Excellence in Higher Education for Liberian Development (EHELD)

Annual Report

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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Acronyms

AEA	Agriculture Education Advisor
AGRA	Alliance for a Green Revolution in Africa
AHED	Academics for Higher Education Development
BiD Network	Business in Development Network
CAIDS	College of Agriculture and Integrated Development Studies
CARI	Central Agricultural Research Institute
CoE	Center of Excellence
CU	Cuttington University
DCOP	Deputy Chief of Party
EEA	Engineering Education Advisor
EHELD	Excellence in Higher Education for Liberian Development
ESL	Engineering Society of Liberia
FAO	Food and Agriculture Organization
GIZ	German Agency for International Cooperation (*Deutsche Gesellschaft für Internationale Zusammenarbeit*)
ICT	information and communication technology
IFESH	International Foundation for Education and Self-Help
IT	information technology
KNUST	Kwame Nkrumah University of Science and Technology
LAC	Liberia Agricultural Company
LASIP	Liberian Agricultural Sector Investment Plan
LEAG	Liberian Employers Action Group
LEAP	Liberia Engineering and Agriculture Pact
LMA	Liberia Maritime Authority
LPMC	Liberian Produce Marketing Corporation
LSO	Learning Support Officer
MSc	Master of Science
NCHE	National Commission for Higher Education
NCSU	North Carolina State University
NGO	nongovernmental organization
PMP	Performance Management Plan
RISE	Rural Infrastructure in Support of Enterprise
RU	Rutgers University
SMS	Short Message Service
SPARK	Dutch non-governmental organization involved in higher education and entrepreneurship
STTA	Short-Term Technical Assistance
TEEAL	The Essential Electronic Agriculture Library
UL	University of Liberia
UM	University of Michigan
UN	United Nations
U.S.	United States
USAID	U.S. Agency for International Development
WAEC	West African Examination Council

1   Executive Summary

The Excellence in Higher Education for Liberian Development (EHELD) project funded by the U.S. Agency for International Development (USAID) has been in operation for eight months. The overall objective is to build regionally recognized and competitive academic Centers of Excellence (CoEs) that produce graduates who become leading professionals and entrepreneurs in the fields of engineering and agriculture in Liberia.

The project seeks to achieve these objectives by pursuing three distinct, but related, areas of activity. First, EHELD will develop the pipeline of secondary school students to attract, enthuse, and adequately prepare equal numbers of young Liberian women and men to Agriculture and Engineering CoE programs. Second, EHELD will work with the leaders and faculty of Cuttington University (CU) and the University of Liberia (UL) to create CoEs in agriculture and engineering. Third, leaders within government, business, and the donor community will be engaged and empowered to build key employer input into the EHELD initiative.

RTI International formally began the project in February 2011 along with initial project activity. Work commenced fully in May 2011, at which time the full project team was in place in Liberia.

RTI is pleased to report that progress to date has been excellent. The executive management teams of both universities have been fully engaged and extremely supportive, and the project subcontractors have been proactive, enthusiastic, and fully committed. The Liberia-based project team is focused, energetic, and tenacious in their approach to achieving the desired results.

The student pipeline activity centered on the Summer Start program, held in August at CU. A 4-week residential program, delivered to over 70 young Liberians, provided learning opportunities in team-building, remedial learning, project work, and social skills. Over 50% of the students are women. Supported by a program of inspirational guest speakers, managed by a team from the University of Michigan (UM), and supported by Liberian faculty and senior students, the event was a huge success. Seventy students completed the program with commitment to and enthusiasm for agriculture and engineering. They acknowledged that the Summer Start program had been a "life-changing" experience and were eager for further, similar experiences. As a result, the project team is realigning the pipeline activities to include more, far-reaching student pipeline activities that will identify, filter, and support committed young Liberians through similar Summer Start events in subsequent years.

In addition to the Summer Start activities, the project has distributed scholarships to deserving students in agriculture and engineering. The USAID-funded scholarships have been awarded to students who were deemed to be most likely to be effective in achieving the EHELD project objectives. The EHELD team also secured an additional five scholarships from the Liberia Maritime Authority (LMA). For the 2011–2012 academic year, 48 full and partial scholarships were awarded across the two

universities. Seven of the recipients are among the top 11 students graduating from high school from the previous year.

CoE development has focused on minor facility improvements (so as to be fit-for-purpose for teaching), identification of Liberian faculty suitable for study and development overseas, the planning and commencement of a sweeping curriculum development program, and, most critically at this stage, the engagement of long-term contract faculty. Contract faculty will work in the universities for periods ranging from one semester to one academic year, occasionally longer. The contract faculty will support the shortfall in teaching capacity in the universities, will work on the curriculum and facility development, and will mentor and guide existing Liberian faculty. At the end of the fiscal year, six contract faculty, recruited through Rutgers University, were in place, and work on recruiting the next phase of faculty is fully progressing.

The employer engagement activity has been particularly successful. Initially, over 20 stakeholders in graduate employment were visited by the EHELD team, to develop awareness of the project and to generate support for specific initiatives. This activity culminated in an Employers' Forum, held in July 2011, which was attended by over 60 stakeholders. Following a keynote address from U.S. Ambassador [Redacted], a stimulating discussion resulted in the formation of the Liberia Employers Action Group (LEAG) and five focus groups that will meet in the future to discuss and develop areas such as internships and career development. Dialogue continues with individual stakeholders and the focus groups.

The objectives for the next year are to continue the success the project has had to date through leveraging resources and diving deeper on core project components. A major focus will be on preparing and implementing a curriculum that is driven by the employers and is appropriate for the students and for Liberia. Clearly this curriculum must be supported by enthusiastic and knowledgeable faculty, working in adequate and functional facilities. EHELD will continue to build this supporting foundation.

Finally, RTI will continue to enthuse and excite the most critical element of all—the students—who will be nurtured through the student pipeline activities. There is clearly great commitment and enthusiasm among Liberian youth for a better standard of education that will help them to rebuild their country. EHELD will continue to aim to provide the foundations of this movement.

2   Introduction

This is the Annual Report of the Excellence in Higher Education for Liberian Development (EHELD) project. It covers the period from project initiation to September 30, 2011 and includes the Third Quarterly Report, covering the period from July 1, 2011, to September 30, 2011.

EHELD's Strategic Objective is to build regionally recognized and competitive academic Centers of Excellence (CoEs) that produce graduates who become leading professionals and entrepreneurs in the fields of engineering and agriculture in Liberia.

There are three Intermediate Results:

- Increase in the number of students who select and succeed in agriculture and engineering majors at Cuttington University (CU) and the University of Liberia (UL) respectively
- Agriculture and Engineering CoE programs that provide the highest quality education   in line with international best practices
- Increased employment opportunities for the graduates of the Agriculture and Engineering CoE programs
- Supporting objectives of EHELD are to accomplish the following:
- Improve graduate placement from the engineering and agricultural programs by linking the academic programs with priority economic sectors, such as mining, agriculture, and infrastructure construction (energy, water, and sanitation systems as   well as roads and bridges).
- Support national development priorities by increasing the availability of qualified entrants to the workforce in key economic growth sectors through an improvement in the success rate of students entering the higher education system.
- Attract youth to the agriculture and engineering fields through outreach programs,   early academic exposure, and marketing campaigns.
- Ensure broader access to degree programs through targeted outreach and scholarship   programs, with a special emphasis on women students and underserved populations.
- Create linkages with U.S. and regional university programs through faculty exchanges, joint research projects, and shared resources.
- Promote self-employment opportunities through professional and entrepreneurship   training.

Throughout the implementation of the program there will be a focus on building local capacity at all levels of partner institutions, placing a priority on gender issues; creating inclusive programming for women and girls; and developing lasting, relevant, and sustainable institutions.

At the end of the program, high-performing graduates from the CoEs will be prepared to resolve the economic and development challenges facing Liberia as it rebuilds its economy, physical infrastructure, social structure, and government institutions. In

addition, EHELD will have developed a best-practice model for the restoration of higher education in Liberia.

The ultimate success of this project rests with three separate, fully coordinated approaches. First, EHELD programs will develop the pipeline of secondary school students to attract, enthuse, and adequately prepare equal numbers of young Liberian women and men to Agriculture and Engineering CoE programs. Second, EHELD initiatives will assist the leaders and faculty of CU and UL to create academic CoEs in agriculture and engineering that employ sufficient numbers of faculty, utilize up-to-date curricula, employ best-practice teaching methodologies and materials, and do so in facilities that are conducive to learning. Third, utilizing a powerful public-private education community outreach initiative, the Liberia Employers Action Group (LEAG), leaders within government, business, and the donor community will be engaged and empowered to build key employer input into the EHELD initiative. The goal is to create a real-world student experience, service learning opportunities, and constant exposure to the practical world of work for CoE students that will, ultimately, facilitate their job placement.

The contract was awarded on February 10, 2011, and the start-up team arrived in Liberia in March 2011. With one exception, the full team was in position from May 1, 2011.

2.1 Nomenclature Relating to Years

In previous documents, there has been a lack of consistency in reference to the various definitions of reporting years. This was resolved in an explanation in the Second Annual Work Plan and is repeated here for consistency and clarity.

This section attempts to unify the various definitions; henceforth, all references to "years" are based on the U.S. fiscal year, running from October 1 to September 30 (identical to the USAID reporting/planning year). The rational for this is explained below:

- On occasions, reference is made to academic years. These start in September and run through until around May the following year.
- USAID planning and reporting years are based on the U.S. fiscal year, running from October 1 to September 30.
- The EHELD project started on February 10, 2011. In some instances, in earlier documents, reference to Year 1 was intended to be interpreted as the year covering February 10, 2011 to February 9, 2012, i.e. the original Project Year or Contract Year. As such, end-of-year targets could be interpreted as being measured by February 9, 2012.

Thus, the EHELD project commenced partway through a fiscal year and will conclude partway through a fiscal year. This creates a clear mismatch with both the end of an Academic Year and the end of the U.S. fiscal year.

The relationship between these types of years is shown in Figure 1.

Figure 1.   Realignment of Project Years

FISCAL YEAR	Oct '10 – Sept '11	Oct '11 – Sept '12	Oct '12 – Sept '13	Oct '13 – Sept '14	Oct '14 – Sept '15	Oct '15 – Sept '16
ACADEMIC YEAR	Aug '10 – Jul '11	Aug '11 – Jul '12	Aug '12 – Jul '13	Aug '13 – Jul '14	Aug '14 – Jul '15	Aug '15 – Jul '16
CONTRACT YEAR	Feb '11 – Jan '12	Feb '12 – Jan '13	Feb '13 – Jan '14	Feb '14 – Jan '15	Feb '15 – Jan '16	
PROJECT YEAR	**Y1** Jan '11 – Sept '11	**Y2** Oct '11 – Sept '12	**Y3** Oct '12 – Sept '13	**Y4** Oct '13 – Sept '14	**Y5** Oct '14 – Sept '15	**Y6** Oct '15 – Jan '16

Project Start   Project End

To avoid confusion, from October 1, 2011, all EHELD documentation will refer to a "Project Year" as running from October 1 to September 30. The Life of Project Strategic Plan and the Performance Management Plan will be amended accordingly.

Thus, the EHELD project, while being five years in duration, falls into six "Project Years":

- Year 1: covers the period from February 10, 2011 to September 30, 2011
- Year 2: covers the period from October 1, 2011 to September 30, 2012
- Year 3: covers the period from October 1, 2012 to September 30, 2013
- Year 4: covers the period from October 1, 2013 to September 30, 2014
- Year 5: covers the period from October 1, 2014 to September 30, 2015
- Year 6: covers the period from October 1, 2015 to February 9, 2016

2.2   Advisory Councils

A key co-coordinating element described in the First Annual Work Plan is the formation of Advisory Councils. During project start-up, it was convenient to meet at several different levels and with the full range of stakeholders, e.g., with the individual university presidents, with the University Oversight Committees, with LEAG Focus Groups. As a result, it was felt that formation of the Advisory Councils at this time would be counter-productive in terms of use of stakeholder time. It is expected that, as the most committed stakeholders emerge and as the EHELD and CoE agendas become more focused during the Second Project Year, the Advisory Councils will be formed as originally envisaged.

3   Development of Student Pipeline

3.1   General Objective

A major objective of EHELD is for the CoEs to produce a cadre of high-performing graduates with the ability to generate a positive step-change in the Liberian economy. This will require a selective, rather than inclusive, approach, with the result that the project resources need to be focused strategically to generate maximum benefit.

The foundation for achieving this objective is to enable the creation of a "student pipeline" that attracts committed and enthusiastic students while, at the same time, ensuring that any deficiencies in knowledge and learning are addressed and, if possible, remediated.

The pipeline will be developed using a mix of initiatives aimed at attracting and engaging potential students while they are still at high school and maintaining that engagement through to their entry to the university. In addition, a social marketing approach will impact early school years, families, and the general public. This long-term strategy will result in gradually changing mindsets in children, parents, and teachers over the coming years.

More focused activity will identify those high-potential students who would benefit from targeted scholarships and other support. Such students would be the first through the pipeline, acting as exemplars and ambassadors for other potential entrants.

3.2   Specific Activities and Results

3.2.1   Smart Start

Smart Start is an initiative to raise awareness about career opportunities in agriculture and engineering. A major component of Smart Start is a social marketing program using school visits, multiple media outlets, and personal encounters with role models. Messaging will target both youth and adults—acquainting families, teachers, and students with these professions and promoting business opportunities and the many kinds of jobs available in these fields.

Specific activities include the following:

Cuttington University Agricultural Fair, April 16, 2011: RTI increased visibility of the EHELD project and promoted the CoEs by attending CU's Agricultural Fair on April 16, 2011. An EHELD team, joined by a faculty member from North Carolina State University (NCSU), manned a booth to distribute project brochures and speak with students and the general public about the benefits of the CoEs. There was a significant amount of interest and publicity. The President of Liberia, Her Excellency Mrs. Ellen Johnson Sirleaf, visited the booth and mentioned the EHELD project during her opening address at the fair.

Buchanan Careers Fair, June 25, 2011: The EHELD team attended a careers fair in Buchanan. This was organized by Odebrecht International's Social Program to promote careers at all levels, mainly in engineering. RTI had a booth for the EHELD project and distributed project information. A brief presentation was given by [Redacted], EHELD Deputy Chief of Party (DCOP). The names and contact details of interested students were collected for addition to the student database. The EHELD team was supported by faculty and students from UL. In addition, EHELD invited and hosted the top-performing students from St. Joseph's School, in Grand Bassa County. St. Joseph's is part of the Liberia Agriculture Company (LAC) school system, an international agriculture company operating in Liberia. Ten of the eleven top-performing year-12 students in Liberia attend St Joseph's, and there was strong interest in EHELD (see Figure 2). Four students stated a wish to study engineering and four to study agriculture. These students were invited to attend the Summer Start program, and in September, seven of the St. Joseph's students were awarded EHELD scholarships to study agriculture at CU (more in Scholarships Section below). See also *Annex B: Success Stories*.

Figure 2.   Top-performing pupils from St Joseph's School meet the EHELD team at the Buchanan Careers Fair

Press, radio, and television coverage: A significant volume of press, radio, and television coverage has been generated to date. While this is not all aimed specifically at the student pipeline, such coverage raises awareness of opportunities presented by EHELD to all stakeholders. However, Smart Start, in the widest sense, is a social marketing program, and such publicity strongly underpins the more focused activities, hence the inclusion of this information in this section. Further details of the specific events can be found in the appropriate sections of this report.

Coverage in Year 1 of the project includes the following:

- Employers' Forum
    - five national daily newspapers (front page)
    - two national radio stations
    - one television station
- Buchanan Careers Fair
    - DCOP's presentation broadcast live on one local radio station
    - Further report on one local radio station
- Summer Start final ceremony
    - Broadcast live on one local radio station
    - Center-page spread in one local newspaper
    - Center-page spread in one national newspaper

Peace Corps: The Peace Corps will have up to 40 volunteers in Liberian secondary schools in the 2011–2012 academic year. RTI discussions with the Peace Corps resulted in a presentation to volunteers in August, which requested their participation as advocates for EHELD in these schools. They will not only present a favorable view of engineering and agriculture as wealth-creating careers, but may be able to identify particularly promising or committed students for future access to schemes such as Fast Start and Summer Start (described below). It is also possible that some of the volunteers still in-country in August 2012 may be able to assist in the delivery of such activities.

3.2.2 Summer Start

Summer Start is an intensive, 4-week enrichment program, originally intended as a pilot, for up to 80 incoming UL and CU freshmen and sophomores—40 each from UL and CU—who have declared their intent to pursue engineering and agriculture majors. Summer Start provides these students with an intensive experience supported by a team from the University of Michigan (UM) and specially selected faculty (who were sent to UM for pre-program orientation), by peer-mentoring from top-performing UL and CU incoming seniors, by faculty visiting from RU and by guest speakers as role models. The program prepares students explicitly for the new expectations and requirements of a rigorous college program. Courses in mathematics, computers, and English are offered; engineering/agriculture career opportunities are presented; academic social networks are built; personal and professional development are stressed; and social opportunities and cultural events add balance (see Figure 3).

Figure 3.   Summer Start students working on their bridge-building project

The 2011 Summer Start program was an outstanding success. At the commencement of the program, 72 students enrolled. By the closing ceremony, 70 students had completed and had undergone a significant life process (see ***Annex B: Success Stories*** and Figure 4).

Figure 4.   Summer Start students celebrate the end of the program

Despite the challenges facilitators experienced from running a new program, the enthusiasm and commitment from the students was apparent for all those present. This is illustrated in some of the comments from the students:

"Since I have been to Summer Start, I have learned to be inventive, creative, knowing more about computer, how to do group work. All of these things have helped to encourage me to love my career best, because as a good engineer, you must get all of these things that will [guide] you anywhere. So, I know that the knowledge I have gained from the Summer Start program will enable me to be one of the best mining engineers in times to come."

<div align="right">

[REDACTED]

</div>

"…one of the most important things as an engineer is to develop the capacity of innovation, developing and [putting] together different ideas that the world will see and approve of. In this class, I have benefitted more and hope for more mechanisms [to] be put into place so that my interest in my career would increase and also make me more creative in engineering career and designs."

<div align="right">

[REDACTED]

</div>

"The Summer Start program has helped me to become more passionate about the people in my community and the country at large. It made me realize that there is a huge demand for my area of specialization as a mining engineer to grow the industrial sector of Liberia. As a student of mining engineering, I see myself creating things that would benefit my community. It makes me love my career, and I see engineers as living engines to power the economy of a nation. I grew up with the notion of looking for [a] job upon my graduation as [an] engineer, but this program had revealed that engineers have the capacity to be self-employed and employ others."

<div align="right">

[REDACTED]

</div>

"By seeing a lady as an engineer and [not BSc but PhD], really encourages me and changed my attitude positively and increased my drive for being an engineer."

<div align="right">

[REDACTED]

</div>

"My attitude concerning my career has changed positively since I began training with the Summer Start Program … it has added … great values and passion towards my career as an electrical engineer. I have achieved great knowledge about being creative and constructive in my field. This program has given me the motivation that I can indeed succeed in my career and make an impact on society."

<div align="right">

[REDACTED]

</div>

"The Summer Start program has made me realize that there is more to agriculture than what I thought. In my country, most people see agriculture as just making a backyard garden and rearing a small amount of domestic animals, which we thought that anyone can do. Professor [Redacted] spoke to us about medicinal plants, which is also a branch of agriculture, and how the world depends on agriculture for so many things like food, clothing, shelter, drugs. I know now that I'm very much important to the world because the world needs me to provide all these important [items] to survive."

<div align="right">

[REDACTED]

</div>

"I learned to be self dependent in acquiring knowledge. Really, most Liberian kids … rely on instructors for notes and don't believe in extra researches, but now that has really changed in me."

<p align="right">**[REDACTED]**</p>

"One of the classes I love to attend is the life skills class in that it has taught me things I didn't know about myself. This program has also built up my skills, taken away my shyness, and made me interact with others, including my professors."

<p align="right">**[REDACTED]**</p>

"I am an average B+ student, but from the pieces of advice … I have heard … from the facilitators, teachers, guest speakers, … I can obtain A+ if I strive during my regular university schooling."

<p align="right">**[REDACTED]**</p>

A further observation from the program is that students would benefit greatly from more general learning support. Faculty identified weaknesses in math, English, and information technology (IT) base knowledge in otherwise seemingly accomplished students. Support in these areas will aid retention and motivation, and eventually, the standard of graduate output. This has been addressed by the engagement of a Learning Support Officer (LSO) on each site, through a contract faculty post. This is explained further in Sections 5 and 8.

However, the most significant outcome of the Summer Start program is the realization that there is an urgent need for more of this type of activity. As a result, the planned activity in this area has been expanded. This is described in detail in the Second Annual Work Plan, but for continuity is described briefly below.

This revised pipeline strategy consists of three elements: a revised Smart Start element; a new element called Fast Start, and a continuation of the successful Smart Start initiative.

Smart Start, originally planned as a series of social marketing messages and events, will include several specific school visits, which will consist of hands-on activities and stimulating information and messages. These visits will be supported by EHELD personnel, senior students (probably those previously involved in the delivery of Summer Start), university faculty, and, if possible, Peace Corps volunteers. The intention of these visits will be to excite and enthuse students as well as stimulate interest in possible attendance at Fast Start events.

Fast Start, which is a new concept in EHELD, will be a series of (probably five) 2-week residential programs offered to students in years 10, 11 and 12 with the intention of igniting interest in careers in engineering and agriculture and acting as both a marketing and filtering mechanism for the best and most enthusiastic students to access the 4-week Summer Start.

3.2.3 Scholarships

The USAID grant provides a total of [Redacted] for scholarships to students studying engineering and agriculture. This is split into [Redacted] for UL and [Redacted] for CU. The underlying intent in the use of this funding is to provide opportunities and encouragement for students to pursue study and careers in these wealth-creating occupations. As such, the funding is seen by the EHELD team as an investment that requires careful allocation and management to ensure the best returns. On this basis, it was decided that scholarships would be awarded to those students with the best potential for success. This could be either students achieving high academic results OR students demonstrating high levels of commitment and enthusiasm for these particular subject areas.

A plan was developed for the rollout of the scholarship funding (see Table 1), based on a balance of funding over the early years and taking into account the need to continually support funded students. It was also recognized that further sources of funding will be needed to ensure the sustainability of the initiative post-EHELD. Thus, it is planned to fund students in Years 4, 5, and 6 of the EHELD project, even though at present it is not clear how those students will be funded following the completion of the EHELD project. It is expected that further funding will be identified (preferably from the private sector) within this time frame (for example, even at this early stage, the Liberia Maritime Authority [LMA] have kindly agreed to divert five of their existing scholarships to the EHELD project).

Table 1.   Planned allocation of scholarships over the life of project

EHELD scholarship program – all figures in US$						
Cuttington University						
	Year 2	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Total**
Academic year	Sep 2011 – Aug 2012	Sep 2012 – Aug 2013	Sep 2013 – Aug 2014	Sep 2014 – Aug 2015	Sep 2015 – Aug 2016	
Enrollment						
No. of students in EHELD scholarship program	20	20	20	20		
		30	30	30	30	
			15	15	15	
Total	**20**	**50**	**65**	**65**	**45**	**245**
Financial						
[REDACTED]						
University of Liberia						
	Year 2	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Total**
Academic year	Sep 2011 – Aug 2012	Sep 2012 – Aug 2013	Sep 2013 – Aug 2014	Sep 2014 – Aug 2015	Sep 2015 – Aug 2016	
Enrollment						
No. of students in EHELD scholarship program	12	12	12	12	12	
		10	10	10	10	
			10	10	10	
Total	**12**	**22**	**32**	**32**	**32**	**130**
Financial						
[REDACTED]						

In terms of the scholarship award process, agreement was reached with each university as to how funds should be allocated. This process varied slightly between each university to accommodate their wishes and to align, where appropriate, with their existing processes.

The scholarship committees met in late September/early October and allocated the 2011–2012 funding for Semester 1 as shown in Table 2.

Table 2.   Scholarship allocations, Semester 1, 2011–2012

| University | Partial/Full | Awards | | | [Redacted] | [Redacted] |
		Male	Female	Total		
CU	Partial	8	14	22	[Redacted]	[Redacted]
CU	Full	7	4	11	[Redacted]	[Redacted]
UL	Partial	7	8	15	[Redacted]	[Redacted]
Totals		**22**	**26**	**Full 11 Partial 37**	**[Redacted]**	**[Redacted]**

Note: CU Scholarships include 2 full scholarships donated to EHELD by LMA. UL Scholarships include 3 full scholarships donated to EHELD by LMA.

3.2.4 Books

While not necessarily falling strictly under the Student Pipeline initiative, several book donations have been received. Some of these will be used in Smart Start, Fast Start, and Summer Start (as part of the Student Pipeline initiative); some will be donated to schools as a further mechanism to enthuse pupils; and some will be placed in the respective CoEs.

Donations to date include 4,080 science, math, and English books from the USAID-funded Liberia Teacher Training Program initiative, 400 books from the Food and Agriculture Organization (FAO) collection at the United Nations (UN) Women Office and a range of engineering and agriculture textbooks from RU.

3.3   Challenges and Specific Measures Used/Planned to Overcome Them

The student pipeline activity has been extremely successful at this early stage. The general response from schools and pupils has been good, even with the relatively low level of activity. The 4-week residential Summer Start program, described above, exceeded expectations and has led to a planned expansion of this type of activity through the addition of Fast Start (a 2-week program for schools, described above) and the more focused approach to school visits incorporated into Smart Start (the social marketing program originally planned in the project proposal).

This expansion inevitably creates budget challenges, but the potential added value justifies the extra effort to overcome these. The planned measures to overcome this challenge include the following:

- Seek private-sector funding: as part of the employer outreach activity, funding, both cash and in-kind, is being sought. This has started to show some possibilities—LAC has provisionally agreed to host a Fast Start program in summer 2012 at little or no cost. Other companies have shown definite interest in similar types of support.

- The extra personnel necessary to support the expanded program are being identified. These include existing contract faculty, existing faculty, senior students, UM undergraduate students, and Peace Corps volunteers as well as industrialists. If a gender component is incorporated in Summer Start (as detailed in Section 11), extra resources may be forthcoming from other sources. Dialogue with the Engineering Society of Liberia has also indicated some willingness to participate in a volunteering sense.

3.4 Activities Planned for Next Quarter

Planning for the 2012 2-week residential Fast Start and 4-week residential Summer Start is underway, but the priority for the next quarter is to mobilize the Smart Start activities. This specifically requires

- development of the social marketing strategy, along with the relevant public relations and branding activities;

- development of the resource pack required to support the Peace Corps in their role as "unofficial" EHELD advocates;

- development of the resource pack and activities required for the 1-day Summer Start events;

- development of the visits component of the Summer Start initiative.

It is expected that the first Smart Start visits will commence during the next quarter.

4 Improved Agriculture Curriculum
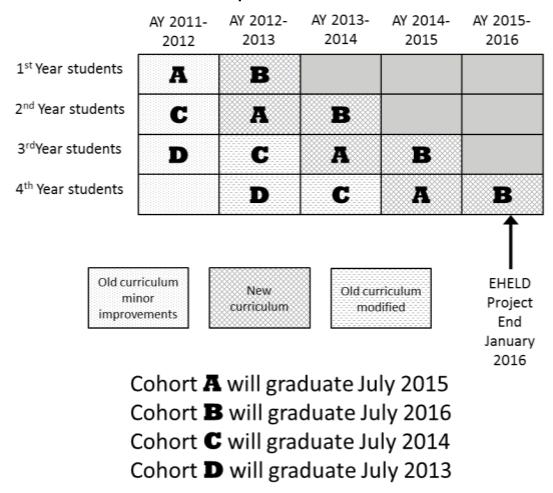
4.1 General Objective

The objective is to prepare an agriculture curriculum that will produce graduates with the skill sets required to meet the development challenges and needs of Liberia's agricultural sector. An outward-looking approach to curricula and course development will be taken that considers the current and future needs of the Liberian public, private, and nongovernmental organization (NGO) sectors; focuses on issues of food security, reviving traditional agricultural sectors such as rice and cassava, while strengthening newer higher value ones, such as horticulture, animal, and poultry within an agri-business development model; and considers other pressing development needs identified in the Liberian Agricultural Sector Investment Plan (LASIP). This will include areas such as crop protection, post-harvest handling and storage, production intensification and water management, and natural resource management. The development of the CU experimental farm and its integration with research activities at the neighboring Central Agricultural Research Institute (CARI) will be a key achievement, as will accommodating the needs of a broader range of agricultural industries and professionals through the introduction of short courses and certificate programs. Agribusiness and entrepreneurship concepts will be introduced at all levels of the curricula, leveraging resources from the private sector.

4.2 Specific Activities and Results

A curriculum review was carried out by CU faculty in collaboration with faculty from Rutgers University and NCSU. The review indicated those areas of curriculum requiring improvement. It also indicated that those students already in Years 3 and 4 of the 4-year agriculture program are poorly prepared for a new curriculum. Thus, the curriculum improvement plan is based on a two-pronged strategy which will introduce new curriculum for incoming freshmen and sophomores in September 2012 and will introduce improved, but not new, curriculum for Years 3 and 4 at the same time. This approach is essential to ensure as many students as possible benefit from EHELD; however, only one complete cohort of students (Cohort A in Figure 5) will receive the new curriculum and graduate within the life of the EHELD project. Yet it will also give three cohorts (Cohorts B, C, and D) access to the improved curriculum, thus improving their experience beyond the current norm.

This rollout of new and improved curricula is shown in Figure 5.

Figure 5.   Rollout of new and improved curricula

	AY 2011-2012	AY 2012-2013	AY 2013-2014	AY 2014-2015	AY 2015-2016
1st Year students	A	B			
2nd Year students	C	A	B		
3rd Year students	D	C	A	B	
4th Year students		D	C	A	B

Old curriculum minor improvements	New curriculum	Old curriculum modified	EHELD Project End January 2016

Cohort **A** will graduate July 2015
Cohort **B** will graduate July 2016
Cohort **C** will graduate July 2014
Cohort **D** will graduate July 2013

This curriculum rollout also presents the opportunity to nurture the best students through their program, utilizing all the resources available to EHELD. It may enable the "streaming" of the best students who may have attended Summer Start, who may be recipients of scholarships, and who may have had access to the best internships, such that upon graduation they are truly able to enter work with the potential to add value to the Liberian economy—EHELD's major objective.

This streaming will also enable control of class size for this group of students, ensuring that their educational experience is excellent. These students may also be admitted to, or assist with, future Summer Start programs and have ready access to an LSO so that any knowledge or learning deficiencies can be rectified sooner rather than later.

Mechanisms for the full curriculum development have been formulated, taking into account input from the LEAG Focus Group on curriculum (described in Section 10). This will include input from SPARK, a Dutch NGO, who runs entrepreneurship mentoring and competitions. The curriculum will also incorporate feedback on internships and entrepreneurship and will have a strong project focus.

Planning has also commenced for the improvement of the School Farm. Activities on the farm will be integrated more closely into the curriculum and will include income generation and agriculture business and economic. A short-term technical assistance visit in the next quarter will finalize the plan and enable work to start. There may also be a facilities element to this work.

4.3 Challenges and Specific Measures Used/Planned to Overcome Them

Timely completion of the new curriculum is critical if it is to be approved and implemented in time for the 2012–2013 academic year. While this is a challenge, it can be overcome by careful project management and timely completion of individual tasks. This will require close management of the process by the Agriculture Education Advisor (AEA) as the focus of the activity.

A further challenge will be ensuring acceptance by faculty (it is they who must deliver it) and by the employers. The curriculum development approach of close involvement with employers should ensure their acceptance and the temptation to bypass them will be avoided.

4.4 Activities Planned for Next Quarter

The following activities are planned for the next quarter:

- Further short-term technical assistance (STTA) visits to assist in curriculum development
- Finalization of high-level curriculum structure
- Allocation of tasks among the AEA, contract faculty, subcontractors, and existing faculty
- Design of "rollout" plan, to incorporate requirements of the CU curriculum approval process
- Identification of industrial contributors
- Commencement of detailed curriculum development
- Finalization of plan for School Farm, including STTA visit.

5 Strengthened Capacity of Agriculture Faculty

5.1 General Objective

It has previously been identified that the College of Agriculture and Integrated Development Studies' (CAIDS') ten current faculty members, though committed, are unable to meet the demand for courses across all the subject areas required. A significant proportion of these staff originate from other West African countries rather than Liberia. In addition, several of these faculty members are nearing retirement age, and others need to further their own graduate training. A significant priority in addressing these issues is strengthening the capacity of existing faculty through mentoring, research opportunities, training, and degree programs. The identification and recruitment of additional faculty, particularly women, is also a priority. In the short term, the need for additional capacity will be met through contract and visiting faculty, but in the long term, a pipeline for new Liberian faculty members will be developed. This long-term need will be addressed, in part, by identifying the most promising students interested in a teaching profession and seeking opportunities for them to continue their education in either top regional or U.S. institutions, while serving in the interim periods as teaching assistants in the CoE.

In addition, for an undergraduate Agriculture CoE to continue its growth and to be sustained over time, key CoE administration support roles and responsibilities will be identified, and those involved will be supported with the training and exposure to best practice CoE program management in West Africa and the U.S.

5.2 Specific Activities and Results

5.2.1 Contract faculty

An initial study, identifying areas of weakness in faculty capability, has been conducted, resulting in the appointment of four contract faculty who will begin their roles at CU during September 2011.

These contract faculty are the following:

- [Redacted]: specializing in agriculture, agricultural education, science education, curriculum, capacity-building, and leadership
- [Redacted]: specializing in soil science, forestry, and natural resource management
- [Redacted]: specializing in learning support, education, and Liberian youth
- [Redacted]: specializing in agricultural engineering and machinery It is pleasing to note that 50% of these contract faculty are female.

These faculty are housed in the EHELD Guesthouse, which is situated on the CU campus. The guesthouse was equipped at project cost, with the labor provided by CU. The guesthouse will be at the disposal of EHELD at no charge for the duration of the project.

At the request of the CU President, the AEA took up the post of Acting Dean of Agriculture in July 2011. Subsequently, as planned, one of the incoming contract faculty, [Redacted], assumed this role and will, potentially over a 3-year period, mentor a Liberian successor. This is an arrangement that has been well received by CU faculty and should prove to be a catalyst to additional progress.

Also underway is a process to finalize the selection of a candidate to undertake an agriculture degree (master of science [MSc] or possibly a doctorate) in a West African university. The contract faculty will be sourced by Rutgers, and the short courses will be supported and delivered by Rutgers and NCSU.

5.2.2 Learning Support Officers

It is also apparent (across both subject areas) that the student body would benefit greatly from more general learning support. The Summer Start program in particular has identified weaknesses in math, English, and IT base knowledge in otherwise accomplished students. It is felt that support in this area will aid retention and motivation, and a contract faculty post has been utilized in employing an LSO on each site. The LSO has the responsibility to form and grow a Learning Support Office to enable students who are struggling with courses to seek help and be directed to the appropriate assistance. It is likely that this mechanism will also pick up non-academic problems that can be directed to general counseling services or, more likely, be the catalyst for the provision of university-wide counseling services.

5.2.3 Faculty development

Several activities have been focused on the development of existing faculty:

Summer Start directors to UM

Prior to the Summer Start program, one Summer Start director from each university was appointed. The CU representative was [Redacted]. As part of the UM contribution, the two directors traveled to UM for a period of two weeks to observe and participate in the U.S. equivalent of Summer Start. This enabled both directors to understand the underlying principles relating to the management and organization of such events and will allow them to build on this experience as they organize and manage future Summer Start events.

Faculty participation in Summer Start

A further valuable faculty development outcome of Summer Start was the opportunity for faculty members and senior students to contribute and work alongside the UM team. Two faculty members from each university delivered courses to the Summer Start students in mathematics, English, botany, and physics. There were further contributions to the life skills course, and other CU Agriculture faculty contributed to the project work carried out by the students. The interaction with the UM staff, the team work, and the excellent response from the Summer Start students ensured a rich and valuable experience for all concerned, and it is expected that their involvement in future Summer Start activities will initiate a sustainable Summer Start program that will run beyond the conclusion of the EHELD project.

Faculty enrichment

It is recognized that many of the faculty have little experience in working in other, possibly more developed, universities. The lack of experienced managers also results in the lack of role models for faculty. The outcome is faculty who, through no fault of their own, are limited in terms of professionalism, although the situation at CU is much better than that at UL. One role of the contract faculty is to mentor existing faculty, but although this is of value, it is limited in terms of potential achievement, and other mentoring mechanisms have been sought.

An opportunity has arisen to contribute to and participate in a partnership organized by the Dutch NGO SPARK. SPARK is an independent not-for-profit organization, based in the Netherlands. SPARK develops education and entrepreneurship so that young and ambitious people are empowered to lead their post-conflict society into prosperity. It does so by building the capacity of local economic and educational organizations and institutions. EHELD discussions have focused on collaboration regarding entrepreneurial aspects of the curriculum, access for CoE students to the SPARK Business Start-up Competition, and linking the SPARK faculty enrichment program (that runs with the Association of Liberian Universities) with the EHELD faculty strengthening activity. It is this latter activity that is relevant to the faculty development activity of the EHELD project.

The partnership consists of SPARK, the EHELD project, the Business in Development (BiD) Network, the Association of Liberian Universities, UL, CU, the School of International Service (American University, Washington), and the University of Twente in the Netherlands. The enrichment program is planned to run over the next academic year as a series of seminars with two to three 1-week sessions. Topics covered will include pedagogic aspects, professional ethics and responsibilities, group dynamics and conflict management, and project-led education. It is likely that contributions will be made by EHELD contract faculty, short-term technical assistance (STTAs), and EHELD core staff. The primary focus, agreed on with SPARK, will be on engineering and agriculture faculty at UL and CU.

It is also pleasing to note that CU has appointed an International Foundation for Education and Self-Help (IFESH) volunteer as the Director of Faculty Development. It is the intention that EHELD will work closely with the Director, not only on the SPARK initiative, but also on other aspects of faculty development.

The USAID-funded UL/Indiana University/University of Massachusetts has also shown interest in collaboration with the SPARK partnership.

Rutgers/KNUST collaboration

Through leveraging the partnership between EHELD subcontractor Rutgers and the Kwame Nkrumah University of Science and Technology (KNUST) in Ghana, two teaching assistants in agriculture at CU have been awarded an Alliance for a Green Revolution in Africa (AGRA) Scholarship to undertake an MSc program in Plant Breeding and Genetics at KNUST, Kumasi, Ghana, during the coming academic year. The AGRA scholarship covers tuition, boarding, travel, textbooks, and living expenses.

Extra Rutgers scholarships

It is pleasing to note that Rutgers has committed to an additional [Redacted], specifically to bring over one faculty member from UL (to get their MS in Engineering) and one faculty member from CU (to get their MS in Agriculture). This is in addition to the two faculty graduate degree programs already budgeted for within EHELD.

Attracting expatriate Liberians for university positions

The executive management of both universities recognizes that there are many expatriate Liberians who have the leadership and management experience required to initiate change. Although not specifically a part of the EHELD planned activities, the project team, as part of their outreach activity, will seek funding from the Liberian private sector to assist with this initiative.

5.3   Challenges and Specific Measures Used/Planned to Overcome Them

The obvious challenge in this activity is that of sourcing contract faculty who have the skills and experience required at CU; who are content with the salary, benefits, and terms and conditions; and who are prepared to work in the environment presented by CU and by Liberia. The team currently in place at CU is an excellent combination of the required skills and experience, but this has required significant effort on the part of Rutgers and the EHELD team. It is clear that to sustain this effort, the level of activity must increase and encompass other sources of faculty. To date, the EHELD team has held discussions with several potential sources. These include IFESH, Academics for Higher Education Development (AHED), and Veterinarians Without Borders. There is also clearly an element of managing the expectations of incoming contract faculty, and care is being taken to ensure that incoming faculty have a comprehensive picture of what to expect.

5.4   Activities Planned for Next Quarter

Specific activities for the next quarter are as follows:

- Consolidate the role of the current contract faculty team
- Continue the process of sourcing further contract faculty
- Allocate faculty scholarships for overseas study
- Commence dialogue with the new CU Director of Faculty Development regarding the implementation of new initiatives, including the SPARK Faculty Enrichment program.

6 Improved Agriculture Facilities

6.1 General Objective

Classrooms, faculty offices, laboratory facilities and equipment, the School Farm, and faculty accommodation require across-the-board upgrading. The objective is for EHELD to work with CU administration to make basic classroom improvements so that students can feel the potential of a CoE. These improvements will include refurbishing existing classrooms and providing basic teaching support materials (white boards, tables, chairs, teaching aids, etc.). An underlying intention is to demonstrate that fit-for-purpose facilities can be created and maintained for a relatively modest cost.

It is realized that, in addition, the USAID Rural Infrastructure in Support of Enterprise (RISE) Project—expected to be operational in 2012—will be responsible for constructing a new CU Agriculture and Integrated Development Services building, with the classrooms, laboratory space, and faculty offices to accommodate CoE activities. Conceptual planning for this facility will be carried out in Year 2 so that a preliminary plan and design can be presented to the RISE Project once it is operational.

6.2 Specific Activities and Results

6.2.1 Facility improvements

A facility survey has been carried out at CU. Based on this report; various facility improvements have been carried out or are in progress. The agreement with CU is that they will assist with such improvements with in-kind contributions. This could be in terms of some building materials that are already available or, more usually, with labor. Examples of existing facilities are shown in Figures 6 and 7.

Figure 6.   A typical classroom in CAIDS at Cuttington University

Figure 7.   The CAIDS facility at Cuttington University, showing the patched asbestos roof

Facilities improved to date include the following:

- Contract faculty housing. It is unlikely that contract faculty would have been content staying in the standard faculty housing, so with the intention of recruiting and retaining good quality faculty, a faculty house has been

converted to an EHELD Guesthouse. This has been done at cost to the project, but with the agreement with CU that it will be rent-free for the duration of EHELD.

- Classrooms (this work is still in progress).
    - Rehabilitation of two classrooms
    - Rehabilitation of an agriculture/science laboratory
    - Establishment of a resource room
    - Upgrading of two rooms for instructors' offices
- A small generator has been loaned to CU. This was originally used to provide power to IT facilities during Summer Start but is now available to the EHELD project on the CU campus to ensure power provision in the event of extended power cuts.

Further plans are being formulated to improve the existing facility. At present, a part of the existing CAIDS building is used as the university clinic. Once this is relocated, there will be an opportunity to turn this space into a laboratory and faculty offices.

The roof on this part of the building needs to be replaced urgently. It primarily consists of asbestos, which leaks severely.

Plans are also in preparation for the re-vitalization of the School Farm. These will be completed following a short-term technical assistance (STTA) visit in the next quarter and it is possible that some facility improvements may be required.

It is expected that dialogue with other donors will add to these efforts. TOTAL Liberia Inc. (a petroleum company) has shown interest in funding the relocation of the clinic. Veterinarians Without Borders have donated two microscopes to CAIDS and have shown interest in the creation of a National Veterinarian laboratory.

6.2.2 Equipment donations

The following equipment and books have been donated to the Agriculture CoE through the activities of the EHELD team:

- Books (FAO)
    - 400 books on agriculture and food-related subjects
- Books (RU)
    - A range of agriculture textbook
- Laboratory equipment (RU)
    - A range of lab materials and supplies, including a digital camera
- Two microscopes (Veterinarians Without Borders)
- The Essential Electronic Agriculture Library (TEEAL), a digital "library in a box" (RU)

- Computers (RTI International)
    - 25 laptop computers and 5 desktop computers have been donated to CU by RTI International. RTI renews IT equipment on a 3-year rolling basis and regularly donates the used equipment to charitable causes. This year, following a suggestion by the EHELD DCOP, this significant donation has been made to the EHELD universities.

6.3 Challenges and Specific Measures Used/Planned to Overcome Them

The major challenge in improving facilities lies in ensuring the best value for money and in establishing the most immediate priorities. Also, given the planned activities of the RISE project, it is important that work not be carried out now, under EHELD, that will fall more naturally under the RISE project.

The approach to managing this problem is to involve CU in all aspects of the work, particularly in securing their "buy-in." This ensures that there is "joint ownership" of facilities and drives the need for careful consideration of the best solution by all parties. There is also an element of scheduling required, so that the potential RISE work complements, rather than contradicts, any work carried out under EHELD.

6.4 Activities Planned for Next Quarter

Specifically, planned activities for the next quarter are as follows:

- Completion of classroom renovations
- Formulation of a long-term library plan that allows immediate improvements but also considers improvements required from RISE
- Commencement of detailed planning for School Farm improvements, including an STTA visit

7   Improved Engineering Curriculum

7.1   General Objective

The objective is to prepare an engineering curriculum that will produce graduates with the skill sets required to meet the development challenges and needs of Liberia's engineering sector.

Much of the curricula is outdated and in need of revision or replacement. There appears to be little formal input from industry and employers, and there is a culture of making ad hoc changes to the curriculum. It is possible that there is too much variety in the curriculum, and there is a plethora of potentially unnecessary courses. Thus, rationalization and consolidation of the courses available is also an objective.

Informed by an initial comprehensive review of the engineering program curriculum, development needs are being prioritized, and a strategy is being developed for a market-driven program that is responsive to national priorities. Remedial courses need to be offered to ensure that students entering the engineering program with inadequate math, science, and language skills are able to cope with the rigorous curricula.

7.2   Specific Activities and Results

The curriculum review carried out in the first year of the project has indicated those areas of curriculum requiring improvement. This has led to a plan for the engineering curriculum improvement that is similar to that described for agriculture, above. However, there is an additional complication in that the UL Engineering department currently runs a 5-year degree program. There are a range of arguments for and against this arrangement, but the recommendation of the EHELD team is that the engineering curriculum be rewritten to enable a 4-year degree program and, if possible, include the rationalization of departments and facilities. If this can be achieved, then the implementation model is similar to that for agriculture, described above.

As with agriculture, the review indicates that those students already in Years 3, 4, and 5 of the 5-year engineering program are poorly prepared for a new curriculum. Thus, the curriculum improvement plan is based on a two-pronged strategy which will introduce new curriculum for incoming freshmen and sophomores in September 2012 and will introduce improved, but not new, curriculum for Years 3 and 4 at the same time. This approach is essential to ensure as many students as possible benefit from EHELD, however, only one complete cohort of students (Cohort A in Figure 3) will receive the new curriculum and graduate within the life of the EHELD project. Yet it will also give three cohorts (Cohorts B, C, and D) access to the improved curriculum, thus improving their experience beyond the current norm. If the change is not made from a 5-year to a 4-year program, even Cohort A will not graduate within the life of the project.

This rollout of new and improved curricula is shown above in Figure 5. However, it has been possible to implement some limited changes to the Year 1 curriculum to strengthen those areas seen as particularly weak. These changes are in the following areas:

Math 109—An Introduction to Computers: previously focusing on programming concepts in archaic computer languages such as COBOL, the course will now serve as an introduction and provide the student with a detailed understanding of computer hardware and application and system software.

Geng 105—Engineering Orientation: this course will now familiarize the students with the various engineering fields by bringing alumni, practicing professionals, and other guests to share their experience with the students. It will assign and encourage first-year students to identify and compile solutions to existing challenges and acquaint them with their responsibilities to the university and society as future engineers.

Eng 303—Engineering Mechanics (Statics): this course syllabus has not been updated since the 1970s. To bring the course up-to-date, material added includes Resolution of Force Systems, Equilibrium of a Particle, Equilibrium of Rigid Bodies, Force Systems Resultants, Trusses and Frames, Internal Forces, and Friction and Simple Machines.

Eng 403—Fluid Mechanics: this course has not been updated since the 1970s. To bring the course up-to-date, material added includes Fluid Statics (Hydrostatics); Kinematics of Fluids: Vorticity and Circulation; Stream Function; Euler's Equation; Bernoulli's Equation and Applications; Dynamics of Fluid; Continuity Equation; Turbulent, Transition, and Laminar Flow; Flow in Pipes: Friction and other Losses; Open Channel Flow: Notches and Weirs; and Momentum Equation and its Application.

This curriculum rollout also presents the opportunity to nurture the best students through their program, utilizing all the resources available to EHELD. It may enable the "streaming" of the best students who may have attended Summer Start, who may be recipients of scholarships, and who may have had access to the best internships, such that upon graduation they are truly able to enter work with the potential to add value to the Liberian economy—EHELD's major objective.

This streaming will also enable control of class size for this group of students, ensuring that their educational experience is excellent. These students may also be admitted to, or assist with, future Summer Start programs and have ready access to an LSO so that any knowledge or learning deficiencies can be rectified sooner rather than later.

Mechanisms for the full curriculum development have been developed, taking into account input from the LEAG Focus Group on curriculum (described in Section 10). This will include input from SPARK, a Dutch NGO, who runs entrepreneurship mentoring and competitions. The curriculum will also incorporate feedback on internships and entrepreneurship and will have a strong project focus.

7.3 Challenges and Specific Measures Used/Planned to Overcome Them

Timely completion of the new curriculum is critical if it is to be approved and implemented in time for the 2012–2013 academic year. While this is a challenge, it can be overcome by careful project management and timely completion of individual tasks. This will require close management of the process by the Engineering Education Advisor (EEA) as the focus of the activity.

A further challenge will be ensuring acceptance by faculty (it is they who must deliver it) and by the employers. Acceptance by the faculty is particularly troublesome at UL because there is significant resistance to change. This results in poor attendance at meetings, and although there is a willingness to talk, there is an unwillingness to act positively on agreed actions. While the tactic of developing curricula in close collaboration with employers should ensure the acceptance and relevance of the curricula, there is a more deep-rooted resistance among the Engineering faculty. This seems to stem from a lack of management, both in the past and in the present, which has resulted in a lack of pride and ownership of engineering at UL. The executive management of the university recognizes this problem, and they are working closely with the EHELD team to remedy this problem.

7.4 Activities Planned for Next Quarter

The following activities are planned for the next quarter:

- Formation of a committed body of engineering faculty with the authority to act on curriculum and organizational changes
- Short-term technical assistance (STTA) visit for additional input to curriculum
- Finalization of high-level curriculum structure
- Allocation of tasks among the EEA, contract faculty, subcontractors, and existing faculty
- Design of a "rollout" plan, to incorporate requirements of the UL curriculum approval process
- Identification of industrial contributors
- Commencement of detailed curriculum development

8 Strengthened Capacity of Engineering Faculty

8.1 General Objective

UL leadership has emphasized the great importance of preparing the next generation of engineering faculty. This is the major objective of this activity. The development of a pipeline of the new full-time faculty required will be addressed aggressively by the EHELD team to enable graduate study toward master's and doctorate degrees in engineering for current and prospective UL faculty members. Short courses and study tours will also be used to support faculty development. At the same time, it is expected that UL will address the acknowledged problem of limited incentives to support full-time faculty attendance.

It has previously been identified that the current engineering faculty are over-stretched and that too many courses are being taught by external professionals. This deficiency will be met in the short term by using contract faculty and visiting professors, as part of a longer term integrated staff development plan. Contract faculty will be sourced through our network of African and Indian universities. Visiting professors will be primarily sourced from Rutgers and UM. The nature of the task at UL requires visiting professors who are able to think beyond their individual disciplines and have the ability to contribute in multiple ways to the broader mission of building up the college of engineering and its human capital. Rutgers and UM team members will work with in-country EHELD staff to coordinate the recruitment, selection, and fielding of visiting professors who will focus on teaching, developing contacts with industry and professional organizations, and curriculum administration.

Supporting this faculty-focused activity will be activities that acknowledge deficiencies in undergraduate math, science, and English skills that will require greater coordination between these departments and the Engineering CoE faculty. Another issue that has been identified is the need for CoE administration and leadership training. Key CoE administration support roles and responsibilities will be identified, and EHELD will support UL leadership and CoE administrators with the training and exposure to best practices in CoE program management in West Africa and the U.S.

8.2 Specific Activities and Results

8.2.1 Contract faculty

An initial study, identifying areas of weakness in faculty capability, has been conducted, resulting in the appointment of two contract faculty who will begin their roles at UL during September 2011.

These contract faculty are the following:

- [Redacted]: specializing in mechanical engineering and mechanical science
- [Redacted]: specializing in information and communication technologies (ICT), learning support, and Liberian youth

These faculty are currently housed in the EHELD Guesthouse in Monrovia at the expense of the EHELD project. Ideally they should be housed by UL at the Fendell campus. It is expected that once the Fendell campus faculty accommodations are ready, the contract faculty will then be relocated there, although there is no clear timescale for this. Until that time, they are transported to Fendell daily at the expense of the project.

It has proven difficult to recruit female contract faculty in engineering, although significant effort is being expended in this matter. It is expected that there will be more progress over the next project year.

Further areas of weakness have been identified, and the Rutgers team, supported by the wider EHELD team, is actively seeking to fill positions in these areas. The following areas are identified as needing attention:

- Petrology
- Mineralogy

However, it is acknowledged that these are problem areas and solutions to these issues are discussed in more detail in Section 8.3, below.

8.2.2 Learning Support Officers

It is also apparent (across both subject areas) that the student body would benefit greatly from more general learning support. The Summer Start program in particular has identified weaknesses in math, English, and IT base knowledge in otherwise accomplished students. It is felt that support in this area will aid retention and motivation, and a contract faculty post has been utilized in employing an LSO on each site. The LSO has the responsibility to form and grow a Learning Support Office to enable students who are struggling with courses to seek help and be directed to the appropriate assistance. It is likely that this mechanism will also pick up non-academic problems that can be directed to general counseling services or, more likely, be the catalyst for the provision of university-wide counseling services.

8.2.3 Recruitment of visiting and contract faculty

Several activities have been focused on the development of existing faculty:

Summer Start directors to UM

Prior to the Summer Start program, one Summer Start director from each university was appointed. The UL representative was [Redacted]. As part of the UM contribution, the two directors traveled to UM for a period of two weeks to observe and participate in the U.S. equivalent of Summer Start. This enabled both directors to understand the underlying principles relating to the management and organization of such events and will allow them to build on this experience as they organize and manage future Summer Start events.

Faculty participation in Summer Start

A further valuable faculty development outcome of Summer Start was the opportunity for faculty members and senior students to contribute and to work alongside the UM team. Two faculty members from each university delivered courses to the Summer Start students in math, English, botany, and physics. There were further contributions to the life skills course, and other CU Agriculture faculty contributed to the project work carried out by the students. The interaction with the UM staff, the team working, and the excellent response from the Summer Start students ensured a rich and valuable experience for all concerned, and it is expected that their involvement in future Summer Start activities will initiate a sustainable Summer Start program that will run beyond the conclusion of the EHELD project.

Faculty enrichment

It is recognized that many of the faculty have little experience with working in other, possibly more developed, universities. The lack of experienced managers also results in the lack of role models for faculty. The outcome is faculty who, possibly through no fault of their own, are limited in terms of professionalism, although the situation at CU is much better than that at UL. At UL, many of the faculty have other jobs, which divert their attention away from the engineering college priorities. This is a serious issue that the UL management is determined to resolve.

One role of the contract faculty is to mentor existing faculty; although this is of value, it limited in terms of potential achievement, and other mentoring mechanisms have been sought.

An opportunity has arisen to contribute to and participate in a partnership organized by the Dutch NGO SPARK. SPARK is an independent not-for-profit organization, based in the Netherlands. SPARK develops education and entrepreneurship so that young and ambitious people are empowered to lead their post-conflict society into prosperity. It does so by building the capacity of local economic and educational organizations and institutions. EHELD discussions have focused on collaboration regarding entrepreneurial aspects of the curriculum, access for CoE students to the SPARK Business Start-up Competition, and linking the SPARK faculty enrichment program (that runs with the Association of Liberian Universities) with the EHELD faculty strengthening activity. It is this latter activity that is relevant to the faculty development activity of the EHELD project.

The partnership consists of SPARK, the EHELD project, the BiD Network, the Association of Liberian Universities, UL, CU, the School of International Service (American University, Washington), and the University of Twente. The enrichment program is planned to run over the next academic year as a series of seminars with two to three 1-week sessions. Topics covered will include pedagogic aspects, professional ethics and responsibilities, group dynamics and conflict management, and project-led education. It is likely that contributions will be made by EHELD contract faculty, STTAs, and EHELD core staff. The primary focus, agreed on with SPARK, will be on engineering and agriculture faculty at UL and CU.

The USAID-funded UL/Indiana University/University of Massachusetts has also shown interest in collaboration with the SPARK partnership.

Extra Rutgers scholarships

It is pleasing to note that Rutgers have committed to an additional [Redacted], specifically to bring over one faculty member from UL (to get their MS in Engineering) and one faculty member from CU (to get their MS in Agriculture). This is in addition to the two faculty graduate degree programs already budgeted for within EHELD.

Attracting expatriate Liberians for university positions

The executive management of both universities recognizes that there are many expatriate Liberians who have the leadership and management experience required to initiate change. Although not specifically a part of the EHELD planned activities, the project team, as part of their outreach activity, will seek funding from the Liberian private sector to assist with this initiative.

8.3 Challenges and Specific Measures Used/Planned to Overcome Them

The obvious challenge in this activity is that of sourcing contract faculty who have the skills and experience required at UL; who are content with the salary, benefits, and terms and conditions; and who are also prepared to work in the environment presented by UL and by Liberia. The team currently in place at UL, while below the expected number, is an excellent beginning in providing much needed support in basic IT, mechanical science and general learning support, but this has required a significant effort on the part of RU and the EHELD team. To sustain this effort, the level of activity must increase and encompass other sources of faculty. To date, the EHELD team has held discussions with several potential sources. These include IFESH and AHED. RU has also opened several other lines of enquiry, including Punjab University in India. There is also clearly an element of managing the expectations of incoming contract faculty, and care is being taken to ensure that incoming faculty have a comprehensive picture of what to expect in term of living and working conditions.

8.4 Activities Planned for Next Quarter

Specific activities for the next quarter are as follows:

- Consolidate the role of the current contract faculty team
- Continue the process of sourcing further contract faculty, particularly in collaboration with IFESH and AHED
- Allocate faculty scholarships for overseas study
- Continue development of new initiatives for faculty development, including the SPARK Faculty Enrichment program
- Increase focus on recruitment of female contract faculty

9 Improved Engineering Facilities

9.1 General Objective

The objective of this activity is to bring facilities in engineering up to a fit-for-purpose standard. Where possible, standards will be set for a "Center of Excellence" while at the same time demonstrating what can be done for relatively little financial input.

These improvements will include refurbishing existing classrooms and providing basic teaching support materials (white boards, tables, chairs, teaching aids, etc.).

It is realized that, in addition, the USAID RISE Project—expected to be operational in 2012—will be responsible for renovating facilities at the Fendell campus (as well as providing an adequate power supply), and the EHELD work is being conducted in a way that it is likely to be complementary to the RISE-funded work. Conceptual planning for this facility will be carried out in Year 2 so that a preliminary plan and design can be presented to the RISE Project once it is operational, with the expectation that RISE and EHELD will then undertake an innovative learn-by-doing construction partnership program.

9.2 Specific Activities and Results

9.2.1 Facility improvements

A survey of facilities was conducted at the Fendell campus, and preliminary work is commencing on the refurbishment of some facilities:

- Equip and furnish two EHELD class rooms with white boards and overhead projectors
- Equip and furnish one computer laboratory
- Improve the appearance of the main entrance into the engineering building

The agreement with UL is that they will assist with such improvements with in-kind contributions. This could be in terms of some building materials that are already available, or, more usually, with labor. Examples of existing facilities are shown in Figures 8 and 9.

Figure 8.   The reading room at Fendell – the site for the engineering library

Figure 9.   A typical classroom in the engineering facility at Fendell

Work will commence work on these facilities in October 2011.

It is expected that dialogue with other donors will add to these efforts. As previously stated, TOTAL Liberia Inc. (a petroleum company) has shown interest in the refurbishment of the Engineering Reading Room to allow the establishment of a library and to allow EHELD to focus its efforts on the information and material

contained and accessible therein. Also, a provisional opportunity has arisen to refurbish the Civil Engineering laboratories and workshops in collaboration with the German Agency for International Cooperation (*Deutsche Gesellschaft für Internationale Zusammenarbeit* [GIZ]). This will be considered in relation to curriculum requirements, although the GIZ requirements are likely to make this a viable action. The likely arrangement would be for GIZ to provide equipment and staff for vocational training activities in highway engineering, while EHELD/UL would enable/provide facilities in the Fendell building. This would enable access to the same facilities for undergraduate laboratories and short courses. The result would be a National Centre for Highway Engineering located at the Fendell campus.

9.2.2 Equipment donations

The following equipment and books have been donated to the Engineering CoE through the activities of the EHELD team:

- As a demonstration and as a precursor to the creation of the engineering equivalent, The Essential Electronic Agriculture Library (TEEAL), a digital library in a box, from RU (RU has obtained a grant from the Engineering Information Foundation for [Redacted] to support Library and Information Access for EHELD at the UL CoE.
- Books (RU)
  - A range of engineering textbooks
- Computers, RTI International
  - 25 laptop computers and 5 desktop computers have been donated to UL by RTI International. RTI renews IT equipment on a 3-year rolling basis and regularly donated the used equipment to charitable causes. This year, following a suggestion by the EHELD DCOP, this significant donation has been made to the EHELD universities.

9.3 Challenges and Specific Measures Used/Planned to Overcome Them

The lack of basic facilities at the Fendell campus will undermine efforts to improve facilities. These problems should be resolved with the initiation of the RISE project, but, until then, the challenges of having power for only four hours per day, the lack of reliable water and washroom/toilet facilities in the engineering building, and the general level of the state of repair will tend to have a detrimental effect on any attempt to demonstrate excellence.

The plan to overcome the general appearance is to take the approach described above of making small improvements to the foyer area and creating an "excellence" route though the engineering building. This will only partially address the problem by creating a favorable visual impression, but there are limitations to what EHELD can do in terms of power and water. Solutions have been investigated, including the loan of a generator, but the scale of the problem exceeds the EHELD resources and budget.

The EHELD team continues to put pressure on the UL executive management, but with the realization that they also have limited resources.

The other major challenge in improving facilities lies in ensuring the best value for money with the limited work being carried out and in establishing the most immediate priorities. Also, given the planned activities of the RISE project, it is important that work is not carried out now, under EHELD, which will fall more naturally under the RISE project.

The approach to managing this problem is to involve UL in all aspects of the work, particularly in securing their "buy-in." This ensures that there is "joint ownership" of facilities and drives the need for careful consideration of the best solution by all parties. There is also an element of scheduling required, so that the potential RISE work complements, rather than contradicts, any work carried out under EHELD. It is also the intention to liaise closely with the eventually successful RISE contractors.

9.4 Activities Planned for Next Quarter

Specifically, planned activities for the next quarter are as follows:

- Completion of classroom/foyer/computer lab renovations
- Formulation of a plan to refurbish the Engineering Reading Room, prior to the establishment of a library
- Commencement of detailed planning for laboratory improvements and collaborative projects

10 Employer Engagement and Outreach

10.1 General Objective

For the universities to be successful in producing employable graduates capable of adding wealth to the Liberian economy it is absolutely vital that employers and other stakeholders in graduate employment are fully engaged in the process of regeneration. Securing this engagement is the primary objective of this activity. It is also important that they understand that this initiative requires input that should be seen as an investment in the future of their businesses and in the nation.

Most employers are likely to engage seriously only if they perceive benefit to their organizations and businesses. An important message is that this benefit may be in the medium to long term rather than in the short term. However, it is generally the case that the more they contribute to the EHELD project, in terms of time, resources, knowledge, opportunities, and, possibly, cash, the more benefit they will eventually reap.

The central foundation of this approach, which will ensure deep integration of EHELD into the Liberian economy and ensure alignment with the job markets, is the Liberian Employers Action Group (LEAG). A further objective of this activity is to continue to build the contribution and capability of LEAG. LEAG was established in the first year of the project and is a loose forum enabling all stakeholders in graduate employment to meet, share ideas, advise the universities and the EHELD team, and, if necessary, apply pressure to other organizations for support. Eventually, it is likely to result in a national EHELD advisory board comprising major employer representatives from business, government ministries, universities, USAID, and the CoEs.

Thus, the overall objective of this EHELD element is to enable and facilitate the environment in which this collaborative effort will evolve. It involves continual interaction with employers; the organization of meetings and discussions; and, most importantly, the translation of comments, wishes, and contributions to implement effective change.

10.2 Specific Activities and Results

The initiation of the outreach process has involved a significant number of visits to stakeholders in graduate employment. Initially these meetings were intended to introduce EHELD, determine initial needs and perceptions, and generate support for LEAG. This initial activity culminated in the organization of the Employers' Forum, described below, and has continued via the subsequent focus groups and other meetings.

These meetings have resulted in many ideas and messages of support. Several of the ministries felt that EHELD would be fundamental to enabling scholarships from the private sector. Many industries supported the idea of internships, preferably long-term (up to a year in length) and preferably paid. There was also support for the idea of

real-life student projects, assistance with defining graduate outcomes and curriculum, and increased interaction through field trips and guest speakers.

The first Employers' Forum was held in July, with the U.S. Ambassador as keynote speaker, see Figure 11. Over 60 stakeholders attended the meeting. The First Annual Work Plan described how this Forum would be used to form the Liberian Engineering and Agriculture Pact (LEAP). Subsequently it was discovered that there is another organization under the name of LEAP. Also, it was felt that the name did not truly reflect the purpose of the initiative. Thus, the Employers' Forum resulted in the formation of the Liberian Employer Action Group (LEAG) and resolved to form five focus groups: (1) Scholarships, (2) Internships, (3) Career Development and Advice, (4) Collaboration and Information Sharing, and (5) Curriculum Development.

Figure 10.   US Ambassador, [Redacted] addresses the EHELD Employers' Forum

Details of the focus group discussions are included in *Annex A*. The action points are summarized below:

Session I—Internships: Action Points

- The EHELD team will prepare a summary report and send to all participants for corrections or inputs for final production and distribution.
- The EHELD Outreach and Partnerships Specialist and Partners Liaison Officer will contact employers for specific action or support.

- The EHELD team will continue to organize more LEAG meetings in the future to adequately address these issues.
- The EHELD team will follow up with private and public institutions that are interested in providing internships for students in engineering and agriculture.

Session II—Scholarships: Action Points

- The EHELD team will develop a scholarship concept paper in consultation with UL and CU, to be shared with the LEAG scholarship group.
- The EHELD team will follow up with the Liberian Produce Marketing Corporation (LPMC) to conclude scholarship award process and details.
- The EHELD team will follow up with other institutions that are interested in providing scholarships for students in engineering and agriculture at UL and CU.
- All EHELD scholarship students will be monitored by the universities.
- LMA provided five (5) scholarships for EHELD students to study agriculture at CU and engineering at UL, and scholarships will be administered by the EHELD team.
- Three LMA scholarships for UL engineering students
- Two LMA scholarships for CU agriculture students

Session III—Collaboration and Coordination: Action Points

The EHELD team, employers, partner universities, and stakeholders will encourage greater collaboration and coordination to enhance productivity, using appropriate means from the list below:

- Establish EHELD-RTI website/online repository
- Post bulletin boards with relevant project information at UL, CU, and other institutions
- Newsletters
- Internet cafe
- Use twitter
- Radios
- Newspapers
- Local newspapers, local radio stations
- Partner with other universities to hold discussions with students
- Hold town hall meetings and drama club productions
- Cell phone text messages, short message service (SMS)

Further investigation will prioritize this list to achieve maximum benefit.

Session IV—Career Counseling: Action Points

UL and CU have seen the need to urgently establish guidance counseling offices at both universities. The universities will work out the modalities to establish these two guidance counseling offices to assist students in choosing future careers, especially engineering and agriculture freshman students.

The LEAG focus group put forward the following recommendations as the way of solving this problem at EHELD's two partner institutions:

- The two universities (UL and CU) should adapt a holistic approach to career counseling—create student guidance offices at each institution.
- Career counseling should begin at the high school level.
- Establish guidance offices at the distract level
- Undertake more career fairs
- Undertake annual agriculture shows
- Career counseling should also be done at Summer Start programs.
- Review West African Examination Council (WAEC) results for 12th graders and encourage the best and brightest students to develop career interest in engineering and agriculture

Session V—Curriculum Development: Action Points

- EHELD should give resources to support internships at institution/companies.
- University point persons should work with EHELD staff to engage employers.
- Foreign university experts could come to set up university liaison offices.
- Curriculum development mechanisms and processes will be coordinated by EHELD.
- The universities will implement curriculum after EHELD has gone.
- The Liberian Government should regulate universities in terms of number of students enrolling in a particular subject, based on labor market demand.

These outcomes from the focus groups will form the basis for future actions in improving employer engagement and will also be the basis for the CoE Advisory Councils, which will also be formed to include committed stakeholders.

Other specific benefits and potential benefits, in addition to the outputs of the focus groups, include the following:

- Dialogue with LMA, resulting in the donation of five of the regular LMA scholarships to EHELD
- Dialogue with TOTAL Liberia regarding the possibilities of funding facility improvements at both universities
- Dialogue with the Engineering Society of Liberia (ESL) regarding opportunities to publicize EHELD to the engineering community and opportunities for ESL to contribute to the student pipeline

Attracting expatriate Liberians for university positions

This was mentioned previously under the heading of Strengthening Capacity of Faculty for both Engineering and Agriculture. It also merits inclusion in this section. This is an initiative to support growth of a vibrant and competent faculty, not ostensibly within the remit of EHELD, to try and encourage suitably qualified Liberians, currently residing outside Liberia, to return to take up academic positions. This is recognized as a particularly difficult problem due, in part, to the relatively low remuneration for university positions. One way in which EHELD can support this initiative during the employer engagement activity is to explore with industrial and business partners the possibility of endowed chairs for returning Liberians.

10.3 Challenges and Specific Measures Used/Planned to Overcome Them

As expected, the major challenge in this activity is to maintain the interest of the private sector. Again, as expected, ministries and NGOs have a greater rate of interaction, which is good, but the key to success for EHELD is to engage the private sector—wealth creating employers. This situation is not significantly different to other nations. The key is to ensure that the private sector perceives value in the interaction, and this requires, initially, persistence and eventually, results.

The measures to overcome this relative lack of engagement are based on meeting the employers on their own terms. Private employers will rarely travel to meetings, and the EHELD team must continually be prepared to take time to visit, to pass on valuable messages and progress reports, and to continue to seek win-win partnerships. It is recognized that this is a difficult, long-term task that will only become easier once the supply of valuable graduates can commence. An early indication of this to employers will be the supply of competent interns, supplied through an efficient and effective internship programs.

10.4 Activities Planned for Next Quarter

Specifically, planned activities for the next quarter are as follows:
- Continue meetings and activities related to LEAG focus groups:
    - Curriculum Development
    - Internships
    - Career Development
    - Scholarships
    - Collaboration and Information Sharing
- Commence activities arising from focus groups, e.g. a LEAG newsletter
- Commence development of internship offices
- Seek initial, pilot internships

- Invite industrialists to attend curriculum development panels; brief on expectations and required input
- Continue dialogue with the Engineering Society of Liberia, particularly as a means of accessing' grass-roots' Liberian engineering expertise and contacts

11　Gender Considerations

11.1　General Objective

There is a clear gender imbalance in those studying and working in the engineering and agricultural sectors. The female population is being underutilized, with the result that the nation neglects the potential that exists in this sector. The objective of the gender activities in EHELD is to redress this imbalance so that the proportions of this gender imbalance trend move toward equity and so that the full potential of the female population can be realized.

The problem will be approached on a variety of fronts: consideration will be made of female attitudes to engineering and agriculture as careers; of incentives and disincentives for study in these areas; and, once females are enrolled in these programs, the issues surrounding retention and support.

11.2　Specific Activities and Results

A gender study has been completed, and the outcomes are currently under discussion. There is much work to be done in this area, and the EHELD team is currently seeking ways to achieve maximum effect within the budget constraints.

The report makes the following recommendations, which although exceeding the original proposed scope of work, would make a significant contribution to this effort. The summarized recommendations are as follows:

- A Liberian-based gender champions(s), perhaps based in each university
- Delivery of gender modules and a faculty development workshop
- Purchase of gender-specific books and materials
- Support for gender networking and for women's groups in each university
- Development of a Summer Leadership School for women, or incorporation of this concept into Summer Start

11.3　Challenges and Specific Measures Used/Planned to Overcome Them

The major challenge is the volume of work to be carried out in this area. Targets of 50% female participation are difficult to achieve if it is considered that the obstacles to women's empowerment commence at home at a preschool age, continue through primary school with the presentation of gender stereotypes, and then culminate in higher education and in the workplace where, often, the prevailing attitudes provide further obstacles.

The EHELD team's approach to this will be similar to the general approach to the project, in that existing efforts will be leveraged to generate extra benefit. One example is that although it may be beneficial to hold a Summer Leadership School for women, this is not possible because of budgetary constraints. However, it is entirely feasible to use Summer Start as a vehicle for promoting such leadership skills at little or no additional cost.

It is also likely that there will be some opposition to the incorporation of gender aspects in curriculum, but with a consultative, team effort, it is expected that the contributors will reach a suitable balance.

11.4 Activities Planned for Next Quarter

- Seek to identify a "gender" champion in each university
- Plan a faculty development workshop OR consider incorporating gender material into the SPARK Faculty Enrichment initiative
- Commence dialogue with the library activity in EHELD (see Section 11) to ensure that appropriate gender balance is attained in books and other information
- Seek to promote engineering and agriculture gender issues so that gender movements at each university will champion and support the EHELD initiatives

12 Improved Administrative and Support Capability

12.1 General Objective

It has been well understood since the inception of the project that the solution to sustainable achievement of the broader project objectives is not possible without consideration of university activity and operations outside the Schools of Engineering and Agriculture. However, it is increasingly apparent that these elements are more crucial than might first be perceived.

This section gives an overview of these "university-wide" activities and describes the necessity for improvement and the activities required to achieve this improvement.

The objective is for EHELD to be a catalyst for wider improvement in areas that support the achievement of the project objectives. Often this will be in the form of constructive feedback and suggestions but, where possible, will be in the form of positive action.

12.2 Library

The libraries at both campuses are in dire need of updating and improving. This has been recognized since EHELD's inception and is a specific activity in the EHELD plan. There is variation between each university: CU needs library expansion (to be achieved through the RISE project) and an updating of stock and technology; UL requires the conversion of the Engineering Reading Room into an Engineering Library and the updating of stock and technology. However, there are similarities in the required way forward.

The way forward will be based on a long-term plan for each campus. It is clear that the world of information access is progressing rapidly, with the advent of online material, mobile technology, and fast broadband Internet speed. However, Liberia is not yet ready for this, and a transition needs to be planned that considers the basic, immediate needs of the universities and their students. The plan will also consider the nature and availability of power supply, Internet provision, and affordability of solutions and will suggest an evolutionary growth to bring the universities into a position to fully embrace the benefits of the digital age. In the short term, the focus will be on providing fit-for-purpose places of study, with a readily accessible source of material that is at an appropriate level for the students. The facility will be appropriately equipped, and it is highly likely that there will be a training need for library staff.

In September 2011, a visit from the Rutgers Agriculture Librarian initiated the planning process. The resulting report provided a compelling vision of the future (which may be beyond the end of the EHELD project), and the task is now to develop those steps necessary to achieve that vision in a sustainable and timely manner.

As previously stated, book donations have been received from other USAID projects and from the FAO book collection at the UN Women Office. Also, Rutgers provided each university with a copy of TEEAL, a digital library in a box. This will be followed up by the provision of similar version for engineering. While of limited relevance to early stage students, these will be invaluable reference sources for faculty.

Planned activities for the next quarter will be as follows:

- Renovation of the Engineering Reading Room (assuming suitable funding is identified)
- A follow-up visit from Rutgers to determine and put into action specific short-term needs
- Commencement of the process (linked with the curriculum review) to identify priority acquisitions for each library

12.3 UL Strategic Plan and Student Records

A particular problem with Engineering at UL is the lack of institutional planning. This is exacerbated by the lack of a realistic UL Strategic Plan and the lack of monitoring of the planning actually carried out. The result is a lack of direction in engineering which contributes to ad hoc decision-making and poor coordination of resources. The UL president has asked if the EHELD team will assist in the development of the next UL Strategic Plan. Although this is not directly a part of the EHELD plan, it is a most welcome opportunity to help the university to put a plan in place that would benefit engineering in terms of establishing direction. This will increase the likelihood of achieving the EHELD objectives in addition to establishing the foundations for the entire university to move forward in a more coherent manner.

In the next quarter, the EHELD team will endeavor to move forward with this matter with the UL executive management.

A similar situation exists with student records. This is a particular area of inefficiency in engineering. Not only is it difficult to manage resources (e.g., section size) given the poor record-keeping systems, but it is impossible to analyze the data to determine, for example, the major timing and sources of student drop-out.

Again, the UL president has asked for EHELD participation in the specification and acquisition of a fit-for-purpose student records system. Success in this area for the university would be of great benefit to engineering and to EHELD, so every effort will be made to assist the university in this matter.

The EHELD team will endeavor to move forward with this in the next quarter.

12.4 LEAG outcomes

As described in Section 10, the LEAG Focus Groups identified the need for various administrative support units. Although these are specifically required in engineering and agriculture, there is a strong argument that these units should (or could) be central university functions. This will, however, be a matter of further debate.

The administrative support units identified include the following:

- An internship office
- A scholarship office
- A careers advice office
- An outreach/industry liaison office
- An information office

It was recognized that some of these could be combined into one unit. It was further recognized that there is a lack of experienced Liberian personnel available to set up and staff these offices and that there may be opportunities with the EHELD subcontract universities to enable training and experiential visits in these areas.

There is no doubt that the engineering and agriculture departments would benefit greatly from the support of such offices, and EHELD will endeavor to create the opportunities to set these up, either at the university level or on a more focused subject level. Investigating the feasibility of creating these functions is a major task for the next quarter.

12.5 Learning Support Office referrals

The need for LSOs has been described previously as necessary to support those students who are, for whatever reason, deficient in the base subject skills. It has also become apparent that in addition to this academic support there is also the need for support in a social context. The subject-based Learning Support Offices are unable to provide very much in the way of pastoral support, and it is usually the case that such student counseling is a central function. Given the huge drop-out rate of students in engineering (and possibly throughout UL), such a counseling function seems essential. In the next quarter, EHELD will work with the universities to initiate the process of setting up effective personal and social counseling services to support the EHELD-initiated Learning Support Offices.

13 Other Related Activities

It is pleasing to note that through dialogue with the World Bank, with the Ministry of Education, and with USAID, there may be an opportunity for the EHELD team to participate in activities relating to the formulation of a National Strategic Plan for Higher Education and in developing a scheme for the empowerment of the National Commission for Higher Education (NCHE). Such involvement would be of great significance to EHELD and to the achievement of the project objectives.

13.1 National Strategic Plan for Higher Education

One of the difficulties faced by engineering at UL (less so in agriculture at CU) is the lack of a national strategy for managing the supply and demand of engineering students. This also applies to most other subject areas. The lack of a national strategy also distorts the post-secondary education scenario in that it is likely there are too many university openings for students and insufficient technical and vocational opportunities as alternatives to university study. The end result is too high a demand for engineering undergraduate places by a student body that is largely ill-equipped for undergraduate study. Those less-able students are likely to be better equipped for technical or vocational study, but there is neither a strategy which directs them to that study or sufficient training places should they take that direction.

A National Strategy for Higher Education would allow greater control over the number and standard of students entering engineering programs (and, for that matter, most other subjects). This immediately puts boundaries on the existing planning problems and sets the scene for university and departmental strategic planning. Such a strategy would also underpin a sorely need financial and budgeting regime for publicly funded post-secondary institutions.

The opportunity for EHELD to influence this strategy development would assist in delivery of project outcomes.

13.2 National Commission for Higher Education

The empowerment of the NCHE would also benefit EHELD and the project objectives. The role of the NHCE should be to authorize the formation of degree awarding institutions and to accredit the quality of their standards and operations. This would limit the current trend to form unofficial "degree mills," which lower standards and detract from the potential quality of the sector. Empowerment for the NHCE would also enable the setting of standards and would give employers clarity regarding the validity of qualifications.

The development of the role of the NHCE is critical to the success of the Liberian higher education sector, and it would be particularly beneficial to the EHELD objectives if the project were able to exert some influence and assist in developing the necessary systems and structures.

14 Performance Management Plan (PMP)

The finalization of the PMP has been delayed slightly, although it is expected that this will be settled by the end of October 2011. The delay is due to two reasons:

- Re-alignment of the project years, as described in Section 2: The previous alignment of years meant that the "Year 1" PMP targets were largely determined for the first 12 months of the project. This means that in some, but not all, cases the target is not valid at the end of the newly defined Project Year. The PMP is being realigned to take this into account, although the information in Table 3 is still based on the old model.

- As the EHELD team has become more familiar with the operational aspects of the universities and with the nature of the project tasks, it has become clear that some of the targets are poorly defined and are not necessarily good measure of progress. These are in the process of being redefined and, while not differing substantially, will be included in the revised PMP in a more clear and useful style.

As stated in the previous quarterly report, it is the intention to report progress against quarterly targets, but because of these revisions, this will commence in the next quarterly report.

Progress to date (taking into account the comments above) is shown in Table 3.

Table 3.   Progress against targets

No.	Indicators		Year 1	Year 1	Year 2	Year 2	Year 3	Year 3	Year 4	Year 4	Year 5	Year 5
	Agriculture and Engineering Targets, Respectively	**Base line data**	**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**
	Outcome: High-Performing Students and Graduates											
1	80% of CoE graduates (classes of 2014 and 2015) find full-time or graduate education opportunities in agriculture and engineering, or related fields, within 12 months of graduation								80%		80%	
2	50% increase in the number of graduates over the baseline survey from the Agriculture and Engineering departments								50%		50%	
3	5 percentage point annual increase in the graduation rate (incoming sophomores to graduating seniors) of engineering and agriculture students				5%		5%		5%		5%	

No.	Indicators	Base line data	Year 1 Target	Year 1 Actual	Year 2 Target	Year 2 Actual	Year 3 Target	Year 3 Actual	Year 4 Target	Year 4 Actual	Year 5 Target	Year 5 Actual
	Agriculture and Engineering Targets, Respectively											
4	1,500 interns placed through internship program (internships classified as minimum of 4 weeks full-time equivalent)				200		300		400		600	
5	30% increase in number of applicants into the Agriculture and Engineering Departments over the baseline				25%		30%		30%		30%	
Outcome: Solutions to National and Local Problems												
7	40 projects carried out by final year students & faculty in selected localities (community or industry) to address national or local problems		5		5		10		10		10	
8	10 private/public-sector partnerships established for direct support to scholarships, facilities, student internship, etc.		2	2	3		3		2			
Outcome: Regional Model for Learning												
9	20 exchange visits between professors/in-country and regionally to improve curriculum, faculty capability, and student services			2	5		5		5		5	
10	200 promotional activities, (radio shows, events, SMS, billboards, etc.) on agriculture and engineering CoEs and related programs		40	3	60		60		20		20	
11	2,000 students participate in and complete Summer Start programs.		80	70	600		650		470		200	
Outputs: Improve Curriculum												
12	6 programs revised with detailed course outlines and endorsed by Ministry of Education Commission on Higher Education.				2		2		2			

No.	Indicators		Year 1	Year 1	Year 2	Year 2	Year 3	Year 3	Year 4	Year 4	Year 5	Year 5
	Agriculture and Engineering Targets, Respectively	**Base line data**	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
13	150 students participating in farm enterprise income-generating activities as part of a hands- on practicum.		30		30		30		30		30	
	Outputs: Faculty Strengthening and Development											
14	39 contract faculty years provided		8	6	8		8		8		7	
15	10 visiting faculty years provided		2	0	2		2		2		2	
16	10 faculty members complete advanced degree programs				2		2		2		4	
17	2 Faculty trainings and study tours completed.				1		1					
	Outputs: Student Services											
18	270/750 student scholarship study completed (years)		70	48	170		240		310		240	
19	Improve teaching and learning resources (textbooks, laboratory equipment library) at Suakoko and Fendell university campuses to support the revised curriculum			4*	2							
20	1,000 participants participate in non-degree courses in response to stakeholders' demand		300		300		200		100		100	
21	A minimum of 18 advisory council meetings held		2		4		4		4		4	
22	1,000 students participating in service learning (involves working in or with the community on developing solutions to real-life problems)		200		200		200		200		200	

Notes for Table 3:
As stated in the text, the PMP is in the process of being improved. The following notes relate to the planned improvements, due end of October 2011.
Line 10: The term "promotional activities" requires better definition. Line 18: Scholarship targets need to be revised and re-profiled.
Line 19: The term "improved….resources" requires better definition.
Line 21: Clarity required regarding relationship between LEAG focus groups and the Advisory Councils.

Annex A: Liberia Employers Action Group (LEAG) Focus Group Notes

Excellence in Higher Education for Liberian Development (EHELD) Project

Notes from the Liberian Employers Action Group (LEAG) Focus Group Meetings

Introduction

On July 20, 2011, EHELD launched the first Employers' Forum at [Redacted] in Monrovia. The Employers' Forum comprised EHELD's stakeholder group, including private- and public-sector organizations, Liberian Government ministries and agencies, and relevant organizations and individuals. At the end of the forum, participants resolved that EHELD management immediately begins organizing a series of focus group meetings to discuss the following issues—internships, scholarships, collaboration and coordination, career counseling, and curriculum development in line with EHELD's annual work plan. Against this background, the EHELD team organized the first Liberian Employers' Action Group (LEAG) meeting for August 9, 2011, to discuss internships and scholarships. The EHELD team organized subsequent LEAG focus group meetings for August 16, 2011, to discuss career counseling, coordination and collaboration, and August 18, 2011, to discuss curriculum development.

August 9, 2011

Participating Institutions

Institution	Representative
Stella Maris Polytechnic	[Redacted]
Booker Washington Institute (BWI)	[Redacted]
	[Redacted]
Liberia Marketing Association	[Redacted]
RTI-EHELD Project	[Redacted]
	[Redacted]
	[Redacted]
	[Redacted]
ACDI/VOCA	[Redacted]
USAID	[Redacted]
Cuttington University	[Redacted]
	[Redacted]
	[Redacted]
University of Liberia	[Redacted]
Liberia Maritime Authority (LMA)	[Redacted]
LPMC	[Redacted]

Discussion Points

I.   **Session I—Internships**

The internship session discussions began with participants brainstorming a suitable definition   of the word internship and what it entails. The deliberation included payment of interns,   duration of internships, assessment/evaluation of interns, roles of institutions sending interns,   roles of companies receiving interns, and feedback. Many participants defined internship in   the following manner, and they highlighted the following points as a way forward for the successful implementation of the EHELD internships and scholarships program:

Internship Definition
- On-the-job training
- Training and learning on the job
- Learning practical experience in area of specialization
- On-the-job training activities for students to develop skills to prepare them for the job market
- An opportunity for students to practice what they have learned in class
- Learning on-the-job skills (people's skill) and to interact with employers for possible employment opportunities
- Opportunity for students to have work experience
- Preparing students to enter the workforce and may lead to long-term employment
- Internships afford students the opportunity to build lasting relationships with employers

Internship Duration
- One year
- 6 months
- 2 months
- 4months

Stipend for interns
- Paid
- Unpaid
- Partial payment

Terms of internships
- Partner universities (UL and CU) should determine the terms of internship, not employers.
- Partner universities should have one standard for internships.

- Instructors must conduct regular follow-up on interns during internships to determine the effectiveness of program for future improvements.
- Employers should evaluate interns at end of program and submit final evaluation/assessment report to institution/universities.
- Sponsors/parents should provide stipend for interns if employers are not willing to pay interns.
- Partner universities must clearly state objectives of internships before sending out interns.
- Employers willing to pay interns should determine pay rate, not partner universities.
- Partner university and employers should work together to determine pay for interns if the need arises.
- Internships should begin at third year of study of courses or 6 months to completion of study at university level.
- Feedback from internship is necessary, hence universities should develop feedback questionnaire.
- Interns should have specific tasks or description of duties to perform with supervision.

Summary of some benefits of internships
- **Students**—Students learn on the job and may have employment opportunities with employers after internships. Students may be paid for internships. Students may receive credits for internships.
- **Institutions**—Universities may improve curricula after internship feedback. Universities may also build lasting relationships with employers, creating greater opportunity for future collaboration between employers and universities.
- **Employers**—Through internships, employers may pay for cheap labor and spot good interns for future employment. Employers will have direct access to university's best and brightest students for employment.
- Internships afford students the opportunity to build lasting relationships with employers.

Action Points
- The EHELD team will prepare a summary report and send to all participants for corrections or inputs for final production and distribution.
- The EHELD Outreach and Partnerships Specialist and Partners Liaison Officer will contact employers for specific action or support.
- The EHELD team will continue to organize more LEAG meetings in future to adequately address these issues.
- The EHELD team will follow up with private and public institutions that are interested in providing internships for students in engineering and agriculture.

Session II—Scholarships

Employers and stakeholders at the second LEAG meeting discussed the following scholarship issues:

EHELD Scholarship Eligibility Criteria

- EHELD scholarship recipients must be Liberian citizens.
- EHELD scholarship recipients' age range should be 40 years and below.
- EHELD scholarship recipients must study agriculture at CU and engineering at UL.

Category and grade point average (GPA)

- Full scholarship (3.0 and up)
- Partial scholarship (2.5 and up)
- Financial assistance (2.0 and up) (for special cases)

Action Points

- The EHELD team will develop a scholarship concept paper in consultation with the UL and CU to be shared with the LEAG scholarship group.
- The EHELD team will follow up with LPMC to conclude scholarship award process and details.
- The EHELD team will follow up with other institutions that are interested in providing scholarships for students in engineering and agriculture at UL and CU.
- All EHELD scholarship students will be monitored by the universities.
- Liberia Maritime Authority (LMA) provided five (5) scholarships for EHELD students to study agriculture at CU and engineering at UL, and scholarships will be administered by the EHELD team.
- Three (3) LMA scholarships for UL engineering students
- Two (2) LMA scholarships for CU agriculture students

August 16, 2011

Session III—Collaboration and Coordination

Participating Institutions

Institution	Representative
Ministry of Planning & Economic Affairs	[Redacted]
USAID/Education	[Redacted]
Cuttington University	[Redacted]
	[Redacted]
RTI-EHELD Project	[Redacted]
	[Redacted]
	[Redacted]
University of Liberia	[Redacted]
Liberia Marketing Association (LMA)	[Redacted]

Employers, government institutions, private institutions, public institutions, and EHELD stakeholders' discussions focused on the following issues/concerns:

- What are those areas of collaboration and coordination?
- Availability of scholarships
- Who is offering scholarships?
- Who are the beneficiaries?
- Internship opportunities
- Information sharing-workshops, seminars, etc.
- Job opportunities
- Donor opportunities
- Business opportunities
- Collaborating with professional organizations in Liberia
- Organizing field trips—word of mouth information sharing
- Guest speaker
- Networking—working with clubs like YMCA, Rotary Club, etc. to disseminate information

Some possible solutions

It was discussed that collaboration and coordination was the way forward for EHELD to efficiently utilize other resources contributed by partners and stakeholders, hence the   following were some effective tools needed to disseminate EHELD's message to target audience/population:

- Establish EHELD-RTI website/online repository
- Post bulletin boards with relevant project information at UL, CU, and other institutions
- Newsletters

- Internet cafe

- Use twitter

- Radios

- Newspapers

- Local newspapers, local radio stations

- Partner with other universities to hold discussions with students

- Hold town hall meetings and drama club productions

- Cell phone text messages, SMS

Employers and others stakeholders agreed that radio was the most effective medium to reach the Liberian audience at this point in time.

Action Point

The EHELD team, employers, partner universities, and stakeholders will encourage greater collaboration and coordination to enhance productivity.

Session IV—Career Counseling

Career counseling was lengthily discussed by the LEAG focus group, and they acknowledged that the lack of centralized career counseling offices at UL and CU was a major problem for these institutions. The universities are not able to effectively coordinate students' career counseling activities. At CU for example, student counseling is done at each academic department, leaving students with very limited choices for choosing a career, or the opportunity to select a different career if the one the department is offering is not of interest to the students. UL has similar problems. UL planned all academic programs for students without their inputs; as a result, many students follow just what the university has planned to offer them.

The LEAG focus group put forward the following recommendations as the way to solve this problem at EHELD's two partner institutions:

- The two universities (UL and CU) should adapt a holistic approach to career counseling—create student guidance offices at each institution
- Career counseling should begin at high school level
- Establish guidance offices at distract level
- Undertake more career fairs
- Undertake annual agriculture shows
- Career counseling should also be done at Summer Start programs
- Review WAEC results for 12th graders and encourage best and brightest students to develop career interest in engineering and agriculture

Action Point

UL and CU have seen the need to urgently establish guidance counseling offices at both universities. The universities will work out the modalities to establish these two guidance counseling offices to assist students in choosing future careers, especially engineering and agriculture freshman students.

August 18, 2011

Session V—Curriculum Development

Participating Institutions

Institution	Representative
Cuttington University	[Redacted]
	[Redacted]
USAID/Education	[Redacted]
Liberia Marketing Association(LMA)	[Redacted]
Ministry of Planning and Economic Affairs	[Redacted]
RTI-EHELD Project	[Redacted]
	[Redacted]
	[Redacted]
University of Liberia	[Redacted]
	[Redacted]
RTI-EHELD Project	[Redacted]
	[Redacted]
	[Redacted]
	[Redacted]

The curriculum development discussions focused on the processes of developing a curriculum relevant to employers, students, and other university stakeholders rather than developing a curriculum. The LEAG focus group was brainstorming ways to get employers involved in the two partner universities' curricula development processes. Everyone agreed there have been problems with getting employers to participate in curriculum development at UL and CU. As a result, over the past years, both universities have been responsible for developing their curricula with no employers' inputs or support. The following points were highlighted as a way forward in developing an employer-driven curricula at CU and UL:

Discussion Points

- Mechanism and processes involving employers
  – Curriculum design
  – Curriculum review
  – Finalization
  – Approval
- Continuous (Annual)

a) Curriculum Design

With employers' input, the two EHELD partner universities (UL and CU) engineering and agriculture curricula should be designed to fit all students from first year to graduation, taking internships into consideration.

The curriculum design should begin by initiating the following exercises:

- look for existing curriculum from other institutions to compare with existing ones at UL and CU

- look at good processes and seeking curriculum experts' advice

- seek employers' inputs (conduct an assessment); understand what employers want

- involve the Liberian Government, especially the Commission on Higher Education at the Ministry of Education

- crystalize our ideas first, and speak with employers to know the type of skills they need

Curriculum design should be flexible enough to accommodate what are required and future changes in technology.

How do we engage employers to partake in curriculum development? Some possible solutions:

- Create awareness amongst employers

- Universities should visit employers to establish partnerships.

- University should work under one professional group.

- Work with university graduates/alumni

- Make friends with others and employers

- Set up scholarships, internships, and guidance counseling offices at the universities (UL and CU)

b) Curriculum Review

Reality check—how do we do that? Process of review

- counter check to compare information from other institution

- Local stakeholders to be part of the review process

- Review to know whether we can really deliver that curriculum—is it achievable?

- Compare and identify the different benchmarks/why we are doing it?

- Seek expert opinion from other universities

c) Finalization and Approval Processes

Who decides or approves curriculum?

At CU and UL, the facility senate comprising all deans of colleges, all chairpersons, and curriculum committee approves the curriculum.

Initially, the curriculum committees write the curricula and send them to each facility senate for approval. The LEAG focus group suggested that to finalize curriculum development, partner universities should get letters of support or approval from employers.

The final approval process should be as follows:

- Validation process
- Asking other non-engineering professionals to review and approve
- Contacting other institutions for approval
- Contacting employers for review and approval
- Contacting Ministry of Education Commission on Higher Education and the Association of Liberian Universities for review of curriculum

Action points/recommendations

- EHELD should give resources to support internships at institution/companies.
- University point persons should work with EHELD staff to engage employers.
- Foreign university experts could come to set up university liaison offices.
- Curriculum development mechanism and process will be coordinated by EHELD.
- University will implement curriculum after EHELD has gone.
- Liberian Government should regulate universities in terms of number of students enrolling in a particular subject based on labor market demand.

Annex B: EHELD Success Stories

USAID | LIBERIA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Liberian Students Glimpse Their Future at the Career Fair

Students from St. Joseph's School attend the 2011 Buchanan Careers Fair in Liberia.

Photo: RTI EHELD

Creating a student pipeline to encourage Liberia's bright young students to pursue higher education is a key to the success of USAID's EHELD program.

Liberia is struggling to retain their best and brightest students. After nearly two decades of civil war, many of Liberia's university-educated citizens have left the country, and the universities themselves are forced to answer the country's need for intellectual capital under less than optimal circumstances.

USAID, through the Excellence in Higher Education for Liberian Development (EHELD) program, is addressing these needs with a three-pronged approach: develop a student pipeline to studies; develop Centers of Excellence at two major universities for engineering and agriculture programs; and engage leaders in government, business, and the donor community to build key employer linkages.

As part of developing a student pipeline, EHELD participated in the June 2011 Buchanan Careers Fair with a booth to distribute project and career information as well as to collect names and contact details from interested students. Faculty and students from the University of Liberia supported the EHELD team in these efforts. In addition, EHELD invited and hosted the top-performing students from St. Joseph's School in Grand Bassa County. Of the 11 top-performing year-12 students in Liberia, 10 attend St. Joseph's. Of these students, four expressed interest in studying engineering, and four in studying agriculture.

An additional benefit was the opportunity to network with other exhibitors—all potential employees of university graduates.

Of the eight students expressing interest in engineering and agriculture, four went on to attend the EHELD Summer Start enrichment program, and seven were awarded scholarships, through a competitive process, to study agriculture. From the initial contact at the Buchanan Careers Fair, 8 of the top 11 students graduating from high school in Liberia are now in the EHELD pipeline. The success of St. Joseph's will be recognized by the EHELD project through follow-up visits to further inspire students.

Attracting and supporting such bright students is the first step toward altering the trajectory of Liberia's economy. Allowing these students to see the possibilities that exist in their own country—not only for university degrees, but also for opportunities to apply their studies in meaningful careers—is a key to rebuilding the nation. Bright minds are Liberia's most precious resource.

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SUCCESS STORY

Employers' Forum Supports Liberian Economic Development

The US Ambassador assigned to Monrovia in conversation with the EHELD Chief of Party, at the Employers' Forum

Photo: RTI EHELD

While Liberia continues to face serious challenges as it emerges from two decades of war, Liberians are ready for relief to give way to development. Yet private and governmental leaders point to Liberia's critical need for improved education, skills, and labor force capacity as the principal challenge to sustaining the momentum of development.

USAID's Excellence in Higher Education for Liberian Development (EHELD) program addresses these issues in a three-pronged approach: develop a student pipeline to attract and prepare students for engineering and agricultural studies; develop Centers of Excellence at two major universities for engineering and agriculture programs; and engage leaders in government, business, and the donor community to build key employer linkages.

As part of the third prong of this approach, EHELD brought together 60 stakeholders in graduate employment—a first in post-conflict Liberia. The significant outcome of this Employers' Forum was the formation of the Liberian Employers Action Group (LEAG), a groundbreaking association aimed at providing a common voice for employers, allowing them to participate in shaping the education of the graduates who will fill their workforce.

At their first forum in July 2011, the US Ambassador addressed LEAG members, urging them to invest in human capital to ensure the future growth of their businesses and of the Liberian economy.

At the forum, focus groups were formed for the following areas: (1) curriculum development, (2) career advisory services, (3) internships, (4) scholarships, and (5) information sharing and dissemination. Moving swiftly forward, these focus groups have already defined an approach for industry involvement in curriculum development, defined the parameters for successful internships in Liberia, and developed mechanisms for sharing information among various stakeholders.

The benefits of this type of employer engagement are widespread and far reaching: students receive support as they prepare to become vital participants in the Liberian workforce; Liberian universities receive support as they improve the quality of their education; Liberian employers receive skilled graduates who understand the unique complexities of the Liberian economy; and Liberia itself receives a much-needed boost for its economic development. Most importantly, the Employers' Forum has initiated the process of two-way dialogue and the formation of common, mutually beneficial objectives. The catalyst for the success of EHELD, and Liberia's economy, is in place.

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FROM THE AMERICAN PEOPLE

SUCCESS STORY

Students in Liberia Get a Boost from the Summer Start Program

Summer Start students in a group discussion during a training session

Photo: RTI EHELD

After nearly two decades of civil war, Liberia is endeavoring to rebuild its education system. USAID's Excellence in Higher Education for Liberian Development (EHELD) program supports this effort through a three-pronged approach: develop the student pipeline to attract and prepare students for engineering and agricultural studies; develop Centers of Excellence at two major universities for engineering and agriculture programs; and engage leaders in government, business, and the donor community to build key employer linkages.

As part of developing the student pipeline, EHELD has initiated Summer Start—a four-week enrichment program for incoming freshmen and sophomores that helps transition students from high school to the academic challenges of university engineering and agricultural coursework.

This year's Summer Start included remedial math and English courses as well as life-skills courses and team-building exercises. Some of the team-based student projects included bridge building and catapult design (incorporating cost analysis).

Inspirational speakers from academia and the professional sector provided real-world views and guidance to the students. After hearing one of these presentations, [Redacted] (University of Liberia freshman) stated, "Seeing a lady as an engineer, [and not just with a bachelor's degree but with a PhD], really encourages me, changed my attitude positively, and increased my drive [to be] an engineer."

Summer Start provides prospective students (some of whom had actually dropped out of high school) with opportunities to explore the idea of a career in either agriculture or engineering. For some of the participants, it was the first time they had ever used a computer!

[Redacted], a student from the University of Liberia, expressed what this program meant to him. "The Summer Start program has helped me to become more passionate about the people in my community and the country at large. It made me realize that there is a huge demand for my area of specialization as a mining engineer to grow the industrial sector of Liberia. As a student of mining engineering, I see myself creating things that would benefit my community. It makes me love my career, and I see engineers as living engines to power the economy of a nation."

In 2011, Summer Start was a life-changing experience for these Liberian students, inspiring students to achieve higher goals while offering support to ensure their success. This is key to USAID's role in rebuilding Liberia's economy.