
Government Technical Institute	Western Urban
Institute of Advanced Management and Technology	Western Urban
Institute of Business, Administration, & Technology	Western Rural
Institute of Continuing Education and Consultancy Services	Western Urban
Institute of Management, Accounting & Tourism	Western Urban
Kakajama Technical VTC	Kenema
Kankalay Computer Institute	Western Urban
LICCSAL Business College	Western Urban
Maria Ines	Port Loko
Milton Margai College of Education and Technology	Western Urban
Murialdo Vocational Institute	Western Urban
Northern Polytechnic	Makeni
Port Loko Teachers College	Port Loko
REAPS Vocational Training Center	Western Urban
SAMKAM Institute of Technology	Western Urban
Sierra Leone Theological College	Western Urban
St. Joseph's Vocational Institute	Western Urban, Port Loko
Sulisha Institute of Management and Computer Studies	Western Urban
Sultan Institute of Management and Technology	Port Loko
The Ansarul Islamic College	Western Urban
The Fatima Institute	Makeni
Umar Bin Al-Khatab Institute	Western Urban
Young Women’s Christian Association	Western Urban

APPENDIX F: PERFORMANCE INDICATORS FOR UNIVERSITIES IN AFRICA

Table F.1. Performance Indicators for Universities in Africa

GOAL	INDICATORS based on 3-year averages	TARGETS related to goals	Relating targets to goals
1. Strong enrolments in SET	% of total student enrolment with SET majors	Average 40% or higher of total enrolment	Strong SET enrolments require at least 40% of students to be in SET programmes.
2. Strong postgraduate enrolments	% of total enrolment in masters & doctoral programme	Average 10% or higher of total	Strong postgraduate enrolments require at least 15% of students to be in masters or doctoral programmes.
3. Favourable student to academic staff ratios	Ratio of full-time equivalent enrolled students to full-time equivalent academic staff	Average ratio below 20	To meet teaching needs of students, ratio of FTE students to FTE academics should not be above 20.
4. High proportion of academic staff with doctoral degrees	% of academic staff with doctoral degrees	50% or higher of total academics	To meet high level research requirements, at least 50% of academics should have doctoral degrees
5. High levels of research funding	Research funding per in purchasing power parity USD (PPP$)	Funding per academic staff above PPP $20000	Research outputs are directly related to funding available to academic staff. The minimum should be PPP $20000 per academic.
6. High outputs of graduates in SET	SET graduates as % of SET undergraduate enrolments	20% or higher	Implies that graduate output levels are high and dropouts reasonably low.
7. High outputs of doctoral graduates	Ratio of doctoral graduates to academic staff	Ratio of 15% or higher	Implies that each academic should produce on average 1 doctoral graduate every 7 years. This would be a reasonably high output.
8. High levels of new knowledge production	Ratio of peer-reviewed research articles to academic staff	Research articles per academic of 0.50 or higher	Implies that academic staff should produce one research publication every two years. This would be a reasonably high output.

Source: Table 15 from Bunting and Cloete (2012), p. 40

APPENDIX G: MISSION AND VISION STATEMENTS OF SELECTED HTEIS

Table G.1 Mission and Vision Statements of Selected HTEIs

HTEI	Vision	Mission	Objective/Goals (selected)
Njala University (Source: Njala University Charter)	- To be a world-class institution in learning, scholarship and community service; defined by high quality of our academic programmes and the quality and strategic focus of our teaching and research; contributing to the personal advancement and success of the individual, our nation, and beyond	- To provide quality education, producing graduates with desirable attitudes, skills and knowledge through the advancement, development and dissemination of knowledge, the promotion of scholarship and community service	- To match university graduate output with national manpower needs - To foster partnership between the university and the private sector - To become a major driver in the socio-economic development of Sierra Leone and beyond, through the exploitation of the university's research and intellectual capital
Eastern Polytechnic (Source: Prospectus 2011/12)	- To provide leadership in community based educational innovations and be a most effective instrument of change and development in both the individual and the community leading to a positive influence on society.	- To maintain excellence; provide the essential services for our community and the nation and serve as an industry for quality human resource development as we train technicians and polyvalent educators molding them in the best moral and spiritual traditions of the founding fathers of this institution.	
USL (Source: IPAM Annual Report)	- Commitment to providing the best higher education possible that emphasizes quality academic programs that are responsive to the critical emerging needs of Sierra Leone, paying particular attention to the tripartite mission of instruction, research, and	- To provide the highest quality instruction in a variety of academic disciplines, through the curricular offerings of the three constituent colleges that reflects the national development agenda of Sierra Leone. It is predicated on the realization that the University of Sierra Leone will continue to maintain and enhance excellence in all its	

HTEI	Vision	Mission	Objective/Goals (selected)
	public service.	endeavors so that the graduates it produces can be globally competitive in the job market.	
Milton Margai College of Education and Technology (Source: Prospectus 2010/11)		- To provide opportunity for young school graduates to study a wide range of courses: academic and non-academic at a variety of levels	- To provide courses in technical studies and skills to provide courses that will enhance skills development and provide knowledge to students for the middle manpower development of Sierra Leone
Institute for Advanced Management & Technology (Source: Prospectus)	- To produce corporate professionals through on-campus and distance education using information technology. To provide quality the highest quality instruction in various professional disciplines, that our graduates will compete in the job market locally and internationally.	- To enable Sierra Leone achieve basic education for the majority of its population, and simultaneously provide the youth a work-oriented and meaning education. - To also serve the community by providing the educational training necessary to prepare for positions in business, industry, government entrepreneurship, and to establish motivation for career advancement and job enrichment.	
University of Makeni (Source: University Website)	- For Sierra Leone to become a civilization of love where peace and social justice for all transcend tribal and political divides, where every citizen has equal access to education to enable them to fulfill their potential.	- Informed by Catholic Social Teaching, to promote human, social, political and economic development in Sierra Leone and Africa as a whole, which at the same time respects the environment so that its resources are used for the benefit of all.	- To develop, promote and implement a common ethical vision and praxis for all dimensions of development in Africa in support of the Millennium Development Goals.

APPENDIX H: PROGRAMS AVAILABLE AT MAJOR HTEIS

Table H.1 Categories of Programs available at Major HTEIs

Major Fields	Categories of Programs
Education	Teacher Certificate , Higher Teacher Certificate, Post-Graduate Diploma in Education, Measurement & Evaluation, Special Needs Education, Early Childhood Education, Adult Education, Educational Administration, Sports Coaching & Management, Guidance and Counseling
Humanities & Arts	Philosophy, Cultural Studies, Theology, English, Linguistics, French, History, African Studies
Social Sciences, Business, and Law	Economics, Social Work, Population & Development Studies, Social Science, Peace and Conflict Studies, Population Analysis & Social Statistics, Library Science, Mass Communication, Law, Sociology, Political Science, Statistics, Agricultural Economics, Extension and Rural Sociology, International Relations, Community Development Studies, Population & Family Life Education, Measurement & Evaluation, Psycho-social Counseling, Geography, Demography
Science	Physics, Biology, Chemistry, Mathematics, Marine Sciences, Geology, Biological Sciences, Applied Ecology And Conservation, Environmental Sciences (Applied Ecology), Environmental Sciences (Environmental Chemistry), Computer Science
Engineering & Manufacturing & Construction	Civil Engineering, Mechanical & Maintenance Engineering, Electrical & Electronics Engineering, Automobile Engineering, Marine Engineering, Soil and Water Engineering, Agricultural Engineering, Architecture, Surveying, Geographical Information Systems, Electronics & Telecommunication, Networking, Computer Hardware and Electronic Systems, Energy Studies, Industrial Arts, Carpentry, Masonry, Plumbing, Air Conditioning & Refrigeration
Agriculture	Agriculture, Horticulture, Aqua-Culture & Fisheries, Tree Crop Science, Agronomy, Animal Science, Forestry, Crop Sciences, Soil Sciences, Home Sciences, Wildlife, Ecotourism and Biodiversity Conservation, Wood Science, Post-Harvest Technology, Farm Mechanization, Land and Water Management, Environmental Management and Quality Control
Health & Welfare	Nursing, Public Health, Medicine, Biomedical Science, Pharmacy, Community Health, Environmental Health, Medical Laboratory Technology, Community Nursing
Services	Hotel Management, Tourism Management, Food & Management Production & Service, Front Office and Housekeeping, Tourism Studies, Tour Guide, Tailoring, Dressmaking, Cosmetology, Painting and Decorating

Table H.2 Details of Awards offered at Various HTEIs

PROGRAMS	USL	Njala	UniMak	EP	NP	MMCET	FTC	PLTC	IAMTECH
Management/Accounting/Commercial									
Accounting		B,D		HD,					B
Applied Accounting	B,M								
Applied Economics & Marketing									B
Banking & Finance Studies		B		D					B
Business Administration	B,M	M	B,D,C	HD,D					B
Business Studies/Mgmt.						D,C			HD, D
Commerce	B								
Development Studies	M		B,D,C						
Entrepreneurship	B								
Finance & Accounting	B			D,NTC		HD,D			HD, D
Financial Services	B,M								
Governance & Leadership	M								
Human Resource Mgmt.		M	B,D						B
Information Systems	B,M								B, HD
Marketing				D					
Procurement Mgmt.	PD,			D					
Project Development									HD,D
Public Administration	M	M	B,D,C						
Public Sector Management	B,M								
Purchasing & Stores Mgmt.				NTC					
Secretarial Studies		C,D		NTC		D,C			
Sustainable Development			M						
Telecom Mgmt.	PD,								
Education									
Teaching Certificates		HTC-P, HTC-S, TC		TC, HTC-P, HTC-S	TC,HTC-P, HTC-S	HTC-S	TC, HTC-P, HTC-S	TC,HTC-P, HTC-S	
Education		M, B, D	B,PG	B,D,C		B,			
Special Needs Education			D						
Early Childhood Education	B,D,C	B							
Adult Education	B,D,C	D							
Engineering & Technology									
Civil	B			B,HD, D,NTC,		HD,D			

PROGRAMS	USL	Njala	UniMak	EP	NP	MMCET	FTC	PLTC	IAMTECH
				NVC					
Mechanical & Maintenance	B			B,HD, D,NTC, NVC					
Electrical & Electronics	B			B,HD, D,NTC, NVC		HD,D			
Automobile Engineering				B,HD, D,NTC, NVC		HD,D			
Marine Engineering						HD,D			
Post-Harvest Technology		M							
Soil and Water Engineering		M							
Agricultural Engineering		B							
Architecture						HD,D			
Computer Science/Studies		B		HD,D					B
Electronics & Telecom		B							B
Networking									B
Business Information Technology		B							B
Computer Hardware and Electronic Systems		HD,D							HD
Data Processing and Information Technologies		HD,D							HD
Energy Studies		B							
Industrial Arts		HD							
Farm Mechanization		HD							
Land and Water Mgmt.		HD							
Arts & Humanities									
Philosophy			B						
Mass Communication	B,D,C		B						
Library Science	B,D								
Cultural Studies	D								
Theology	B, D								D
English	B								
Linguistics	B								
Hospitality and Tourism									
Hotel Management						HD			
Tourism Management						HD			

PROGRAMS	USL	Njala	UniMak	EP	NP	MMCET	FTC	PLTC	IAMTECH
Food & Management Production & Service						D,C			
Front Office and Housekeeping						D,C			
Tourism Studies						D			
Tour Guide						C			
Social Sciences & Law									
Economics		M,B							B
Social Work	B	B							
Population & Development Studies	B,D								
Social Science	B								
Peace and Conflict Studies	B	M							
Law	B		D,B						D
Population Analysis & Social Statistics	C								
Sociology	B	M,B							
Political Science	B								
Statistics		M,B							
Agricultural Economics		M,B							
Extension and Rural Sociology		B							
Basic and Applied Sciences									
Physics				B					
Chemistry		B		B					
Biology				B					
Integrated Sciences									
Mathematics				B					
Statistics and Demography				HD					
Geography	B	B							
Biological Sciences		B							
Applied Ecology And Conservation		B							
Geographical Information Systems		B,HD							
Surveying		HD,D, PD,C							
Environmental Mgmt. &		PD,C							

PROGRAMS	USL	Njala	UniMak	EP	NP	MMCET	FTC	PLTC	IAMTECH
Quality Control									
Agriculture and Forestry									
Agriculture		HD, D, C	C,D,B	B, B.Ed.					
Horticulture		M, B		B.Ed.					
Aqua-Culture & Fisheries		B							
Tree Crop Sciences				D					
Agronomy		HD							
Animal Science		M, B, HD							
Forestry		M, B, HD							
Crop Sciences		M, B, HD							
Soil Sciences		M, B							
Home Sciences		M, B		B, D, NVC					
Wildlife, Ecotourism and Biodiversity Conservation		B							
Wood Science		B							
Medical and Health Sciences									
Nursing	B,SRN, SECHN	SRN,SECHN		SECHN, SRN					
Public Health		B		C					
Medical Laboratory Sciences/Technology		HD,D		D					
Medicine	B								
Biomedical Science	B								
Pharmacy	B,D	HD,D							
Community Health		HD,C							
Environmental Health		HD,D, C							

Source: Various HTEI documents. Programs on offer as of 2011 academic year

B: Bachelor Degree; HD: Higher National Diploma; D: (Ordinary) Diploma; C: Certificate; PD: Post-graduate Diploma; SRN: State Registered Nurse; SECHN: State Endorsed Community Health Nurse; M: Masters TC: Teacher Certificate; HTC: Higher Teacher Certificate

APPENDIX I: QUESTIONNAIRE FOR SURVEY ON SKILLS AND COMPETENCIES CRITICAL FOR SUCCESS

Instructions: Pick the **five** skills and competencies most critical for success at work. Rank them from 1 to 5, with 1 being the most important

1	A sense of maturity and how to succeed on your own	_____
2	Improved ability to solve problems and think analytically	_____
3	Time-management skills	_____
4	Independent and critical thinking/reasoning skills	_____
5	Strong work habits	_____
6	Greater commitment to being involved in the community and more engaged and informed about contemporary social and civic issues	_____
7	Strong writing and oral/speaking skills	_____
8	Tangible business skills, and a specific expertise and knowledge in your field of focus	_____
9	Competency in computer skills	_____
10	Expanded understanding of science and its relevance to other areas of study	_____
11	Expanded knowledge of Sierra Leonean culture and history	_____
12	Expanded knowledge of cultures and societies outside Sierra Leone	_____
13	Knowledge of and respect for people of other backgrounds, ethnicities, and lifestyles	_____
14	Teamwork skills and the ability to get along with and work with people different from yourself	_____
15	Exposure to the business world	_____
16	Sense of values, principles, and ethics	_____
17	Leadership skills	_____
18	Self-discipline	

BIBLIOGRAPHY

Adams, Jonathan, Christopher King, and Daniel Hook. *Global Research Report: Africa.* Leeds: Evidence, by Thomson Reuters, 2010.

Ajayi, J. F. Ade, Lameck K. H. Goma, and G. Ampah Johnson. *The African Experience W ith Higher Education.* Accra, London, Athens, OH: Association of African Universities, James Currey, Ohio University Press, 1996.

American Association of Colleges and University. *Liberal Education and America's Promise.* 2012. http://www.aacu.org/leap/vision.cfm (accessed August 21, 2012).

Ananiadou, Katerina, and Magdalean Claro. *21st Century Skills and Competences for New Millennium Learners in OECD Countries.* OECD Education Working Papers, No. 41, OECD Publishing, 2009.

Braima, Samuel Jamiru, Philip Sahr Amara, Brima Baimba Kargbo, and Bridget Moseray. *2004 Population and Housing Census: Analytic Report on Employment and Labor Force.* Freetown: Statistics Sierra Leone, 2006.

Brennan, John. "The Academic Profession and Increasing Expectations of Relevance." In *Key Challenges to the Academic Profession*, edited by Maurice Kogan and Ulrich Teichler. UNESCO Forum on Higher Education Research and Knowledge and International Centre for Higher Education Research Kassel, 2007.

Bunting, Ian, and Nico Cloete. *Cross-National Performance Indicators: A case study of eight African universities.* Wynberg, South Africa: Centre for Higher Education Transformation, 2012.

Carrol, Bidemi. *Private Monies, Public Universities: Implications for Access and University Behavior. A Study of Makerere University.* Palo Alto: Stanford University, 2005.

Christian, Michelle, Karina Fernandez-Stark, Ghada Ahmed, and Gary Gerei. *The Tourism Global Value Chain: Economic Upgrading and Workforce Development.* Center on Globalization, Governance & Competitiveness, Duke University, 2009.

Cloete, Nico, Tracey Bailey, Pundi Pillay, Ian Bunting, and Peter Maassen. *Universities and Economic Development in Africa.* Centre for Higher Education Transformation (CHET), 2011.

Cybermetrics Lab. *Ranking Web of World Universities.* January 2012. http://www.webometrics.info/index.html (accessed July 23, 2012).

Decker, Olufemi Sallyanne. "Structural Change and Competition in the Sierra Leone Banking Sector: An Empirical Investigation." In *Economic Challenges and Policy Issues in Early 21st Century Sierra Leone*, edited by Omotunde E. G. Johnson. International Growth Centre, 2012.

Finegold, David, and Alexis Spencer Notabartolo. "21st-Century Competencies and Their Impact: An Interdisciplinary Literature Review." 2010.

Government of Sierra Leone Human Resource Management Office. "A report of the 2011 Manpower Hearings and the Human Resource Plan and Budgets of Ministries, Departments and Agencies (MDAs) for FY 2012." 2011.

Government of Sierra Leone. "National Sustainable Agriculture Development Plan 2010-2030." 2010.

Government of Sierra Leone. "Sierra Leone Local Content Policy." 2012.

Government of Sierra Leone. *Tertiary Education Commision Act.* Freetown: Government Printing Press, 2001.

Government of Sierra Leone. "The Agenda for Prosperity: Road To Middle Income Status. Sierra Leone's Third Generation Poverty Reduction Strategy (2013-2018)." Freetown, 2013.

Government of Sierra Leone. *The National Council for Technical, Vocational and Other Academic Awards Act.* Freetown: Government of Sierra Leone, 2001.

Government of Sierra Leone. *The Tertiary Education Commission (Tertiary Education Institutions) Regulations.* Freetown: Government Printing Press, 2006.

Hatloy, Anne, Tewodros Kebede, Huafeng Zhang, and Ingunn Bjørkhaug. "Perceptions of Good Jobs: Analytical Report, Port Loko and Freetown, Sierra Leone." Background Paper for the World Development Report 2013, 2013.

Ikpe, I. B. "Beyond relevance: In praise of useless knowledge." *South African Journal of Higher Education* 24, no. 4 (2010): 525–537.

Institute of Public Administration and Management. "Cluster Supervision: Ways Forward." 2012.

Institute of Public Administration and Management. "Student Handbook 2011-2012." Draft, 2011.

International Labor Organisation. "Developments and challenges in the hospitality and tourism sector." Issues paper for discussion at the Global Dialogue Forum for the Hotels, Catering, Tourism Sector, Geneva, 2010.

Loukkola, Tia, and Thérèse Zhang. *Examining Quality Culture: Part 1 - Quality Assurance Processes in Higher Education Institutions.* Brussels: European University Association, 2010.

Martin, Michaela, and Antony Stella. *External Quality Assurance in Higher Education: Making Choices.* Paris: UNESCO: International Institute for Educational Planning, 2007.

Materu, Peter. *Higher Education Quality Assurance in Sub-Saharan Africa: Status, Challenges, Opportunities, and Promising Practices.* World Bank Working Paper No. 124, Washington, DC: World Bank, 2007.

Ministry of Education, Science and Technology. "Education Country Status Report: An analysis for further improving the quality, equity and efficiency of education system in Sierra Leone." 2013.

Njala University. "Service Charter (Draft)." 2012.

OECD. *Testing student and university performance globally: OECD's AHELO.* n.d. http://www.oecd.org/education/highereducationandadultlearning/testingstudentanduniversityperformancegloballyoecdsahelo.htm (accessed August 24, 2012).

Owlia, Mohammad S., and Elaine M. Aspinwall. "A framework for the dimensions of quality in higher education." *Quality Assurance in Education* 4, no. 2 (1996): 12-20.

"Report of the Sierra Leone Conference on Development and Transformation: Charting the next 50 years forward." Freetown, 2012.

Sierra Leone Conference on Development and Transformation. "Report of the Sierra Leone Conference on Development and Transformation: Charting the next 50 years forward." Freetown, 2012.

Tertiary Education Commission. *Annual Report 2010.* Freetown: Tertiary Education Commission, 2011.

Tertiary Education Commission. "Annual Report 2011." Freetown, 2012.

Tertiary Education Commission. "Registration New Institutions - Analysis Form." 2011.

Tertiary Education Commission. "TEC Guidelines for Accreditation of Academic Programmes and Tertiary Educational Institutions in Sierra Leone." Draft, n.d.

Tertiary Education Commission. "Tertiary Institutions in Sierra Leone 2003/2004/5." 2006.

Turay, Brima Michael. "The Unknown Facts about Lecturer Pay and the Minister of Education." *Awareness Times*, March 15, 2013.

U.S. Embassy. "2012 U.S. Embassy Sierra Leone Investment Climate Statement." 2012.

UNESCO. *WORLD DECLARATION ON HIGHER EDUCATION.* 1998. http://www.unesco.org/education/educprog/wche/declaration_eng.htm (accessed July 27, 2012).

University of Makeni. "Prospectus 2011-2012." *University of Makeni.* 2011. http://universityofmakeni.com/wordpress/wp-content/uploads/PROSPECTUS-whole-2.pdf (accessed July 18, 2012).

World Bank. *Financing Higher Education in Africa.* Washington, D.C.: The World Bank, 2010.

World Bank. "Sierra Leone Economic Update." 2012.