



# Diagnostic Paper for Higher Education in Liberia

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*Analytic Interpretations of the Information Available for the HESP*

Based on general surveys of the Liberian education system, census data on the higher education sub-sector, and interviews and discussions with leaders and stakeholders, this is a summary diagnosis of the status of higher education in Liberia. The purpose of this diagnostic review is to enrich the dialogue for the Higher Education Strategic Plan (HESP).



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## Executive Summary

The National Commission on Higher Education (NCHE) was established to regulate an expanding and undistinguished higher education sub-sector. Years of crisis and neglect have affected the quality of faculty, the availability of facilities and resources, and the academic preparation of students for advanced study provided by the general education system. The fragile context of Liberia presents many interrelated problems that resist easy solution. Over the past few years, the higher education institutions have begun to address their difficulties, and increased investment by the Government has enabled them to more aggressively deal with quality issues. Salaries are slowly rising, female participation in the student body and faculty has increased, experienced and qualified faculty are returning or joining the universities, critical major fields are emerging with the recognition and awareness of the economic and job possibilities, and facilities for some institutions have been repaired or newly built and expanded. Resources remain a challenge and technology is not widely available, although support from oil and mining concessions has provided specialized equipment in some cases. In collaboration with the Association of Liberian Universities, the NCHE has negotiated standardization of calendars and basic curriculum, carried out two censuses to take account of the status of higher education, and introduced minimal criteria for the establishment of a higher education institution in Liberia. There is open and wide recognition of the problems that challenge the quality of the sub-sector, but there appears to be effective leadership, a will to chart the difficult path to progress, and investment to support the many areas needing attention.

The diagnostic review portrays a system with complex problems that will benefit substantially from a deep and probing dialogue about the situation and a systematic strategic process that maps some options for the way forward. With the vitalization of the labor market to reflect new possibilities, there is a need to consider the vision for higher education in Liberia and how that vision can be realized while dealing with the incremental improvements necessary to achieve international credibility and accomplish the general expectations for higher education beyond human capital development. There is not a clear path for fragile states to follow, so Liberia will have to build on their recent accomplishments and create their own directions to the future. As with such challenges, there are opportunities and difficulties. The strategic planning process presents the best prospect to meet the current and future challenges, as long as it builds an enduring process and does not become a static plan.

# Diagnostic Paper for Higher Education in Liberia

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## Analytic Interpretations of the Information Available for the HESP

### Objectives

- 1. Human development is critical for Liberia's post-war reconstruction and transformation efforts**, and will be featured prominently in the Government of Liberia's (GoL) Economic Growth and Development Strategy (EGDS) 2012-17, which builds on the Poverty Reduction Strategy 2008-11. The EGDS takes place in the context of *Liberia Rising 2030*, which is the government's on-going exercise to envision a trajectory leading the country to middle income status by 2030.
- 2. The catalytic potential of higher education reform to meet national development goals is currently untapped in Liberia.** In addition to serving as a key bridge between the growing number of basic education graduates and the labour market, an enhanced higher education system is essential for improving the lower levels of education, in particular through teacher training and more generally as an incentive for self-development efforts of students in preparation for advanced opportunities. Investments in higher education to improve analytical and knowledge generation capacities also have been found to enhance a country's overall aid-absorption capacity (Vorghese, 2010). A relevant and cost effective higher education system is a driver for workforce development, a powerful tool for addressing youth unemployment and unrest, an implementable pro-poor policy context with broad economic ramifications, and critical for maintenance of on-going investments in Liberia. An improved higher education system would thus contribute to the GOL's efforts to alleviate poverty, improve social cohesion, and reduce vulnerability to vagaries of its current fragile condition.
- 3. The Ministry of Education (MOE), the National Commission on Higher Education (NCHE), and the Association of Liberian Universities (ALU) have requested a partnership with the World Bank to develop a Higher Education Strategic Plan (HESP) that takes into account national economic development and social cohesion goals<sup>1</sup>. The objectives of the program, agreed to by the Government of Liberia and the World Bank, are to (i) assist in the development of a comprehensive survey report for higher education in Liberia; (ii) produce a Diagnostic Paper on priority issues in higher education, based on rigorous data analysis of the census survey, and (iii) provide technical assistance to the GOL to develop a Higher Education Strategic Plan to prioritize, sequence, and cost higher education interventions.**

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<sup>1</sup>Global good practice suggests that aid to higher education is maximized when support is extended to national policies and strategies, and when the focus is on institution-wide improvement rather than on selected faculties for targeted intervention (Vorghese, 2010).

4. **In the shadow of a proposed new higher education Act, the National Commission on Higher Education is the lead organization in the strategic planning process.** The NCHE coordinates activities related to strategy development and is the primary implementation agency for the oversight of strategy and policy recommendations. The roles may be adjusted in the context of the proposed National Task Force, Technical Working Groups, and Secretariat. The participation of the Ministry of Education and the Association of Liberian Universities is critical to the linkage of higher education to the general education system from which its students are found and to the coordination of the sub-sector for quality assurance to educate those students to fulfill its mission to produce talented graduates. Additional linkages with the public and private sectors, other important ministries (e.g., Ministry of Labor, Finance, and Youth and Sport), and recognition of the importance of faculty and students are important to the effectiveness of eventual policies and strategies. There is an urgent need to develop a HESP for Liberia that will address the issues and challenges in quality, access, equity, and relevance. The higher education institutions (HEIs) need a comprehensive mid to long-term plan to develop and improve the higher education sub-sector within the vision and goals set for the education sector. Such a strategy needs to set the directions for the improvement and development of the higher education system. Considerable capacity building and technical support is needed for the national staff of the government departments that will prepare and implement the HESP especially for the staff of MOE and NCHE. The NCHE is the proper agency to prepare the HESP as it is responsible for setting the overall policies for the higher education sub-sector in addition to regulating and monitoring the HEIs.

#### **Rationale: Human Development Needs in Liberia**

5. **The challenges are daunting.** Liberia ranks 182 out of 187 countries on the UNDP human development index and the prolonged civil conflict resulted in a substantial depletion of human capital. Despite some progress, social marginalization and exclusion abound and Liberia remains a highly fragmented society. While Liberia has abundant natural resources, the development benefits of such resources are likely to be reaped only if accompanied by high levels of human capital (Bravo-Ortega and de Gregorio, 2007).
6. **Higher education reform in Liberia requires a two-pronged approach: improve the sub-sector and improve the talent of graduates.** Currently 75 percent of the population in Liberia is below the age of 35 (CWIQ, 2010). The GoL will need to ensure that those under 15 years, or the “Post-Conflict Generation”, will become fully functional, literate, skilled, and healthy members of society and the labor force through equitable and quality social services. On the other hand, those between 15 to 35 years, also known as the “Lost Generation”, grew up during the civil conflict years. As such, they were practically excluded from accessing basic social services. Cognizant of the challenge to address the needs of both groups—albeit in different ways—Liberia’s long-term growth agenda will likely adopt a two-pronged approach: (i) **building cost-effective systems of education, health, and social protection for the next generations**, while (ii) **immediately addressing the social and economic integration needs of vulnerable youth (the “Lost**

**Generation’’) to mitigate economic stagnation and social unrest.** Improving the higher education *system* is a medium- to long-term goal that requires gradual scaling up of institutions and running them effectively and sustainably. It also entails updating and upgrading a system that was severely crippled through the war, both with respect to destruction of physical infrastructure and the depletion of human capital. On the other hand, there is the short-term need to provide higher education to a pipeline of students with immense potential but who are likely to require substantial remediation and support, not only academically but also with respect to behavioral skills such as critical thinking, communication, collaboration, and creativity.

7. **Higher education is the primary mechanism for an enduring pipeline of skilled professionals, as well as for addressing poverty and inequality in Liberia.** A salient example comes from the agriculture sector. Over the short-to-medium term, agriculture (comprising mainly foodstuffs, livestock, and fishing as well as the processing and marketing activities associated with them) holds great potential for rapid growth and job creation. The revival in the sector so far has been partly due to the government’s assistance to farmers and also resettlement onto agricultural lands deserted by farmers during the war. Despite these interventions, output is not enough to meet local demand and the country makes up the deficit with imports - an indication of the potential for further growth in the future. The country will need to figure out how to advance the agriculture sector going forward and transition from the mainly subsistence type of production currently prevailing by adapting new technologies and innovations and providing its people with the requisite knowledge and skills to utilize these technologies and innovations; it is in this latter area where the education sector can play a vital role.
8. **Another example emerges in iron ore mining,** where there are two foreign companies engaged in extraction of the raw materials for export. For Liberia to take the leap from extraction of iron ore to its processing would require a cadre of workers with higher level skills than is currently available. The link between these emerging areas, and those to come, with economic development is supported by recent analyses. As Bloom, et al. (2006), point out: ...”recent evidence suggests higher education is a determinant as well as a result of income, and can produce public and private benefits. Higher education may create greater tax revenue, increase savings and investment, contribute to reduced population growth, improve technology, and strengthen governance.”
9. A third example reflects a new strategy of the President’s Office to **encourage local entrepreneurial development through support services provided by the Liberian Business Association (LBA).** Historically, Liberia has had many small shops in rural areas and in the municipal markets, serving the basic needs of local communities. The idea was to encourage more entrepreneurial activity featuring many other services and goods. Additionally some of these would be developed by university-graduate business students who increasingly face a lower demand for their services in the formal markets. The College of Business at the University of Liberia mounted an entrepreneurial summer course to prepare business students for these kinds of possibilities.



**10. The demand for higher education is very high** (e.g., about 23,000 applications to the University of Liberia for 6,000 places), but the preparation is very low (only a handful of 1st and 2nd passes in the WAEC Exams and generally poor performances in the university entrance exams). As observers pointed out, the higher education institutions are taking the “best of the bad” and then under-educating them. This selection ratio would usually signal a very selective system. The proliferation of higher education institutions exploits the demand and the quality of these alternatives remains a question. Given the difficulty of the larger universities to mount effective programs, the quality of these smaller, facility-and-resource poor institutions is unclear.

**11. Few donors have provided support for higher education in Liberia.** Although there are ad hoc programs, the major partner involved is USAID through two large-scale projects that together aim to build three Centers of Excellence in areas critical to addressing the countries priorities. USAID’s Excellence in Higher Education for Liberian Development (EHELD) project focuses on agriculture education at Cuttington, University and engineering education at the University of Liberia. USAID’s second project, Center of Excellence in Health and Life Sciences (CEHLS) project, addresses the national shortage of health care workers at the University of Liberia. The Chinese government also recently finished building a new \$23 million dollar campus for the University of Liberia but, in general, the Chinese government does not provide programmatic support for the sector.

**12. In education, the majority of post-war reconstruction efforts have focused on basic education, at the expense of reforms in post-basic education and training (PBET)—**which consists of upper secondary, technical and vocational education and training (TVET), and higher education. While the human development needs are many, Liberia is at an especially critical juncture with respect to higher education reform. A comprehensive and coherent Higher Education Strategic Plan (HESP) would set the roadmap for Liberia to transition out of low-skill industries and become more competitive sub-regionally, as well as globally.

**13. The President of the University of Liberia, Emmet A. Dennis, concluded: “As the demands for national reconstruction are different from those that existed before the conflict, implementation of pre-conflict curricula show severe limitation in providing the human capital for national reconstruction.”** His advice serves as a starting point for strategic planning. He argues the necessary roles for a post-conflict university are to:

1. *Pursue renovation and reconstruction of its physical asset and services;*
2. *Pursue intensive programs for faculty, staff, and student development;*
3. *Provide, as much as possible, expertise that would play pivotal roles in setting the national developmental and rehabilitative agenda for sustainable national recovery and prosperity;*
4. *Transform and reorient the curriculum, and research and service programs toward a more applied approach for immediate relevance to the national developmental agenda;*
5. *Perform research and disseminate information relative to the root causes of the conflict and develop strategies for dealing with the conflict and avoiding future occurrences;*

6. *Provide the consciousness for integrity in national deliberations; and*
7. *Take ownership of adjacent communities, those that supply students to the university, and the curricula of feeding institutions in specific areas.*

**14. Although there is a fair amount of literature on the role of higher education and HEIs in post-conflict societies, information regarding best practices in higher education reform in post-conflict countries is sparse,** and the approaches tried are diverse with ambiguous contributions to post-conflict societies. The wide variety of approaches range from “strong civic institutions relatively insensitive to differences in the society to multicultural models that more directly attempt to integrate diverse communities.” The designs seem to be influenced by the political interests in the society more than by other more educational or human resource development considerations. Dialogue around the roles of HEIs in post-conflict societies does provide some useful categories of discussion: (i) social inclusion of those disenfranchised during the conflict, etc.; (ii) the nature of appropriate curriculum as a means of identifying the original underlying causes of the conflict and using that understanding as a means of ameliorating those issues through peace education, reconciliation, etc.; and (iii) the HEI as a “venue” (or social connector) for broader dialogue on the range of topics facing the post-conflict society, such as public/private sector development, citizenship, social capital, political participation, etc.

#### **Background of the National Commission on Higher Education**

**15. Before the civil war, the history of higher education institutions was primarily the history of the University of Liberia, Cuttington University, and the William V.S. Tubman University.** The University of Liberia, the oldest degree granting institution in West Africa, was established in 1862 as the College of Liberia and expanded into a University in 1951. The first private co-educational university in West Africa was Liberia’s Cuttington University, founded in 1889 as a religiously affiliated institution and located in rural Bong County. Tubman University started as a College of Technology, and three years ago was established as a university, located in Maryland County. Historically, these institutions had the mandate of liberal arts, advanced technical training, and professional preparation and research. In addition, these institutions, as in other African countries, were expected to play an important role in promoting national development. Cuttington has shared national prominence with the University of Liberia, and these institutions have graduated many national and local leaders over the history of Liberia. Tubman brought higher education to the eastern side of Liberia, extending access and opportunity.

**16. As a result of the conflict, the institutions’ infrastructure (including equipment, facilities, libraries, laboratories, and buildings) was severely damaged, looted, or destroyed.** The post-war reconstruction efforts started with the rehabilitation of the higher education system. The universities often shut down for indefinite periods of time, and “garage institutions” mushroomed in the absence of any regulations. Moreover, the universities experienced a massive brain drain of their most highly qualified faculty and administrators. A 2007 assessment of higher education institutions (HEIs) by Association

of American State Colleges and Universities (AASCU) and the Ministry of Education concluded:

*The physical damage to universities has been horrific: laboratories stripped, equipment stolen, buildings burned. Yet the visible physical damage is only one part of the story of the catastrophic consequences of the civil war. The greater damage to higher education has been the loss of human capital... One unit at the University of Liberia, for example, reported that before the war, there were 27 Ph.D.s, 24 Masters-qualified faculty, with baccalaureate-trained faculty only used as lab and teaching assistants. After the war, that unit only had 2 Ph.D.s left, and 4 Masters-qualified faculties. As a result, the university now relies heavily on baccalaureate-only faculty to teach courses at all levels<sup>2</sup>.*

17. Just before the civil turmoil that has marred Liberia's progress in developing a quality higher education system, **the National Commission on Higher Education (NCHE) was established by an Act in 1989** in order to (1) formulate broad policy guidelines for the establishment of higher education in Liberia and serve as principal liaison between the institutions of higher learning and the government of Liberia; (2) monitor, evaluate and accredit all institutions of higher learning; (3) approve new and existing programs of higher education for funding after having satisfied itself of their needs for national development; and (4) review existing programs at institutions of higher education with the aim of establishing priority programs of study based on national needs.<sup>3</sup> The Commission was moribund during most of the conflict but the Secretariat of the NCHE was eventually established in 1997. The resurgence of the NCHE in a difficult decade indicated its importance and was a major step forward to guide Liberian institutions into initial compliance with international standards. In the absence of legal and professional guidelines, Liberia experienced the proliferation of 'less than optimal' institutions. The NCHE's development and legal establishment of policies "represent[ed] a turning point in the development of higher education..."<sup>4</sup> and led to a rationalization of higher education institutions. NCHE is still rebuilding its organization in order to carry out its mandate. During this post-war period, compliance with regulatory standards and regulatory oversight is now implemented, and twenty-eight (28) of the newly established higher education institutions of the earlier period of uncertainty were closed in 1998. With little resources, even over two decades later, neither the universities nor the NCHE meets international expectations, but they have begun the process of assessment, review, and reflection through the census surveys and the activation and dialogue of the Association of Liberian Universities. Many problems remain. NCHE has few staff and low funding, and the universities are offering either an inflated set of programs without credible quality, important offerings under difficult conditions and limited resources, or dubious investments in programs unrelated to local problems and issues or likely to result in international contributions to academia. Current circumstances result in the compromise of standards with expediency to create the framework of advanced education, and an expectation that the future will provide greater quality assurance.

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<sup>2</sup>"Report of the Visiting Delegation of the Association of American State Colleges and Universities (AASCU) to Liberia, April 22-27, 2007" (2007).

<sup>3</sup>*An Act Establishing a National Commission on Higher Education*, 1989.

<sup>4</sup>Launching statement by Dr. D. Evelyn S. Kandakai, Chairperson, National Commission on Higher Education, 2002.

**18. There are thirty (30) colleges and universities in Liberia that are covered by the NCHE.** There are additional tertiary institutions in education (Rural Teacher Training Institutes at Kakata, Zorzor, and Webbo) and technology (Booker Washington Technical Institute). Only the colleges and universities are currently included under the regulations and oversight of the National Commission on Higher Education (NCHE). The other institutions are under the Ministry of Education, reporting to the Deputy Minister for instruction. Originally, the concept of higher education was broader: “refers to institutions and programs that encompass all educational programs of study and institutions above the senior secondary level. In terms of programs of study and degrees or credentials awarded, a higher institution is defined as a Junior or community college, a technical or technological institute, a Polytechnic, a four-year college, a Seminary, a University college or a University (p.3, *National Policy on Higher Education in the Republic of Liberia*, Promulgated October 4, 2004).”

**19. International good practice suggests that quality assurance and regulation functions should be separated, but several variants on this principle are possible within a functional separation framework** (e.g., the USA Council for Higher Education Accreditation with internal and external quality assurance and external accreditation; Ireland’s internal quality assurance with external accreditation; and France’s Ministry of Education centralized control of academic degrees (see J.S. Eaton’s for a changing USA picture, *The Future of Accreditation?* From CHEA, 2008); as well as developments in *The Bologna Declaration of 19 June 1999: Joint Declaration of the European Ministers of Education*). In 2004, under the direction of Dr. D. Evelyn S. Kandakai (Chairperson, NCHE) and Dr. Lawrence S. Bestman (Executive Director, NCHE), the policy statement for NCHE specified the areas to be accredited: curriculum, teacher staff (quantity and quality), student admission advisement, retention, and graduation requirements, standard for awarding degrees, financial support, physical facilities, and conduct of administration (pp. 6-7, *National Policy on Higher Education in the Republic of Liberia*, Promulgated October 4, 2004). An accreditation panel was proposed for five to seven members, including the Secretariat, selected Commissioners, and co-opted professionals.

**20.** The National Education Consultative Conference (NECC) of 2011 recommended the transfer of accreditation from NCHE to the National Accreditation Council (NAC; eventually named under the *Reform Education Act of 2011* as the Center for Certification and Accreditation) to correspond to the responsibilities and functions of international accrediting bodies. Accreditation is the assurance to the public and professional communities that the institution is meeting its obligations as stated in its mission statement and that these activities are congruent with good practice and contribute to the educational aspirations of the nation. Accreditation is intended to both develop quality and ensure its continued practice based on outcomes rather than the inputs of establishment requirements or the processes of regulations. In the crisis period, many schools and training and higher education institutions were created to fill the void and needs of the nation. They are not all operating at the standard expected for such institutions and they need both assistance and evaluation of their programs and institutional quality. The current tension entails the establishment of the independent

center or retention of control within the NCHE, under a new Higher Education Act. Either organizational arrangement would necessitate some external review, because of the capacity deficits in the universities and agencies.

- 21. The National Commission on Higher Education is specifically designed to work with the establishment requirements and operational regulatory functions of higher education.** These areas of responsibility apply to inputs and processes for higher education to ensure conformity with the notion of a higher education institution and compliance with the legal authority for existence and its operations. The NCHE enforces the legal requirements for an institution of higher education to function in Liberia. The Center for Certification and Accreditation was to be a broad-based voluntary body that adopts the historical responsibility for the accreditation of higher education institutions from the NCHE. This separates accreditation from establishment and operation rules of the institutions, and creates processes more aligned with institutional improvement and peer review in terms of outcomes that meet international standards. The Center for Certification and Accreditation also extends its reach throughout the education system to guarantee the fulfillment of the education agenda as a student progresses through the program, from pre-school to post-graduate studies. Both of these institutions assure the public of the quality of education and promote the processes associated with quality assurance and related continuous improvement.
- 22. The existence of the NCHE joins Liberia to the growing number of countries in Africa with established agencies for quality assurance in higher education<sup>5</sup>.** However, there is no technical staff or higher education experts at the NCHE, and thus the human capacity of the organization remains weak and requires reliance on external assistance (some of which comes appropriately from the Association of Liberian Universities). A cadre of high-level professionals is needed for the NCHE to take the leadership role in a much needed higher education reform effort. Additionally, there are insufficient resources for serious quality assurance and accreditation work. Estimates from several HEIs in 2006 indicated that a country with ten tertiary institutions could expect to spend at least \$450,000 for the agency's effort and about \$200,000 for the institutional component (Hayward, 2006), and this does not include the costs to institutions that are required to meet resulting standard deficiencies. Liberia has thirty HEIs.
- 23. There is a pressing need to prepare a higher education strategic plan (HESP) for Liberia to address the issues of quality, growth, equity, and relevance to the labor market and consolidate the policies within a framework and overall direction for higher education.** There is no medium to long-term national plan for higher education and the HEIs rarely have such plans mainly because of the lack of capacity and their preoccupation with their operations. The institutions admit students yearly according to their available physical facilities and academic staff. In the public and private institutions,

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<sup>5</sup>Peter Materu, *Higher Education Quality Assurance in Sub-Saharan Africa: Status, Challenges, Opportunities and Promising Practices*, World Bank Working Paper No. 124 (Washington, D.C.: World Bank, 2007)., and Fred M. Hayward, *Quality Assurance and Accreditation of Higher Education in Africa*. (Conference on Higher Education Reform in Francophone Africa: Understanding the Keys to Success, 2006, updated 2010).

the amount of subsidies they get from the government and the level of income they generate from student fees, donations, and other sources restrict the expansion of facilities and staff.

**24. The HEIs need a comprehensive long-term plan to develop and improve the higher education sub-sector within the vision and directions set for the education sector.**

Such a strategy needs to set the directions for the improvement and development of the higher education system to address questions such as: (i) where higher education wants to be in the coming ten to fifteen years, (ii) whether it is going in the right direction, and (iii) whether it is linked to general education strategies. The higher education sub-sector needs to be part of the education sector plan and the sector plan should be part of the overall social and economic strategy of Liberia. 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 as the financing plan to ensure implementation and fiscal sustainability. Experience in other countries showed that successful strategic plans were prepared by the national expertise with the support of international development organizations to increase ownership. Also, these plans were supported by high level political will that continued through preparation and implementation stages.

**25. The HESP is usually based on detailed studies and situation analyses.**

The preparation of such a plan also requires a projection exercise that covers enrollment and cost as well as policy simulations to assist in setting reasonable, achievable and affordable targets given the limited resources and capacity. The enrollment and cost projections and the financing analysis carried out by the team for this Higher Education Diagnostic Paper can be utilized and integrated in the work of developing the HESP.

**26. Considerable capacity building is needed for the national technical staff of the government departments that will prepare and implement the HESP.**

The NCHE in the Ministry of Education is responsible for setting the overall policies for higher education subsector in addition to regulating and monitoring the higher education institutions. If the NCHE would be the institution responsible for supervising and coordinating the preparation of the higher education strategy, considerable capacity building support and technical assistance is needed during the phases of plan preparation and implementation.<sup>6</sup>

**27. 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 the strategic plan includes: (i) a high level inter-sectoral National Task Force to set the overall vision and sector directions, (ii) Technical Working Groups (TWG) to conduct the diagnostics on priority areas, and (iii) a full-time

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<sup>6</sup>During the World Bank mission in May 2012, two training sessions were conducted for the MOE and NCHE technical staff. The first was the statistical training workshop and the second was the hands-on training workshop on the applications of the projection model used in the enrollment and financial projections.

Secretariat to coordinate the activities and report progress to the National Task Force (NTF). The NCHE started contacting the high level government agencies to form the NTF and the team recommends that efforts continue to form the TWG as a priority. This group will start preparing the research and analysis needed by the NTF to make informed decisions and provide useful strategic choices. At the same time, efforts must be continued to form the high level NTF to set the overall directions for the sub-sector.

**28. The Higher Education Strategic Plan (HESP) will build on current strategies implemented by the NCHE in collaboration with the Association of Liberian Universities (ALU). Some of the successful strategies include:**

- *Founding of the Association of Liberian Universities (ALU) in 2003.*
- *Early establishment of minimal criteria for an HEI, and the consequential closure of 28 inadequate institutions.*
- *Standardized general curricula for the first two years of higher education, enabling consistency across the HEI programs and some degree of equivalence.*
- *Two census surveys completed during FY2009 and FY 2011 to provide a comprehensive portrait of the status of higher education.*
- *Standardized academic calendars so that all institutions began in September and ended by June.*
- *Development of an education sector assessment as a background for the deliberations of the National Education Consultative Conference at Suakoko in 2011.*
- *Development of a new Higher Education Act that will clarify the roles of NCHE, the linkage of regulation and accreditation for HEIs, and the creation of an autonomous NCHE, no longer reporting directly to the Ministry of Education. A draft of the Act is with legal authorities for review and redrafting.*
- *Early discussions on institutional autonomy, clarifying the mutual and separate responsibilities of the NCHE and HEIs, as NCHE carries out its regulatory functions.*

## **Quality: Priority Issues in Higher Education**

### **Retrospective on Quality Constraints for HEIs**

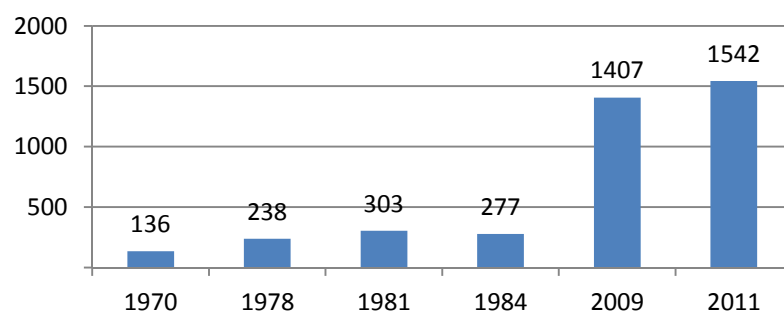
**29. Higher education in Liberia has a long history of quality difficulties, poorly prepared freshmen, and variable program quality.** During the last thirty plus years since the “rice riots” of 1979, Liberian higher education has suffered extensive damage, multi-source constraints, and years of neglect and even closure, but quality issues were apparent even before this destructive era. Many of the problems and issues of today have a long legacy in local higher education. An important limitation to programming at the HEIs is the poor education quality at the lower levels of education and accordingly, the inability of entering students to handle the advanced educational programs at the higher education level. Students are not ready for this next step. The HEIs either provide remediation or let them “sink or swim.” In either case, this inefficiency costs talent and wastes resources. The entire higher education program is compromised. Without foundational educational experiences, HE student entrants are not prepared and the faculty faces a wide range of backgrounds, few developed skills, and little knowledge in areas needed for the academic programs expected at this level.

**30. Many of the characteristics of earlier students are similar to those confronted by the HEI system today, but there was some promise for progress before the crisis years.**

Enrollment has increased substantially over the years due to population growth even within the difficult conditions over recent times. The decrease in enrollment between 1981 and 1984 may indicate the beginning of the stresses in the rural areas particularly and the political uncertainties following the coup in April 1980. The primary education net enrollment was 32% of the school age population in 1978 and 31% in 1984. The current rate is about 32.4% so enrollment of primary school youth at the right age (CWIQ, 2010) and it has kept up with the substantial population growth. The characteristics of the students remain approximately the same because the penetration into the society is still limited, and schooling remains a distant activity for most school-age children. In 1971, 75% of the children in school were not at the right age for their grade. This was not due to political crises, but rather to cultural and economic conditions, and these constraints continue, even if weakened by the civil disruptions.

**31. The system has grown substantially over the years,** increasing complexity and number of children who need quality education. With the system growth, age-grade mismatches were considerable. To compensate for age-grade mismatch, the Accelerated Curriculum Experiment (ACE) was initiated in 1971 to accelerate the progression of older students to the level of their age cohorts. The experiment was carried out under contract with the Tubman Teachers College at the University of Liberia and conducted at 10 schools across 5 counties. It had positive results but was stopped in 1974. The replacement (about 1978 to 1985) was a more general program for improved teaching that would deal with all age levels and multi-age classrooms, called Improving the Efficiency of Learning (IEL). IEL was also successful, and it was expanded through the Primary Education Program (PEP), which was stopped by the growing crisis. These early explorations demonstrate that improved quality is possible, but with the diminished quality of teacher educational backgrounds, the size of the system, and widespread destruction of facilities and resources, the graduates of the formal system are unlikely to be well prepared for tertiary education any time soon. There are more children in school (and the numbers are increasing), lower educated teachers, and limited progress in facility and resource improvements. Any HE strategy will need to deal with the lowered possibilities at this juncture of educational development than the growing potential of earlier times and the strategy must encompass the enormous increase in the size and complexities of the system.

**Figure 1: General Enrollment at Irregular Census Intervals ('000)**





Source: C.W. Snyder, Jr, & J. Nagel (1986). The Struggle Continues! World Bank and African Development Bank Investments in Liberian Educational Development (1972-1985). Monrovia, Liberia: Ministry of Education; Ministry of Education Censuses.

**32. Teacher quality has been a serious constraint for a long time but there was a “vener” of talent earlier that has disappeared and will be difficult to reproduce.** In 1978, the number of teachers who were not trained in education was about 4,300, with only just over 2,000 trained. Before the war years, many of these “untrained” teachers had high school degrees, or some college experience, and over 750 had advanced degrees (including 10 doctorates). After the “rice riots” and the government coup of 1979-1980, over 2,000 of the teachers had some college experience and over 1,100 of these had a Bachelor’s degree and 212 had advanced degrees. Liberia was making progress, and more of the teachers were Liberian citizens than earlier (91% were citizens in 1984, compared with 65% in 1970). This new veneer of Liberian teacher talent was short-lived, and the crisis resulted in the loss of nearly all of this slowly developed local potential. Higher education needs to address the talent deficiencies in the larger education program. Given the increasing enrollment in higher education and the slow growing job market, there are many future graduates who have studied in advanced courses, are unlikely to find jobs in their study areas, and may provide new potential in the teaching force. HE strategies should encompass alternative certification schemes for their graduates to contribute to the improvement of the education system.

#### Faculty

**33. Across institutions there is agreement that faculty development is an important priority.** At the University of Liberia, it is estimated that 50% of the faculty has their degrees from the same institution, about 8% of the full-time faculty has doctorates and less than 4% of the part-time faculty has doctorates. Unfortunately, university staff development, even beyond faculty, suffers from weak systems and poor management. Liberian universities struggle a great deal with little chance for improvement unless they improve their inconsistent, outdated, and inefficient policies and procedures. Management and administrative staff need professional development, lines of communication and authority need improvement and active practice, and institutions have to develop and use strategic planning and policy and strategy assessment to continue to improve their programs and support their faculty.

**34. Recruitment, retention, and development of faculty are critical concerns.** The pool of talent is small, the participants cannot generally afford to hold only one position, and opportunities for professional learning are few. Cuttington requires faculty to undertake a training program on teaching at the college level through its Center for Teaching and Learning. Instructors participate in semester workshops and submit their syllabi, notes, quizzes, and resources for the semester. The University of Liberia supports some training benefits for increasing qualifications and receives restricted funding for faculty scholarships for external qualification upgrading, particularly in critical areas such as geology and education. Most institutions have no faculty development programs. Over two-thirds of the HEIs are located in Montserrado County, so many of the institutions share faculty for common courses.

**35. There is universally low credentialed faculty in higher education institutions.** Even at the flagship institution, the University of Liberia, where salaries are higher, the academic composition reveals a considerable reliance on Bachelor's level administrators (80%) and full time faculty (30%), although evidence of structural improvements in qualifications is apparent. The general increase in enrollment, however, led to more part-time faculty (many with Master's and possibly shared with other institutions), and accordingly, the 75% full-time faculty of 2009/10 dropped to 43% in 2011/12. This problem was considered important for quality assurance and many programs were postponed or cancelled, awaiting qualified faculty availability or professional development.

**Table 1: Faculty Composition (#) at the University of Liberia over Two Surveys**

Qualification	Administration		Full-Time Faculty		Part-Time Faculty	
	2009/10	2011/12	2009/10	2011/12	2009/10	2011/12
Ph.D.	4	7	11	25	0	15
Master's	60	17	131	191	35	249
Bachelor's	18	105	100	92	44	137
Associate	9	2	1	1	0	7

Source: HEIs Survey 2009/10 and 2011/12

**36. Over all the Master's-Bachelor's Degree-Granting Institutions, there were not substantial changes in the general profile, except increased use of part-time faculty and some part-time administrators.** The changes may reflect the larger enrollments and the growth of institutions needing to share faculty to handle the student increases. Given the apparent gains at the University of Liberia and the increased investment by the Liberian Government, the lack of change in the qualifications of full-time HEI faculty is disappointing.

**Table 2: Faculty Composition (#) at All Master's-Bachelor's Degree Institutions over Two Surveys**

Qualification	Administration		Full-Time Faculty		Part-Time Faculty	
	2009/10	2011/12	2009/10	2011/12	2009/10	2011/12
Ph.D.	29	33	57	55	31	38
Master's	74	91	440	448	217	489
Bachelor's	159	266	245	208	59	269
Associate	64	50	5	3	2	7

Note: There were 9 Master's or Bachelor's Degree Institutions in 2010 and 11 in 2012.

Source: HEIs Survey 2009/10 and 2011/12

**37. Significant increases in higher education expenditures, particularly at the University of Liberia, may account for the faculty qualification improvements at the University of Liberia but has not yet had apparent effects across HEIs.** From a base of just over \$11 million, higher education expenditures increased to about \$22 million by FY2012.

This constituted 34% of total education spending, higher than primary (32.7%) and secondary (24.2%), and clearly a high priority of the Government of Liberia. However, it should be noted that donor support is aimed at primary and lower secondary (basic education) levels so post-basic education is left almost solely to Government support.

38. The explicit intent of the University of Liberia is to attract and retain more qualified faculty to organize and lead key areas of academic study (e.g., business, education, engineering, mathematics, science, and physics). Similar strategies are applied at Tubman University (upgraded to university status when re-opened three years ago) and Cuttington, historically an important private (faith-based) HEI in Liberia. More modest increases have been provided to public and private institutions. These additional funds also cover the 1/3 increase in enrollment (from over 30,000 to over 40,000) in higher education from FY09 to FY11. Accordingly, the increased investment has contributed to some faculty upgrading, but has also supported the additional access to higher education.

**Table 3: Recurrent Expenditure by Level of Education**

Level of Education	Amount in US\$			Percentage of Level			Percentage of All Categories		
	2009/10	2010/11	2011/12	FY10	FY11	FY12	FY10	FY11	FY12
<b>Primary</b>	16,164,918	17,951,653	20,932,964	100.0	100.0	100.0	44.0	37.9	<b>32.7</b>
<b>Employee Compensation</b>	13,256,669	14,722,716	18,912,220	82.0	82.0	90.3	66.3	57.1	56.8
<b>Transfers</b>	777,087	152,037	69,233	4.8	0.8	0.3	6.5	1.0	0.3
<b>Goods and services</b>	2,131,162	3,076,900	1,951,511	13.2	17.1	9.3	44.6	50.8	24.1
<b>Secondary</b>	5,930,150	10,601,217	15,512,623	100.0	100.0	100.0	16.1	22.4	<b>24.2</b>
<b>Employee com</b>	4,809,957	8,836,958	11,744,885	81.1	83.4	75.7	24.0	34.3	35.2
<b>Transfers</b>	8,648	7,965	8,873	0.1	0.1	0.1	0.1	0.1	0.0
<b>Goods and services</b>	1,111,545	1,756,294	3,758,865	18.7	16.6	24.2	23.2	29.0	46.4
<b>TVET</b>	3,257,987	4,106,180	5,898,882	100.0	100.0	100.0	8.9	8.7	<b>9.2</b>
<b>Employee Compensation</b>	1,500,143	1,811,751	2,152,784	46.0	44.1	36.5	7.5	7.0	6.5
<b>Transfers</b>	616,087	1,319,811	1,958,498	18.9	32.1	33.2	5.1	8.5	8.6
<b>Goods and services</b>	1,141,756	974,618	1,787,600	35.0	23.7	30.3	23.9	16.1	22.1
<b>Higher</b>	11,409,467	14,734,945	21,765,853	100.0	100.0	100.0	31.0	31.1	<b>34.0</b>
<b>Employee Compensation</b>	438,810	419,277	509,526	3.8	2.8	2.3	2.2	1.6	1.5
<b>Transfers</b>	10,573,532	14,067,244	20,649,161	92.7	95.5	94.9	88.3	90.5	91.0
<b>Goods and services</b>	397,125	248,424	607,166	3.5	1.7	2.8	8.3	4.1	7.5
<b>Grand total*</b>	38,842,825	49,612,644	69,539,131	100.0	100.0	100.0			
<b>Employee Compensation</b>	20,005,580	25,790,702	33,319,415	54.4	54.4	52.0			
<b>Transfers</b>	11,975,354	15,547,057	22,685,765	32.6	32.8	35.4			
<b>Goods and services</b>	4,781,589	6,056,236	8,105,143	13.0	12.8	12.6			

Source: Author's computation from the Ministry of Finance Budget.

Note: \* Transfer components of the grand total include transfers to non-public schools/institutions (US\$2.1 million in 2009/10, US\$2.2 million in 2010/11, and US\$5.4 million in 2011/12).

39. The source of funds for higher education comes primarily from transfers, which can fund any type of expenditure. The University of Liberia dominates the share of transfers and has used this increase for upgrading faculty salaries to be regionally competitive. Salaries at the University of Liberia have increased over the last few years from about \$125/month to nearly \$1,400/month at the top levels and from \$45/month to \$780/month at the lower faculty levels. Additional support has come from oil and mining concessional contracts with prescribed allocations to higher education in these important development areas, and these contributions have been used to improve the quality of engineering and mathematics fields. Two important questions are how long these investment levels will be sustained, and can Liberia afford to support quality improvements across 30 HEIs.

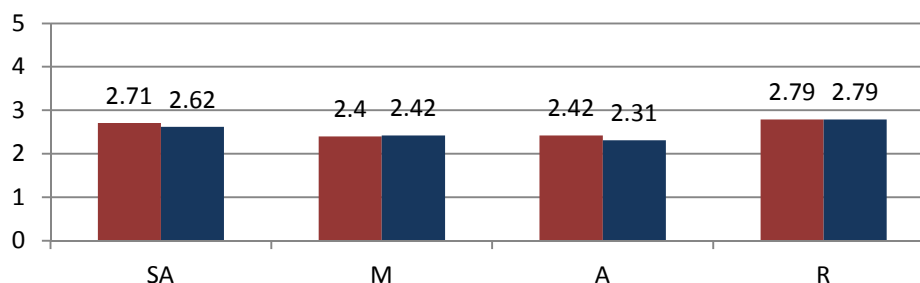
**Table 4: Transfers of Ministry of Finance Budget by Destinations**

Education Expenditure	Amount in US\$			Percentage Share		
	2009/10	2010/11	2011/12	2009/10	2010/11	2011/12
Transfer to University of Liberia	6,893,441	10,348,956	14,479,071	55.8	62.1	58.6
Transfer to W.V.S. Tubman University	2,294,330	2,541,430	3,508,000	18.6	15.2	14.2
Public Colleges			1,160,000	0.0	0.0	4.7
Transfer to Booker Washington Institute	1,527,106	1,854,003	1,900,000	12.4	11.1	7.7
Transfer to Cuttington University	0	740,275	1,188,000	0.0	4.4	4.8
Other Private Institutions	256,170	229,988	869,000	2.1	1.4	3.5
Transfer to Free and Compulsory Primary Education	527,741	116,967	30,000	4.3	0.7	0.1
Transfer to WAEC Fees Grade 6	213,936	-	-	1.7	0.0	0.0
Transfers to Private Schools	222,017	382,000	397,000	1.8	2.3	1.6
Transfer to Liberia Opportunities Industrialization Center	400,000	160,000	649,600	3.2	1.0	2.6
Others	24,708	295,032	545,352	0.2	1.8	2.2
<b>Total</b>	<b>12,359,449</b>	<b>16,668,651</b>	<b>24,726,023</b>	<b>100.00</b>	<b>100.0</b>	<b>100.0</b>

Source: Liberia Ministry of Finance

40. **Faculty recognizes the inadequacies of their HEIs.** In the initial data collection phase, it was felt that the faculty ‘voice’ is important to ascertain their views about the quality of the University workplace. Working through faculty associations at two major institutions, selected faculty responded to a questionnaire designed to ascertain their perceptions of the overall capacity of the university in which they worked. “Capacity” entailed strategic alignment (SA), management (M), administration (A), and resources (R), as indicated in the graph below. There is an obvious need for the improvement of faculty credentials. The question is if the university can organizationally use the talent effectively and efficiently. Faculty does not see any facet of their institutions as meeting minimal requirements. They also agree across these very different university environments, indicating the validity of low quality generalizations.

**Figure 2: Faculty Perceptions of University Capacity (n=43) from Two Universities**



Note: A rating of “3” is minimal capacity; a rating of “2” is poor capacity.  
Source: Qualitative Survey on Faculty Perceptions 2012

- 41. From the perspective of these faculties, the universities are unprepared to carry out the recommended agenda for national development or academic discipline competence.** Individual talent requires a supportive context in which to be effective. In the academic environment, faculty can isolate themselves from the context and focus on their enterprise. But in the Liberian situation, there is little research, more teaching time and requirements, and little opportunity to develop a research program or enrich teaching with current reading or professional development. The context is, therefore, particularly important to the nurturance of better teaching and knowledge generation. There seem to be few advocates for University credibility.
- 42. Merely increasing the skill and talent level of faculty will not yield an effective set of programs without other capacity improvements.** The faculty believes their colleagues can do the work, and feel their departments are effective. The problem from the faculty perspective is the lack of organizational effectiveness, weak work structures, low motivation, inefficient administration arrangements, and inadequate resources. Strategy development will need to address the general capacity issues before any program improvements can be expected or sustained. The awareness and admission of these problems is somewhat surprising, and yet they separate the institutional issues with the potential of their colleagues. The faculty does not believe in their institutions but they do believe in themselves. A combination of motivating incentives and better organizational arrangements needs to support any professional development activity.
- 43. Because of the limited talent available in the faculty, there is ambivalence for an accreditation scheme at this time.** A path to higher quality might be led by a process of accreditation, but in Liberia it is believed that no institution could currently be accredited in terms of international standards and the accreditation process would merely embarrass the institutions rather than help them to improve. Perhaps in a few years, there will be a better picture of quality as institutions continue their improvement efforts. There is agreement about quality assurance. There are various ways to approach quality assurance, and this is worthy of further investigation and perhaps support from the National Commission on Higher Education and the Association of Liberian Universities. Quality assurance activities should become an integral part of the university management. However, the smaller institutions may require some external assistance, a role that might be taken up by the NCHE.
- 44. The need for quality assurance is very evident and if seriously operationalized and active in improvement planning and implementation, the faculty may embrace the effort.** There are some faculty members who believe that the University is doing well in all areas, and there are many more faculty members who believe the University is generally inadequate. Most faculty members lie between these extremes but tend to see considerable flaws of the current organizational effectiveness of the University. Accordingly, the general rating is below what might be considered minimal credibility. Not only is the University system perceived to be weak in terms of graduates and general offerings, but it seems to have many internal organizational difficulties as well.

## Students

- 45. There is a serious preparation gap between what the senior secondary schools provide and what is required at university level.** The University of Liberia had a remediation program. They considered it almost useless, because they lacked the capacity to really help the students. The students had the same inadequacies after remediation so it was a waste of time, and because of extra costs to students, even referred to as “exploitation.” Very few students perform at the higher levels of the WAEC examinations (large percentages pass but very few credits or distinctions; *Country Status Report*, 2010) and some adjustments to acceptable scores have to be made at times on the entrance exams. Because of poor preparation of students and the low faculty profile in some major field areas, the University of Liberia has temporarily closed advanced courses until the faculty in those areas can be recruited or upgraded. These closures have been for only one year and have included the MBA program, physics, mathematics, biology/chemistry, and education. The strategy has been to improve quality one discipline/major at a time.
- 46. The demand for higher education is greater than the availability.** There were 23,837 applicants to the University of Liberia (16,220 males and 7,617 females), and it accepts about 6,000. Cuttington has about 2,000 applicants and accepts approximately 25%. This would be considered selective, but the applicant pool is weak. Many private universities have opened to take up the other applicants. Private universities have different characteristics that attract various kinds of students. Tubman attracts technology students who prefer a rural environment, whereas Stella Maris would attract those who wish to be in the urban area. Students also come to an institution like Stella Maris because of its strict compliance with instruction and rules (which parents like). Cuttington lures the student who wants a rural setting with good instruction and a long credible record of competitiveness in Liberia. Community colleges may attract students who want to remain in their region, and other institutions have specialties or characteristics that attract other students.
- 47. The future may be helped by increased use of communication and instructional technology; there is evidence that higher education can promote faster technological catch-up.** Cuttington is well-wired for Internet and its use is under study for instructional applications. Continued reliance on brick-and-mortar institutions for increasing higher education access may exceed the resources available and existing programs may benefit in quality with better technology applications. More technology applications could help accelerate technological diffusion, decrease knowledge gaps, and help reduce poverty and inequity in opportunities.
- 48. Higher education institutions do reach down into the senior secondary programs at times to try to improve those programs.** Cuttington encourages the top 10<sup>th</sup> and 11<sup>th</sup> grade students to come to a summer school featuring mathematics, science, and English. They are also introduced to software for the Internet. This gives the student some idea about what university would be like, shows them the possibilities at Cuttington if they

would attend in the future, and creates a learning environment on campus. This program entails 6 weeks of study each summer for three years. Unfortunately, this program is not currently operating but it reflects the awareness of the poor information flow to students and the lack of any systematic guidance assistance for students.

**49. The University of Liberia is establishing Centers of Excellence in engineering and health and life sciences, and Cuttington University is establishing a Center of Excellence in agriculture.** All three Centers are supported by USAID through the Excellence in Higher Education for Liberian Development (EHELD) project and the Center of Excellence in Health and Life Sciences (CEHLS) project. The purposes of the project are:

- *Encouragement of youth, especially women and girls, for study and careers in agriculture and engineering;*
- *Improve the thinking and problem solving activities in curriculum;*
- *Provision of job placement and small business opportunities;*
- *Professional development for higher education faculty in agriculture and engineering;*
- *Development of research at the university level that contributes to national development; and*
- *Provide a model for higher education development.*

**50. Most students major in business and sociology, with a substantial number of business majors focusing on accounting.** The profile of major fields of study (collected in seven general categories): Other areas, like engineering and sciences, are very small proportionally. This profile reflects the choices made by students, with the more difficult subject areas absent because students do not select them or the programs have been or are under reform (e.g., upgrading faculty). During the period 2007–2011, students in HEIs increased by 9.4 percent per year and their number increased from 29,860 to 42,767 in the same two years. The two NCHE censuses for 2009/10 and 2011/12 show even a faster rate of increase (13 percent per year) in the past two years. The same censuses also show that students are concentrated in the major groups of business and humanities where more than two thirds of total students are enrolled in these areas. On the other hand, fewer students pursue the relevant areas needed in the emerging economy of Liberia, including engineering, science, technology, and agriculture where the number of students in these areas range between six to eight percent of the total enrollment.

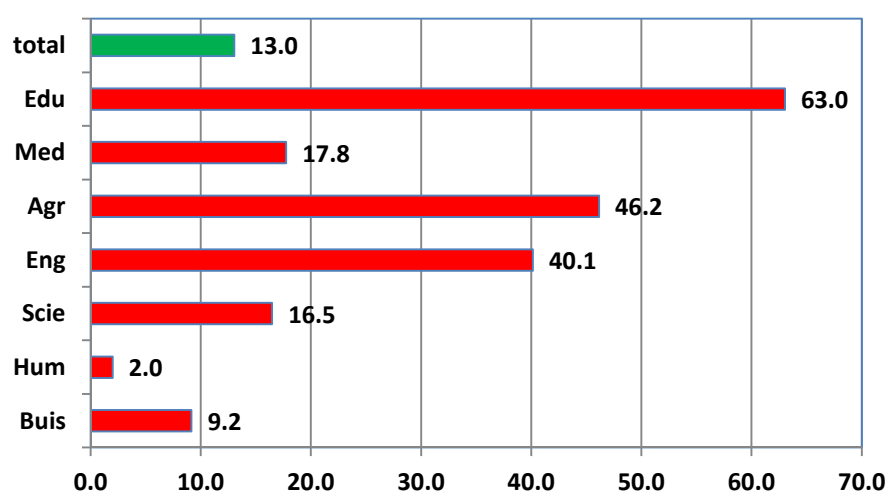
**Table 5: HEIs Enrollment by Major Areas of Study, 2009/10 and 2011/12**

<b>Selected Areas of Study</b>	<b>Major FY2010</b>	<b>Major FY2012</b>	<b>Graduates 2011</b>
<b>Business/Mgt</b>	15,925	18,975	2,273
<b>Humanities/Art</b>	9,004	9,368	1,117
<b>Sciences</b>	2,657	3,605	189
<b>Engineering</b>	1,310	2,573	129
<b>Agr/Forestry</b>	1,330	2,841	146
<b>Med/Nursing</b>	2,531	3,510	442
<b>Ed Studies</b>	713	1,895	94

Source: HEIs Survey 2009/10 and 2011/12

**51. Between 2009 and 2011 there has been a shift in growth in the areas that are more relevant to the labor market needs.** Enrollment in major areas of study that have small shares of enrollment and are more in demand by the labor market like engineering, agriculture and education, increased by high rates (40%, 46%, 63%, respectively). In the same time, enrollment in the areas of humanities and business, where student numbers make two thirds of the total, increased by about 2 and 9 percent per year respectively. The high increase in education, engineering, and agriculture could be attributed to the government policy of offering scholarships that cover mainly tuition fees for students majoring in these areas.

**Figure 3: Enrollment Growth Rates of Major Areas of Study, 2009 -2011 (%)**



Source: HEIs Survey 2009/10 and 2011/12

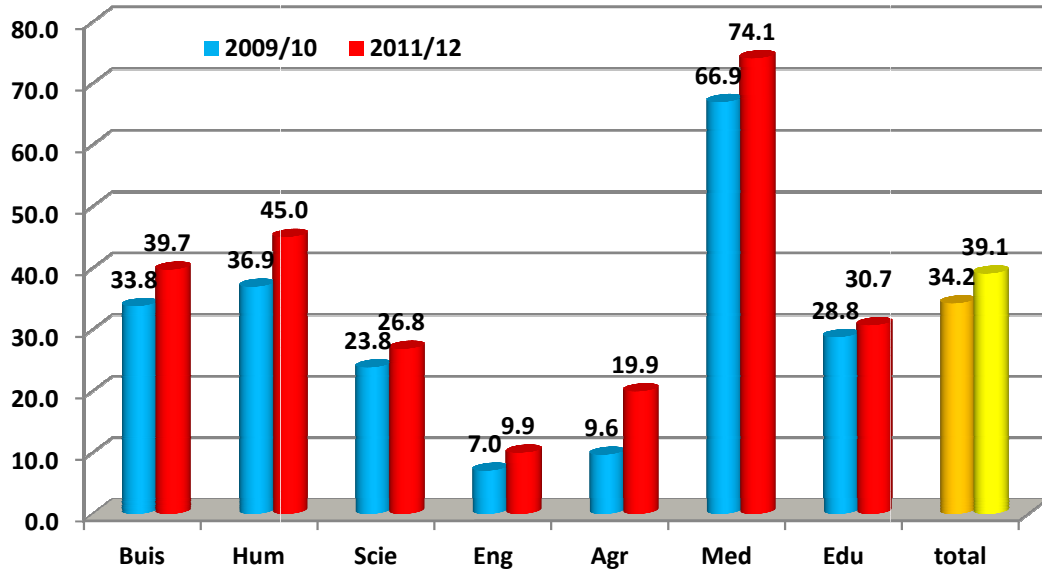
**52. Recent censuses show that females are enrolling in HEIs at a much higher rate than males.** The growth rate of females during 2007-2011 was 11.3 percent and in the past two years, 2009-2011 it jumped to 21 percent. Whereas, the growth rate for males was 6.1 percent during 2007-2011 and increased to 9 percent during 2009-2011. The high growth rate of females increased their share to the total HEIs enrollment from 34 percent in 2009 to 39 percent in 2011. If the growth of female enrollment will continue at the 2007-2011-rate, their number will reach equity by the year 2026.

**53. Females tend to concentrate in areas of study that are traditionally known to be associated with women.** In 2009, females make up the majority in health studies, mainly in nursing (67%) and have high concentration in humanities (37%) and in business studies (34%). Between 2009 and 2011, females continued their preference to enroll in these major groups and by 2011 their share increased to 74 percent in health studies, 45 percent in humanities and 40 percent in business studies. Females entering higher education still face issues related to the unavailability and inadequacy of the secondary education program, which constrains access of rural students to post-basic education.



Also the distant locations of secondary schools from many communities limit the continuation of females in post-basic education.

Share of Females in Major Areas of Study 2009/10 & 2011/12 (%)



Source: HEIs Survey 2009/10 and 2011/12

**54. Higher education is merit-based in Liberia’s major HEIs, and private and community colleges are left to address regional needs.** There are no general institutional strategies for dealing with economically disadvantaged students or those from impoverished local environments. Institutions deal with the background inadequacies in different ways. Cuttington requires all students to take two years of intensive English and mathematics because high schools do not teach these subjects well. The University of Liberia dropped its remedial program because it was not considered effective. Because all students came from generally poor academic preparations, their needs were met as best as possible within the regular processes of the regular academic program. Community colleges and private institutions are left to respond to regional differences that may capture local talent and provide some opportunity for tertiary education to those rejected by the mainline institutions.

**55. Enrollment growth has been significant in the post-crisis era and the growth continues in the last few years as well, especially for females.** Most of the growth has occurred for enrollment of females in all degree levels and general enrollment in Associate Degree-Granting institutions. There were fewer males in 2012 than in 2010, but there were over 4,000 more females in HEIs. In Bachelor/Master degree granting institutions, female enrollment comprises 34 percent (although only 28 percent at the University of Liberia). There is more gender parity in Associate Degree programs, where women make up 54 percent of enrollment.

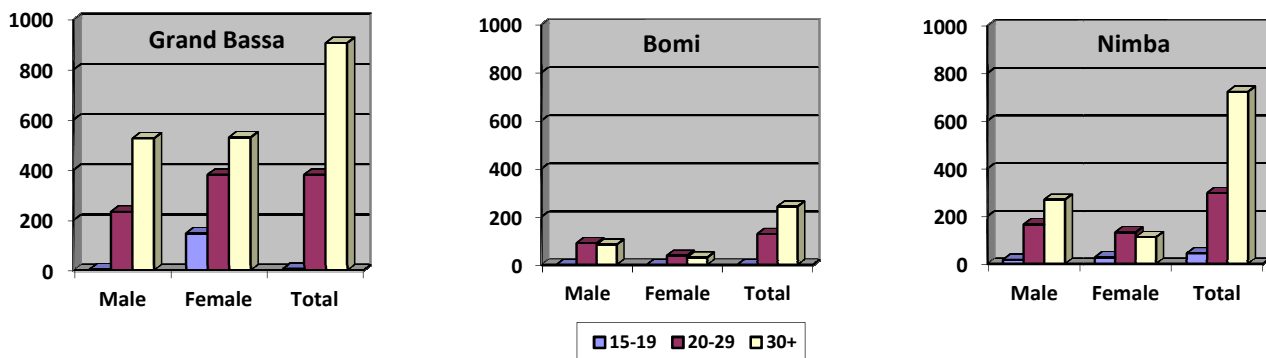
**Table 6: Enrollment in Higher Education Institutions, 2007/08, 2009/10, and 2011/12**

Degree	Year	2009/10			% Increase '08-'10	2011/12			% Increase '10-'12
	2007/08	Male	Female	Total		Male	Female	Total	
Bachelor/Master Degree	26,038	20,753	10,030	30,783	18%	24,554	12,789	37,343	21%
University of Liberia	15,556	14,373	5,145	19,518	25%	17,064	6,773	23,837	22%
Associate Degree	1,743	1,045	1,248	2,293	32%	2,571	2,969	5,540	142%
Diploma/Certificate	173	214	180	394	128%	NA	NA	NA	
<b>TOTAL</b>	<b>27,954</b>	<b>22,012</b>	<b>11,458</b>	<b>33,470</b>	<b>20%</b>	<b>27,125</b>	<b>15,758</b>	<b>42,883</b>	<b>28%</b>

Sources: Liberia Education Country Status (CSR) Report, 2010, and HEIs Survey 2009/10 and 2011/12.

**56. There is increased pressure to establish community colleges in every county (15) to increase access for post-secondary education, especially for girls and older students.** The distant locations of secondary schools from many communities limit the continuation of females in post-basic education and their share of total HEI enrollment is approximately 37 percent. That isolation is magnified in higher education opportunities. Women tend to be concentrated in health, general liberal arts, and social studies where they make up the majority of enrollment in these areas (about 53 percent in FY2011). There are also a majority of females at the public community colleges (51%). Only 0.7 percent of Liberian women have completed higher education, compared with 3.4 percent of men (*Core Welfare Indicators Questionnaire, or CWIQ 2010*).

**Figure 4: Enrollment at Public Community Colleges by Age**



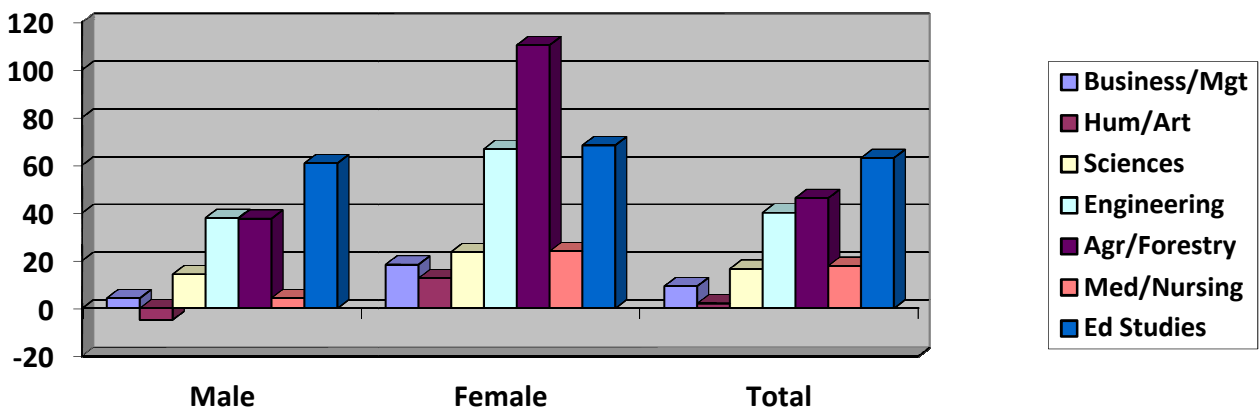
Source: HEIs Survey 2009/10 and 2011/12

**57. For many structural and cultural reasons, few females participate in secondary education and fewer still are available or academically prepared for tertiary programs.** Almost all tertiary institutions are located in the Montserrado region and this means that aspirations for advanced education require dislocation from familiar cultural origins and family support. Accordingly, few females are able to carry on their education in these tertiary institutions. The creation of community colleges may address the extent

of dislocation, but it remains to be seen if they will provide sufficient quality for any future advancement or if they will improve employment possibilities in the regions.

**58. The fastest growing areas of study are education studies (63%), agriculture/forestry (46%), and engineering (40%); however, these are also smaller programs so greater room for growth.** Lower growth rates for business and humanities reflect their already large enrollments. Female participation has increased in share in all fields of study, with an overall increase of about 5%. The lowest share of female participation is found in engineering (9.9%).

**Figure 5: Growth Rates (%) for Major Fields of Study by Sex**



Source: HEIs Survey 2009/10 and 2011/12

**59. Few female instructors at nearly every level of the education system, in addition to social justice arguments, limit the number and extent of role models for females in the school system. This effect varies by region, and also is true for higher education (about 12%).** There are fewer females than males enrolled at every level of schooling, from pre-primary through senior secondary school, which then continues into tertiary courses. Female students are far fewer than their male counterparts in higher education (16,258 females versus 27,585 males). Females have faced far more male instructors throughout their schooling careers. From 33% female teachers at pre-primary, the percentage of female teachers decreases from 11% at primary, 4% at junior secondary, and 5% at senior secondary across all types of schools, public and private. Females have few role models in the education system, and there is some evidence of abuses because of the lack of gender equality in schools. Although they find about 12% of HEI faculty are female, this is still a very low proportion. The lack of female teachers and the low proportional representation of females in higher education suggest system-wide problems that cannot be addressed by HEI strategies alone.

**60. Inequities at the secondary education level set the stage for persistent inequities at the higher education institutions.** Some counties are worse than other counties in female participation, and the rural areas lag behind, some considerably. Although the overall average for female enrollment is about 43% at secondary school and the figures are especially low for several rural communities. The Ministry's Census Report indicates

a 4% increase in the Girls/100 Boys Ratio at senior high school and girls' enrollment grew 21% compared with 18% for boys. This means that girls' participation is growing slightly faster than boys' participation, although these are relatively small numbers overall and general participation rates remain low.

- 61. Higher education opportunities for females are greater for those in the urban area, both geographically and in terms of higher levels of participation in senior secondary education.** Based on the recent Core Welfare Indicators Questionnaire (CWIQ 2010) Education, the Gross Enrollment Ratios (GERs) are low (53.3%) at senior secondary schools and the GER is lower for girls (41.6%) than for boys (61.2%). The urban Montserrado (greater Monrovia) has a GER of 73% for females but no other County comes close to that, and many rural counties are very low ( $\leq 25\%$ : Grand Cape Mount, River Cess, River Gee, and Gbarpolu). The Gender Parity Indices (GPIs) by county are computed using Gross Enrollment Ratios (GERs) for the two sexes rather than simply using the girls to 100 boys (G/100 B) ratio. Again, although the overall index is 79 girls to every 100 boys in secondary level, many rural counties are low (particularly Gbarpolu and River Cess). These are slight improvements over the previous CWIQ (2007), where it was 77 girls to every 100 boys, but the gains in primary level is significant unlike the profile of male-dominated schooling in Liberia or greater participation in the rural areas. This indicates that the lack of parity in admissions is likely to continue in higher education due to these structural limitations in the potential applicant pool for many years to come. If there is no policy to assure parity at primary level, there will no guarantee for what have been naturally achieved at primary level to continue.
- 62. The issue of secondary school completion remains subject to other considerations, but the evidence suggests higher education cannot directly affect the major problems of female participation in the HE applicant pool.** Although the Gross Completion Rate (GCR) for Senior High School is 41% overall (after accounting for repetition and dropout rates; CWIQ, 2010). The NCR rates reflect the low NERs for those at the official age range for the level, and few students are graduating at the anticipated age level. To some extent, then, the problem of a low qualified pool of applicants for higher education will continue and female participation suffers from these structural problems, possibly as much as from other contributing factors. In terms of policy, this might mean that recruitment is not likely to improve quickly and the policy focus would emphasize general school enrollment at the official age level.
- 63. Students do pursue areas that for the most part they believe will lead to employment but they also avoid areas for which there is employment but are difficult or require strong specialty backgrounds.** Most students are found in nursing, business, or sociology. The first is the belief that banks and other sources will take on significant numbers of graduates, and the second is a result of the post-conflict years in which NGO jobs were available to normalize the situations for people in many contexts. The need for business graduates is more limited now and the NGOs are changing foci. Even so, most students find eventual employment in the public sector. The Ministry of Labor indicates that this is changing also. The public sector is contracting along with the reduction of the

size of government. The decreasing public sector is accompanied by a limited private sector. The Liberian Business Association is trying to collect information on the small businesses in Liberia and potential areas of opportunity for graduates from the universities. If the government contracts too quickly, the unemployment of educated applicants and employees will follow, unless new options are available.

**64. Most choices about what to study are made from peer information and influence.**

There are few counseling supports and poor information on which to base a counseling program. No one seems to have much formal information about the employment of university graduates. Better collaboration with secondary schools may help HEIs in preparation for important programs for national development and may help students make better choices for their future employment. The USAID-funded EHELD project is investigating the usefulness of counseling for participation in engineering and agriculture programs.

### Relevance Concerns

**65. There is increasing evidence from Sub-Saharan Africa (SSA) that higher education systems must become better aligned with national economic development and policy reduction strategies.**

Consequences of misalignment result in a flood of students into increasingly dysfunctional institutions; graduates without viable work skills; an unending demand for funding that throw public budgets into disarray, outside stated priorities; high levels of graduate unemployment; increasing politicization of education and employment policies; and possibilities for political unrest and instability. Liberia faces many of these consequences already and the HESP must address these issues to avoid enduring problems. The misalignment is unfortunately coupled with low expectations for higher education and little recognition by the Government of the importance of higher education to the country's development. The Government should be looking to its higher education institutions as resources for the bright, talented, next generation of development professionals, policy leaders, etc., but higher education is given a low priority among the other needs of the country. Increased funding and support to the University of Liberia reflects growing hopes for the higher education domain, but the universities have to respond to these opportunities to demonstrate their direct links to national development goals. President Dennis of LU has argued that national development is one of the most important priorities for post-conflict universities.

**66. There is little articulation between university offerings and the existing labor market.**

There are no tracer studies, little feedback from the larger employers (from the Chamber of Commerce), and only anecdotal contributions to small businesses and entrepreneurial developments (Liberian Business Association). Even those university programs that presume to address employment needs seem speculative rather than evidence based. At the flagship public university, about 57% of the graduates this past year were from business courses, with accounting continuing to be the largest major field (n=4,464; 20% of the entire university program; and 27% (n=504) of recent graduates) and business in general comprising about 44% of all students (n=9,771 out of 22,410

total enrollment). This reflects the concern of students and the presumption of need by the university about employment possibilities.

**67. Informal feedback indicates that College of Business graduates are not being easily absorbed into the labor market.** There was a recommendation of creating a national service to put graduates into schools and/or Rural Teacher Training Institutes. The Business school does provide a 3-month program in small business management, launched in April, to address the transition of its graduates to small business development. Aside from business, the next field that attracts students is sociology. There are about 3,165 majors (14%) and were 340 graduates from this discipline (18%). The next largest major fields are biology (1,956; 9%) and agriculture (1,519; 7%). The question is what happens to the sociology majors when there is no apparent direct employment linkage, except government service, which seems to absorb all those students who have no particular opportunities in the private sector. A private institution reported that their nursing, science, and engineering graduates were quickly absorbed but other fields had few employers and considerable competition from the various other institutions also producing similar graduates. Stella Maris Polytechnic does provide contract-arranged programs, tailored to particular employers.

**68. The need for improved student services is recognized as an important component of program quality to ensure student support, adequate progression, academic advice, and career counseling.** The continuous demand for university entrance, coupled with the unusual selection of courses (either oversubscribed or questionably relevant), suggests that students have little support in their program choices. There is no counseling available for high school students to provide information and guidance about the differential opportunities for study across the various higher education institutions or the national needs and likely subsequent employment possibilities. Their decisions are personal and unassisted.

## Resource Issues

**69. Only about a half dozen of the Liberian HEIs have sufficient enrollment to have fiscal adequacy and program viability.** About 35 years ago, the Ford Foundation established the minimal student enrollment of 1,000 FTE as necessary to generate sufficient revenue from tuition for an HEI to survive. Smaller numbers limit the number of faculty available and the investment in academic programs and facilities. Liberian institutions have used, perhaps accidentally, the strategies of small institutions to survive. First, they have gained some, although limited, government support. Second, they have “merged” in a sense their faculty with others, although not systematically, by part-time faculty arrangements. This saves money but also means less campus time for their faculty and little time for program development. Third, institutions can establish niche programs that offer unique opportunities. Many of the newer institutions have tried to do this and with the other conditions in place, they remain viable.

**70. All HEIs have resource limitations that are reflected in limited adequate classrooms, libraries, laboratories, and other resources for quality programming.** However, the

University of Liberia benefits from additional support from concessional contracts that entail contributions to program development, including facilities, laboratories, equipment, supplies, and professional development (e.g., oil and mining concessions have contributed to improved quality in the geology program). Because LU is public, it has been the major recipient of concessional contracts. Other institutions rely on other sources for extra income, when available.

- 71. The problem for the smaller institutions with part-time faculty, limited resources, few administrators, and weak affiliations with their owners, is that they will not be able to meet any reasonable future regulations, which would entail additional investments in either physical structures or enhanced programs.** Furthermore, they have no capacity to do extensive planning or to contribute to HE sub-sector planning. The main problem for brick and mortar institutions is the maintenance of existing structures and the expansion of facilities to increase enrollment. Even with the survival tactics that enabled the establishment of these HEIs, they are at considerable risk and perhaps more relevant to the quality issue, they are unlikely to be able to offer sustainable full quality programs.
- 72. There is a need to decentralize higher education but within the limits of acceptable quality.** The trend of privatized institutions taking over niche programs across Africa's mirrored in faith-based programs in Liberia. The role for technology is proposed for public community colleges, but they suffer from the lack of faculty and resources. The question for the strategic planning process is how to address the risks and possibilities of private institutions, and what role will the NCHE play in either aiding them or in eliminating them? One idea is to absorb community colleges into the University of Liberia as satellite campuses but comparable quality is not yet attainable. Access is increased by their presence, and equity could improve, particularly when the institutions are outside the urban area exclusively, but quality is a problem for all HEIs. There is no pre-determined answer to the Liberian situation. It will be essential for the strategic planning process to be open and responsive to the realities of Liberia, now and in the future. At the Commencement of the Trinity Bible College in Firestone, Margibi County, the Director General of NCHE, Dr. Michael Slawon, pointed out how the NCHE closed down 28 inadequate tertiary institutions, but also pointed out the need to decentralize higher education, rebuild the facilities of colleges and universities, increase opportunities for access to higher education, and to address the shortages of qualified faculty and instructional staff. The commitment to expand access requires both public and private HEI expansion. How to accomplish that with limited resources and inadequate facilities and staff remains the challenge.
- 73. Recurrent expenditure in higher education is 72% and more than 2/3 of that went to salaries of both teaching and non-teaching personnel.** Capital expenditure is 28% of total expenditure on higher education, and most of this (88%) was due to expenditures on construction, equipment, and material. The major source of income (44%) came from student fees (tuition and other fees). The second largest source of income generated by the HEIs came from Government subsidies and scholarships. Lease and sale of buildings and land was also a fairly sizable source of income for the HEIs (11%).

**74. Public institutions have relied heavily on Government subsidies, scholarships, and student fees (95%) and they have the lowest costs per student.** Tubman University relies on Government the most (91%). Among private and faith-based institutions, Cuttington University is among the most subsidized, though Government subsidies amount to only 8% of income for the institution. Government subsidies for private institutions constituted only 7%, while student fees constituted 26% of total income. The rest of their income came from lease and sale of buildings and land (Cuttington University) and donations, such as Lincoln Dujar College (88%). Faith-based institutions received 13% of their income from Government subsidies and scholarships and 52% from student fees. The rest of their income came from sale and lease of buildings and land and donations. Private institutions have the highest total cost per student (\$1,944), which is almost double that in Public institutions (\$1,060) and higher than Faith-based also (\$1,281). The higher cost for private institutions may be attributable to their specialized programs in some cases. Private institutions have the highest personnel costs per student (\$4,029) is almost double that in the public institutions (\$2,347) and higher than the Faith-based also (\$3,296).

**75. The HEI survey should become a permanent feature of the NCHE review of institutions. Compliance should be required as a regulation,** and failure to comply should result in temporary deregistration. Although the current survey was an improvement over the previous one, partly due to the support of the EHELD project, incomplete data may mislead detailed assessments of strategic needs.

### **Affording Quality: Financing Higher Education**

**76. The World Bank Education Simulation Model (ESM) is applied to carry out detailed enrollment projections for general and higher education systems that are used as a basis for financial projections.**<sup>7</sup> The coverage of primary and secondary helps trace the impact on the student pipe line and establish the link between general and higher education. The projections are based on internal efficiency and transition rates and cover male and female enrollment in primary, junior and senior secondary as well as higher education (by major areas of study) for the period of 2011-2026. Enrollment projections of general education are based on demographic growth and the GPE targets set for basic education. Higher education projections are based on the growth trend in the past four years (2007-2011) shown in the two NCHE surveys of 2009/10 and 2011/12 and the detailed information obtained from the HEIs.

**77. The purpose of the projections is to show the implications of the recent rapid expansion of higher education system on the growth and composition of enrollment**

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<sup>7</sup> The Education Simulation Model (ESM) is a World Bank model used for enrollment and cost projections in different countries. It is a cohort model that traces the student's progression grade-by-grade and year-by-year. The projections are based on detailed demographic growth and efficiency and transition parameters. The ESM is usually applied to carry out projections in a base run and alternative policy simulations.



**and its financial requirements.** Therefore the projections are based on the assumption that the status quo continues, i.e. no change in current policies. This will help provide some answers to the following questions: what are the implications of the current enrollment growth rate (9.4%); is it achievable and sustainable? Also, is the current growth rate of females (11%) and its composition adequate and appropriate for labor market needs? Is the current trend of increased enrollment in engineering, agriculture and education studies relevant to labor market needs, and is the trend affordable and sustainable?

**78. Enrollment projections show that general education enrollment is expected to double in the coming fifteen years and the number of students will increase from 0.9 million in 2011 to 1.8 million in 2026 (4.6% annually).** During the same period, enrollment in primary education will increase at 3.8 percent per year reflecting the demographic growth and the student coverage needed for the GPE targets. Enrollment in secondary education is expected to increase at a higher rate of 6.5 percent per year as a result of the increasing flow of students from primary and junior secondary, due to the elimination of the general examination at the end of these cycles (details of enrollment projections is provided in Annex).

**79. As for higher education, projections show that if the growth in the past four years (2007-2011) continues at the same rate (9.4%), enrollment will increase three and a half times and the number of students will increase from 42,800 in 2011 to 155,400 in 2026.** Such a growth pattern will change the share of enrollment for each education level, i.e. the share of primary students will decrease from 72 percent in 2011 to 62 percent in 2026 and over the same period, the share of secondary students will increase from 24 percent to 30 percent, and the share of higher education students will increase from 5 percent to 8 percent in the same years.

**Table 7: Enrollment Projections, by Education Level**

	2011	2016	2021	2026
Enrollment ('000)				
Primary	674.5	886.8	1030.6	1194.8
Junior Sec	138.0	224.8	294.5	341.5
Senior Sec	82.0	122.7	192.8	233.2
HEIs	42.8	48.9	77.4	155.4
<b>Total</b>	<b>937.4</b>	<b>1,283.1</b>	<b>1,595.3</b>	<b>1,924.9</b>
Enrollment (%)				
Primary	72.0	69.1	64.6	62.1
Junior Sec	14.7	17.5	18.5	17.7
Senior Sec	8.8	9.6	12.1	12.1
HEIs	4.6	3.8	4.9	8.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: The base year is 2011/12 (2011) from the Liberia School Census (EMIS)

**80. The fast increase in areas of engineering, agriculture, and education, and the slow increase in humanities and business, represent desirable enrollment trends, although the exceptionally high growth rates in some groups may lead to distortions in enrollment patterns.** As mentioned in the Enrollment Composition and Growth Section above, growth was high in areas of study with small enrollment size and low in those with large enrollment size. More specifically, between 2007 and 2011, major groups like education, engineering and agriculture, that comprise 17 percent of the total enrollment, increased by high rates (29%, 14%, 10%, respectively) and enrollment in the groups of business and humanities, where enrollment makes two thirds of the total, increased by about 3 percent per year. If these growth rates continue, enrollment in these areas of study will increase substantially during the period of 2011-2026, i.e. enrollment in engineering will increase by six times and in agriculture by about four times. As for education studies, enrollment will increase at an exceptionally high rate of thirty seven times between 2011 and 2026.

**Table 8: Higher Education Enrollment by Major Area of Study, 2011-2026**

	2011	2016	2021	2026
Enrollment ('00)				
Medical	3,510	4,046	5,826	8,489
Engineering	2,573	3,488	7,359	15,537
Sciences	3,605	3,998	5,377	7,236
Business	18,973	18,724	22,169	26,924
Agriculture	2,842	3,612	5,824	10,895
Humanities	9,368	10,114	12,377	15,456
Education	1,896	4,888	18,451	70,846
Total	42,767	48,870	77,383	155,383
Enrollment (%)				
Medical	8.2	8.3	7.5	5.5
Engineering	6.0	7.1	9.5	10.0
Sciences	8.4	8.2	6.9	4.7
Business	44.4	38.3	28.6	17.3
Agriculture	6.6	7.4	7.5	7.0
Humanities	21.9	20.7	16.0	9.9
Education	4.4	10.0	23.8	45.6
Total	100.0	100.0	100.0	100.0

Note: The base year is 2011/12 (2011) from the NCHE Survey

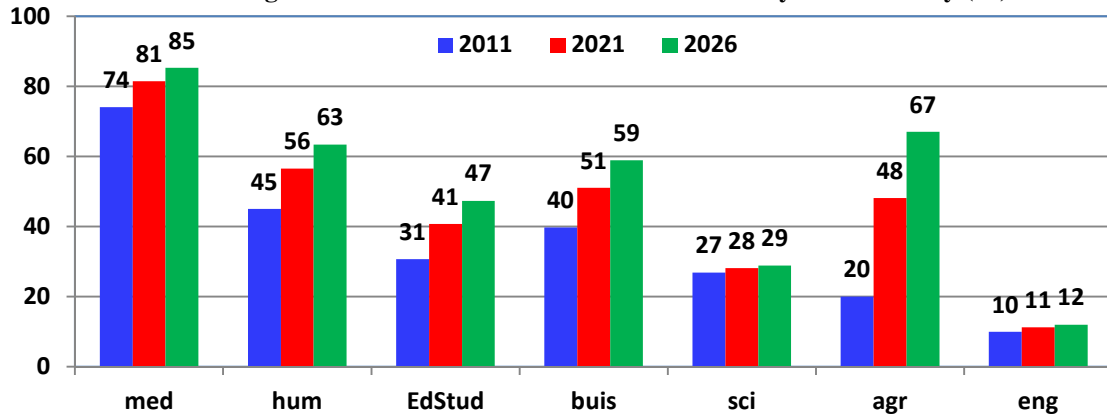
**81. As a result of such growth patterns, the share of enrollment in education, engineering, and agriculture will increase from 17 percent in 2011 to 63 percent in 2026 and the share of enrollment in humanities and business groups will decline from 66 percent in 2011 to 27 percent in 2026.** It is important to relate the soaring increase of students in education studies to the projected requirements for teachers, taking into consideration the growth in general education enrollment and the student-teacher ratio at each education level. This growth pattern has high cost implications as

engineering, agriculture, and other professional areas of study usually have high unit costs.

**82. If the high growth rates of female enrollment will continue, gender equity will be reached by 2026, and females will be the majority in the medical (nursing), humanities, business, and agriculture areas of study.** The growth pattern of females reflects their preference for the areas of studies that are more suitable for their environment. If growth rates in medical studies will continue, females will continue to be the majority in these areas and their proportion will increase to 85 percent by 2026. The same is expected to occur with the humanities and business areas of study, where the share of females is expected to reach 63 percent and 59 percent by 2026 respectively.

**83. Female enrollment over the 2007-2011 period has grown substantially (21%) in agricultural studies, an area that is traditionally not favored by females.** This is most likely due to the free tuition scholarship policy for students studying agricultural subjects. If such growth rates continue, the share of females in these studies will triple, increasing from 20 percent in 2011 to 67 percent in 2026. On the other hand, the share of females in the areas that are typically less appealing to females, like engineering and pure sciences, will increase slightly and reach 12 percent in engineering and 29 percent in sciences by 2026 respectively.

**Figure 6: Female's Share in HEIs Enrollment by Area of Study (%)**



Source: HEIs Surveys 2009/10 and 2011/12

**84. Secondary graduates are the inputs into higher education and at the same time, the higher education system prepares teachers, managers, librarians, laboratory technicians, and other professional staff needed by general education.** The flow of students from primary to junior secondary and further to senior secondary was suppressed by the exams at the end of primary and junior secondary, which has had an impact on secondary graduates comprising the pool of students that feeds university expansion. However, the general exams after primary and junior secondary have been eliminated and the flow of students to secondary schools is expected to increase significantly. Enrollment projections show that primary students will continue growing by 3 percent during the coming fifteen years whereas secondary enrollment is growing at double that rate. This quantitative growth together with quality improvement will require substantial

resources for primary and secondary education such as facilities, teaching and non-teaching staff, books, materials, etc.<sup>8</sup>

**85. General and higher education enrollment projections are carried out to assess the pool of students graduating from secondary schools and to ensure that there are enough students for expansion of the university system.** Projections show that there are enough secondary graduates to feed the expansion of higher education if the current rate of increase continues. In 2011, intake into the HEIs was almost half of the secondary graduates and the projections show that the proportion of intake to the total number of secondary graduates will increase to 78 percent by 2026.<sup>9</sup> Secondary graduates need to pass the WAEC examination and they can get automatic admission to the universities if they obtain a score of 1 or 2 on a scale ranging from 1-9. The latest WAEC result shows that the average for Liberia is around 8.2 which is below the passing grade of 8. In other words, less than 50% passed (got scores 1-8) the WAEC in 2011. Each HEI has their own admission test from which they collect fees and make admissions decisions. Currently, there are many university applicants consisting of secondary graduates from the current year and previous years. For example, only one in four (approximately 6,000 out of 23,000) applicants are admitted to the University of Liberia, which enrolls more than half of all students enrolled in HEIs.

**86. University admissions are limited by facilities and faculty rather than competency, but some institutions do provide remedial work because of quality issues at the secondary level.** Improvements in quality, access and equity must be relevant to the growing national developments needs of Liberia. Aside from the traditional liberal arts curriculum, there is little available in specialized domains and limited offerings in advanced topics and areas associated with the knowledge economy. Furthermore, students have little information about possible careers and majors, and these priority areas are not adequately established for these future prospects.

**87. The purpose of the financial projections is to see if the enrollment growth in the HEIs in the past four years is financially viable and sustainable.** These projections are carried out on the same principal of enrollment projections, that the status quo continues i.e. current policies remain without change. They include the expenditure needed for the rapid growth in the HEIs enrollment and the resources expected to be available from government and non-government sources as well as the financing gap between necessary expenditures and available resources. Furthermore, the projections are based on enrollment and unit costs; expenditures and resources are estimated in the base year (2011) prices. Projections are also based on expected future growth of GDP, government

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<sup>8</sup> Detailed expenditure analysis of primary and secondary education is in the Education Section of the PER, draft, May 2012.

<sup>9</sup> This is the link between gen and HE, i.e. the relation between SSSyr3 graduates and intake into the HEIs. The sec graduates are computed from projections of SSSyr3 taking the promotion rate given with other efficiency rates. The intake is calculated by the model as new entrants into the HEI (enrollment in yr 1 minus the repeaters).

and sector budgets and other macro indicators projected by the IMF and the World Bank (Annex includes detailed tables).

**88. The fast expansion of the HEIs enrollment during 2007-2011 (9.4%) requires substantial resources for additional staff, facilities, equipment, materials, etc.** Quality is already quite low and if such growth will continue without a parallel increase in staff and facilities, quality will deteriorate even further. To catch up with the fast enrollment increase, the HEIs need to increase their expenditure by one a half times more in the coming five years and more than double it in the coming ten years. Projections show that expenditures need to increase from US\$ 40 million in 2011 to US\$ 63 in 2016 and further increase to US\$ 99 million in 2021. In another words, the HEIs need to spend US\$ 4.6 million more annually in the coming five years and increase that amount to US\$ 7 million annually in the five years that follows.

**Table 9: Higher Education Resources and Expenditure Needs, 2011-2021 (US\$ million)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Expenditure needs (Rec+Dev)	39.6	42.8	46.9	52.6	58.3	62.5	67.4	73.3	80.3	88.7	98.9
Government resources (Rec+dev)	14.9	16.7	17.2	17.7	18.3	19.5	20.9	22.3	23.9	25.6	27.4
Own resources	24.7	26.2	27.0	27.9	28.7	30.6	32.8	35.1	37.5	40.2	43.0
Total resources	39.6	42.8	44.2	45.6	47.0	50.2	53.7	57.4	61.4	65.7	70.3
Financing gap	0.0	0.0	2.7	7.0	11.3	12.3	13.8	15.9	18.9	23.0	28.6
% Gap to Expenditure	0.0	0.0	5.7	13.3	19.4	19.7	20.4	21.7	23.5	25.9	28.9

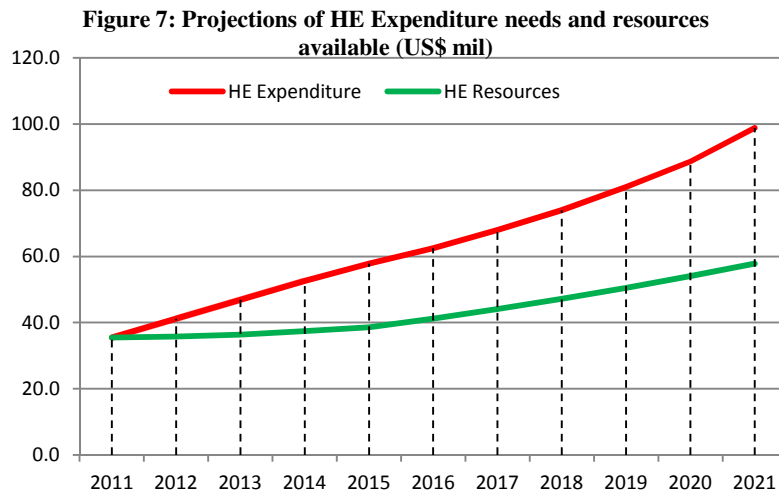
Source: HEIs Surveys 2009/10 and 2011/12

**89. The resource envelope expected to be available from the government is projected on the assumption that the current macro relationships between GDP, public, and sector budgets will continue during the projection period.** More specifically, the ratio of the public budget to GDP and the ratio of the education sector budget to the public budget are constant over the projection period. Also, the share of resources earmarked for higher education within the sector budget remains the same over the projection period (Annex B). Based on these assumptions, government resources for the HEIs are expected to increase from US\$ 14.9 million in 2011 to US\$ 19.5 million in 2016 and almost double in the following five years, reaching US\$ 27.4 million by 2021. Furthermore, the share of government resources to expenditure needs of the HEIs is expected to decline from 39 percent in 2011 to 31 percent in 2016 and further decline to 28 percent in 2021, leaving an expanding financing gap that will need to be filled by other sources, such as income generated by the HEIs themselves.

**90. University income generation is projected on the assumption that the institutions will continue at the current capacity of raising income from student fees, real estate and donations and the share of each of these sources remain the same.** The estimates show that income generation is projected to increase by 17 percent during the coming five years (from US\$ 24.7 million in 2011 to US\$ 30.6 million in 2016) and increase by 78 percent in the following five years and reach US\$ 43 million by 2021. Moreover, the share of that income to the expenditure needs of the HEIs is expected to decrease from 61

percent in 2011 to 49 percent in 2016 and further decline to 43 percent in 2021 resulting in a financing gap that will increase with time.

**91. The financing gap between the needed expenditure and the resources available is expected to increase rapidly to reach almost 30 percent of the expenditure by 2021.** Projections show that the difference between expenditure needs for financing the enrollment growth trend and resources expected to be available from both government subsidies and income generated by the institutions, is estimated to increase to US\$ 12.3 million in 2016 and to US\$ 28.6 million by 2021. In other words, the proportion of the financing gap to the total expenditure needs will be 20 percent in 2016 and 29 percent in 2021.



Note: base year is from 2011/12 HEIs survey

**92. The magnitude and the fast growth of the financing gap makes the HEIs enrollment growth trend in the past few years difficult to achieve and fiscally unsustainable.** It is difficult to finance the gap from increasing government resources and the income generated by the HEIs. If the resource gap is financed from government subsidies, the public allocations to higher education need to increase from US\$ 14.9 million in 2011 to US\$ 31.8 million in 2021 and to US\$ 55.9 million in 2021. Such a financial policy will raise the proportion of government allocations earmarked to higher education from the sector budget from 22.6 percent in 2011 to 38.6 percent in 2016 and further pushes the ratio to 48.3 percent by 2021, a level that will be difficult to reach as it will crowd out allocations to other sub-sectors especially primary and secondary education.

**Table 10: Projections of HE Resources from Government and Own Income if Covering the Finance Gap (US\$ mil)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
HE Gov res	14.9	16.7	17.2	17.7	18.3	19.5	20.9	22.3	23.9	25.6	27.4
HE Gov res if covering the gap	14.9	16.6	19.9	24.7	29.6	31.8	34.7	38.3	42.8	48.6	55.9
% of HE Gov res to Ed Sect bdg if covering gap	22.6	23.6	27.4	33.0	38.3	38.6	39.3	40.5	42.3	44.9	48.3
HEIs Own res in US\$ mil:											
Own res	24.7	26.2	27.0	27.9	28.7	30.6	32.8	35.1	37.5	40.2	43.0
Own res if covering the gap	24.7	26.1	29.7	34.9	40.0	42.9	46.6	51.0	56.4	63.1	71.5
% own res to total res if covering the gap	61.1	61.1	67.2	76.4	85.1	85.6	86.8	88.8	91.8	96.1	101.7

Source: Base year from 2011/12 HEIs Survey

**93. On the other hand, if the fiscal gap is financed by the HEIs own generated income, the institutions need to almost double their income by 2016 and triple it by 2021.** Under this policy, the institutions' own income must increase from US\$ 24.7 million in 2011 to US\$ 42.9 million in 2016 and to US\$ 71.5 million in 2021, i.e. at 12 percent annual rate of increase during 2011- 2016 and at 11 percent annual rate of increase during 2016-2021. This means that the sources of this income like student fees, real estate income and donations have to increase at the same rates, or at another combination of growth patterns, to generate this level of income. If this income comes from the different sources growing at the same rate, student fees must double in the coming five years and triple in the five years that follow. This would be very difficult to attain, knowing that the current average student fees is double the per capita income. Given the lack of donor investment in higher education at this time, it is not clear where the additional resources will come from if the expansion and development continues.

**94. The HEIs need to focus on the efficiency of their expenditure to reduce the cost and save resources that can be invested for quality improvement and expansion.** Some of the measures for increasing efficiency include streamlining staff and faculty numbers, which involves policies of recruitment, utilization and deployment. The number and composition of staff and faculty need to be related to the number of students by reviewing the student-faculty ratios and academic to non-academic staff ratios. Any measure to rationalize the staff numbers and their deployment as well as the non-academic staff usually generates a reduction in salaries, which is the largest segment of recurrent expenditure. Another measure to address the efficiency issue is to develop a vibrant and competitive private sector that will be able to absorb more of the demand on higher education and release some of the financial burden on government resources. Also, a means tested system of fees and scholarships will make it possible to increase the fees for students who can afford it and at the same time protect economically disadvantaged students by offering them scholarships to ensure the continuation of their studies.

**95. The trend of enrollment growth in the HEIs over the past four years is very costly and financially unsustainable. If the trend continues, quality will further deteriorate.** The institutions need to plan their growth and set achievable, reasonable and affordable targets taking into consideration the financial and capacity limitations. It is

also important to plan for additional faculty, staff and facilities required for the planned expansion. Quality enhancement is very expensive and requires substantial resources, especially with regards to staff development and facilities, and needs to be considered in addition to quantitative growth targets. Furthermore, desirable trends are underway, such as rapid growth in some areas of study, like engineering, agriculture and education resulting from the tuition-free scholarships policies, and gradual growth in other areas of study like humanities. However, these policies need to be part of an overall framework with strategic goals and broad directions for the education sector in general and for higher education in particular.

**96. Government subsidies to HEIs are not set according to a unit cost formula but are usually based on the previous year's subsidies and the negotiation power of the institutions.** The institutions submit their total needs to MOF on the basis of their recurrent and development expenditure and discuss their requirements with the MOF. After their negotiations, the subsidies are earmarked for each institution in the annual budget as part of the three-year budgetary framework prepared by MOF. The subsidies need to be set according to a funding formula and a set of criteria such as: (i) the number of students enrolled, admitted, and graduated, (ii) type of courses offered in the institution (degree, diploma, and certificate), (iii) the ability of the institution to generate income from other sources, (iv) extent of curriculum in research and development (R&D) and innovation and (iv) the annual increase in the standard of living. University charges and fees are not means-tested and there are no clear and systematic programs for alternative funding methods like concessional student loans or special financial aid to provide support for economically disadvantaged students. A means-tested system of fees and scholarships will make it possible to increase fees for students who can afford it and at the same time protect economically disadvantaged students by offering them scholarships to ensure their continuation in the universities. For regional equity, it is recommended that: (i) the economic and regional conditions are studied to make sure that the universities are serving the entire country and tapping the best talent regardless of region or poverty, (ii) aptitude tests are carried out in the areas of the country where the education system is less advanced and the poor home environment is unlikely to have compensated for the schooling deficits, (iii) scholarships are awarded to poorer students, other things being equal, and (iv) a less expensive community college system be developed that will provide an alternative path to less economically advantaged students in the long run.

## Education Sector Finance

**97. The post war reconstruction required substantial investments in primary, secondary and higher education and created a significant gap that was financed by the government, donors, and households.** The share of donor financing of the education sector is fairly high accounting for about 45 percent of total financing by the government and donors in 2011<sup>10</sup>. Major donor partners contributing to the education sector include the United States Agency for International Development (USAID), The United Nations

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<sup>10</sup> Detailed sector finance analysis is in the Education Sector Section of the PER, draft May 2012.



Children's Fund (UNICEF), Open Society Foundation (OSF), the European Union (EU), World Food Program (WFP), and the World Bank. The share of donors' investment declined in the past two years from 53 percent in 2009 to 45 percent in 2011 as a result of the decreasing USAID funding and the increasing government spending during the past two years.

**98. The share of the education sector to the government budget remained constant around 14 percent during 2009/10 and 2011/12 and its share to GDP increased from 4.0 percent to 6 percent over the same period.** Public spending on education in Liberia is still among the lowest in the region. The percentage of public spending on education to government expenditure is the lowest in Liberia compared with a sample of fifteen Sub-Saharan African countries, and the percentage to GDP is the fourth lowest among the same sample of countries. Recurrent expenditure has by far the largest share of the sector budget and the share of capital expenditure has been little and fluctuating. The share of recurrent expenditure to the sector budget was 98 percent in 2009, 88 percent in 2010 and 94 percent in 2011. Capital expenditure accounted for about 6 percent of total education sector expenditures in 2011 and fluctuated significantly from year to year. In 2009, capital expenditure was US\$0.7 million and increased to US\$ 6.1 million in 2010 then declined to US\$ 4.0 million (Annex B).<sup>11</sup>

**99. Government recurrent expenditure on education increased substantially over the past few years in response to the growth of the system.** Government expenditure on education increased from US\$ 36.8 million in 2009 to US\$ 46.7 million in 2010 and further increased to US\$ 64.1 million in 2011. Between 2009 and 2011, the largest increase was in secondary education where the expenditure increased by more than two and a half times i.e. at an annual growth rate of 62 percent. The second largest growth of recurrent expenditure was in higher education where the amount almost doubled during the 2009-2011 period with an increase of about 38 percent per year. Recurrent expenditure of primary education was growing at a slower rate of 13.8 percent per year (Annex B).

**100. As a result of the growth pattern of the sub-sectors, the share of secondary education from the recurrent expenditure increased from 16 percent in 2009 to 24 percent in 2011 and the share of higher education increased from 31 percent to 34 percent in the same two years.** On the other hand, the share of primary education declined from 44 percent in 2009 to 33 percent in 2011. The high share of higher education spending relative to total education expenditures and the relatively low share of primary spending are disproportionate in relation to the share of enrollment at each level. The proportion of primary expenditure is well below the recommendation of Education for Global Partnership for Education (GPE) that suggests allocating 50 percent of education expenditure to primary education and the share of higher education is higher than the GPE recommendation of allocating 20 percent to higher education.

**101. The increasing trend in resource allocations to secondary education could be partially explained by the rapid increase in secondary students after the elimination**

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<sup>11</sup> Liberia: Education Section of the *Public Expenditure Review*, draft May 2012.

**of the exams at the end of primary and junior secondary cycles.** During 2007-2011, students in primary schools increased by about 3 percent per year whereas students in secondary increased by 5.5 percent. The increase in government resources to higher education can also be explained by the substantial increase in enrollment in the past few years. The number of students in HEIs increased by 9.4 percent per year during 2007 – 2011 and the institutions’ enrollment doubled during that period and reached almost 44,000 students in 2011. It is important to mention here that the government resources allocated to HEIs is part of the institutions’ budget and in 2011 they made only one third of their expenditure. The HEIs have diversified sources of revenue and they generate their own income from student fees, donations, and real estate sale and lease (see higher education finance section below).

## Higher Education Finance

**102. As a result of the continuing pressure of expansion and the increase in demand, enrollment in HEIs has been growing at a high rate of 9.4 percent annually during 2007-2011 and if this trend continues without parallel increase in facilities and staff, quality will deteriorate further.** This level of growth requires substantial resources and makes it difficult to sustain. In addition, quality enhancement is very expensive and any plan for staff development and additional facilities would require substantial increase in resources. The HEIs finance their expenditure from government and non-government sources. The non-government sources come from the income generated by the institutions from student charges, real estate sale and lease as well as donations. The following sections discuss these sources of income and their relative shares.

**103. Government subsidies: Approximately one third of the HEIs expenditure is financed from government subsidies and the rest is financed from the institutions own generated income.** The Ministry of Finance (MOF) provides subsidies to the HEIs to supplement their recurrent expenses, mainly for salaries, and the institutions have the autonomy to generate income from other sources. The institutions have good diversified sources of income coming from student fees, donations, and real estate. In 2011, the HEIs received more than US\$15 million<sup>12</sup> in government subsidies and the rest of their budget (about US\$ 25 million) was covered from student fees, real estate income and donations. Government subsidies include a fairly small amount for scholarships (US\$ 1.1 million) to be offered to students on the basis of their achievement in the GPA (see scholarship section below).

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<sup>12</sup> The amount of government subsidies reported by the HEIs in the NCHE 2011/12 census (US\$15.1mil) is slightly less than the amount reported by the Ministry of Finance (US\$16.8mil). The difference could be attributed to the timing of releasing the subsidies as the NCHE census was conducted in March and the difference might have been received after the census as the financial year finishes by the end of June.

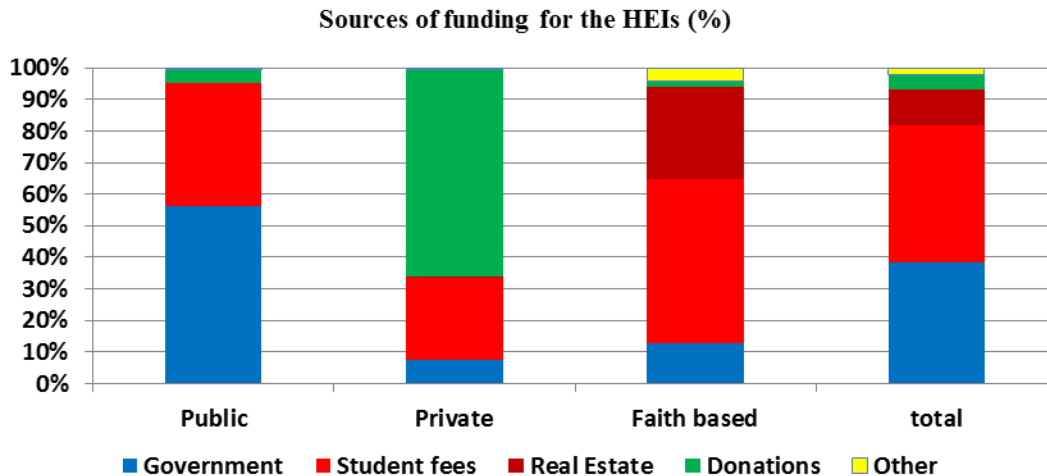
**Table 11: Source of funding for HEIs in 2011 - US\$ ('000)**

	Public	Private	Faith-Based	Total
Government Subsidies	13,063	-	913	13,976
Scholarships	16	88	1,030	1,134
Sub-total	13,079	88	1,942	15,110
Tuition	5,302	251	5,681	11,233
Other student fees	3,863	57	2,151	6,071
Sub-total	9,164	308	7,832	17,304
Building & land lease/sale	-	6	4,410	4,416
Donations	967	775	233	1,975
Others	120	5	639	764
Total	23,331	1,182	15,056	39,569

Source: HEIs Survey 2011/12

**104. Government transfers are an important source of funding for the public institutions as they make more than half of their budget (56%).** Private institutions depend more on donations (65%) and faith-based institutions depend primarily on student fees and real estate income (81%) (Figure F1). In general, private and faith based institutions suffer from shortage of funds and limited support that make them more dependent on part-time faculties and have little investment or involvement in research and knowledge creation.

**Figure 8: Sources of Funding for HEIs (%)**



Source: HEIs Survey 2011/12

**105. The allocation of subsidies depends primarily on the power of negotiations between the institutions and MOF.** For example, the provision for the University of Liberia (LU) increased from US\$ 6.9 million in 2009 to US\$ 10.3 million in 2010 and further increased to US\$ 14.5 million in 2011. That was mainly due to the fact that LU managed to negotiate their needs for improving faculty qualifications, reviewing curriculum, and increasing staff salaries. The salary increase was necessary for the teaching staff to minimize their pre-occupation with secondary jobs. The raise in

subsidies was also needed to attract more of the few existing Ph.D. staff that makes only 13 percent of the total faculty of the university. On the other hand, institutions with weak negotiating power and lack the capacity to prepare a high-quality budget proposal end up with much fewer government subsidies. Therefore, subsidies need to be set according to a funding formula and a set of criteria such as; (i) the number of students enrolled, admitted, and graduated, (ii) type of courses offered in the institution (degree, diploma, and certificate), (iii) the ability of the university to generate income from other sources, and (iv) the annual increase in the standard of living.

- 106. Government subsidies to the LU is by far the largest compared to subsidies to the other institutions.** The increase in funding mentioned above raised the share of LU to the total government subsidies from 56 percent in 2009 to 62 percent in 2010 and to 57 percent in 2011. With a total enrollment of 22,400 students in the LU (54 percent of total HEIs enrollment), subsidies per student increased to reach US\$ 647 in 2011 and that puts the university among the highest intuitions receiving government funding. The increasing funding to LU was in response to the rapid increase in its enrollment and the increase in salaries of qualified faculty. Students in LU increased from 19,520 in 2009 to 22,400 students in 2011, an increase of 54 percent. Furthermore, LU increased the salaries of faculty and staff especially those holding Ph.D.s, where their monthly salary increased from US\$ 125 in 2007 to US\$ 1,300 in 2011.
- 107. Scholarships: The HEIs receive limited funds from the Ministry of Finance for scholarships offered to students to cover mainly tuition fees.** In 2011, the institutions received US\$1.1 million for the scholarships and that made only 3 percent of their total income. Scholarships are usually offered on the basis of the students' achievement in the GPA. Full scholarships are given to the few students who have a GPA score of 3.75 and partial scholarships are offered to those who score below that level. In 2011, the UOL offered full or partial scholarships to approximately 300 students and about 700 others received some sort of financial aid, the total of which comprises 4.5 percent of the university's enrollment.
- 108. In addition, there are scholarships offered for students who enroll in agriculture, education and medical studies because of the priority of these subjects for national development.** The Ministries of Agriculture and Education offer tuition free scholarships to students in agriculture and education programs, also similar scholarships are offered by the Ministry of Finance, as part of government subsidies, to students in medical and pharmacy programs. Students in engineering and other related programs are also offered scholarships from different private sector companies. These areas of study do not have large enrollments and the scholarships are incentives to build them up to meet current and anticipated labor market needs.
- 109. Student Charges: Student fees are the primary source of income and in 2011, the HEIs managed to generate more income from student fees (US\$ 17.3 million) than from what they received from the government as subsidies (US\$ 15.1 million).** Student fees make-up the largest share of the institutions' income (44%) and the second largest share comes from government subsidies (38%) followed by real estate income

(11%), donations (5%), and the remaining 2% comes from other sources. Student charges consist of mainly tuition fees and other charges such as exam and admission fees and charges for matriculation, library, etc.

- 110. Fees vary from one institution to another and their level is fairly high in public institutions.** In 2011, the average fee per student in UOL, the largest of public institutions, was US\$ 768 and that is two and a half times the per capita income in Liberia. On the other hand, tuition per student in Cuttington University (the largest of private institutions) was US\$ 224. Fees and government subsidies are the primary source of income for the public institutions and donations are the main source of income for the private institutions. Universities like to increase the fees but such an attempt finds strong resistance from the government as the latter has to increase the scholarships (given to students to cover fees) as such a policy would add more financial burden on the public budget.
- 111. University charges and fees are not means-tested and there are no clear and systematic programs for alternative funding methods like concessional student loans or special financial aid to support the economically disadvantage students.** This has led to limiting the opportunities of admission to the universities for the poor students. The current policy of admission is based solely on the WAEC twelfth grade examinations and the university entrance tests. The underlying assumption is that talented but disadvantaged students will find their way through the merit system. To increase the opportunities for the poor students, it is recommended that; (i) the economic and regional conditions are studied to make sure that the universities are serving the entire country and tapping the best talent regardless of region or poverty, (ii) aptitude tests need to be carried out in the areas of the country where the education system is less advanced and the poor home environment is unlikely to have compensated for the schooling deficits. Students in the poor areas might not show up in single assessments examination that measure achievement rather than aptitude, (iii) an immediate policy position might be to award the scholarship to the poorer student, other things being equal, and (iv) build-up a less expensive community college system that will provide an alternative path to the economically less advantaged students in the long run.

### **Higher Education Institutions Expenditure**

- 112. In 2011, the recurrent expenditure was 72 percent of the total HEIs expenditure and more than two thirds goes to staff and faculty salaries.** The share of salary expenditure is higher in public institutions (66 percent) than in the faith-based (63 percent) and in the private (58 percent). Private institutions have the highest cost per student (US\$1,944), which is almost double that in public institutions (US\$1,060) and higher than faith-based institutions (US\$1,281). That is mainly due to the fact that private institutions have the highest staff cost per student (US\$ 4,029) that is almost double the staff cost per student in public institutions (US\$ 2,347). Private institutions depend largely on part-time faculty and that drives their staff cost higher. Also, the higher cost for private institutions may be attributable to their specialized programs in some cases.

**Table 12: HEIs Recurrent and Capital Expenditure, 2011 (US\$ '000)**

	Public	Private	Faith based	total
Recurrent expenditure	16,146	845	8,492	25,483
Teaching	6,391	286	3,467	10,143
Non-Teaching staff	4,312	206	1,866	6,384
total salaries	10,702	492	5,333	16,528
Non-salary expenditure	5,443	353	3,159	8,955
Total Capital Expenditure	6,203	1,764	2,088	10,055
Construction	3,638	934	1,117	5,688
Equipment and materials	1,721	661	801	3,182
Other	845	170	170	1,185
Total Rec+Dev Exp	22,349	2,610	10,580	35,538
	%	%	%	%
Salaries	66.3	58.2	62.8	64.9
Non-Salaries	33.7	41.8	37.2	35.1
	100.0	100.0	100.0	100.0
Construction	58.6	52.9	53.5	56.6
Equipment and materials	27.7	37.4	38.4	31.6
Other	13.6	9.6	8.1	11.8
	100.0	100.0	100.0	100.0
Cost per staff US\$	2,347	4,029	3,296	3,150
Cost per student US\$	1,060	1,944	1,281	1,278

Source: HEIs Survey 2011/12

- 113. Staff salaries are generally low especially in public institutions where the staff cost per student in public institutions (US\$ 2,350) is almost half of the staff cost per student in the private institutions (US\$ 4,030).** Furthermore, annual raises to staff are minimal and therefore, a large number of teaching staff seek another job to supplement their income. The demand pressure and the rapid growth of enrollment have made the institutions give priority to recruiting more full time and part time faculty rather than increasing salaries. However, some institutions tried to address the issue of low salaries. To ensure the faculty time is devoted for teaching and to retain the high level staff, the LU has increased salaries of faculty and staff substantially over the last few years. For example, the monthly salary of a faculty with Ph.D. increased from US\$ 125 in 2007 to US\$ 1,300 in 2011.
- 114. Capital expenditure makes a sizable proportion of the HEIs budget (28%) and most of it (88%) is spent on construction of buildings and facilities, and procurement of equipment and material.** The fairly high level of capital expenditure shows that the institutions are expanding their facilities in response to the fast increasing demand and the recent rapid growth of higher education enrollment especially in the different areas of sciences like engineering, medical, and agriculture that usually have higher unit costs as they require more specialized facilities, laboratories, equipment and materials (see enrollment growth section below).

### Final Considerations: Global Perspectives on Higher Education Reform

- 115.** There is a collective view at a global level that is supported by multiple forms of evidence that **higher education supports development through income growth, enlightened leadership, expanded choices, and increasingly relevant skills. Higher education contributes substantially to economic development** via the formation of

human capital, research and development, and innovation. There is also a growing body of research that supports the notion that the quality of social infrastructure is a critical factor in the effectiveness of governments, institutions, and firms, and higher education plays a critical role in **social development**, including nation building, democratic institutions, and social cohesion.

116. Based on global experiences, **higher education in the developing world is “weighed down” by contextual problems that characterize fragile states in particular**, such as the absence of vision, the lack of political and financial commitment, conditions of initial disadvantage (low baseline), and disruptions due to globalization (poor countries are more fragile and sensitive to brain drain, volatility, etc.). There is widespread acceptance that government has an important role to play in higher education which involves the establishment of a coherent policy framework, the creation of an enabling regulatory environment, and the availability of appropriate financial incentives.
117. **Effective higher education systems tend to have a common set of characteristics**, including a stratified structure, adequate and stable long-term funding, competition, flexibility, well-defined standards, immunity from political manipulation, well-defined links to other sectors, a supportive legal and regulatory framework, and “system-wide” resources such as management information systems and standardized tests.
118. **Disconnects in higher education need attention to address the complexities of the sub-sector**. They can be perceived in five ways: (i) between higher education and employers (skills users), (ii) between higher education and companies (research users), (iii) between higher education and research institutions (research providers), (iv) among higher education institutions themselves and between these institutions and training providers (horizontal disconnect across skill providers), and (v) between higher education and earlier education (vertical disconnect across skill providers).
119. Based on case studies from various countries, **the development of world-class universities is facilitated by certain “accelerating factors,”** including relying on the diaspora, using English as the main language of the institution, concentrating on niche areas, utilizing benchmarking as a guide to orient institutional upgrading, introducing curricular and pedagogical innovations, and using continuous monitoring and self-assessment.
120. Successful international experiences on the **preparation and implementation of higher education strategies have some common characteristics**, including strong and continuous political sponsorship and commitment, good ownership, intensive participation, and extensive consultations.
121. **The process of developing the strategy can be perceived simultaneously as an opportunity to strengthen social cohesion** among stakeholders, since issues related to the causes and consequences of conflict can be addressed implicitly and explicitly throughout the process.

- 122.** Some evidence suggests that, due to the difficult political economy of introducing system-wide higher education reform, donors have either given up supporting reforms or have started funding institutes or faculties with sound proposals for introducing change. This explains why **foreign aid for higher education in the developing world is either concentrated in selected countries or comes in a fragmented way**, spread too thinly across institutions or areas of intervention within institutions, such as individual faculties or centers.



## Annexes

### Higher Education Institutions in Liberia, 2012

(Sorted by Enrollment)							
Institution	Type	Highest Degree	County	Male	Female	Total	% of Total
University of Liberia	Public	Master's	Montserrado	17064	6773	23837	54.4
African Methodist Episcopal University	Faith-based	Bachelor's	Montserrado	2160	1210	3370	7.7
United Methodist University	Faith-based	Bachelor's	Montserrado	1415	1875	3290	7.5
African Methodist Episcopal Zion University College	Faith-based	Bachelor's	Montserrado	1700	1136	2836	6.5
Cuttington University (including Kakata Jr. College)	Faith-based	Master's	Bong	1302	1263	2565	5.9
Smythe Institute of Management and Technology	Private	Associate	Montserrado	265	1442	1707	3.9
Grand Bassa Community College	Public	Associate	Grand Bassa	761	529	1290	2.9
William V.S. Tubman University	Public	Bachelor's	Maryland	577	180	757	1.7
Nimba Community College	Public	Associate	Nimba	451	271	722	1.6
Stella Maris Polytechnic	Faith-based	Bachelor's	Montserrado	195	360	555	1.3
Adventist University Of West Africa	Faith-based	Associate	Montserrado	183	205	388	0.9
Morris Community College of Airline Studies	Private	Associate	Montserrado	63	300	363	0.8
Bomi Community College	Public	Associate	Bomi	174	68	242	0.6
Liberia Dujar College	Private	Associate	Montserrado	147	79	226	0.5
St. Clements University College	Private	Associate	Montserrado	146	51	197	0.4
Christian Theological Seminary	Faith-based	Associate	Montserrado	144	38	182	0.4
Liberia International Christian College	Faith-based	Associate	Nimba	118	44	162	0.4
Free Pentecostal College	Faith-based	Associate	Lofa	104	51	155	0.4
Lincoln College of Professional Studies	Private	Associate	Montserrado	60	67	127	0.3
Liberia Christian College	Faith-based	Associate	Montserrado	75	43	118	0.3
ABC University	Faith-based	Bachelor's	Nimba	87	29	116	0.3
Liberia Baptist Theological Seminary	Faith-based	Bachelor's	Montserrado	82	21	103	0.2
Leigh-Sherman Community College and Secondary School	Private	Associate	Montserrado	0	95	95	0.2
Vision International Christian College of Liberia	Faith-based	Associate	Montserrado	56	32	88	0.2
Wesleyan College of Liberia	Faith-based	Associate	Montserrado	64	15	79	0.2
Monrovia Bible College	Faith-based	Bachelor's	Montserrado	53	23	76	0.2
Liberia Assemblies of God Bible College	Faith-based	Bachelor's	Montserrado	35	32	67	0.2
Trinity Bible College and School of Business	Faith-based	Associate	Margibi	56	11	67	0.2
West Africa School of Missions and Theology	Faith-based	Associate	Montserrado	30	10	40	0.1
Jake Memorial Baptist College	Faith-based	Associate	Montserrado	18	5	23	0.1
Total				27,585	16,258	43,843	100.0

Note. There are some minor discrepancies in reporting enrollments. Without some of the ambiguous data, the total enrollment is 42,561.

Enrollment Projections by Gender, Grade, and Year - 2011-2026

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Primary and Secondary Enrollment by Year of Study</b>																	
prim1	male	86678	89106	91769	94522	97358	100278	103287	106385	109577	112864	116250	119738	123330	127030	130841	134766
	female	78658	80838	83252	85749	88321	90971	93700	96511	99407	102389	105460	108624	111883	115239	118697	122257
	total	165336	169944	175022	180271	185679	191249	196987	202897	208983	215253	221711	228362	235213	242269	249537	257023
prim2	male	70768	78727	81249	83687	86197	88783	91446	94190	97015	99926	102924	106011	109192	112467	115842	119317
	female	63867	70942	73221	75417	77679	80010	82410	84882	87429	90051	92753	95536	98402	101354	104394	107526
	total	134635	149669	154470	159104	163876	168792	173856	179072	184444	189977	195677	201547	207593	213821	220236	226843
prim3	male	62998	65819	72992	75603	77894	80232	82639	85118	87672	90302	93011	95801	98675	101636	104685	107825
	female	56063	58976	65305	67678	69734	71827	73982	76201	78487	80842	83267	85765	88338	90988	93718	96529
	total	119061	124796	138297	143282	147628	152059	156620	161319	166159	171143	176278	181566	187013	192624	198402	204354
prim4	male	54383	58744	61481	67979	70648	72822	75011	77261	79579	81966	84425	86958	89567	92254	95021	97872
	female	47483	51775	54578	60265	62684	64624	66568	68565	70622	72741	74923	77171	79486	81870	84326	86856
	total	101866	110519	116059	128244	133332	137447	141578	145826	150201	154707	159348	164129	169053	174124	179348	184728
prim5	male	45704	50860	55021	57683	63606	66304	68386	70446	72560	74736	76979	79288	81667	84117	86640	89239
	female	39342	44270	48365	51100	56267	58737	60605	62435	64309	66238	68225	70272	72380	74551	76788	79092
	total	85046	95131	103386	108782	119873	125042	128991	132880	136868	140974	145204	149560	154047	158668	163428	168331
prim6	male	37558	42821	47704	51677	54262	59695	62387	64387	66333	68324	70374	72485	74659	76899	79206	81582
	female	31032	36526	41213	45115	47774	52473	54957	56761	58484	60241	62049	63910	65827	67802	69836	71931
	total	68590	79347	88916	96791	102035	112168	117344	121148	124817	128565	132422	136395	140487	144701	149042	153514
total	male	358089	386077	410216	431151	449965	468114	483156	497787	512736	528118	543963	560281	577090	594403	612235	630601
prim	female	316445	343327	365934	385324	402459	418642	432222	445355	458738	472502	486677	501278	516316	531804	547759	564191
	total	674534	729404	776150	816475	852424	886756	915378	943142	971474	1000620	1030640	1061559	1093406	1126207	1159994	1194792
JSS1	male	29659	31450	35715	39829	43214	45460	49886	52279	54002	55643	57314	59034	60805	62629	64508	66443
	female	23866	25701	30068	34008	37312	39611	43402	45604	47161	48606	50068	51571	53118	54711	56353	58043
	total	53525	57152	65783	73837	80526	85071	93288	97883	101163	104249	107382	110605	113923	117341	120861	124487
JSS2	male	24999	27846	29606	33504	37391	40629	42815	46882	49247	50918	52475	54053	55675	57346	59066	60838
	female	20330	22111	23827	27730	31420	34543	36756	40196	42347	43848	45206	46569	47967	49406	50888	52414
	total	45329	49958	53433	61234	68810	75172	79571	87078	91594	94766	97681	100622	103642	106751	109954	113252
JSS3	male	21759	23624	26282	28005	31599	35283	38391	40521	44288	46616	48242	49728	51225	52763	54346	55976
	female	17416	19017	20688	22306	25842	29318	32293	34435	37599	39700	41158	42448	43731	45045	46396	47788
	total	39175	42641	46970	50312	57440	64601	70683	74957	81887	86315	89400	92176	94956	97807	100742	103764
total	male	76417	82920	91603	101338	112204	121372	131092	139682	147537	153177	158031	162815	167705	172738	177920	183257
JSS	female	61612	66829	74583	84044	94574	103472	112451	120235	127107	132154	136432	140588	144816	149162	153637	158245
	total	138029	149749	166186	185382	206778	224844	243543	259917	274644	285331	294463	303403	312521	321900	331557	341502
SSS1	male	17847	18753	20328	22588	24116	27141	30317	33026	34912	38097	40168	41607	42899	44193	45519	46885
	female	13538	14575	15898	17299	18664	21516	24437	26973	28833	31435	33267	34542	35642	36724	37827	38963
	total	31385	33327	36226	39886	42780	48657	54753	60000	63745	69532	73435	76148	78541	80916	83347	85847
SSS2	male	15259	16691	17564	19018	21112	22573	25357	28329	30890	32691	35633	37616	38993	40212	41426	42670
	female	11414	12329	13275	14471	15748	16998	19534	22197	24535	26270	28615	30326	31520	32537	33527	34535
	total	26673	29019	30839	33490	36860	39571	44891	50527	55425	58961	64248	67942	70513	72748	74953	77205
SSS3	male	14040	14392	15720	16555	17916	19878	21270	23868	26669	29094	30810	33562	35454	36767	37921	39067
	female	9951	10567	11409	12286	13389	14571	15730	18052	20518	22693	24315	26476	28077	29196	30143	31062
	total	23991	24959	27129	28841	31305	34448	37000	41920	47186	51787	55126	60038	63531	65963	68064	70129
total	male	47146	49836	53612	58161	63144	69592	76944	85223	92471	99882	106611	112785	117346	121172	124866	128622
SSS	female	34903	37471	40582	44056	47801	53085	59701	67222	73886	80398	86197	91344	95239	98457	101497	104560
	total	82049	87307	94194	102217	110945	122677	136645	152445	166357	180280	192808	204129	212585	219629	226363	233182
<b>total</b>	<b>male</b>	<b>481652</b>	<b>518833</b>	<b>555431</b>	<b>590650</b>	<b>625313</b>	<b>659078</b>	<b>691192</b>	<b>722692</b>	<b>752744</b>	<b>781177</b>	<b>808605</b>	<b>835881</b>	<b>862141</b>	<b>888313</b>	<b>915021</b>	<b>942480</b>
<b>Prim+Sec</b>	<b>female</b>	<b>412960</b>	<b>447627</b>	<b>481099</b>	<b>513424</b>	<b>544834</b>	<b>575199</b>	<b>604374</b>	<b>632812</b>	<b>659731</b>	<b>685054</b>	<b>709306</b>	<b>733210</b>	<b>756371</b>	<b>779423</b>	<b>802893</b>	<b>826996</b>
	<b>total</b>	<b>894612</b>	<b>966460</b>	<b>1036530</b>	<b>1104074</b>	<b>1170147</b>	<b>1234277</b>	<b>1295566</b>	<b>1355504</b>	<b>1412475</b>	<b>1466231</b>	<b>1517911</b>	<b>1569091</b>	<b>1618512</b>	<b>1667736</b>	<b>1717914</b>	<b>1769476</b>

Post-Secondary HEIs Enrollment by Area of Study																	
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
med1	male	185	183	188	194	200	206	212	219	225	232	239	246	254	261	269	277
	female	522	544	591	643	700	761	828	901	981	1067	1161	1263	1374	1496	1627	1771
	total	707	727	779	837	900	967	1040	1120	1206	1299	1400	1509	1628	1757	1896	2048
med2	male	184	181	179	184	190	196	202	208	214	220	227	234	241	248	256	264
	female	520	512	532	578	629	684	745	810	881	959	1044	1135	1235	1344	1463	1591
	total	704	693	711	762	819	880	946	1018	1095	1179	1271	1369	1476	1593	1718	1855
med3	male	180	180	178	176	181	186	192	197	203	209	216	222	229	236	243	250
	female	521	510	501	521	565	615	669	728	792	862	938	1021	1110	1208	1315	1430
	total	701	690	679	696	746	801	861	925	996	1071	1154	1243	1339	1444	1558	1681
med4	male	181	176	177	174	172	177	182	188	193	199	205	211	218	224	231	238
	female	519	511	499	491	510	553	601	654	712	775	843	917	998	1086	1182	1286
	total	700	687	676	665	682	730	784	842	905	974	1048	1129	1216	1310	1413	1524
med5	male	180	177	173	173	171	169	173	178	184	189	195	201	207	213	220	226
	female	518	509	500	489	481	499	541	588	640	696	758	824	897	976	1062	1156
	total	698	686	673	662	652	668	714	766	824	886	953	1025	1104	1189	1282	1382
total	male	910	897	895	901	914	934	961	990	1019	1049	1082	1114	1149	1182	1219	1255
	female	2600	2586	2623	2722	2885	3112	3384	3681	4006	4359	4744	5160	5614	6110	6649	7234
	total	3510	3483	3518	3623	3799	4046	4345	4671	5025	5408	5826	6274	6763	7292	7868	8489
eng1	male	581	559	646	748	867	1005	1165	1351	1566	1815	2104	2439	2827	3277	3799	4404
	female	65	63	74	87	102	120	141	166	195	230	271	319	375	441	519	611
	total	646	622	719	835	969	1125	1307	1517	1761	2045	2375	2758	3202	3719	4318	5015
eng2	male	580	564	543	624	723	838	971	1126	1305	1512	1753	2032	2356	2731	3165	3669
	female	65	63	61	71	84	98	116	136	160	189	222	261	308	362	426	501
	total	645	627	604	695	806	936	1087	1262	1465	1701	1975	2294	2663	3093	3591	4171
eng3	male	579	563	547	626	726	840	968	1107	1260	1461	1693	1963	2275	2637	3057	3521
	female	63	63	61	59	69	81	95	112	132	155	182	214	252	297	349	411
	total	642	626	608	685	795	921	1055	1219	1415	1643	1908	2215	2572	2987	3469	4032
eng4	male	577	562	546	630	731	847	974	1113	1264	1465	1717	1987	2274	2639	3069	3567
	female	63	61	61	59	57	66	78	92	108	127	149	176	207	244	287	337
	total	640	623	607	689	788	913	1045	1206	1372	1592	1866	2181	2481	2916	3356	3904
total engineering	male	2317	2248	2282	2428	2703	3123	3619	4198	4854	5637	6535	7575	8781	10179	11795	13677
	female	256	250	257	276	312	365	430	506	595	701	824	970	1142	1344	1581	1860
	total	2573	2498	2539	2704	3015	3488	4049	4702	5459	6338	7359	8545	9922	11523	13380	15537
sci1	male	660	698	739	783	829	878	930	985	1043	1105	1170	1239	1312	1390	1472	1559
	female	243	259	277	295	315	336	358	382	407	434	463	494	527	562	599	639
	total	903	957	1016	1078	1144	1213	1288	1366	1450	1539	1633	1733	1839	1951	2071	2198
sci2	male	661	614	646	684	724	767	812	860	911	965	1022	1082	1146	1214	1285	1361
	female	242	226	240	256	273	291	310	331	353	376	401	428	457	487	519	554
	total	903	840	885	939	997	1058	1122	1191	1264	1341	1423	1510	1603	1701	1805	1915
sci3	male	660	615	646	684	724	767	812	860	911	965	1022	1082	1146	1214	1285	1361
	female	242	225	210	222	236	252	269	287	306	326	348	371	396	422	450	480
	total	902	840	856	906	960	1026	1087	1148	1217	1291	1370	1453	1540	1636	1733	1841
sci4	male	657	614	646	684	724	767	812	860	911	965	1022	1082	1146	1214	1285	1361
	female	240	225	209	195	205	219	233	249	265	283	302	322	343	366	390	416
	total	897	839	855	879	929	986	1045	1109	1175	1230	1287	1344	1408	1474	1541	1617
total sciences	male	2638	2541	2528	2595	2738	2900	3070	3252	3444	3648	3863	4091	4333	4590	4860	5147
	female	967	935	936	968	1029	1098	1170	1249	1331	1419	1514	1615	1723	1837	1958	2089
	total	3605	3476	3464	3563	3767	3998	4240	4501	4775	5067	5377	5706	6056	6427	6818	7236
buis1	male	3203	3002	3003	3014	3026	3038	3051	3063	3075	3087	3100	3112	3125	3137	3150	3162
	female	2033	1937	2061	2204	2358	2522	2698	2886	3088	3303	3533	3780	4044	4326	4628	4950
	total	5236	4939	5063	5218	5384	5561	5749	5949	6163	6390	6633	6892	7168	7463	7777	8113
buis2	male	2975	2936	2758	2750	2764	2771	2782	2793	2804	2816	2827	2838	2850	2861	2872	2884
	female	1883	1864	1779	1882	2011	2152	2302	2462	2634	2818	3014	3225	3450	3690	3948	4223
	total	4858	4800	4537	4632	4771	4923	5084	5256	5438	5634	5841	6063	6299	6551	6820	7107
buis3	male	2861	2731	2691	2534	2520	2527	2537	2547	2557	2568	2578	2588	2599	2609	2620	2630
	female	1883	1732	1708	1633	1719	1836	1964	2101	2247	2404	2572	2751	2943	3148	3368	3603
	total	4744	4464	4399	4167	4238	4363	4501	4648	4805	4972	5150	5339	5542	5758	5988	6233
buis4	male	2403	2609	2507	2467	2328	2308	2314	2323	2332	2342	2351	2360	2370	2379	2389	2398
	female	1732	1725	1593	1566	1499	1570	1676	1792	1917	2051	2194	2347	2511	2686	2873	3074
	total	4135	4334	4100	4032	3827	3879	3990	4115	4249	4393	4545	4708	4881	5065	5262	5472
total buis	male	11442	11278	10959	10765	10634	10644	10684	10728	10768	10813	10856	10898	10944	10996	11051	11074
	female	7531	7258	7441	7895	7987	8080	8133	8241	8388	8576	8787	9020	9276	9554	9854	10178
	total	18973	18536	18100	18650	18621	18724	18824	18969	19154	19389	19633	19918	20220	20550	20928	21252
agr1	male	637	658	682	706	731	757	784	812	841	871	902	934	967	1001	1037	1074
	female	153	183	222	269	325	394	477	578	699	847	1026	1242	1504	1822	2206	2671
	total	790	842	904	975	1056	1151	1261	1390	1540	1718	1927	2176	2471	2823	3243	3745
agr2	male	591	584	602	623	645	668	692	717	742	769	796	824	854	884	915	948
	female	142	140	166	201	244	295	357	433	524	635	769	931	1127	1365	1653	2002
	total	733	724	768	824	889	963	1050	1150	1266	1403	1565	1755	1981	2249	2568	2950
agr3	male	569	543	535	550	570	590	611	633	655	678	703	728	753	780	808	837
	female	142	131	129	151	183	221	268	324	393	476	576	698	845	1023	1239	1500
	total	711	673</														

## Sources and Assumptions

- Projections are carried out using the World Bank Education Simulation Model, a cohort progression model.
- Projections included public primary, junior and senior secondary and post-secondary HEIs.
- Base year (2010/11) information for general ed is obtained from MOE statistical bulletin (2009/10) and for HE from NCHE survey of 2011/12.
- Intake into grade one primary is based on the demographic increase of relevant age group and the target EFA GERs and NERs (WB projections).
- Intake into HEIs is based on the growth during 2009/10 - 2011/12 (obtained from the latest NCHE statistical survey).
- Rates of transition, repetition and dropout for primary, JSS, & SSS are for 2009/10, obtained from MOE Statistical Publications.
- The efficiency rates for HEIs were estimated on the basis of mission discussions with officials in HEIs (subject to revision).
- Efficiency rates for prim, secondary and HEIs are assumed constant over the projection period.

**Macro-economic indicators, 2007-2012**

	2007	2008	2009	2010	2011	2012					
<u>a. GDP in US\$ mil</u>					Prelim	Projected					
GDP	740.0	832.0	845.0	941.0	1106.0	1238.0					
% Growth rate GDP nominal		12.4	1.6	11.4	17.5	11.9					
% Real Growth rate of GDP	9.4	4.7	2.8	5.0	6.4	8.8					
				,2009/10	,2010/11	,2011/12					
<u>b. Government Expenditure in US\$ mil</u>											
Government recurrent expenditure				255.9	344.3	443.7					
Government development expenditure				29.6	64.1	72.7					
total gov expenditure				285.5	408.4	516.4					
<u>c. Education sector budget by level of education US\$ m</u>											
							relative distribution		increase increase		
<u>Recurrent expenditure</u>				,2009/10	,2010/11	,2011/12	%	%	%	2011/10	2012/11
primary				16.2	18.0	20.9	44.0	38.5	32.7	1.111	1.166
secondary				5.9	10.6	15.5	16.1	22.7	24.2	1.788	1.463
TVET				3.3	4.1	5.9	8.9	8.8	9.2	1.260	1.437
higher education - rec				11.4	14.0	21.8	31.0	30.0	34.0	1.227	1.555
total Ed Rec				36.8	46.7	64.1	100.0	100.0	100.0	1.269	1.374
% total Rec to total Ed Exp				0.98	0.88	0.94					
<u>Development expenditure</u>											
primary											
secondary											
Voc & technical											
higher education -dev				0.02	0.9	1.5					
total Ed Dev				0.7	6.1	4.0					
% total Dev to total Ed Exp				0.02	0.11	0.06					
<u>Total Rec+Dev</u>											
primary											
secondary											
Voc & technical											
higher education - rec+dev				11.4	14.9	23.2					
total Ed sect budget (Rec+Dev)				37.5	52.8	68.1					
% Ed Exp to GDP				4.0	4.8	5.5					
% Ed Exp to Gov budget				13.1	12.9	13.2					
% Gov Exp to GDP				30.3	36.9	41.7					

source WB PER and IMF estimates, May 2012 (updated during May 2012 mission)

**GDP, government and sector budgets projections, 2011-2021**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
GDP	1106.0	1238.0	1324.7	1417.4	1516.6	1622.8	1736.4	1857.9	1988.0	2127.1	2276.0
% gov budet to GDP	36.3										
Gov budget	408.4	516.4	527.9	539.4	550.9	589.5	630.8	674.9	722.2	772.7	826.8
% Ed bdg to Gov bdg	13.1										
Ed Sector budget	52.8	68.1	70.1	72.1	74.2	77.4	82.9	88.7	94.9	101.5	108.6
higher ed rec	14.000	21.766	22.413	23.058	23.703	24.749	26.482	28.335	30.319	32.441	34.712
higher ed dev	0.900	1.360	1.431	1.472	1.513	1.580	1.690	1.809	1.935	2.071	2.216
tot HE (gov resources)	14.900	23.126	23.844	24.530	25.216	26.329	28.172	30.144	32.254	34.512	36.928
% Ed sector budget to GDP	4.8										
% Ed sector budget to Gov budget	12.9										
% HE budget to GDP	1.3										
% HE budget to Gov budget	3.6										
% HE budget to Ed Sect budget	28.2										

source WB PER and IMF estimates, May 2012 (projections are team caculations, June 2012, see text for key assumptions)

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